



ANNUAL REVIEW – SSD_7831

ARSENIC CONTAINMENT CELL DEVELOPMENT CONSENT

ORICA KOORAGANG ISLAND

DECEMBER 2020



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ABBREVIATIONS

AR	Annual Review
CEMP	Construction Environment Management Report
CSEMP	Construction Safety and Environmental Management Plan
DPIE	Department of Planning, Industry and Environment (formerly Department of Planning and Environment)
EPA	New South Wales Environment Protection Authority
EPL	Environment Protection Licence
GMP	Groundwater Monitoring Program
HAZOP	Hazard and Operability Study
KI	Kooragang Island
LTEMP	Long Term Environmental Management Plan
MO	Management Order
RVR	Remediation Validation Report
SAS/SAR	Site Audit Statement/Site Audit Report
SHES	Safety, Health, Environment & Security
SSD	State Significant Development

1 INTRODUCTION AND DESCRIPTION OF DEVELOPMENT

1.1 ORICA KOORAGANG ISLAND, NEWCASTLE NSW

Orica Australia Pty Ltd (Orica) operates an ammonium nitrate manufacturing facility on Kooragang Island, NSW (**Figure 1**). The facility commenced operations in 1969 and has undergone several projects aimed at increasing the ammonium nitrate production capability of the site since. The current site operations consist of an Ammonia Plant, three Nitric Acid Plants, two Ammonium Nitrate Plants and associated despatch and support infrastructure (Existing Operations).

1.2 SSD 7831

A state significant development (SSD 7831) was granted by the Minister for Planning under Section 4.31 of the *Environmental Planning and Assessment Act 1979* on 10 August 2018 for the construction of a containment cell to remediate historic arsenic contamination from a former arsenic sludge disposal pit in the north west corner of the site. (**Figure 2**).

The containment cell was completed on 24 September 2019 with the construction of a cut-off wall (12 m depth) comprised of low permeability soil/bentonite with an integrated 4,200 sqm capping system designed to hydraulically isolate the identified arsenic contamination in accordance with a Remediation Action Plan (RAP). The RAP was required under MO 20181401 issued by the EPA under *Contaminated Land Management Act 1997*.

The Remediation Validation Report (RVR) describes the development in detail and was submitted to the Department (DPIE) in March 2020. The RVR was validated by the site auditor in September 2020 (**see Section 10**). The RVR is available on the [Orica KI Public Website](#).

This report has been prepared in accordance with Condition C13 of the Arsenic Development Consent (SSD 7831) which requires an Annual Review (AEMR) to be submitted to the Department (DPIE) within 3 months after the first year of commencement of operation (24 December). The reporting period covered by this report has been aligned with the annual environmental management report for Orica KI's 08_0129 Expansion Consent.



Figure 1: Site Location



Figure 2: Arsenic Remediation Project - Site Location

2 ANNUAL REVIEW REQUIREMENTS

Condition C13 of SSD 7831 requires that Orica submit an AR within 3 months after the first year of commencement of operation and in the same month annually thereafter. This report details environmental compliance between the 24 September 2019 and 30 November 2020 and satisfies condition C13 of SSD 7831. The annual reporting period of this report going forward will be 1 December to 30 November to align with annual report undertaken for the Expansion Consent (08_0129) for the site). The requirements of condition C13 are as follows:

Table 1: Condition C13 of SSD 7831 – Annual Review

Condition C13		
	Condition / Requirement	Section of AR
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;	1,5
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 	4, 6, 7, 10
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;	7, 10
d)	Identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and	8
e)	Describe what measures will be implemented over the next year to improve the environmental performance of the development	9

3 ACTIONS IDENTIFIED FROM PREVIOUS AEMR

This AEMR (2020) is the first report for SSD 7831 and therefore there is no feedback to address. This section will be used for future reports.

4 PROJECT, DOCUMENTS, STANDARDS AND PERFORMANCE MEASURES

Key documents, standards and conditions are detailed in the following documents:

- Arsenic Environmental Management Plan dated March 2014
- Remediation Action Plan dated 8 July 2016
- Secretary's Environmental Assessment Requirements dated 18 August 2016
- Quantity Surveyor's Certificate of costs dated 23 January 2017
- Environmental Impact Assessment: Part A, Part B, Part C dated 23 February 2017
- Project Approval SSD 7831 dated 11 December 2017
- State Significant Development Assessment dated August 2018
- Arsenic Remediation Development Consent dated 10 August 2018
- Arsenic Remediation Approved Plans signed 10 August 2018
- Arsenic Remediation Construction Environmental Management Plan dated 8 October 2018
- Long Term Environmental Management Plan (LTEMP) dated 5 May 2020
- Site Audit Statement dates September 2020

These (and other) documents are available on the [Orica KI Public Website](#).

Key design criteria outlined in these documents are detailed in Appendix A.

5 PROJECT STATUS

5.1 PROJECT STATUS AND PROGRESS REVIEW

Construction of the containment cell was completed on 24 September 2019 with completion of a cut-off wall (12 m depth) comprised of low permeability soil/bentonite with an integrated capping system (4,200 sqm), designed to hydraulically isolate the identified arsenic contamination in accordance with a Remediation Action Plan (RAP).

5.2 POST CONSTRUCTION

An LTEMP has been prepared in accordance with condition B9 of SSD 7831 which focuses on an ongoing groundwater monitoring program (GMP) outlined in **Section 6** of this report. In addition, the LTEMP includes requirements for regular inspection and maintenance of the cell. The LTEMP was submitted to DPIE, with approval provided by the Department and is available on the [Orica KI Public Website](#).

6 ENVIRONMENTAL MONITORING

6.1 ENVIRONMENTAL MONITORING

Environmental monitoring controls incorporated into the construction of the cell are discussed in the RAP and Remediation Validation Report. Control measures were implemented in accordance with the project's CEMP (Air quality, hygiene etc) which was prepared in accordance with the consent.

6.1.1 GROUNDWATER MONITORING PROGRAM AND DATA

Groundwater monitoring was undertaken in accordance with the LTEMP to demonstrate that the containment cell is performing as per design and is achieving the remediation objectives.

Details of the GMP and monitoring results during the Annual Review period can be found on the [Orica Public Website](#).

- 2019 Biannual Groundwater Monitoring Program
- 2020 Annual Groundwater Monitoring Program (frequency was changed to annual at completion of construction in accordance with the LTEMP)

A discussion of temporal and spatial trends included in Section 6.5 of the 2020 GMP.

7 NON-COMPLIANCES AND COMPLAINTS

7.1 NON-COMPLIANCES AND INCIDENTS

There were no reportable non compliances or incidents during the 2019-2020 reporting period.

7.2 COMPLAINTS

There were no complaints during 2019-2020 reporting period related to SSD 7831.

8 DISCREPANCIES

The 2020 Annual Groundwater Monitoring Program did not identify any discrepancies between the predicted and actual impacts of the development during construction. Preliminary water level data collected from data loggers in groundwater wells associated with the project suggest the cell is performing in accordance with design.

9 ENVIRONMENTAL PERFORMANCE IMPROVEMENTS

Given the passive nature of the containment cell design it is not anticipated environmental performance improvements will form part of the operation of the cell. An inspection regime is in place as part of the LTEMP to ensure the physical condition of the cell is maintained to ensure ongoing performance in accordance with the design.

10 DEVELOPMENT CONSENT COMPLIANCE

10.1 CONDITION COMPLIANCE

Orica KI engaged Ramboll Australia Ltd (Ramboll) to conduct an independent environmental audit (IEA) in accordance with conditions of C15 & C16 of SSD 7831, with the final report dated 31 August 2020. The report was submitted to DPIE on 2 September 2020 and can be found on the [Orica KI Public Website](#)

A review of the status of compliance with the SSD 7831 is detailed in Table 3 below. All conditions were either “not triggered” or “compliant”.

Table 2 – Noncompliance risk level ranking

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

Table 3 Summary of Compliance with SSD 7831

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	‘Closed out’ OR ‘Ongoing’?
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"> Documentation as described in this table. 	Management plans and project management activities are in place to ensure that environmental harm during construction and monitoring.	Compliant	Closed out
TERMS OF CONSENT					
A2	The development may only be carried out: <ul style="list-style-type: none"> 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"> 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 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	Closed out

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
A3	<p>Consistent with the requirements in this consent, the Planning Secretary may make written directions to the Applicant in relation to:</p> <ul style="list-style-type: none"> 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 b) the implementation of any actions or measures contained in any such document referred to in A3(a) 	N/A	No written direction received	Not triggered	NA
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>		NA	Not triggered	NA
LIMITS OF CONSENT					
LAPSING					

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
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.		The development consent was issued on 10 August 2018 and the development has physically commenced (and construction completed by September 2019).	Not triggered	NA
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	Closed out
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: <ul style="list-style-type: none"> 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 	<p>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).</p> <p>In June 2019, Orica notified the Department of the anticipated date of completion of the construction activities associated with the containment</p>	Compliant	Closed out

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
		SSD_7831, 24 September 2019	cell as 29 July 2019. Construction of the containment cell was actually completed on 24 September 2019.		
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.		The Project was not staged.	Not triggered	NA
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 the Applicant has addressed the matters not resolved.	Email from Fabiana Quinton of the EPA dated 7/12/18	Consultation with the EPA in preparation of the Containment Cell Management as required under condition B3.	Compliant	Closed out
STAGING, COMBINING AND UPDATING STRATEGIES PLANS OR PROGRAMS					
A10	With the approval of the Planning Secretary, the Applicant may:	<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.	Compliant	Closed out

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
	<p>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);</p> <p>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</p> <p>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).</p>	<ul style="list-style-type: none"> Letter and associated updated drawings sent to DPIE (Susan Fox) on 18 July 2019 noting minor variations between RAP layouts and finished capping landform. 	<p>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.</p> <p>An updated LTEMP (Rev 1) was submitted to the Department and subsequently approved. LTEMP available on Orica public website.</p>		
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.		The development was not staged.	Not triggered	NA
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.	Letter from Orica to DPIE re: Notification of updates relating to Approval SSD_7831, 18 July 2019	<p>The project was not staged.</p> <p>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</p>	Compliant	Closed out

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
			<p>that were to be placed inside the cell.</p> <p>An updated LTEMP (Rev 1) was submitted to the Department and subsequently approved. LTEMP available on Orica public website.</p>		
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.		Materials were not removed from site for disposal. ENM was mixed with the bentonite wall.	Not triggered	NA
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 Project induction (PowerPoint) dated February 2019 Arsenic 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.	Compliant	Closed out
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		Plant and equipment were operated and maintained by the construction contractors. Pre-start checklists were completed	Compliant	Closed out

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
	b) operated in a proper and efficient manner.		by the contractors and audited by Orica.		
UTILITIES AND SERVICES					
A16	Before the construction of any utility works associated with the development, the Applicant must obtain relevant approvals from service providers.		No utility works were undertaken.	Not triggered	NA
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 have referred to relevant guidelines in preparation of plans and reports for the development.	Compliant	Ongoing
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.		No written directions have been received by the Planning Secretary.	Not triggered	NA
ADVISORY NOTES					

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
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	Closed out
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 Contaminated Land Management Act, 1997 (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).	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	Closed out
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	Orica letter to DPIE re: Containment Cell Management Plan, 1 November 2018	Golder Associates were appointed as the Validation Consultant for the works. Qualification and experience details of the Validation Consultants were provided to	Compliant	Closed out

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
	<p>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).</p>		<p>the Department on 1 November 2018.</p>		
CONTAINMENT CELL					
B3	<p>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 required by Condition C2 and be prepared in accordance with Condition C1. The CCMP must:</p> <p>a) be prepared by a suitably qualified and experienced person(s);</p> <p>b) be prepared in consultation with the EPA;</p> <p>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</p> <p>d) be prepared as described in the RAP.</p>	<ul style="list-style-type: none"> • CCMP (November, 2018) • Letter from DPIE approving the CEMP and sub-plans dated 19/12/18 • Orica letter to DPIE re: Containment Cell Management Plan, 1 November 2018 • RAP (July, 2016) • Email from Chris Jewell dated 3/12/18 subject: KI Arsenic CCMP • Email from Fabiana Quinton of the EPA dated 7/12/18 	<p>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.</p> <p>Construction of the containment cell commenced in February 2019.</p> <p>a) The CCMP was prepared by Gary Schmetmann, 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</p> <p>b) Comments on the CCMP were provided by the EPA on 7 December 2018</p>	Compliant	Closed out

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
			<p>c) Section 1.3 of the CCMP includes details of the CQC and CQA approach.</p> <p>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).</p>		
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 • implement the most recent version of the CQCMP approved by the Planning Secretary. 	Letter from DPIE approving the CEMP and sub-plans dated 19/12/18	The CCMP 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	Closed out
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.	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</i>	Compliant	Closed out

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
			<i>considered to have successfully met the requirements of the RAP...</i>		
B6	The Applicant must carry out the remediation works using suitably qualified and experienced contractor(s).	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	Closed out
B7	The Applicant must only place arsenic contaminated material as described in the RAP, in the containment cell.	Remediation Validation Report, Golder Associates, 24 December, 2019	Remediation Validation Report	Compliant	Closed out
REMEDICATION VALIDATION REPORT					
B8	<p>Within three months of completion of remediation works, the Applicant must submit a Remediation Validation Report (RVR) to the satisfaction of the Planning Secretary. The RVR must:</p> <p>a) be prepared by the validation consultant(s) (see Condition B2);</p> <p>b) be prepared in accordance with the RAP and the Contaminated Sites: Guidelines for Consultants Reporting on Contaminated Sites (OEH 2011);</p> <p>c) include, but not be limited to a:</p> <p>(i) CQA report;</p> <p>(ii) design report;</p> <p>(iii) construction report.</p>	<ul style="list-style-type: none"> Remediation Validation Report, Golder Associates, 24 December, 2019 Letter from DPIE to Orica re: Orica Kooragang Island (SSD 7831) Remediation Validation Report, 24 February 2020 	<p>Remediation works were completed in September 2019. The RVR was prepared by Golder Associates dated 24 December 2019. The requirements under this condition are satisfied as follows:</p> <p>a) The RVR was prepared by Golder Associates who is the validation consultant (refer to response to condition B2).</p> <p>b) The RVR was prepared in accordance with the RAP as evident by the various cross-</p>	Compliant	Closed out

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
			<p>references to the RAP throughout the RVR.</p> <p>c) The requirements under this condition are included in Appendix A (cut off wall CQA report) and Appendix B (capping system CQA report).</p> <p>The Department confirmed its satisfaction with the RVR in February 2020.</p>		
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> <p>a) be prepared by a suitably qualified and experienced person(s) certified under either the CEnvP(SC) or the CPSS CSAM scheme;</p> <p>b) be reviewed by an EPA accredited Site Auditor as required by Condition B1;</p> <p>c) include, but not be limited to:</p> <p>(i) the hydraulic performance of containment cell;</p> <p>(ii) details of the groundwater monitoring program including a description of the procedures for 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>	<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> <p>a) The LTEMP was prepared by Golder Associates Pty Ltd (noted as a certified consultant)</p> <p>b) The LTEMP was reviewed by Chris Jewell of C.M. Jewell & Associates Pty Ltd as an accredited Site Auditor under the Contaminated Land Management Act 1997</p> <p>c) The requirements under this condition are met in the following sections:</p> <p>(i) Section 8.2</p>	Compliant	Closed out

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
			(ii) Section 8 (iii) Section 7 (iv) Section 8.4.		
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) was submitted to the Department and subsequently approved. LTEMP available on Orica public website.	Compliant	Closed out
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 Emails to EPA and DPIE dated 5/05/20 including March 2020 Annual 	Two GMP events have been completed (July 2019 and March 2020). The biannual and annual summary report were submitted to the EPA, and the annual summary report was submitted to DPIE.	Compliant	Ongoing

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
		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 Site Audit Statement/Site Audit Report submitted by the Auditor on 24 September 2020 	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.	Compliant	Closed Out
WORK HEALTH AND SAFETY					
B13	The Applicant must ensure that all remediation works are carried out in accordance with NSW Work Health and Safety Regulation 2017 (WHS Regulation).		No incidents occurred requiring notification to WorkSafe.	Compliant	Closed out
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:	<ul style="list-style-type: none"> CEMP (October 2018) HSP (September 2018) Orica email to DPIE submitting CEMP for approval, 12 October 2018. Letter from DPIE re Construction Environmental 	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	Compliant	Closed out

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
	<p>a) describe the controls to ensure compliance with the WHS Regulation;</p> <p>b) identify personal protective equipment (PPE) required for use onsite;</p> <p>c) describe the procedures for training, education and awareness programs and inductions for site 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>Management Plan and Sub Plans, 19 December 2018</p>	<p>containment cell commenced in February 2019.</p> <p>The HSP satisfied the requirements of this condition as follows:</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: “steel capped boots, hard hat and safety glasses, long sleeved shirts and long pants”.</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>	<ul style="list-style-type: none"> Letter from DPIE re Construction Environmental Management Plan and Sub Plans, 19 December 2018 	<p>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.</p>	Compliant	Closed out

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
	b) implement the most recent version of the HSP approved by the Planning Secretary.				
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"> 60578946_Arsenic Remediation Results 30APR19 Arsenic remediation air quality monitoring results from 13/02/18 to 28/06/19 	Ambient air quality monitoring was undertaken during construction works. The monitoring included assessment of TSP, PM10 and arsenic criteria. The completed containment cell is covered with vegetation and inspected regularly. There is limited potential for dust generation under long-term management.	Compliant	Closed out
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; 		During construction this condition was met. The CEMP defined the implemented controls.	Compliant	Closed out

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
	<ul style="list-style-type: none"> trucks associated with the Development do not track dirt onto the public road network; and public roads used by these trucks are kept clean. 				
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"> 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	Closed out
AIR QUALITY MANAGEMENT PLAN					
B19	<p>Prior to the commencement of remediation works, the Applicant must prepare an Air Quality Management Plan (AQMP) to the satisfaction of the Planning 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> <p>a) be prepared by a suitably qualified and experienced person(s) whose appointment has been endorsed by the Planning Secretary;</p> <p>b) describe the measures that will be implemented to minimise the potential risks to adverse air quality in the area including:</p> <p>(i) the management and mitigation measures to be employed at the site;</p>	CEMP (October 2018)	<p>The AQMP is included as Appendix B to the CEMP. The AQMP is dated 5 October 2018.</p> <p>Remediation works commenced on 13 February 2019. The requirements under this condition are satisfied as follows:</p> <p>a) The AQMP was prepared by David Rollings and Chad Whitburn of AECOM.</p> <p>b) The measures outlined under this condition are included in the following sections:</p>	Compliant	Closed out

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
	<p>(ii) plant and equipment being maintained to ensure that it is in good order;</p> <p>(iii) how the air quality impacts of the development will be minimised during adverse meteorological conditions or extraordinary events;</p> <p>(iv) show the locations of dust monitors on and off-site with appropriate trigger values;</p> <p>(v) details regarding the mitigation and management measures to control dust from stockpiles;</p> <p>(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;</p> <p>(vii) detail proactive mitigation measures for the control of dust and odour impacts, including procedures to restrict works during adverse meteorological conditions;</p> <p>(viii) detail procedures for consulting with the nearby sensitive receivers to minimise dust and odour impacts;</p> <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>(i) Section 5 (Table 5 and Table 6)</p> <p>(ii) Section 4</p> <p>(iii) Section 5 (Table 5) – “Remediation works will not occur during adverse meteorological conditions”</p> <p>(iv) Section 6.3 describes the locations for the High Volume Air Sampler (HVAS) as well as real time continuous particulate monitoring.</p> <p>Section 6.4 – air quality trigger values.</p> <p>(v) Section 5 (Table 5) under stockpiles sub-heading</p> <p>(vi) Sections 6.2 and 6.3 – air quality criteria.</p> <p>Section 8 – review and continual improvements procedure</p> <p>(vii) Section 5 (Table 5)</p> <p>(viii) Section 3.4 of CEMP. Orica also has a Communications Strategy and operates in accordance with a Neighbour (Off-site) EMP.</p> <p>(ix) Section 5 – reference to the complaints management</p>		

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
			<p>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"> Letter from DPIE re Construction Environmental Management Plan and Sub Plans, 19 December 2018 	<p>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.</p>	Compliant	Closed out
ODOUR MANAGEMENT					
B21	<p>The Applicant must ensure the remediation works does not cause or permit the emission of any offensive odour (as defined in the POEO Act).</p>		<p>No odour complaints in relation to remediation works were recorded during the AEMR period.</p>	Compliant	Closed out
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</p>	<ul style="list-style-type: none"> Remediation Action Plan, Golder Associates, July 2016 Site visit observations 	<p>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</p>	Compliant	Closed out

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
	<p>design diagrams in the Appendix A: Wall Alignment and</p> <p>Detail Design of the RAP;</p> <p>c) be in accordance with applicable Australian Standards; and</p> <p>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.</p>		Design of the RAP.		
B23	<p>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.</p>	<p>Orica email to C.M. Jewell re: Works- as-executed drawing - Stormwater drainage and finished ground levels, 21 November 2019</p>	<p>Survey was provided to the Site Auditor within two months of the completion of remediation works.</p>	Compliant	Closed out
B24	<p>The surface water management system must be operated and maintained for the duration of the Development.</p>	<ul style="list-style-type: none"> • Site visit observations • Interview with site personnel • Arsenic containment cell quarterly inspection checklist dated 22/07/20 	<p>The surface water management system was observed during the site visit to be in good condition. The containment cell is subject to quarterly inspections.</p>	Compliant	Ongoing
EROSION AND SEDIMENT CONTROL					
B25	<p>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</p>	<p>CEMP (October 2018)</p>	<p>The Erosion and Sediment Control Plan is Appendix C to the CEMP.</p>	Compliant	Closed out

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
	<p>the <i>Managing Urban Stormwater: Soils and Construction - Volume 1: Blue Book</i> (Landcom, 2004) guideline and the Erosion and Sediment Control</p> <p>Plan included in the CEMP required by condition C2.</p>				
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) • Post Remediation Annual Groundwater Monitoring Event – March 2020, Golder Associates, 4 May 2020 	Erosion and sediment control measures were in place during construction. The purpose of the development is to address historic contamination and improve groundwater quality. Ongoing monitoring as per the LTEMP is required to verify effectiveness of the cell.	Compliant	Closed out
B27	Any spills must be contained and disposed of at a licenced facility.		No spills reported during construction of the cell.	Not triggered	NA
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.		There was no on-site servicing or repair of vehicles or mobile plant associated with the remediation works.	Not triggered	NA
IMPORTED SOIL					

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
B29	The Applicant must: i) ensure that only VENM or ENM or other material approved in writing by the EPA is used as fill on the site; ii) keep accurate records of the volume and type of fill to be used; and iii) make these records available to the Planning Secretary upon request.	Remediation Validation Report, Golder Associates, 24 December, 2019	Materials tracking included as Appendix D of the Remediation Validation Report.	Compliant	Closed out
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) 	The unexpected finds protocol is included in Section 5.6 of the CEMP. No unexpected finds occurred during the works.	Compliant	Closed out
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).		No bulk fuels were stored on site by the contractors.	Compliant	Closed out

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
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"> 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	NA
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"> 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 received for the cell capping as outlined in the Remediation Validation Report.	Not triggered	NA
PESTS, VERMIN AND NOXIOUS WEED MANAGEMENT					
B36	The Applicant must: <ol style="list-style-type: none"> implement suitable measures to manage pests, vermin and declared noxious weeds on the site; and 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 	<ul style="list-style-type: none"> CEMP (October 2018) LTEMP (May 2019) Arsenic containment cell quarterly inspection checklists (Enablon) 	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.	Compliant	Ongoing

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?									
	<p>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>													
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 border="1"> <thead> <tr> <th>Activity</th> <th>Day</th> <th>Time</th> </tr> </thead> <tbody> <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> </tbody> </table>	Activity	Day	Time	Remediation works	Monday – Friday	7am to 6pm		Saturday	8am to 1pm	<ul style="list-style-type: none"> CEMP (October 2018) 	All remediation works were undertaken within these construction hours.	Compliant	Closed out
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>		Works were not undertaken outside the standard hours specified in condition B37.	Not triggered	NA									

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
REMEDATION WORKS NOISE LIMITS					
B39	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.	<ul style="list-style-type: none"> CEMP (October 2018) 	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. No complaints were received relating to noise from the remediation works.	Compliant	Closed out
VARIATION CRITERIA					
B40	Vibration caused by construction at any residence or structure outside the site must be limited to: <ul style="list-style-type: none"> a) for structural damage, German Standard DIN 4150 Part 3 Structural Vibration in Buildings. Effects on Structures; and for human exposure, the acceptable vibration values set out in the Environmental Noise Management Assessing Vibration: A Technical	<ul style="list-style-type: none"> CEMP (October 2018) 	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	Compliant	Closed out

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
	Guideline (Department of Environment and Conservation, 2006).		intensive equipment will be used during the works for tracked mobile operating plant (excavator/crane): <ul style="list-style-type: none"> • Cosmetic damage – 3m • Human response – 13m. • No complaints were received relating to vibration from the remediation works. 		
REMEDIATION WORKS CONDITIONS					
B41	The Applicant must ensure that: <ol style="list-style-type: none"> The development does not result in any queuing on the public road network; all vehicular movement to and from the site must be in a forward direction; 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; all loading and unloading of materials is carried out on-site in designated areas; and vehicle manoeuvring areas must always be kept clear of any obstacles, including parked cars. 	<ul style="list-style-type: none"> • CEMP (October 2018) 	Traffic management measures are included in Section 5.7 of the CEMP.	Compliant	Closed out
PARKING					
B42	The Applicant must provide sufficient parking facilities on-site, including for heavy vehicles and		No complaints concerning traffic or parking were	Compliant	Closed out

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
	for site personnel, to ensure that traffic associated with the remediation works does not utilise public and residential streets or public parking facilities.		received.		
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	Closed out
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: <ul style="list-style-type: none"> a) detailed baseline data; b) details of: <ul style="list-style-type: none"> (i) the relevant statutory requirements (including any relevant approval, licence or lease conditions); (ii) any relevant limits or performance measures and criteria; and 	<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> <ul style="list-style-type: none"> 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 	Compliant	Closed out

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
	<p>(iii) the specific performance indicators that are proposed to be used to judge the performance 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>ESCP – Section 5.3</p> <p>d) Section 7.0 of the CEMP</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>		

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
	<p>(iii) failure to comply with statutory requirements; and</p> <p>h) a protocol for periodic review of the plan. Note: The Planning Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.</p>				
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> <p>a) be approved by the Planning Secretary prior to the commencement of remediation works;</p> <p>b) identify the statutory approvals that apply to the development;</p> <p>c) outline all environmental management practices and procedures to be followed during remediation works associated with the development;</p> <p>d) describe all activities to be undertaken on the site during remediation works, including a clear indication of construction stages;</p> <p>e) detail how the environmental performance of the remediation works will be monitored, and what actions will be taken to address identified adverse</p>	<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> <p>a) The CEMP was submitted to the Department on 12 October 2018 and approved by the Secretary on 19 December 2018.</p> <p>b) Included in Section 1.4</p> <p>c) Included in Section 5</p> <p>d) Included in Section 2.5 and 2.6</p> <p>e) Included in Section 7.1</p> <p>f) Included in Section 3</p> <p>Refer to response to condition C3 below</p>	Compliant	Closed out

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
	environmental impacts; f) describe the roles and responsibilities for all relevant employees involved in remediation works associated with the development; and g) include the management plans required under Condition C3 of this consent. h)				
C3	As part of the CEMP required under Condition C2 of this consent, the Applicant must include the following: a) Containment Cell Management Plan (see Condition B3); b) Health and Safety Plan (see Condition B14); c) Air Quality Management Plan (see Condition B19) d) Erosion and Sediment Control Plan (see Condition B25); and Unexpected Finds Protocol (see Condition B30).	CEMP (October 2018)	The requirements under this condition are included in the CEMP as follows: a) Appendix D b) Appendix A c) Appendix B d) Appendix C Section 5.6	Compliant	Closed out
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	<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	Closed out

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
	approved by the Planning Secretary from time to time).				
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.	CEMP (October 2018)	Table 1 in section 1.2 of the CEMP shows where relevant conditions have been addressed.	Compliant	Closed out
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,		(C6 and C7 should be read together as one condition) A letter notifying DPIE of review, and the outcomes of that review, was submitted 12 October 2020.	Compliant	NA
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	<ul style="list-style-type: none"> Letter from Orica to DPIE re: Notification of updates relating to Approval SSD_7831, 18 July 2019 	Remediation Action Plan and other project documentation including Development Layout	Compliant	Closed out

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
	<p>and programs required under this consent must be revised, to the satisfaction of the Planning Secretary. Where revisions are required, the revised document must be submitted to the Planning Secretary for approval within six weeks of the review.</p> <p>Note: 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.:</p>	<ul style="list-style-type: none"> DPIE email to Orica re: Orica Kooragang Remediation - Post Approval Document Received - (SSD- 7831-PA-2), 15 May 2020 	<p>Plans were updated. An updated LTEMP (Rev 1) was submitted to the Department and subsequently approved. LTEMP available on Orica public website.</p>		
REPORTING AND AUDITING					
INCIDENT NOTIFICATION, REPORTING AND RESPONSE					
C9	<p>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.</p>		<p>No notifiable incidents have occurred to date.</p>	Not triggered	NA
NON COMPLIANCE NOTIFICATION					
C10	<p>The Department must be notified in writing to compliance@planning.nsw.gov.au within seven days after the Applicant becomes</p>		<p>No non compliances</p>	Not triggered	NA

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
	aware of any non-compliance.				
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.		No non compliances	Not triggered	NA
C12	A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.		No non compliances	Not triggered	NA
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: 		<p>Remediation works were completed on 24 September 2019. The first Annual Review is due in December 2020.</p> <p>This report satisfies this condition.</p>	Compliant	Ongoing

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
	<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; <p>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;</p> <p>d) identify any trends in the monitoring data over the life of the development;</p> <p>e) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and</p> <p>f) describe what measures will be implemented over the next year to improve the environmental performance of the development.</p>				

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
C14	Copies of the Annual Review must be submitted to Council and any interested person upon request.		Submitted to Newcastle City Council on 1 December 2020	Compliant.	Ongoing
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.</p> <p>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 <p>recommend measures or actions to improve the environmental performance of the development, and any strategy, plan or program required under this consent.</p>	DPIE letter to Orica re: Independent Environmental Audit – auditor endorsement request, 17 June 2020	The Independent Environmental Audit was undertaken in accordance with this condition and is the first audit required with the final report dated 31 August 2020	Compliant	Ongoing

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
C16	<p>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.</p> <p>Note: The audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Planning Secretary.</p>	Portal lodgement receipt dated 13 October 2020	2020 IEA submitted to the Department.	Compliant	Ongoing
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><i>Note: 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</i></p>			Noted	Ongoing

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
	<i>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>				
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> <p>(i) the documents referred to in condition A2 of this consent and the final layout plans for the development;</p> <p>(ii) all current statutory approvals for the development;</p> <p>(iii) all approved strategies, plans and programs required under the conditions of this consent;</p> <p>(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;</p>	<ul style="list-style-type: none"> • Orica website 	<p>The required information is available on the Orica website. A Complaints Register is not available; as there were no complaints in relation to the remediation works.</p>	Compliant	Closed out

Condition	Compliance requirement	Evidence (where relevant)	Comment	Compliance Status	'Closed out' OR 'Ongoing'?
	<ul style="list-style-type: none"> (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; (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 <p>b) keep such information up to date, to the satisfaction of the Planning Secretary.</p>				