

MULTIPLY

**CONSTRUCTION ENVIRONMENTAL
MANAGEMENT PLAN**

St Leonards Health Organisations Relocation (SHOR) Project

Revision 6
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1.	Introduction.....	1
1.1	Purpose	1
1.2	Scope of this Plan.....	1
1.3	Abbreviations.....	1
1.4	Precedence	2
1.5	Interface with other Operational Procedures and Project Plans.....	2
1.6	Project Scope	2
1.7	Legal and Other Requirements	3
1.8	Hours of Work.....	14
1.9	Document Control.....	14
2.	Environmental Management System Framework.....	16
2.1	Approach to Environmental Management.....	16
2.2	Management System Framework	16
3.	Responsibility and Accountability	17
3.1	Environmental Policy.....	17
3.2	Objectives, Targets and Programs.....	17
3.3	Management Review.....	17
3.4	EMS Organisational Chart.....	17
3.5	Multiplex Roles and Responsibilities.....	18
3.6	Contractor Roles and Responsibilities	20
4.	Communication and Consultation.....	21
4.1	Communication.....	21
4.2	Consultation.....	21
5.	Contractor Management.....	23
5.1	Evaluation and Selection of Contractors.....	23
5.2	Subcontractors Environmental Management Plans and EWMS	23
5.3	Contractor EMS Submission Requirements	23
5.4	Subcontractor Environmental Management Monitoring.....	24
5.5	Purchasing of Goods and Services.....	24
6.	Risk Management.....	25
6.1	Risk Workshops.....	25
6.2	Aspects and Impacts	25
6.3	Environmental Controls Map	26
6.4	Hazardous Materials Risk Management	27
7.	Training and Competency	28
7.1	Training and Competencies	28
7.2	Induction Training.....	28
7.3	Tool Box Meetings.....	28
8.	Traffic Management	29
9.	Incident and Emergency Management	29
9.1	Incident Management.....	29
9.2	Emergency Management	29
10.	Inspections, Testing and Monitoring	30
10.1	Environmental Site Inspections.....	30
10.2	Environmental Site Testing and Monitoring	30

11. Audits and Non-Conformances	31
11.1 Audits.....	31
11.2 Non-Conformances, Corrective and Preventative Action	31
12. Document and Records Management.....	32
12.1 Document Control.....	32
12.2 Record Control	32
13. Reporting.....	33
14. Environmental Management Sub Plans.....	34
14.1 Construction Noise and Vibration Management Sub-Plan	34
14.2 Dust and Air Quality Management Sub-Plan	37
14.3 Water Quality Management Sub-Plan.....	39
14.4 Erosion and Sediment Control Management Sub-Plan	41
14.5 Chemicals Management Sub-Plan.....	43
14.6 Land Contamination Management Sub-Plan	45
14.7 Waste Minimisation and Management Sub Plan	47
14.8 Aboriginal and European Heritage Management Sub-Plan.....	51
14.9 Flora and Fauna Management Sub-Plan.....	52
14.10 Site Office Environmental Management Sub-Plan	54
15. Appendices	55
15.1 Appendix 1: Environmental Policy.....	55
15.2 Appendix 2: EMS Forms and Guides.....	56
15.3 Appendix 3: Design Guidance Note No. 15	57
15.4 Appendix 4: Unexpected Finds Protocol.....	59
15.5 Appendix 5: Asbestos/Hazardous Materials	60
15.6 Appendix 6: Noise and Vibration.....	61
15.7 Appendix 7: Erosion and Sediment Control	61
15.8 Appendix 8: Air and Dust Quality	61
15.9 Appendix 9: Tree Management.....	61
15.10 Appendix 10: Water Quality Management Strategy.....	61

1. Introduction

1.1 Purpose

The purpose of this Construction Environmental Management Plan (Plan) is to provide a coordinated high level plan that details, at a Project level, the Construction environmental management strategies and procedures that will be adopted on The St Leonards Health Organisations Relocation (SHOR) Project (the Project) on which Multiplex is operating as the Principal Contractor.

This plan is a sub-plan of the Project Management Plan, which forms part of Multiplex Management System which is certified to:

- » AS/NZS ISO 9001:2015 – Quality Management System
- » AS/NZS ISO 14001:2015 – Environmental Management System
- » AS/NZS 4801:2001 – Occupational Health and Safety Management System
- » New South Wales Government Accreditation Scheme.

Copies of these certifications can be found on the Multiplex Operating System ‘Document and Forms Library’.

1.2 Scope of this Plan

This Plan applies to the works associated with the Project and consists of:

- » An overview of the Environmental Management System (EMS)
- » The organisational structure for environmental management
- » Applicable legislative requirements
- » Sub-plans to manage the environmental aspects of the Project
- » Environmental incident management processes
- » Processes to monitor and evaluate environmental performance.

1.3 Abbreviations

The abbreviations used in this Plan are outlined below.

Abbreviation	Definition
AS/NZS	Australian and/or New Zealand Standard
ASS	Acid Sulfate Soil
CEMP	Construction Environment Management Plan
DEC	Department of Environment and Conservation
DIA	Department of Indigenous Affairs
EMS	Environmental Management System
EWMS	Environmental Work Method Statement
SDS	Safety Data Sheet
MPX	Multiplex Constructions Pty Ltd
MSOP	Management System Operational Procedures
NEPC	National Environment Protection Council
NEPM	National Environmental Protection Measures
REF	Review of Environmental Factors

Figure 1 *Abbreviations*

1.4 Precedence

Where ambiguity is detected between the procedures and requirements in this plan and the MSOPs located on Multiplex Operating System, then the procedures nominated in this Plan will take precedence.

1.5 Interface with other Operational Procedures and Project Plans

This Plan should be read in conjunction with the MSOP and Management Plans detailed in Section 2.2 of this Plan. The MSOP referenced in this Plan are confidential documents, and as such, will not be issued outside of Multiplex. However, they will be made available, for the purpose of surveillance and audit of the EMS.

1.6 Project Scope

The scope of the Works can be summarised as follows:

- demolition of buildings 34, 37 (remaining portion), 38, 51 & 52 and any associated sub-surface structures, and including hazardous materials removal, tree removal, tree relocation, site clearance and make good;
- general site enabling works including relocation and augmentation of services to Lot 41 (east and west);
- construction of a PCA A grade commercial office building of 10 occupied levels (including ground floor) and approximately 27,000 m² of commercial NLA on the western portion of Lot 41;
- an integrated fitout for the Ministry of Health and other Health entities, organisations and pillars throughout the building including interconnecting stairs (with the exception of a single whole level that will not be the subject of fitout);
- an outdoor forecourt / podium public domain area connecting the new building lobby to the Vanderfield Building heritage precinct within the grounds of RNSH;
- an accessible pedestrian link between the existing Herbert Street pedestrian bridge (from St Leonards station) and Reserve Road that integrates with the forecourt public domain area;
- hard and soft landscaping to the site and surrounds including amendments to Reserve Road and construction of a new access road to service the new building and the eastern portion of Lot 41; and
- design and installation of suitable building services (ie. connection access conduits for power, internet and communications) and vehicular access provisions to facilitate a potential sub-divided site (situated to the east of the SHOR building).

The building features large floorplates, of approximately 3,000 m², with a side core in keeping with modern workplace trends which desire large open floorplates with good access to natural light.

The base building works are to be fully integrated with the fitout for the Ministry (and its Health Entities) and suitable for cellular office, open plan and activity based working layouts. In addition to the commercial space, the building is to feature a two storey basement carpark, end-of-trip facilities and a ground floor area to accommodate the main building lobby, security and concierge, a cafe retail space and a 'cold shell' space for child care facilities.

The building is also to achieve the following sustainability measures and outcomes:

- Green Star Base Building (Design & As-built): 5 star
- NABERS Energy Base Building: 5 stars
- NABERS Energy Tenancy: 5 stars
- NABERS Water Whole Building: 4 stars
- Green Star Interiors: adoption of feasible, practical initiatives, but without seeking a formal rating
- Green Star Performance: adoption of feasible, practical initiatives, but without seeking a formal rating
- WELL Certification: investigate the feasibility of pursuing preconditions in each category as feasible/practical
- design and installation of provisions within the building to facilitate a possible future installation of a large scale solar PV system – such provisions include ensuring a suitable structural capacity of the roof, allowing appropriate

spatial provisions in plant rooms and risers, and designing the electrical infrastructure so as to accommodate the future retrofit of a PV system.

1.7 Legal and Other Requirements

In accordance with Procedure BU AUS IMS P DIV 050 – Document and Records Management, a schedule of environmental legislation has been developed to identify all environmental legal and other requirements that are applicable to the project. This schedule is maintained on Multiplex Operating System and is reviewed annually by the WHS&E Manager/Coordinator.

1.7.1 Legislative References

The pertinent Acts, Regulations and Guidelines that apply to the project are outlined below:

ENVIRONMENTAL LEGISLATION REGULATIONS AND GUIDELINES	
Acts	
» Contaminated Land Management Act 1979	» Ozone Protection Act 1989
» Environmentally Hazardous Chemicals Act 1985	» Pesticides Act 1999
» Environmental Planning and Assessment Act 1979	» Protection of the Environment Operations Act 1997
» Heritage Act 1977	» Soil Conservation Act 1938
» Land and Environment Court Act 1979	» Sydney Water Act 1994
» Local Government Act 1993	» Waste Avoidance and Resource Recovery Act 2001
» National Parks and Wildlife Act 1974	» Water Act 1912
Regulations	
» Contaminated Land Management Regulation 2013	» Protection of the Environment Operations (Clean Air) Regulation 2010
» Environmentally Hazardous Chemicals Regulation 2017	» Protection of the Environment Operations (General) Regulation 2009
» Environmental Planning and Assessment Regulation 2000	» Protection of the Environmental Operations (Underground Petroleum Storage Systems) Regulations 2014
» Heritage Regulation 2012 – various amendments and Regulations	» Protection of the Environment Operations (Noise Control) Regulation 2017
» Land and Environment Court Regulation 2005	» Protection of the Environment Operations (Waste) Regulation 2014
» Local Government (General) Regulation 2005	
» National Parks and Wildlife Regulation 2009	
» Pesticides Regulation 2017	
» Sydney Water Regulation 2017	
Commonwealth (National) Environmental Legislation	
» Aboriginal and Torres Strait Islander Heritage Protection Act 1984	» Ozone Protection and Synthetic Greenhouse Gas Management Act 1989
» Environmental Protection and Biodiversity Conservation Act 1999	» Product Stewardship Act 2011
» National Environment Protection Council Act 1994	» Water Efficiency Labelling and Standards Act 2005
» National Greenhouse and Energy Reporting Act 2000	
Commonwealth National Environmental Protection Measures	
» National Environment Protection (National Pollutant Inventory) Measures 1998	» National Environment Protection (Diesel Vehicle Emissions) Measure 2001
» National Environment Protection (Ambient Air Quality) Measure 1998	» National Environment Protection (Used Packaging Materials) Measure 2011
» National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013)	» National Environment Protection (Air Toxics) Measure 2011
NSW Environmental Planning Policies	
» State Environmental Planning Policy (State and Regional Development) 2011	» State Environmental Planning Policy (Building Sustainability Index: BASIX) 2004
» State Environmental Planning Policy (Exempt and Complying Development Codes) (2008)	» State Environmental Planning Policy No 71 (Coastal Protection)
» State Environmental Planning Policy (Infrastructure) 2007	

ENVIRONMENTAL LEGISLATION REGULATIONS AND GUIDELINES	
» State Environmental Planning Policy (Major Development) 2005	» State Environmental Planning Policy No 55 (Remediation of Land) » Sydney Local Environmental Plan 2012
Guidelines/ Australian Standards	
» Air Quality Guidance Notes for Construction Sites	» NSW Heritage Office Guidelines- Photographic Recording of Heritage Items using Film or Digital Capture.
» Assessing Significance for Historical Archaeological Sites and Relics	» AS 1940-2017- The storage and handling of flammable and combustible liquid
» Assessing Vibration – Technical Guidelines (2006) – DEC (EPA) AS1055	» AS 4976-2008- The removal and disposal of underground petroleum storage tanks
» Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000)	» AS 4897-2008 – The design, installation and operation of underground petroleum storage systems
» City of Sydney Code of Practice for the Construction Hours/Noise 1992	» UPSS Technical Note:Site Validation Reporting
» City of Sydney Council’s Policy for Waste Minimisation in New Developments 2005	» UPSS Technical Note: Decommissioning, Abandonment and removal of UPSS
» Technical Guidelines to Minimise Blasting Overpressure and Ground Vibration	» Managing Urban Stormwater – Soils and Construction
» Environmental Management Systems Guidelines for the Construction Industry	» Know Your Responsibilities – Managing Waste From Construction Sites
» Interim Construction Noise Guideline	» National Australian Built Environment Rating System (NABERS Energy)Energy)

Figure 2 Environmental Legislative Regulation and Guideline

1.7.2 Approvals, Licenses and Permits

The relevant approvals, permits and licenses for the project are outlined below:

Approval/Licence/Permit	Relevant Authority	Details
210803ASA	A class licence	Asbestos Removal Works
AD200565	Demolition licence	Demolition works (restricted & unrestricted licence)
941R-00173047-01	Demolition notification	Notification to demolish buildings
943R-00174115-01	Safework	Notificaiton to remove asbestos (Friable & Non Friable)
943R-00174115-01	Safework	Notification to remove lead

Figure 3 Approvals, permits and licenses

1.7.3 SSSA Conditions

The relevant development conditions relating to environmental management for the project are outlined below. In accordance with the below SSSA conditions, Multiplex will ensure compliance with the following environmental SSSA clauses.

The clauses are broken by the Prefix initials per the following:

Prefix	Condition Type
A	Administrative Condition
B	Prior to Commencement of Works
C	During Construction
D	Prior to Occupation or Commencement of Use
E	Post Occupation
AN	Advisory Notes

Category	Clause No.	Requirement
Review of Strategies, Plans and Programs	A13	<p>Within three months of:</p> <ul style="list-style-type: none"> a) the submission of a compliance report under conditions of this consent b) the submission of an incident report under conditions of this consent c) the submission of an Independent Environmental Audit under conditions of this consent d) the approval of any modification to the conditions of this consent; or e) the issue of a direction of the Planning Secretary under condition A3, <p>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.</p>
	A14	<p>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 and submitted:</p> <ul style="list-style-type: none"> a) to the Planning Secretary’s satisfaction if previously approved by the Planning Secretary; or b) to the Planning Secretary for information <p>Where revisions are required, the revised document must be submitted to the Planning Secretary within six weeks of the review</p>
Incident Notification, Reporting and Response	A15	<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.</p>
	A16	<p>A written incident notification must also be emailed to the Department at the following address: comoliance@planning.nsw.gov.au within seven days after the Applicant becomes aware of an incident. Notification is required to be given under this condition even if the Applicant forms the view that an incident has not occurred.</p> <p>Written notification of an incident must:</p> <ul style="list-style-type: none"> i) identify the development and application number; ii) provide details of the incident (date, time, location, a brief description of what occurred and why it is classified as an incident); iii) identify how the incident was detected; iv) identify when the Applicant became aware of the incident; v) identify any actual or potential non-compliance with conditions of consent;

Category	Clause No.	Requirement
		<ul style="list-style-type: none"> vi) describe what immediate steps were taken in relation to the incident; vii) identify further action(s) that will be taken in relation to the incident; and viii) identify a project contact for further communication regarding the incident.
	A17	<ul style="list-style-type: none"> a) Within 30 days of the date on which the incident occurred or as otherwise agreed to by the Planning Secretary, the Applicant must provide the Planning Secretary and any relevant public authorities (as determined by the Planning Secretary) with a detailed report on the incident addressing all requirements for such reporting set out in A16(b), and such further reports as may be requested. b) The incident report must include: <ul style="list-style-type: none"> (i) a summary of the incident (ii) outcomes of an incident investigation, including identification of the cause/s of the incident (iii) details of the corrective and preventative actions that have been, or will be, implemented to address the incident and prevent recurrence; and (iv) details of any communication with other stakeholders regarding the incident
Non-Compliance Notification and Reporting	A18	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. The Certifying Authority must also notify the Department in writing to compliance@planning.nsw.gov.au within seven days after they identify any non-compliance.
	A19	The 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.
Audits	A20	<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 2B of Part 6 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: 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.</p>
Applicability of Guidelines	A21	<p>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.</p> <p>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.</p>
Erosion and Sediment Control	B9	Soil erosion and sediment control measures must be designed in accordance with Managing Urban Stormwater – Soils & Construction Volume 1 (2004) by Landcom. Details are to be submitted to the satisfaction of the Certifying Authority prior to Commencement of any works.

Category	Clause No.	Requirement
	C5	All erosion and sediment control measures, are to be effectively implemented and maintained at or above design capacity for the duration of the construction works and until such time as all ground disturbed by the works has been stabilised and rehabilitated so that it no longer acts as a source of sediment.
Construction Environmental Management Plan (CEMP)	B16	<p>a) Prior to the commencement of works on the Subject Site, a Construction Environmental Management Plan (CEMP) must be prepared for the development and be submitted to the Certifying Authority for approval. The CEMP must address, but not be limited to, the following matters where relevant:</p> <ul style="list-style-type: none"> (i) Hours of work (ii) 24 hour contact details of site manager; (iii) traffic management, in consultation with the local Council, including a designated off-street car parking area for construction related vehicles; (iv) construction noise and vibration management, prepared by a suitable qualified person; (v) management of dust to protect the amenity of the neighbourhood (vi) erosion and sediment control (vii) stormwater control and discharge (viii) measures to ensure that sediment and other materials are not tracked onto the roadway by vehicles leaving the subject site (ix) groundwater management plan including measures to prevent groundwater contamination (x) external lighting in compliance with AS4282:1997 Control of the obtrusive effects of outdoor lighting. (xi) an unexpected finds protocol (UFP) and associated communications procedure (xii) waste classification (for materials to be removed) and validation (for materials to remain) be undertaken to confirm the contamination status in these areas of the site; and (xiii) waste storage, recycling and litter control <p>c) The CEMP must not include works that have not been explicitly approved in the development consent. In the event of any inconsistency between the consent and the CEMP, the consent must prevail; and</p> <p>d) The Applicant must submit a copy of the CEMP to the Department and Council, prior to commencement of work.</p>
Construction Noise and Vibration Management Plan	B18	<p>Prior to the commencement of works on the Subject Site, a Construction Noise and Vibration Management Plan (CNVMP) must be prepared for the development and be submitted to the Certifying Authority for approval. The CNVMP must address, but not be limited to, the following matters where relevant:</p> <ul style="list-style-type: none"> i) be prepared by a suitable qualified expert; ii) be prepared in circulation with Council and all noise sensitive receivers where noise levels exceed the construction noise management level, in accordance with EPA guidelines; iii) describe the measure that would be implemented to ensure: <ul style="list-style-type: none"> a. Best management practice is being employed; b. Compliance with the relevant conditions of this consent; iv) describe the proposed noise and vibration management measures in detail; v) include strategies that have been developed to address impacts to noise sensitive receivers where noise levels exceed the construction noise management level, for managing high noise generating works; vi) evaluates and reports on the effectiveness of the noise and vibration management measures; and vii) includes an out-of-hours work protocol, including a detailed assessment of any works outside of standard EPA construction hours, mitigation measures and a complaints management system that would be implemented for the duration of the project.
	B19	The Applicant must submit a copy of the CNVMP to the Department and Council prior to commencement of work.
	B20	The CNVMP (as revised from time to time) must be implemented by the Applicant for the duration of the construction works.

Category	Clause No.	Requirement
Complaints and Enquiries Procedure	B29	<p>A Complaints Management System must be prepared before the commencement of any works and be implemented and maintained for the duration of works.</p> <p>The Complaints Management System must include a Complaints Register to be maintained recording information on all complaints received about the development during the carrying out of any works associated with the development. The Complaints Register must record the:</p> <ul style="list-style-type: none"> a) number of complaints received; b) number of people affected in relation to a complaint; and c) nature of the complaint and means by which the complaint was addressed and whether resolution was reached, with or without mediation. <p>The Complaints Register must be provided to the Planning Secretary upon request, within the timeframe stated in the request.</p>
Pre-Construction Compliance Reporting	B30	<p>A Pre-Construction Compliance Report must be prepared for the development, and submitted to the Certifying Authority for approval before the commencement of construction works. A copy of the endorsed compliance report must be provided to the Department at compliance@planning.nsw.gov.au before the commencement of construction works.</p>
Construction Traffic and Pedestrian Management Plan (CTPMP)	B21	<p>a) Prior to the commencement of works on the Subject Site, a Construction Traffic and Pedestrian Management Plan (CTPMP) prepared by a suitably qualified person must be submitted to the satisfaction of the Certifying Authority. The Plan must be prepared in consultation with the Council, CBD Coordination Office within Transport for NSW and RMS. The CTPMP must address, but not be limited to, the following:</p> <ul style="list-style-type: none"> i) identification of construction traffic routes for all required vehicles during construction, inclusive of any crane delivery, including any known road closures and consideration of alternate routes and construction traffic volumes (including heavy vehicle/spoil haulage) on these routes, including any required construction work zone along Reserve Road; i) details of construction vehicle movements including parking, dedicated vehicle turning areas, and ingress and egress points; ii) discussion of construction impacts that could result in disruption of traffic, public transport, pedestrian and cycle access, access to public land, property access, including details of oversize load movements, and the nature and duration of those impacts; iii) discussion of potential cumulative construction impacts on the surrounding road network as a result of the simultaneous construction of adjoining developments; iv) details of management measure to minimise traffic impacts, including temporary road work traffic control measures and measure to minimise peak period congestion; v) details of measures to maintain or provide alternative safe and accessible routes for pedestrian throughout the duration of construction vi) details of measures to maintain connectivity for cyclists, with particular emphasis on providing adequate access between key existing cycle routes for commuter cyclists; vii) details of methods to be used to communicate proposed future traffic changes to affected road users, pedestrians and cyclists; viii) an adaptive response plan which sets out a process for response to any traffic, construction or other incident; and ix) Mechanisms for the monitoring, review and amendment of the CTPMP.

Category	Clause No.	Requirement
		Any alterations to the public road, involving traffic and parking arrangements, must be referred to and approved by the relevant traffic committee. The Applicant must submit a copy of the CTPMP to the Department and Council, prior to the commencement of works.
	C7	The development must be constructed with the aim of achieving the construction noise management levels detailed in the Interim Construction Noise Guideline (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 Construction Noise and Vibration Management Plan (CNVMP).
	C8	If the noise from a construction activity is substantially tonal or impulsive in nature (as described in NSW Noise Policy for Industry), 5 dB(A) must be added to the measured construction noise level when comparing the measured noise with the construction noise management levels.
	C9	The Applicant must ensure all construction related vehicles do not arrive at the project site or in surrounding residential precincts outside approved hours of work.
	C10	The Applicant must schedule intra-day 'respite periods' for construction activities identified in the Interim Construction Noise Guideline as being particularly annoying to surrounding residents and other noise sensitive receivers or where construction activities result in those residents and sensitive receivers being exposed to construction noise levels above 75 dB(A) (i.e. "highly noise affected").
	C11	Any noise generated during the construction of the development must not be offensive noise within the meaning of the Protection of the Environment Operations Act 1997 or exceed approved noise limits for the Subject Site.
	C12	The Applicant must ensure construction of the development is carried out in accordance with the recommendations outlined under St Leonards Health Organisation Relocation (SHOR) Construction Noise and Vibration Management Plan, prepared by Acoustic Logic 19/02/2018.
	C13	Wherever practical, and where sensitive receivers may be affected, piling activities are completed using bored piles. If driven piles are required they must only be installed where outlined in a Construction Noise and Vibration Management Plan.
	C14	Vibration caused by construction at any residence or structure outside the Subject Site must be limited to: a) for structural damage vibration, German Standard DIN 4150 Part 3 Structural Vibration in Buildings. Effects on Structures; and b) for human exposure to vibration, the evaluation criteria presented in British Standard BS 6472-1:2008 – Guide to evaluate human exposure to vibration in buildings. Vibration sources other than blasting (1 Hz to 80 Hz) for low probability of adverse comment.
	C15	Vibratory compactors must not be used closer than 30 metres from residential buildings unless vibration monitoring confirms compliance with the vibration criteria specified above.
	C16	These limits apply unless otherwise outlined in the CNVMP, required under condition B17 and submitted to the satisfaction of the Certifying Authority.
	E2	Noise associated with the operation of any plant, machinery or other equipment on the Subject Site, must not exceed 5 dB(A) above the rating background noise level when measured at the boundary of the sensitive receiver.
	E3	The Applicant must undertake short term noise monitoring in accordance with the Noise Policy for Industry where valid data is collected following the commencement of use of each stage of the development. The monitoring program must be carried out by an appropriately qualified person and a monitoring report must be submitted to the Planning Secretary within two months of commencement use of each stage of the development to verify that operational noise levels do not exceed the recommended noise levels for mechanical plant identified in St Leonards Health Organisation Relocation (SHOR) Operational Noise & Vibration Assessment,

Category	Clause No.	Requirement
		prepared by Renzo Tonin & Associates dated 18 June 2018. Should the noise monitoring program identify any exceedance of the recommended noise levels referred to above, the Applicant is required to implement appropriate noise attenuation measures so that operational noise levels do not exceed the recommended noise levels or provide attenuation measures at the affected noise sensitive receivers.
Construction Waste Management Plan (CWMP)	B23	<p>a) Prior to the commencement of works on the Subject Site, a Construction Waste Management Plan (CWMP) must be prepared for the development by a suitably qualified person in consultation with the Council, and be submitted to the Certifying Authority for approval. The CWMP must address, but not be limited to, the following matters:</p> <p>i) recycling of demolition materials including concrete;</p> <p>ii) removal of hazardous materials and disposal at an approved waste disposal facility in accordance with the requirements of the relevant legislation, codes, standards and guidelines, prior to the commencement of any building works; and</p> <p>iii) details of methods to be used to prevent spill, escape of any dust, waste or spoil from the vehicles or trailers used to transport waste or excavation spoil from the site.</p> <p>b) Details demonstrating compliance with the relevant legislative requirements, associated with the removal of hazardous waste, particularly the method of containment and control of emission of fibres to the air, must be submitted to the satisfaction of the Certifying Authority prior to the removal of any hazardous materials.</p> <p>c) The Applicant must notify the Roads and Maritime Authority's Traffic Management Centre (TMC) of the truck route(s) to be followed by trucks transporting waste material from the Subject Site, prior to the commencement of the removal of any waste material from the Subject Site.</p> <p>d) The Applicant must submit a copy of the CWMP to the Department and to Council prior to the commencement of work.</p>
	B24	The CWMP (as revised from time to time) must be implemented by the Applicant for the duration of the construction works.
Site Contamination	B25	Prior to the commencement of works, the Applicant must submit a written statement, prepared by a suitably qualified environmental consultant, to the Certifying authority advising the results of the post demolition site inspection. If contamination was discovered on the site, the Applicant must submit to the Certifying Authority a Site Audit Report and Site Audit Statement prepared by an EPA accredited site auditor. The site audit report and site audit statement must verify that the land is suitable for the uses proposed as part of this approval.
	C4	Should any new information come to light during construction works which has the potential to alter previous conclusions about site contamination, then the Certifying Authority must be immediately notified and works must cease. The Certifying Authority will determine whether further investigation, or the need for remediation, is required before construction works can recommence.
	D17	The Applicant shall submit to the Certifying Authority a Site Audit Report and Site Audit Statement prepared by an EPA accredited site auditor following the completion of works prior to occupation of the building. The site audit report and site audit statement must verify that the land is suitable for the uses proposed under this consent.
Unexpected Finds - ACM	B26	Prior to the commencement of below ground works, the Applicant must prepare an unexpected contamination finds procedure to ensure that any unexpected potentially contaminated material is appropriately managed. The procedure must form part of the of the CEMP in accordance with Condition B15 and must ensure any material identified as contaminated is appropriately managed and disposed off-site, with the disposal location and results of testing submitted to the Planning Secretary, prior to its removal from the site
Unexpected Finds – Non Aboriginal Relics	C24	If any unexpected archaeological relics are uncovered during the course of the work, then all works must cease immediately in that area and the OEH Heritage Division contacted. Depending on the possible significance of the relics, an archaeological assessment and management strategy may be required before further works can continue in that area. Works may only recommence with the written approval of Heritage Division of the Office of Environment and Heritage.

Category	Clause No.	Requirement
Unexpected Finds – Aboriginal Heritage	C25	In the event that surface disturbance identifies a new Aboriginal object, all works must halt in the immediate area to prevent any further impacts to the object(s). A suitably qualified archaeologist and the registered Aboriginal representatives must be contacted to determine the significance of the objects. The site is to be registered in the Aboriginal Heritage Information Management System (AHIMS) which is managed by OEH and the management outcome for the site included in the information provided to AHIMS. The Applicant must consult with the Aboriginal community representatives, the archaeologists and OEH to develop and implement management strategies for all projects/sites. Works may only recommence with the written approval of OEH.
Access to information	C28	At least 48 hours before the commencement of construction until the completion of all works under this consent, or such other time as agreed by the Planning Secretary, the Applicant must: <ul style="list-style-type: none"> a) make the following information and documents (as they are prepared, obtained or approved) publicly available on its website: <ul style="list-style-type: none"> i) the documents referred to in condition A2 of this consent; 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 arrangements 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) audit reports prepared as part of any independent environmental audit of the development and the Applicant's response to the recommendations in any audit report; any other matter required by the Planning Secretary; and b) keep such information up to date, to the satisfaction of the Planning Secretary.
Compliance – General	C29	The Applicant must ensure that employees, contractors and 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.
	C30	Construction Compliance Reports must be submitted to the Department at compliance@planning.nsw.gov.au for information every six months from the date of the commencement of construction, for the duration of construction. The Construction Compliance Reports must provide details on the compliance performance of the development for the preceding six months and must be submitted within one month following the end of each six month period for the duration of the construction of the development, or such other timeframe as required by the Planning Secretary.
	C31	The Construction Compliance Reports must include: <ul style="list-style-type: none"> a) a results summary and analysis of environmental monitoring; b) the number of any complaints received, including a summary of main areas of complaint, action taken, response given and proposed strategies for reducing the recurrence of such complaints; c) details of any review of the CEMP and associated sub-plans as a result of construction carried out during the reporting period; d) a register of any modifications undertaken and their status; e) results of any independent environmental audits and details of any actions

Category	Clause No.	Requirement
		<p>taken in response to the recommendations of an audit;</p> <p>f) a summary of all incidents notified in accordance with this consent; and</p> <p>g) Any other matter relating to compliance with the terms of this consent or as requested by the Planning Secretary.</p>
Work Cover Requirements	C32	To protect the safety of work personnel and the public, the work site must be adequately secured to prevent access by unauthorised personnel, and work must be conducted at all times in accordance with relevant Work Cover requirements.
Independent Environmental Audit	B33	No later than one month before the commencement of construction works or within another timeframe agreed with the Planning Secretary, a program of independent environmental audits must be prepared for the development in accordance with the latest version of AS/NZS ISO 19011-2014: Guidelines for Auditing Management Systems (Standards Australia, 2014) and submitted to the Planning Secretary for information.
	B34	The scope of each audit must be defined in the program. The program must ensure that environmental performance of the development in relation to each compliance requirement that forms the audit scope is assessed at least once in each audit cycle.
	B35	The environmental audit program prepared and submitted to the Planning Secretary in accordance with conditions B33 and B34 above must be implemented and complied with for the duration of the development.
	B36	All independent environmental audits of the development must be conducted by a suitably qualified, experienced and independent team of experts and be documented in an audit report which: <ul style="list-style-type: none"> a) assesses the environmental performance of the development, and its effects on the surrounding environment including the community; b) assesses whether the development is complying with the terms of this consent; c) reviews the adequacy of any document required under this consent; and d) recommends measures or actions to improve the environmental performance of the development, and improvements to any document required under this consent.
	B37	Within three months of commencing 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.
Hours of Work	C2	<ul style="list-style-type: none"> a) Construction, including the delivery of materials to and from the site, may only be carried out between the following hours: <ul style="list-style-type: none"> i) between 7 am and 5.30 pm, Mondays to Fridays inclusive; and ii) Between 7.30 am and 3 pm, Saturdays. b) No work may be carried out on Sundays or public holidays.) Activities may be undertaken outside of these hours: <ul style="list-style-type: none"> i) if required by the Police or a public authority for the delivery of vehicles, plant or materials; or if required in an emergency to avoid the loss of life, damage to property or to prevent environmental harm; or works are inaudible at the nearest sensitive receivers; or if a variation is approved in advance in writing by the Planning Secretary or her nominee. d) Notification of such activities must be given to affected residents before undertaking the activities or as soon as is practical afterwards.
	C3	Rock breaking, rock hammering, sheet piling, pile driving and similar activities may only be carried out between the following hours: <ul style="list-style-type: none"> a) 9 am to 12 pm, Monday to Friday; b) 3 pm to 5 pm Monday to Friday; and c) 9 am to 12 pm, Saturday.
Disposal of Seepage and Stormwater	C6	Any seepage or rainwater collected on-site during construction or ground water must not be pumped to the street stormwater system unless separate prior approval is given in writing by the Environment Protection Authority in accordance with the Protection of the Environment Operations Act 1997.

Category	Clause No.	Requirement
Protection of Trees	C17	<p>a) No street trees are to be trimmed or removed unless it forms a part of this development consent or prior written approval from Council is obtained or is required in an emergency to avoid the loss of life or damage to property.</p> <p>b) All street trees shall be protected at all times during construction. Any tree on the footpath, which is damaged or removed during construction due to an emergency, shall be replaced, to the satisfaction of Council.</p> <p>c) All trees on the Subject Site that are not approved for removal are to be suitably protected by way of tree guards, barriers or other measures as necessary are to be provided to protect root system, trunk and branches, during construction.</p> <p>d) If access to the area within any protective barrier is required during the works, it shall be carried out under the supervision of a qualified arborist. Alternative tree protection measures shall be installed, as required. The removal of tree protection measures, following completion of the works, shall be carried out under the supervision of a qualified arborist and shall avoid both direct mechanical injury to the structure of the tree and soil compaction within the canopy or the limit of the former protective fencing, whichever is the greater.</p>
Waste	C18	All waste generated by the project must be assessed, classified and managed in accordance with the Waste Classification Guidelines Part 1: Classifying Waste (EPA, 2014).
	C19	The body of any vehicle or trailer used to transport waste or excavation spoil shall be covered before leaving the premises to prevent any spillage or escape of any dust, waste or spoil. Mud, splatter, dust and other material likely to fall from or be cast off the wheels, underside or body of any vehicle, trailer or motorised plant leaving the site must be removed before leaving the premises.
Stormwater Quality Management Plan	D12	<p>A Stormwater Quality Management Plan (SQMP) is to be prepared to ensure proposed stormwater quality measures remain effective. The SQMP must contain the following:</p> <p>a) maintenance schedule of all stormwater quality treatment devices;</p> <p>b) record and reporting details;</p> <p>c) waste management and disposal;</p> <p>d) traffic control measures (if required);</p> <p>e) relevant contact information;</p> <p>f) renewal, decommissioning and replacement timelines and activities of all stormwater quality treatment devices; and</p> <p>g) Work Health and safety requirements.</p> <p>Details demonstrating compliance must be submitted to the Certifying Authority prior to occupation.</p>
Vehicle Management	E4	All loading and unloading of service vehicles in connection with the use of the premises must be carried out wholly within the Subject Site at all times.
	E5	All vehicles must enter and leave the Subject Site in a forward direction.

Figure 4 State Significant Development Conditions

In addition to the above clauses by which Multiplex guarantees the compliance of, refer below plans that have been prepared by Multiplex’s appointed consultants. These plans will be followed upon the commencement of works on site, as well as in the preliminary stages of design and planning.

As this is a live document, the submittal of this Management Plan is made on the proviso that supporting plans shall be added when they are made available. Sections of the below table are TBC until that time whereby the plans are received by a consultant.

Plan	Consultant/Subcontractor	Appendix Reference
Land Management	Warren Smith and Partners	N/A

Asbestos/Hazardous Materials <i>Asbestos Removal Control Plans</i>	N Moit and Sons	Appendix 5
Noise and Vibration	Acoustic Logic	Appendix 6
Erosion and Sediment Control	Warren Smith and Partners	Appendix 7
Air and Dust Quality	N Moit and Sons	Appendix 8
Tree Management	Tree Wise Men	Appendix 9
Water Quality Management Strategy	Moits	Appendix 10

1.8 Hours of Work

As outlined in the SSDA, the hours of work are strictly limited to:

Day	Time
Monday – Friday	7 – 5:30pm
Saturday	7:30am – 3pm
Sunday / Public Holidays	No Work

Activities may be undertaken outside of these hours pursuant to the following SSDA conditions and if notification of such activities are provided to affected residents before these undertakings.

- » If required by the Police or a public authority for the delivery of vehicles, plant or materials
- » If required in an emergency to avoid the loss of life, damage to property or to prevent environmental harm
- » If works are inaudible at the nearest sensitive receivers
- » If a variation is approved in advance in writing by the Planning Secretary or her nominee.

Works including but not limited to rock breaking, rock hammering and sheet piling may only be conducted during the below times:

Day	Times
Monday – Friday	9am – 12pm ; 3pm – 5pm
Saturday	9am – 12pm

1.9 Document Control

This plan and relevant environmental sub-plans will be revised:

- » Six monthly
- » In response to future project approvals or modifications
- » In response to changes in law, risks or accepted practices

- » In response to major changes in site conditions or work methods, or due to incidents
- » Commencement of new phases or stages of design and construction
- » In response to the findings, recommendations or outcomes of a planned management review, audit or risk assessment
- » Requests or requirements of EPA or any other Authority
- » In support of planning approvals or licence variations as necessary.

Electronic distribution of this Plan will be made to those detailed on the distribution list on Aconex.

All changes will be identified as below, and communicated to all relevant personnel.

Revision	Date	Description	Pages	Reviewed By	Approved By
1	02/02/2018	Environmental Management Plan	All	Richie Lok	Paul Couani
2	15/02/2018	Environmental Management Plan	All	Richie Lok	Paul Couani
3	06/09/2018	Changes to reflect SSDA requirements JBS&G comments	All	Sam EL-Choufani Yasaman Ziaie Richie Lok	Paul Couani
4	27/02/2019	Reviewed for accuracy	All	Ali Taleb	Paul Couani
5	27/07/2019	Reviewed for accuracy	All	Ali Taleb	Paul Couani
6	12/11/2019	Minor formatting edits	All	Jade Nicholson	Paul Couani

Figure 5 Document Revisions Control

2. Environmental Management System Framework

2.1 Approach to Environmental Management

Multiplex is continuously seeking to improve environmental culture and standards across its business and the broader industry.

Multiplex works with its clients to integrate environmental management controls at the earliest opportunity. Our aim is to eliminate critical risks which may have long-term consequences.

Multiplex’s approach to environmental management is underpinned by a mature and disciplined environmental culture which is embraced by its people and driven by what its leaders do and say. Multiplex encourages its people to learn from each other’s experiences and share best practice.

2.2 Management System Framework

Multiplex has a management framework which is applied throughout the business and on all projects it undertakes. The EMS documentation forms part of this System Framework and maintained in electronic format on Multiplex Operating System.

The structure of the overall Management System is explained below.

Element	Content	
Internal Control Framework	Operating Environment Risk Assessment Control Activities	Information and Communication Monitoring Activities
Policies	Work Health and Safety Environmental Quality Risk	Drugs and Alcohol Injury and Rehabilitation Indigenous Engagement Diversity
Operational Procedures	Risk Management Integrated Management Quality Management Design Management Construction Management Health and Safety Management	Environmental Management Project Administration Bid Management Human Resources Management Planning and Programming
Management Plans	Project Quality Design Work Health and Safety Environmental Emergency Construction Noise Completion and Handover	Construction Stakeholder Risk Commissioning and Testing Drugs and Alcohol – Fitness for work Workplace Injury Procurement Social Action
Sub Plans	Construction Noise and Vibration Dust and Air Quality Water Quality Erosion and Sediment Chemicals Land Contamination	Waste Heritage Flora and Fauna Site Office
Risk Management	Project Risks	Aspects and Impacts
Forms and Guides	As per Appendix 2	

Figure 6 Management Framework

3. Responsibility and Accountability

3.1 Environmental Policy

Multiplex policies relating to environmental management are contained in **Appendix 1**.

This policy will be made publicly available through the Multiplex Intranet and distributed for display in prominent Project locations. In addition, all personnel attending Project inductions will be made aware of the policy and Multiplex’s commitment to implement it.

3.2 Objectives, Targets and Programs

Environmental objectives and targets established in the table below and in each sub-plan will be monitored, reviewed and assessed by Senior Management, in accordance with Procedure BU AUS IMS P DIV 030 – *Planning and Performance Measurement*.

Objective	Target	Measure
Maximising opportunity to control risk by design, planning and re-planning.	Conduct an environmental risk workshop within 2 months of project commencement.	Environmental aspects and impacts register established within 2 months of project commencement.
Focusing priority on control of critical risks.	Continuously monitor and improve environmental performance through a program of inspections.	Inspections conducted on a fortnightly basis by the onsite Environmental Coordinator.
Closing the gap between paperwork and practice.	Conduct environmental training of all onsite Environmental Coordinators prior to assigned responsibility.	Training conducted prior to assigned responsibility.
Growing a mature culture: innovative, reporting, learning and collaborative.	No environmental regulatory infringements or major pollution incidents.	Number of environmental regulatory infringements and major pollution incidents.

Figure 7 Environmental Project Objectives and Targets

3.3 Management Review

Through the use of audit results, inspection reports, corrective and preventative actions and meetings, Multiplex will continually improve the effectiveness of the EMS in accordance with Procedure BU AUS IMS P DIV 140 – *Management Review*.

Changes to existing procedures will be recorded and communicated to the affected personnel.

3.4 EMS Organisational Chart

Environmental management during construction is the responsibility of each and every member of the Multiplex project team. Management and supervisory personnel lead environmental management by example, through provision of suitable resources to implement and monitor environmental measures, identify and correct any non-conforming conditions or behaviours, and actively promote environmental awareness and individual environmental responsibility.

The organisational chart following identifies the Multiplex personnel responsible for the implementation of the EMS. The organisation chart will be updated as change occurs.

Figure 8 EMS Organisational Chart

3.5 Multiplex Roles and Responsibilities

Multiplex has identified appropriate levels of resources, individual responsibility, and accountability for managing environmental across all roles within the Project Team. These are contained in Procedure BU AUS IMS P DIV 010 – *Responsibility and Accountability*. The general responsibilities and accountabilities of key project personnel in relation to Environmental are outlined over.

Role and Responsibility	CEO – John Flecker	Group Sustainability Manager – Denise Elise	Regional Managing Director – David Ghannoum	Regional Director – Daniel Murphy	WHS&E Manager/Coordinator – Jeremy Charlton	Project Manager – Paul Couani	Site Manager – Louis Borg	Design Manager – Jade Nicholson	Contracts Manager/Admin – Daniel Jessop	Engineer/s – William Murray, Derek Tran, Vuong Hoang, Ben Heffernan	Supervisor/s – Stuart Blanch	WHS&E Coordinator – Thomas Messinesi, William Manning, Rolly Dimitrovski	Construction Workers
Provide resources including personnel, time and finances to ensure compliance with Environmental legislation and the Environmental Management System.	✓	✓	✓	✓									
Ensure MPX operations identify monitors and complies with the current legislation for Environmental Management.	✓	✓	✓	✓	✓								
Ensure that the MPX Management System , risk assessment and procedures reflect the requirements of current environmental, legislation, guidelines and standards.		✓		✓	✓								
Identify by way of subscription, all environmental legislation , standards, codes of practices and guidelines pertinent to our works.					✓								
Promote a positive workplace environmental culture .	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Engage in risk workshops to identify, assess and determine appropriate controls for all potential risk and opportunity where required.				✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Establish realistic project specific measurable targets . Monitor and report.					✓	✓	✓						
Have a working knowledge of the MPX Environmental Management System.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Complete project specific environmental documents utilising templates.					✓	✓	✓					✓	
Establish the environmental requirements for the projects site establishment and planning requirements.					✓	✓	✓					✓	
Establish a schedule of environmental legislation , Communicate and monitor for change.					✓								
Establish records filing system and maintain environmental records .												✓	
Establish and maintain environmental registers including legislation, training and quantifiable targets .					✓							✓	
Establish and organise the environmental component of the induction programme .					✓		✓					✓	
Identify and assess competency of employee’s incl. any unforeseen workforce requirements. Undertake training needs analysis and facilitate any training requirements.				✓	✓	✓	✓						
Determine and assess requirements for environmental monitoring (ie. noise, air and dust) and implement. Review results to determine compliance.					✓		✓					✓	

Role and Responsibility	CEO – John Flecker	Group Sustainability Manager – Denise Else	Regional Managing Director – David Ghannoum	Regional Director – Daniel Murphy	WHS&E Manager/Coordinator – Jeremy Charlton	Project Manager – Paul Couani	Site Manager – Louis Borg	Design Manager – Jade Nicholson	Contracts Manager/Admin – Daniel Jessop	Engineer/s – William Murray, Derek Tran, Vuong Hoang, Ben Heffernan	Supervisor/s – Stuart Blanch	WHS&E Coordinator – Thomas Messinesi, William Manning, Roly Dimitrovski	Construction Workers
Assess subcontractor’s ability to comply with the project environmental requirements and environmental contract requirements.					✓	✓	✓		✓			✓	
Provide SC's with relevant environmental documents templates, CEMPS, EWMS relevant parts of the site specific MPX CEMP.												✓	
Obtain Environmental documentation from each subcontractor prior to commencing. Register and review adequacy and request changes prior to accessing the site.					✓	✓						✓	
Monitor subcontractors activities and report on performance against EWMS and CEMP.					✓	✓					✓	✓	
Conduct inductions for all persons attending site and maintain records.												✓	✓
Complete an environmental aspects, impacts and risk assessment at commencement of the project and update as required to reflect current site conditions.					✓	✓	✓					✓	
Identify and maintain a register of all onsite hazardous materials and dangerous goods .												✓	
Obtain safety data sheets no greater than 5 years old and provide adequate hazardous substances and dangerous goods storage facilities onsite.							✓				✓	✓	✓
Conduct Environmental inspections distribute for action, obtain sign-offs from SC and close out.					✓							✓	
Attend projects to monitor and discuss Environmental issues with project management, supervisors and workers.		✓	✓	✓	✓								
Monitor, resolve and prevent significant Environmental issues and share lessons learnt.	✓	✓	✓	✓	✓								
Schedule and conduct environmental audits of Subcontractors. Distribute report and monitor status.					✓							✓	
Conduct Environmental consultation and communication on environmental matters where required.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Implement emergency response procedures as outlined in the site Emergency Response Plan						✓	✓				✓	✓	✓
Record, report and investigate environmental incidents . Monitor corrective actions and distribute any lessons learnt.				✓	✓	✓	✓					✓	
Report and distribute non-conformances and implement corrective and preventative actions. Review effectiveness of corrective actions.					✓	✓	✓			✓	✓	✓	✓
Implement environmental sub-plans and procedures.					✓	✓	✓	✓	✓	✓	✓	✓	✓
Prepare monthly report on the status of the environmental management system.						✓	✓					✓	
Review Environmental performance including adequacy of resources.	✓	✓	✓	✓	✓	✓	✓					✓	

Role and Responsibility	CEO – John Flecker	Group Sustainability Manager – Denise Else	Regional Managing Director – David Ghannoum	Regional Director – Daniel Murphy	WHS&E Manager/Coordinator – Jeremy Charlton	Project Manager – Paul Couani	Site Manager – Louis Borg	Design Manager – Jade Nicholson	Contracts Manager/Admin – Daniel Jessop	Engineer/s – William Murray, Derek Tran, Vuong Hoang, Ben Heffernan	Supervisor/s – Stuart Blanch	WHS&E Coordinator – Thomas Messinesi, William Manning, Rolly Dimitrovski	Construction Workers
Obtain feedback for both internal/external training conducted and evaluate the effectiveness of the training programs .		✓			✓								
Review environmental objectives and targets annually and provide clear direction of the Environmental management system for the next 12 months.		✓	✓	✓	✓								
Acquire and disseminate Environmental and related information including alerts and lessons learnt.		✓			✓								
Review procedures and forms resulting from any changes in legislation, regulation, standards, codes of practices and incidents.					✓								
Attend collaborative post project review meeting to assess environmental performance, identify and document lessons learnt.					✓	✓	✓	✓			✓	✓	✓

Figure 9 Multiplex EMS Roles and Responsibilities Matrix

3.6 Contractor Roles and Responsibilities

Contractors must ensure they have a CEMP and comply with statutory requirements and instructions given by Multiplex representatives in the performance of work in which they are engaged. Contractors will be responsible for:

- » Implementing their EMS
- » Reporting incidents, near misses and issues of non-compliance with EMS procedures to their supervisor or Multiplex contact
- » Ensuring construction work complies with environmental legislative requirements.

4. Communication and Consultation

4.1 Communication

Multiplex will ensure meaningful and effective communication processes are established and maintained in accordance with Procedure BU AUS IMS P DIV 040 – *Communication and Consultation*.

Communication on EMS matters will occur through the mechanisms outlined below.

Event	Frequency Requirement	Participants	Record/Evidence
Project specific induction	Prior to commencement of contracted work	All personnel	Project induction and declaration form
Work activity Induction (in EWMS or equivalent).	Prior to commencing any building/construction work	Personnel carrying out specific work activities	Record of training – listed on the EWMS or toolbox meeting record
Toolbox meetings	During the introduction of a new process (EWMS) or when discussing environmental issues / topics	MPX Supervisors and Subcontractors	Toolbox meeting record
Subcontractor meetings	Weekly or as required	Project team / Subcontractors, their employees and others as required	Minutes of meeting
Project team meetings.	Fortnightly or as required	Project team	Minutes of meeting
PCG meetings	Monthly	Client and Project Manager.	PCG report
Electronic media (i.e. Aconex)	As required	All personnel	Aconex
Project notice board and general signage	As required	All personnel	Project notice board
Environmental Site inspection actions	Fortnightly	Project team and subcontractors	Aconex Field
Enquiries and Complaints	As required	As per Stakeholder Management Plan	Communications register
Other	As required	As per Stakeholder Management Plan	As per Stakeholder Management Plan

Figure 10 Project EMS Communication Mechanisms

The SHOR projects 24hr contact details of the Site Manager are as follows:

Category	Detail
Name	Louis Borg
Phone	0438 607 962
Email	louis.borg@multiplex.global

A toll-free 1800-number will be set up to take complaints and enquiries for all matters on site, including any environmental issues and concerns.

4.2 Consultation

To ensure effective consultation occurs at all levels throughout the life of the Project, Multiplex will operate in accordance with Procedure BU AUS IMS P DIV 040 – *Communication and Consultation*.

Employees and contractors will be consulted with regard to aspects and impacts that have the potential to impact on the environment.

Consultation on environmental matters will occur through the mechanisms outlined in the table below.

Event	Frequency	Participants	Record
Work activity induction (in EWMS or equivalent)	Prior to commencing work	Personnel carrying out specific work activities	Record of training – listed on the SWMS or Toolbox Talk Record
Aspects and Impacts Risk Workshops	6 monthly	Project team and subcontractors (where required)	Aspects and Impacts Register
Toolbox meetings	As required	Subcontractors	Toolbox meeting record
Subcontractor meetings	Weekly	Project team and subcontractors	Minutes of meeting
Project team meetings	Weekly	Project team	Photos of board

Figure 11 *Project EMS Consultation Mechanisms*

5. Contractor Management

5.1 Evaluation and Selection of Contractors

All Multiplex Contractors (including subcontractors, suppliers and consultants) will be selected and appointed in accordance with Procedures BU AUS IMS P DIV 060 – *Contractor Management*, PAM P DIV 030 – *Tendering Subcontracts* and PAM P DIV 040 – *Letting of Agreements*.

Multiplex’s procurement processes ensure that all contractors engaged must meet the environmental Management requirements. This is achieved by:

- » Documenting and correctly completing subcontract agreements, supplier agreements and consultant deeds that include a scope of work and environmental requirements
- » Examination and evaluation of subcontractor’s demonstrated experience and capabilities
- » Selecting appropriate subcontractors and suppliers for tender
- » Conducting a tender interview to verify the environmental requirements related to the contract can be met
- » Evaluation, recommendation and seeking approval from senior management for engagement of the preferred contractor.

5.2 Subcontractors Environmental Management Plans and EWMS

All subcontractors are required to operate with the requirements of the CEMP and associated documents.

Based on the CEMP and risks identified in the Project Risk Assessment, MPX will assess the subcontractor’s environmental management strategies against the following:

- » The potential environmental impacts of the subcontractor’s activities
- » The environmental sensitivity of the area(s) in which the subcontractors will be working
- » The nature and scope of the subcontractor’s activities
- » The scale of the subcontractor’s activities
- » The subcontractor’s capacity to manage its own environmental performance effectively
- » The subcontractor’s previous performance.

Where a subcontractor is determined to be working in an area identified as high risk for potential impact to the environment, additional management controls will be put in place. These may include the submission of a dedicated CEMP / EWMS to address the specific work package(s) awarded and be submitted for review to MPX prior to commencement of work on site. Comments resulting from the review by Multiplex will be issued to the subcontractor for action and where required, re-submission. The CEMP / EWMS must assess the level of environmental risk and implement appropriate management controls for the subcontractor’s full scope of work.

EWMSs are aimed specifically for use by foremen and construction workers, and are reviewed by each member of the work team before they commence work. This review provides an opportunity for the work team to contribute to environmental controls, and ensure that the work team is trained in environmental methods. Changes to EWMSs are documented and communicated to workers prior to commencing changed methods.

Compliance with AS4282:1997 Control of the obtrusive effects of outdoor lighting will be achieved on this project.

5.3 Contractor EMS Submission Requirements

A summary of the subcontractors EMS submission requirements is outlined in the table below.

Item	Description	Time Frame / Frequency of Submission
1	Project Environmental Management Plan for selected trades determined by Multiplex	10 days before commencing on site.
2	Environmental Work Method Statement (EWMS) for all high activities	10 days before commencing on site.

Item	Description	Time Frame / Frequency of Submission
3	Incident/Near Miss Report	Following an incident
4	Incident Investigation Reports	Following an incident
5	MPX Inspections – completed and signed off	As per timeframe nominated in report
6	Inspection and Monitoring Records as detailed in each Environmental Sub-Plan	As per Environmental Sub-Plan

Figure 12 Summary of Subcontractor Environmental Submission Requirements

5.4 Subcontractor Environmental Management Monitoring

Multiplex will monitor work activities in accordance with Procedures BU AUS IMS P DIV 060 – *Contractor Management* – to ensure that subcontractors are carrying out work in accordance with SWMS documentation. Monitoring may be achieved by one or more of the following:

- » Ongoing visual inspections by supervisors
- » Environmental inspections
- » External Inspections/Audits.

5.5 Purchasing of Goods and Services

Multiplex personnel responsible for the procurement of materials, plant and equipment will ensure that the requirements outlined in Procedures BU AUS IMS P DIV 060 – *Contractor Management* – are implemented to ensure compliance with the relevant Australian Standards and environmental legislation.

Where goods such as materials, plant and equipment are procured, procedures for complying with environmental specifications will be implemented and will cover all environmental standards, legislation or organisational compliance requirements.

Items and equipment that are used to execute the work potentially impacting on the health and safety of a worker of the public, will be subject to hazard identification and risk assessment prior to purchase or hire.

Workers or their WHS Representatives will be consulted regarding any purchasing decisions that could affect their health and safety.

6. Risk Management

6.1 Risk Workshops

Multiplex and its subcontractors will undertake risk workshops outlined in the table below. Further detail relating to risk management is detailed in Procedure BU AUS IMS P DIV 020 – *Risk and Opportunity Management*.

Type of Risk Programme	Purpose	Frequency	Participants	Record
Project Risk Workshops	Overarching risk workshop conducted to identify all significant risks/opportunities and develop control strategies relating to the project	As per schedule	Project Team	Project Risk Register
Project EMS Risk Workshops	To identify key EMS aspects, impacts and develop control strategies for all works associated with the project	Six monthly intervals	Project Team, WHS&E Manager / Coordinator	Project Risk Register
Trade/Element Risk Workshops	To identify key EMS aspects, impacts and develop control strategies for all works associated with the project	As per schedule	Project Team, WHS&E Manager / Coordinator	Project Risk Register

Figure 13 Risk Workshops

6.2 Aspects and Impacts

Key activities carried out by or on behalf of MPX in connection with the Project are identified in the Environmental Aspects and Impacts Risk Register outlined in the table below. This register is completed during the preliminary risk assessment process to help establish key project risks in accordance with Procedure BU AUS IMS P DIV 020 – *Risk and Opportunity Management*.

All risks identified are managed in Project Risk Register on Multiplex Operating System. For each activity the environmental aspects and associated actual and potential environmental impacts are identified for normal operations and uncommon events. All aspects are assessed for risk based on standard controls being in place. Any aspects with a risk rating of high or extreme will be considered a significant aspect and require additional controls / plans to minimise the risk. Additional controls or plans will be referenced in the Environmental Management Sub-plans.

Aspect	Impact	Consequence	Likelihood	Risk Rating
Water Quality	Pollution / contamination of atmospheric, ground or surface water bodies through degradation of water quality.			
Erosion & Sediment Control	Soil loss to environment potentially affecting water quality subsequently impacting ecological values.			
Site Contamination	Mobilisation of chemicals above the level normally found in nature, potentially having an adverse effect on the surrounding environment.			
Air Quality	Pollution/ contamination of atmosphere from dust, exhaust emissions, odour and air-born chemicals.			
Noise & Vibration	Disturbance/ nuisance caused from 'unreasonable' or excessive levels of noise to public/ environment.			
Hazardous Chemicals	An acute event where hazardous chemicals have the potential to be spilt and released to the environment causing adverse effects.			
Cultural Heritage	Damage or disturbance to archaeological/cultural artefacts including skeletal remains, shell middens or other artefacts.			

Aspect	Impact	Consequence	Likelihood	Risk Rating
Flora and Fauna	Direct / indirect impact (stress-death) on an individual or species of flora/ fauna.			
Waste Management	Degradation of aesthetic values due to ineffective waste management. Build-up of chemical and organic waste.			
Office Resources	Depletion of resources as a result of construction and office operations			

Figure 14 Environmental Aspects and Impacts Register

		Likelihood				
		Almost certain	Likely	Possible	Unlikely	Rare
Consequence	A. Extraordinary	1	2	4	7	11
	B. Major	3	5	8	12	16
	C. Moderate	6	9	13	17	20
	D. Minor	10	14	18	21	23
	E. Insignificant	15	19	22	24	25

Figure 15 Consequence and Likelihood Matrix

6.3 Environmental Controls Map

An Environmental Controls Map has been prepared for the Project to include key information from the sub-plans and other sources. The plan will be displayed on site notice boards, and include

- » The worksite layout and boundary
- » Location of the nearest noise sensitive receivers
- » Sediment and erosion control measures
- » Site offices
- » Construction traffic routes within and adjacent to the worksite
- » Monitoring equipment (e.g. dust and noise & vibration monitors)
- » Location of environmentally sensitive areas (e.g. protected trees)
- » Location of heritage (indigenous and non-indigenous) items (e.g. artefacts, registered sites)
- » Location of spill containment and clean-up equipment
- » Location of hazardous substance storage
- » Stormwater drainage and watercourses
- » Location of worksite waste management facilities
- » Demolition works.

6.4 Hazardous Materials Risk Management

In the event that Asbestos is present in the buildings requiring demolition, Multiplex will engage an Asbestos Removalist to provide an Asbestos Removal Control Plan, signed off by a third party consultant. Clearances will need to be issued following the removal of asbestos by a third party assessor.

Risk will be managed by daily asbestos air monitoring carried out by a third party consultant engaged by the demolition subcontractor. The air monitoring must be conducted daily and results provided on a noticeboard on site to inform workers of the results.

Health Infrastructure (NSW) are committed to the terms of the enforceable undertaking (As outlined in Part 11 of the Work Health and Safety Act of 2011) and Multiplex will endeavour to assist Health Infrastructure to comply with the terms of the undertaking on the St Leonards Health Organisations Relocation Project.

If any unexpected finds are discovered, Multiplex will follow the unexpected finds protocol outlined in Appendix 4. All asbestos material removed from site is to be tipped at Dial-a-Dump Eastern Creek, with all tipping dockets kept on record in accordance with Clause B25 of SSDA Conditions of Consent.

7. Training and Competency

7.1 Training and Competencies

Multiplex is committed to achieving and maintaining high standards in training and development.

Multiplex will implement systems in accordance with Procedure BU AUS IMS P DIV 110 – *Training and Competency* – to ensure employees have the required skills and training to competently perform required tasks. Multiplex will maintain a training program that identifies:

- » The training required to meet statutory and legislative obligations
- » The training required for each role or position to meet the required competencies
- » A schedule of required refresher training.

Training programs will remain current and be reviewed at least annually or:

- » When new or unforeseen workplace requirements are identified
- » Following significant changes to the division's business operation
- » Following a significant incident
- » Following changes in legislation
- » Following feedback from employees.

Multiplex will review the training programs to ensure that the training has been effective.

7.2 Induction Training

The Project has developed induction programmes for Project personnel. The project induction outlines key environmental issues. All personnel directly or indirectly working on the Project, including sub-contractors, are required to complete the induction prior to starting work, and will be provided with identification to show they have been inducted. The environmental induction will be periodically reviewed for adequacy.

The project induction includes the following environmental aspects:

- » Key issues relating to the project and existing environment, such as ecological and heritage conservation areas
- » Relevant environmental requirements, relevant conditions of planning approvals and environmental licences, and the obligations of all staff in relation to compliance with approvals and licences
- » Environmental policy
- » Site specific issues, such as:

Waste management and minimisation

Washing, refuelling and maintenance of vehicles, plant and equipment

Efficient use of plant, equipment and materials

Minimising potential environmental impacts including noise, air and water quality

Site-specific erosion and sedimentation controls, and use of spill kits to contain spills

Environmental emergency plans, and incident reporting procedures for environmental harm/incidents.

7.3 Tool Box Meetings

Where deemed necessary toolbox meetings are used to highlight specific environmental and community issues relevant to site personnel. Toolbox meetings will be held as required.

A signoff sheet is completed by all personnel in attendance at toolbox meetings to acknowledge understanding of the information provided.

8. Traffic Management

Traffic management on the project will be done in accordance with a Traffic Management Plan. Multiplex will engage an authorised traffic control and management consultant to provide the aforementioned plan and Multiplex will work in accordance with that plan.

The design of the site is such that there is no need for an external designated laydown areas for construction related vehicles. All construction deliveries and drop offs will occur on site.

A Construction Traffic and Pedestrian Management Plan has been prepared by Ason Group for the project, which has been provided to Council and the Department. This plan will be followed for the duration of the contract works.

9. Incident and Emergency Management

9.1 Incident Management

Multiplex maintains a uniform system for the management and investigation of incidents which is outlined in Procedure BU AUS IMS P DIV 100 – *Incident Management*.

All incidents and near misses will be investigated by competent personnel, reported and recorded in the electronic database and conducted in line with the requirements set out in the internal investigation proforma and procedures. All incident investigations will identify the root causes of the incident so that appropriate remedial and preventative control measures can be identified and implemented.

Where required and where possible, incidents will be reported to EPA.

Corrective actions resulting from incident investigations will be prioritised and carried out in accordance with defined priorities. The corrective action will be evaluated for its effectiveness and whether the initially identified deficiency has been corrected and prevented from recurring.

9.2 Emergency Management

Emergency situations are to be managed through Procedure BU AUS IMS P DIV 100 – *Incident Management and include:*

- » An Emergency Management Plan details a single set of emergency contacts and procedures, consistent with the Project activities that can be scaled as appropriate for any incident or emergency
- » A Site Evacuation Diagram identifies the locations of emergency assembly points, fire exits, first aid kits and associated equipment, directional flow of pedestrian traffic and firefighting equipment
- » A Crisis Management Plan which provides guidance, details, responsibilities and lines of communication for effective emergency management.

Relevant details of the Emergency Management Plan will be provided to all personnel during the site induction, and information posted on notice boards.

10. Inspections, Testing and Monitoring

10.1 Environmental Site Inspections

To ensure compliance with both regulatory requirements environmental inspections detailed in the table below will be implemented in accordance with Procedure BU AUS IMS P DIV 070 – *Inspection Testing and Monitoring*.

The outcomes and status of inspection activities will be recorded in inspection reports and issued to the persons delegated with responsibility for rectifying the impact. The onsite WHS&E Coordinator will be responsible for tracking actions resulting from all inspections.

Type of Inspection	Inspection By	Frequency	Record
General	All Supervisors	Daily	Visual
Environmental Impacts	Environmental graduate	Fortnightly and after a shower / rain event.	Environmental Site Inspection
Environmental Impacts	WHS&E Manager / Coordinator	Monthly	Aconex – Safety Group
Other	Project Team / Subcontractors	As per Environmental sub-plans	As per Environmental sub-plans

Figure 16 EMS Inspection Programme

10.2 Environmental Site Testing and Monitoring

To ensure compliance with regulatory, testing and monitoring requirements, all monitoring and testing will be conducted in accordance with the environmental sub-plans outlined in section 13 and Procedure BU AUS IMS P DIV 070 – *Inspection Testing and Monitoring*.

11. Audits and Non-Conformances

11.1 Audits

An EMS auditing programme outlined below will be established and implemented to assess compliance, identify trends, drive continual improvement and provide assurance that management processes are being effectively implemented and that performance objectives are being met.

Audit procedures including the scope, frequency and methodology to be used as well as the responsibilities and requirements for conducting audits and reporting results will be in accordance with Procedure BU AUS IMS P DIV 120 – *Internal / External Auditing*.

Type of Audit	Audit By	Frequency	Purpose	Record
Internal EMS audit	WHS&E Manager / Coordinator	3 monthly	To confirm compliance against the MPX EMS.	Audit Report
External surveillance audits	External certified organisation	As per schedule	To confirm compliance of the MPX EMS and AS/NZS 14001.	Audit Report

Figure 17 EMS Audit Programme

Audit results will be recorded and an action plan developed identifying the observations and corrective action required against each of the findings in the audit report. Details of any non-conformance reports will be issued in accordance with Procedure BU AUS IMS P DIV 080 – *Control of Non Conformances*.

A follow-up audit will be carried out, as deemed necessary by the auditor, in order to verify and record the implementation and effectiveness of the corrective action taken. Implementation and effectiveness of the corrective actions will be verified and recorded during follow-up. Audits will be closed out in a timely manner.

11.2 Non-Conformances, Corrective and Preventative Action

Deficiencies identified during audits, site inspections or observations of day-to-day operations will be generally recorded on the audit report or inspection report/checklist and actioned.

When non-compliance is identified, Multiplex will document the issue on the Non-Conformance Report in accordance with Procedure BU AUS IMS P DIV 080 – *Control of Non Conformances* – on Aconex identifying the non-conformance and corrective actions. Where appropriate, the recipient and/or Multiplex will also develop measures to prevent recurrence of the non-conformance. The instigator will carry out a follow up review and closeout of the Non-Conformance Report to verify completion of measures taken to rectify and to prevent recurrence of the Non-Conformance within the specified time frame.

12. Document and Records Management

12.1 Document Control

Multiplex’s system of document management and record keeping is detailed at Procedure BU AUS IMS P DIV 050 – *Document and Records Management*. The EMS documentation is maintained in electronic format on Multiplex Operating System and describes and provides direction to the core documents that make up the system. The documentation consists of the following:

- » Policy statements which summarise and detail Multiplex high level commitment to the implementation of the EMS
- » Management System Operating Procedures to effectively and efficiently manage projects from feasibility and planning phase’s right through to the design and construct phases of a project
- » Supporting materials including Forms, Guides (as outlined in **Appendix 2**) and Management Plans provide the tools to ensure conformance with operational procedures.

Project documentation will be controlled in accordance with the Procedure BU AUS IMS P DIV 050 – *Document and Records Management* – which defines the controls to ensure that:

- » The documentation is periodically reviewed, revised as necessary and approved for adequacy prior to issue
- » The documentation is current, readily identifiable and available at all points of use
- » The staff are immediately notified of any changes in the documentation such as, the development or receipt of new documentation and any amendments to the current documentation
- » The documentation of external origin is registered and regularly reviewed for currency
- » The obsolete documents are appropriately identified and archived.

12.2 Record Control

The Project will maintain records in Aconex (web-based document control system), S:Drive and other applications as defined in the table below to demonstrate conformance to specified requirements and to ensure the effectiveness of the operation of the EMS. Pertinent EMS records from subcontractors will be an element of this data.

Record	MPX OP System	Aconex	Share Drive	CHEMALERT	SMARTEK
MPX Management Plans	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Subcontractor CEMP	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Subcontractor EWMS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Permits	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Incident and Investigation Reports	<input type="checkbox"/>				
Inspection and Test Reports	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Audit Reports	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety Data Sheets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Meeting Minutes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Toolbox Meetings	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental Risk Workshops	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Induction Records	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Training Records	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Reports	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Monitoring Records	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental Complaints	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Figure 18 *Records Management*

13. Reporting

The Project will establish and maintain a uniform system of record keeping to enable accurate reporting of EMS matters in accordance with Procedure BU AUS IMS P DIV 130 – *Reporting*. Reporting on environmental matters will include those outlined in the table below.

Type of Report	Report By	Frequency	Recipient/s
Monthly PCG Report	Project Manager/Site Manager	Monthly	Client, Client’s Representative and Regional Director.
Environmental Incident Notification Report	Project Manager/Site Manager	As required	Directors, WHS&E Manager/Coordinator and DEC where required.
Environmental Incident Investigation Report	Project Manager/Site Manager or others nominated by Project Manager /Site Manager	As required	Directors, WHS&E Manager/Coordinator and DEC where required.
Environmental Internal Audit Report	Project Manager / Site Manager / Environmental Manager	As required	Project Team and WHS&E Manager/Coordinator
External Surveillance Audit	External Auditor	As required	WHS&E Manager/Coordinator, Systems Manager, Directors, Project Manager
Other	As per environmental sub-plan	As per environmental sub-plan	As per environmental sub-plan

Figure 19 EMS Reporting Programme

14. Environmental Management Sub Plans

14.1 Construction Noise and Vibration Management Sub-Plan

See appendix 5 for attached Acoustic Noise and Vibration Report by Acoustic Logic

14.1.1 Objectives and Targets

Where construction noise is predicted to exceed the “noise affected” level at a nearby residence, the proponent should take reasonable/feasible work practices to ensure compliance with the “noise affected level”. For residential properties, the “noise affected” level occurs when construction noise exceeds ambient levels by more than 10dB (A)_{Leq(15min)}.

Where noise emissions are such that nearby properties are “highly noise affected”, noise controls such as respite periods should be considered. For residential properties, the “highly noise affected” level occurs when construction noise exceeds 75dB (A)_{Leq(15min)} at nearby residences.

The below outlines the target dB level at each of the aforementioned thresholds.

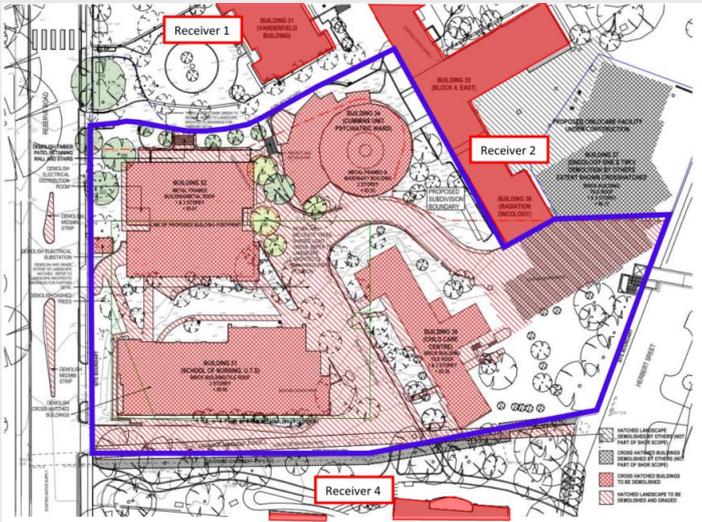
Location	“Noise Affected” Level (Background + 10dB(A)) dB(A) _{Leq(15mins)}	“Highly Noise Affected” Level – dB(A) _{Leq(15min)}
Residential Development	63	75

The below is a summary of the objectives and targets in relation to Noise and Vibration Management

Objective	Target	Key Performance Indicator
To ensure any works causing noise or vibration do not effect nearby structures or residents.	No complaints from the community regarding noise or vibration. No structural damage due to vibrations occurs to any of the surrounding buildings as checked against the dilapidation report.	No. of complaints from residents / businesses related to noise.
Compliance with State and Local requirements as required.	Compliance with the Environmental Protection (Noise) Regulations 1997 - Section 6 of AS 2436-2010 (Standards Australia, 1981). Compliance with 10mm/s vibration limit or as otherwise specified.	Results from environmental inspections Noise and vibration monitoring records

14.1.2 Management Strategies

Parameter	Action	Timing	Responsibility
Construction Work	All construction work to take place during the hours as determined by the SSSA (Refer Section 1.9)	Construction	All Subcontractors

Parameter	Action	Timing	Responsibility
Sensitive Receiver	 <p>Sensitive receivers have been determined by the noise and vibration consultant to be in the above locations. Noise needs to be minimised in accordance with the above when noise and vibration results exceeds the allowed.</p>	Construction	All subcontractors
Plant and Equipment	Plant and equipment noise control equipment to be maintained in accordance with manufacturer's specification to reduce noise levels.	Construction	All Subcontractors
Plant and Equipment Noise Control	All mobile machinery and stationary equipment to be fitted with noise control equipment as per the manufacturer's specifications.	Construction	All Subcontractors
Noise Monitoring	<ul style="list-style-type: none"> - Prior to any works on site all structural ties between the project buildings and surrounding receivers should be removed to minimise structure borne noise. This can be achieved using a saw cutting technique. - It is recommended that an electric type crane be used in lieu of a diesel crane. - Structural demolition and excavation will produce moderate to high level of noise (moderate exceedance for dozer, ripping, high exceedance during use of pneumatic hammer). Structural demolition is anticipated to take 3 months and ground floor slab removal is anticipated to take 2 weeks. ALC has explored the option to utilise alternate methods for each of these tasks, however unavailable. Therefore, we recommend the following: <ul style="list-style-type: none"> - Written notice to Health Infrastructure should be undertaken prior to any works commencement to assist in scheduling moves or critical meetings around proposed works. This should include dates, duration and works location. - In the event concrete pumping is located adjacent to buildings 31, 35 and 36, an exceedance of the 50dB (A) guideline will occur. Therefore, it is recommended that prior to the commencement of concrete pours notification should be given to the occupants. - If practicable, during the same period it is recommended that a noise monitor should be installed with in building 35. The exact location of the noise monitor will be determined prior to the installation once layout of Building 35 is known. Any exceedances above the noise goals will be identified in report summarising the results of the monitoring period. 	Demolition	MPX / Subcontractor

Parameter	Action	Timing	Responsibility
Vibration Monitoring	<ul style="list-style-type: none"> - It is recommended that the use of the pneumatic hammer should be minimised as much as practical. - During demolition of the ground floor slab and the excavation period vibration monitoring is recommended at nearest points at building 35 and building 31. The monitors will have SMS capability, so that Acoustic Logic, Multiplex and the demolition contractor can receive immediate notification in the event that trigger levels are reached. 	Demolition	MPX / Subcontractor
Noise / Vibration – Control Measures	If exceedance occurs stop work and investigate. Review current methodology. Some controls as outlined in the noise and vibration report are including respite periods during works.	Demolition	Acoustic Logic
Communication and Notification	A contact list to be prepared to enable nearby residents and owners to be notified regarding works that may impact them as a result of noise and vibration. This will be managed in accordance with the Communication Management Plan and approved Noise Management Plan (where applicable).	Establishment / Construction	MPX
Vibration Control	Prior to any works on site all structural ties between the project buildings and surrounding receivers should be removed to minimise structure borne noise. This can be achieved using a saw cutting technique.	Demolition	MPX/Subcontractor
Noise Control	During the soft strip-out it is recommended that the existing façade of the project buildings be retained as much as possible. As the existing facades will provide some noise reduction.	Demolition	MPX/Subcontractor
Noise Control		Demolition	MPX/Subcontractor
Noise Recommendation	In the event concrete pumping is located adjacent to buildings 31, 35 and 36, an exceedance of the 50dB (A) guideline will occur. Therefore, it is recommended that prior to the commencement of concrete pours notification should be given to the occupant, however MPX aims to locate the concrete pumping equipment away from 31/35.	Demolition	MPX/Subcontractor
Vibration Control	During demolition ground floor slab and excavation vibration monitoring is recommended at nearest receiver. The monitors will have SMS capability, so that Acoustic Logic, Multiplex and the demolition contractor can receive immediate notification in the event that trigger levels are reached.	Demolition	MPX/Subcontractor
Complaints	Where a complaint is received regarding noise and vibration, the complaint will be investigated and where appropriate, additional control measures will be taken to address the nature of the complaint	Demolition/Civil/ Construction	MPX

14.1.3 Monitoring and Reporting

Type of Monitoring / Reporting	Timing	Responsibility	Record
Vibration monitoring if required by Client, local authority and in response to complaints	At commencement and during excessive vibration	MPX	Vibration monitoring records
Noise monitoring if required by Client, local authority and in response to complaints	At commencement and during excessive Noise	MPX	Noise monitoring records
Number of noise and/or vibration complaints	As required	MPX	Communications Register

14.2 Dust and Air Quality Management Sub-Plan

14.2.1 Objectives and Targets

Objective	Target	Key Performance Indicator
Ensure that dust or odour emissions do not adversely affect the health or visual amenity of surrounding communities.	No complaints from adjoining owners in relation to dust emissions from the works.	No. of public complaints from the public related to dust.
Compliance with State and Local regulatory requirements in relation to dust management.	No visual evidence of deposited dust or suspended particulate matter. Compliance with National Environment Protection Measures (NEPM) standards (where required) and DEC standards during construction.	Visual monitoring of dust movement during environmental inspections. Dust monitoring results (where required).

14.2.2 Management Strategies

Parameter	Action	Timing	Responsibility
Stabilised Driveways	A stabilised driveway is to be installed to minimise the tracking of dirt on public roadways.	Establishment	MPX
Dust Control Method – Physical Barriers	A physical barrier can be erected perpendicular to prevailing winds prior to the commencement of works along the boundary or around uncontrolled dust sources. Fences can be standard hoarding panels / fence or a fence with a screening material with a porosity of 50% or less.	Establishment	All Subcontractors
Dust Control Method – Chemical Stabilisation	Where an exposed area or stockpile is located away from traffic and needs to sit for up to 3 months or where an area needs immediate stabilisation, a chemical soil stabiliser can be used such as Zerotion or the area hydromulched (seed free).	Construction	Bulk Earthworks / Civil / MPX
External Roads	If any sediment is deposited onto the roads adjoining the site, the roads are to be swept regularly and including prior to any rainfall. No hosing is to be undertaken external to the site. A measure to prevent sediment from spreading onto public roads are cattle grids that will be installed at access/egress points on site.	Construction	MPX
Haul roads	Haul roads to be covered with gravel / road base to minimise dust production or at best concrete to be regularly swept.	Construction	MPX
Speed limits	The speed of all vehicles on-site to be restricted to 10 km/hr. This speed to be further reduced if large amounts of dust are still being generated.	Construction	All Subcontractors
Windy Conditions	Dust generating activities to be assessed during periods of excessively windy conditions (>40km/h). Where dust cannot be adequately controlled work is to be ceased and rescheduled to a time when adequate control of dust generation can be achieved.	Construction	All Subcontractors
Water Carts/ Sprays	Water carts or sprinklers are to be used for specific process activities that may cause dust, and can be used to assist in the dust control on access tracks. Consideration should be given to water efficiency and the possible use of a dust control method above.	Construction	Excavation / Demolition Subcontractor
Housekeeping	During construction the site to be kept clean to reduce dust lift off during windy days.	Construction	All Subcontractors
Plant and Equipment Maintenance	All construction plant and equipment with access to the site to be properly maintained and serviced in accordance with the manufacturer’s specification. During the works maintenance logs are to be maintained and available during inspections and audits.	Construction	All Subcontractors

Parameter	Action	Timing	Responsibility
Exhaust Fumes	Operating machinery and vehicles to be visually checked to ensure exhaust fumes are not discharged into adjoining buildings air intakes.	Construction	All Subcontractors
Truck Transportation	Trucks transporting materials such as sand, soil, landscape materials and gravel to have loads covered and tailgates secured.	Construction	All Subcontractors
Paint-Spraying	Paint-spraying activities not be undertaken in adverse weather conditions or near building air intakes.	Construction	All Subcontractors
Exposed Areas	Measures including watering down exposed areas and access will be undertaken to reduce dust generation.	Construction	All Subcontractors
Asbestos	Any asbestos discovered on the project to be left undisturbed and subsequently managed in accordance with the WHS Management Plan. Asbestos material found in ground will require assessment in accordance with State requirements. Refer to WHS Handbook Rev 3 – Asbestos	Construction	All Subcontractors
Sweeping	Where applicable, sealed roads to be swept to remove deposited material that could generate dust.	Demolition , Excavation and Construction	All Subcontractors
Complaints	Where a complaint is received regarding dust, the complaint will be investigated and where appropriate, additional dust control measures taken to address the nature of the complaint	Construction	MPX
Tree protection	No burning of vegetation of other materials is permitted	Demolition, Excavation and Construction	All Subcontractors
HVAC Air Emissions	All new and existing ductwork that serves the building must have been cleaned in accordance to the ASHRAE62.1:2013 Standard as per Green Star As-Built v1.1 submission guidelines.	Construction	Mechanical Subcontractor

14.2.3 Monitoring and Reporting

Type of Monitoring / Reporting	Timing	Responsibility	Record
Inspect dust control measures, to ensure they are in place and implemented.	Weekly	MPX	Environmental Site Inspection
Visually inspect emissions from plant to ensure they are not contributing to ill health effects.	Weekly	MPX	Environmental Site Inspection
Dust monitoring in response to community complaints or in accordance with regulatory requirements.	As required	MPX	Dust monitoring records

14.3 Water Quality Management Sub-Plan

14.3.1 Objectives and Targets

Objective	Target	Key Performance Indicator
Avoid the release of contaminants to waterways or drainage systems.	All water discharged complies with minimum water quality criteria.	Water quality records conforming to minimum water quality criteria (where applicable). No breaches of management strategies in applicable Management Plans. Results from environmental inspections.
Ensure that groundwater quality or height is not significantly affected by the construction.	No significant change in groundwater levels and quality during dewatering activities (if applicable).	Groundwater quality reports.

14.3.2 Management Strategies

Parameter	Action	Timing	Responsibility
Dewatering for construction purposes	<p>Water to be discharged from sediment basins or similar must be tested and, if required, treated to ensure that it meets water quality criteria and that pollution of the receiving waters does not occur; Results of testing and details of any treatment undertaken must be documented i.e. MPX water discharge permit, photographic evidence (photograph of the PH strip and Turbidity tube)</p> <p>Turbidity: <50 NTU Suspended solids: <50 mg/L (Nata tested, if required) pH: 6.5-8.5 Oil and Grease (visual only)</p> <p>The discharge must be monitored throughout to ensure that the water being pumped;</p> <ul style="list-style-type: none"> - Complies with the discharge criteria - Does not come into contact with any soil or exposed surfaces before discharging does not mix with any sediment laden/untested water at either the inlet or outlet. <p>Water must never be discharged or reused onsite in a manner that exceeds the capacity of sediment controls and/or generates runoff with the potential to discharge from site.</p> <p>Reuse on site:</p> <ul style="list-style-type: none"> - Water may be reused on site, for example, for dust suppression, to assist with compaction or for watering landscape/bush regeneration areas 	Establishment	MPX / Excavation Subcontractor

Parameter	Action	Timing	Responsibility
Abstraction of groundwater for construction purposes	<p>A Licence to Take Water is to be obtained from Department of Water before abstraction of groundwater can commence for use in dust suppression and other construction activities. A Dewatering Management Plan may be required to be prepared by an appropriately qualified external consultant and attached to this CEMP.</p> <p>A groundwater abstraction licence is to be obtained for all projects before dewatering can commence.</p> <p>Exemption from a dewatering licence is only available if:</p> <ul style="list-style-type: none"> » Abstraction is from the water table aquifer » Abstraction is solely for the purpose of removing groundwater to facilitate construction » Abstraction pump rate does not exceed 10L/sec over a period of 30 consecutive days <p>The volume of water taken over the 30 days period does not exceed 25,000kL.</p>	Establishment	MPX / Excavation Subcontractor
Acid Sulfate Soil	All excavation with potential to expose Acid Sulfate Soils (ASS) to be determined prior to commencement and an ASS Management Plan is to be prepared to be prepared by an appropriately qualified external consultant and attached to this CEMP.	Establishment / Construction	MPX / Excavation Subcontractor
Trade Waste	Installation of a 3 x 1m3 settlement system for wet-trade washout to be completed.	Establishment	Hydraulic Subcontractor
Tool box meeting	All construction personnel undertaking discharge of water to on-site or off-site areas to undergo a tool box meeting to ensure the correct controls are in place.	Establishment	MPX / Subcontractor
Static Concrete Pumping	A designated washout area and purpose built bunded structure to be provided for concrete pumps and their attachments.	Establishment	Concrete Subcontractor
Mobile Concrete Pumping	An impervious catch tray to be placed below the pump's hopper to contain any possible spillage or droppings. Concrete washout to be undertaken in designated concrete washout area.	Construction	Concrete Subcontractor
Concrete Truck Washout	Concrete trucks are not allowed to wash out on site.	Construction	Concrete Subcontractor
Spills	All spills on site of hazardous chemicals to be cleaned up immediately to minimise pollution of stormwater/groundwater. If water contaminated by hazardous chemicals requires discharge it will need to be sampled and analysed before release to ensure it meets ANZECC water quality criteria for Aquatic Ecosystems. If contaminated, it will need to be removed and treated by an appropriately licence waste contractor.	Construction	MPX / Subcontractor
Chemical Storage	Paint, form oil, solvents and fuels to be stored correctly and bunded in accordance with Chemical Management Sub-plan.	Construction	All Subcontractors
Paint Washout	The painting subcontractor is required to wash out into purpose built tanks that are to be removed by the painting contractor through a licensed liquid waste facility with an arrangement to attain verifiable proof of disposal.	Construction	Painting Subcontractor

14.3.3 Monitoring and Reporting

Type of Monitoring / Reporting	Timing	Responsibility	Record
Dewatering process and water quality results (as per ASS or Dewatering Management Plan (where applicable))	Daily (while dewatering) or as specified in the management plan	Supervisor / Onsite WHS&E Coordinator	Environmental site inspection Water quality records Subcontractor EWMS
Monitor abstraction of ground water to ensure compliance with licence	Weekly or as per licence requirements	Supervisor / Onsite WHS&E Coordinator	Environmental site inspection Abstraction records
Trade waste and washouts	Weekly	Supervisor / Onsite WHS&E Coordinator	Environmental site inspection

14.3.4 Groundwater Management

Per Coffey preliminary contamination report “Coffey (2016b). Preliminary Contamination Review – Former Buildings 2 and 10 and Existing Buildings 9, 37, 38, 51 and 52, dated 9 September 2016”, there is a low to moderate likelihood of soil and groundwater contamination. The report outlines that the only risk and source was from the Aboveground Storage Tank (AST) at Building 51, however it was sitting above a concrete slab and had no evidence of hydrocarbon staining in the soil within the proximity. The report concludes that the underlying groundwater system would not have been affected by the AST.

14.4 Erosion and Sediment Control Management Sub-Plan

14.4.1 Objectives and Targets

Objective	Target	Key Performance Indicator
Prevent clay, silt or sand from entering stormwater drains and waterways.	All disturbed stormwater to pass through primary erosion and sediment controls listed below.	Environmental Inspection records of no uncontrolled release of disturbed stormwater to drains and waterways.

14.4.2 Management Strategies

Parameter	Action	Timing	Responsibility
Erosion and Sediment Control Plan	For sites with a soil disturbance less than 2,500m ² and with slopes <10%, an Erosion and Sediment Control Plan is to be prepared in accordance with MPX minimum requirements. For sites with a soil disturbance greater than 2,500m ² or on a site with a slope of >10%, an Erosion and Sediment Control Plan is to be prepared by a Certified Practitioner in erosion and sediment control. The plan is to be attached as an Appendix to the Construction Environmental Management Plan.	Establishment	Multiplex
Minimum Requirements for sites <2500m ² and less <10% slopes	Evaluate site limitations: Isolate retained vegetation from clearing with tape Identify highly erodible soils with advice from geotech Identify up-slope drainage catchments to be diverted around works Identify work areas to allow for erosion and sediment controls. Stabilise all site entry / exit points in accordance with MPX minimum requirements. Inspect all vehicles for residual mud and remove before leaving the site. Street sweeping (never hosing down) is to be carried out to reduce sediment on roads. Install sediment fence(s) down-slope of the site. Treat sediment laden water with the use of sediment fencing installed in accordance with MPX minimum requirements to allow ponding.	Establishment / Construction / Completion	Multiplex

Parameter	Action	Timing	Responsibility
	<p>The runoff from any slope catchment area exceeding 1,500m² is to be diverted around works. The diversion drain is to be appropriately lined to prevent erosion and discharged to lawful stormwater connection outlet.</p> <p>Clear only those areas necessary for building works to occur.</p> <p>Strip and stockpile any weed-free topsoil to be reused in re-vegetation works. Ensure the top soil stockpile is long and low to maintain aeration and microbiological properties and ensure it is stabilised to prevent erosion.</p> <p>All stockpiles are to be located away from drainage areas and surrounded with sediment fence or covered with a product that will prevent erosion if in an area where it has the potential to enter the stormwater system. All stockpiles stored for longer than 2 weeks are to be covered to prevent erosion.</p> <p>Prevent erosion by mulching areas that have achieved final levels but are not ready for landscape works immediately. For completed areas ensure appropriate top soil is available and establish grass cover within 10 days.</p> <p>Commence building activities.</p> <p>Ensure all runoff from concreted and roof areas is immediately connected to the stormwater.</p> <p>Regularly inspect all drainage, erosion and sediment controls and maintain.</p> <p>Progressively re-vegetate / stabilise the site.</p> <p>Remove any remaining temporary drainage, erosion and sediment control measures upon complete stabilisation of the site.</p>		

14.4.3 Monitoring and Reporting

Type of Monitoring / Reporting	Timing	Responsibility	Record
Inspect erosion and sediment controls are effective and maintained	Weekly or after a shower / rain event.	Multiplex/Subcontractor	Environmental Site Inspection Erosion and Sediment Control Plan

14.5 Chemicals Management Sub-Plan

14.5.1 Objectives and Targets

Objective	Target	Key Performance Indicator
Avoid contamination of soil and water from chemicals.	No release of chemicals/pollutants as listed under the Environmental Protection (Unauthorised Discharges) Regulations 2004, into the environment during construction.	No instances of uncontrolled spills.

14.5.2 Management Strategies

Parameter	Action	Timing	Responsibility
Hazardous Chemicals	Safety data sheets which outline the procedures for handling, storage and emergency response for all hazardous chemicals stored or used on the Project, to be available in the first aid facility.	Establishment	MPX
Spill Kits	Spill kits are to be established at locations adjacent to where chemical spills have the potential to occur. The spill kits are to be maintained and readily available in the event of a spill.	Establishment	MPX / All Subcontractors
Toolbox Talks	Toolbox talks will be undertaken in the use of spill kits and the steps taken in the event a spill.	Construction	MPX / All subcontractors
Tank and Mobile Tankers	Tank and mobile tankers to be fitted with a screw fitting or overflow protection connected to prevent leaks.	Construction	All subcontractors
Bunds	Bunds capable of storing 110% of the largest container volume to be installed around areas where chemicals are stored. The bund is to be impervious, chemically resistant and fire resistant. Further, the bund is to be protected from weather to avoid the potential of rain reducing the bund capacity. Must be compliant with AS 1940 -2004.	Construction	All subcontractors
Labelling of Chemicals	All chemicals and dangerous goods used on site to be appropriately labelled.	Construction	All subcontractors
Fuel Tankers	Fuel tankers to be equipped with an appropriate device to prevent overfilling. An emergency shut off valve is also to be installed.	Construction	All subcontractors
Handling of Chemicals	Handling of chemicals is to take place in a designated area where there is no potential for spills or contaminated run-off that could to reach stormwater. Fuel stored on vehicles is to be stored in a spill tray or other approved container capable of handling a spill.	Construction	All subcontractors
Fuelling of Vehicles or Construction Plant	Refuelling is to take place in designated areas or where contaminated run-off could reach the stormwater. Fuel tankers will use a spill tray beneath the refuelling connection to prevent spills on ground.	Construction	All subcontractors
Fluid Leaks	Trucks that leak any sort of mechanical fluid will not be permitted on or adjacent to the site.	Construction	All subcontractors
Oil Contaminated Stormwater	Oil contaminated water is to be disposed of through a licensed waste facility by a licensed subcontractor.	Construction	All subcontractors
Minor Spills (<100L)	In the event of a spill, the spill kit is to be utilised and the cleaned up material taken to a licensed facility as trackable waste and reported.	Construction	All subcontractors

Parameter	Action	Timing	Responsibility
Major Spills (>100L)	In the event of a major spill, the procedures contained in the Emergency Management Plan are to be implemented and reported.	Construction	All subcontractors
Volume of Fuel and Chemicals	Volumes of fuels and chemicals kept on site are to include only those volumes necessary to complete the works within a reasonable delivery schedule.	Construction	All subcontractors
Solvent Based Paints	Containers of solvent based paints are to be disposed of at an appropriate recycling depot by the subcontractor and a verifiable receipt or docket retained on file by the subcontractor and produced upon request to Site Management.	Construction	All subcontractors

14.5.3 Monitoring and Reporting

Type of Monitoring / Reporting	Timing	Responsibility	Record
Check all bunds are the appropriate size and they are functioning.	Weekly	Subcontractors / MPX	Environmental site inspection
Check all chemicals are labelled, stored in a container in good condition and in a bunded area.	Weekly	Subcontractors / MPX	Environmental site inspection
Check equipment is free from leaks.	Weekly	Subcontractors / MPX	Environmental site inspection
Check the spill kit is available and adequately stocked.	Weekly	Subcontractors / MPX	Environmental site inspection

14.6 Land Contamination Management Sub-Plan

14.6.1 Objectives and Targets

Objective	Target	Key Performance Indicator
To manage contamination in accordance with regulatory requirements.	No spread of contaminants onsite	No Environmental Notices issued to MPX. Waste disposal receipts (where applicable)

14.6.2 Management Strategies

Parameter	Action	Timing	Responsibility
Induction	During inductions all personnel are to be made aware of individual responsibilities in regards to contamination management.	Establishment	All subcontractors
Contamination Investigation	Where a site is to have known contamination, and has not been remediated, a qualified environmental consultant/professional is to be engaged to determine whether a Contaminated Site Investigation is required. Where required, a Contaminated Site Investigation is to be carried out in accordance with State and Local Government requirements.	Establishment	MPX
Management of Contamination	Where contamination is found and requires additional management measures to that found in this CEMP, a Remedial Action Plan is to be developed and attached to this CEMP as an Appendix.	Establishment	MPX
Contaminated Water	Where contaminated water is proposed to be discharged a full suite of contamination analysis is to be undertaken on the water prior to works commencing and prior to discharge. Where water is found to be contaminant free in accordance with the ANZECC Water Quality Guidelines, water is to be discharged in accordance with the Water Quality Management Sub Plan. Where water is found to contain contaminates above the criteria in the ANZECC Water Quality Guidelines, water management is to be undertaken with advice from a qualified environmental consultant/professional.	Establishment	MPX / Excavation Subcontractor
Acid Sulfate Soils (ASS)	Where a project is in a known ASS risk area and involves excavation, dewatering, or compacting saturated soils or sediments then an ASS Investigation is required. The ASS Investigation and further management are to be undertaken with State and Local Government requirements. Any ASS Management Plan to be prepared by a qualified environmental consultant/professional and is required to be attached to this CEMP as an Appendix.	Establishment	MPX / Excavation Subcontractor
Excavated Materials	All excavated materials removed from the site is to be removed in accordance with the approved plan for the management of contamination and disposed of at a facility licensed to take that level of contamination.	Excavation	Excavation Subcontractor
Waste Transport Certificate	A Waste Transport Certificate for all contaminated material is required from the responsible contractor.	Excavation	Excavation Subcontractor

Parameter	Action	Timing	Responsibility
Unexpected Contamination	If unexpected contaminants are identified, all associated activities are to be ceased and a reassessment of the area/contaminants undertaken by a qualified environmental consultant/professional. Contamination is to be managed as per State and Local Government requirements. Refer to WHS Handbook Rev 3 – Flow Chart Unexpected Find Protocol	Excavation	MPX / Subcontractor
Underground Storage Tank (UST)	Should the presence of any underground storage tanks (USTs) be identified during works on the site, and these require removal, this shall be conducted in accordance with all relevant environmental and workplace safety standards under the guidance of an appropriately qualified geotechnical and Remediation consultant. A validation report must be provided to Council in accordance with the provisions of the Protection of the Environment Operations (Underground Petroleum Storage Systems) Regulation 2014 by the Remediation Consultant	Excavation	Excavation Subcontractor

14.6.3 Monitoring and Reporting

Type of Monitoring / Reporting	Timing	Responsibility	Record
Contamination Assessment	Commencement	MPX	Site contamination report / Acid Sulfate Soil Report
Management of Contaminated Material	Construction	MPX	Environmental site inspection Water quality records Remediation Report

14.7 Waste Minimisation and Management Sub Plan

14.7.1 Objectives and Targets

Objective	Target	Key Performance Indicator
Solid and liquid waste to be disposed of as per Regulatory requirements.	All waste to be disposed of by a licensed waste contractor	Onsite waste disposal facilities confirmed and documented.
MPX aim to maximise landfill diversion.	Recycle 80% of demolition and construction waste.	Waste reporting by waste contractors.
No waste to affect nearby premises.	No complaints related to construction waste affecting nearby premises during construction.	No. of complaints relating to waste.

14.7.2 Management Strategies

Parameter	Action	Timing	Responsibility
Induction	During inductions all personnel are to be made aware of individual responsibilities in regards to waste management, including the understanding that all personal rubbish and construction rubbish generated is to be properly disposed of in designated disposal facilities.	Establishment	All subcontractors
Waste Reduction	Design in waste minimisation during the design phases by standard sizing of materials, the use of modular and prefabricated construction techniques. Stockpile clean fill during the excavation phase by for use as backfill on-site Provide sub-contractors during the construction phase with clear guidance for reducing packaging on their own materials by both their suppliers and subcontractors, by accurate ordering and handling of materials. Specify reusable, stackable and returnable packaging.	Establishment / Construction	MPX, Consultants and Subcontractors
Waste Management Plan	Demolition and excavation subcontractors will be required to develop a Waste Management Plan for their Scope of Work detailing the type of waste generated, waste avoidance / reduction / reuse / recycling strategies.	Establishment	Demolition and Excavation Subcontractors
Waste disposal Storage area	Appropriate waste disposal facilities (e.g. bins) shall be provided in strategic locations onsite. Waste bins shall be located such that they do not affect the community and not close to surrounding premises. Separation of waste for recycling will be enforced and monitored.	Establishment / Construction	MPX
	Waste disposal facilities shall be regularly collected or emptied by a licensed waste collector in accordance with Local Council Health Laws.	Construction	MPX
	Where possible a storage area allocated for the separation, collection and recycling of wastes will be established.	Establishment	MPX
Waste contractors	Licensed contractors shall be engaged to remove construction waste. A minimum target of 80% landfill waste diversion will be achieved.	Establishment	MPX
Putrescibles waste (Organic waste)	All putrescibles waste to be placed in a lidded bin and removed separately.	Establishment	MPX
Recycling / waste reduction	Recycling initiatives will be investigated and where practicable implemented onsite. This may include dedicated bins for different waste streams and use of alternative products.	Establishment / Construction	MPX / All subcontractors

Parameter	Action	Timing	Responsibility
Site office	The site office shall implement the following office waste minimisation techniques: Organising recycling paper bins in the office for waste paper Recycle toner cartridges pick-ups Using electronic storage to reduce use of paper Purchasing products in bulk to reduce packaging	Establishment	MPX
Hazardous waste	Hazardous waste will be managed and disposed of as per the Safety Data Sheet requirements and Environmental Protection (Controlled Waste) Regulations 2004.	Construction	MPX / All subcontractors
Servicing	Where practicable plant will be serviced offsite to reduce the generation of hydrocarbon waste onsite and potential for spills.	Construction	All Subcontractors

14.7.3 Monitoring and Reporting

Type of Monitoring / Reporting	Timing	Responsibility	Record
Percentage of diversion from landfill	Monthly	MPX	Monthly Waste Report
Segregated waste and appropriate waste placement	Weekly	MPX	Environmental Site Inspection

14.7.4 Demolition and Excavation Phase Waste Management Plan

MATERIALS ONSITE	REUSE AND RECYCLING		DISPOSAL
ONSITE		OFF-SITE	
Type of Materials	Specify methods	Specify contractor and recycling outlet	Disposal
DEMOLITION			
Masonry, brick & tile	General waste bin	Transfer for reprocess or recycle - Demolition subcontractor	Divert from Landfill
Timber	General waste bin	Transfer for reprocess or recycle - Demolition subcontractor	Divert from Landfill
Metal	General waste bin / dedicated steel scrap bin	Transfer for reprocess or recycle - Demolition subcontractor	Divert from Landfill
Mixed waste	General waste bin	Transfer for reprocess or recycle - Demolition subcontractor	80% Recycling
Asbestos	As per standards	Transfer & disposal at hazardous landfill - Demolition subcontractor	Hazardous Landfill
Bitumen	General waste bin	Transfer for reprocess or recycle - Demolition subcontractor	Divert from Landfill
The demolition contractor prior to commencement shall develop a Waste Management Plan for the Project. Material shall be separated on site and removed in separate trucks for recycling, re-use and landfill.			
EXCAVATION			
Clean Fill	Assess, excavate & stockpile	Transport & fill	Nil
<i>Any hazardous waste will be isolated and managed as per the legislation for hazardous waste. 100% of the clean excavation material will be diverted from landfill.</i>			

14.7.5 Construction Phase Waste Management Plan

MATERIALS ONSITE	REUSE AND RECYCLING		DISPOSAL
ONSITE		OFF-SITE	
Type of Materials	Specify methods	Specify contractor and recycling outlet	Disposal
Concrete	General waste bin.	Transfer for reprocess or recycle - Waste contractor	Divert from Landfill
Masonry, Brick & Tile	General waste bin	Transfer for reprocess or recycle - Waste contractor	Divert from Landfill
Timber	General waste bin	Transfer for reprocess or recycle - Waste contractor	Divert from Landfill
Metal	General waste bin	Transfer for reprocess or recycle - Waste contractor	Divert from Landfill
Plasterboard	Separate in designated bin	Transfer for reprocess or recycle - Waste contractor & plasterboard recycler	Divert from Landfill
Cardboard	Separate in designated bin	Transfer for reprocess or recycle - Contractor to be confirmed	Divert from Landfill
Mixed waste	General waste bin	Transfer for reprocess or recycle - Waste contractor	80% Recycling
Paper	Separate in designated bin	Transfer for reprocess or recycle - Waste contractor	Divert from Landfill
Packaging	Separate in designated bin	Transfer for reprocess or recycle - Waste contractor	Divert from Landfill

Waste will be minimised through reduction of waste generated, reuse of products and recycling. The waste stream will be separated where possible to maximise landfill diversion. Subcontractors will be responsible for recycling and reuse of their waste material.

14.8 Aboriginal and European Heritage Management Sub-Plan

14.8.1 Objectives and Targets

Objective	Target	Key Performance Indicator
Comply with the requirements of the Aboriginal Heritage Act 1972.	Protection of all sites of Aboriginal Heritage significance, both known and as yet unknown.	Immediate reporting of archaeological remains if discovered. Level of disturbance to significance sites recorded.
Comply with the requirements to ensure the protection of European heritage as per the Heritage Act 1977.	Protection of all sites of European Heritage significance, both known and as yet unknown.	As above
Minimise impacts on unknown Cultural and Aboriginal Heritage sites.	As above.	As above.

14.8.2 Management Strategies

Parameter	Action	Timing	Responsibility
Aboriginal Heritage	In accordance with the REF conditions, Multiplex will ensure compliance with clause 16.	Establishment	MPX / All subcontractors
European Heritage	In accordance with the REF conditions, Multiplex will ensure compliance with clause 17 and 35	Establishment	MPX / All subcontractors
General	Operations generating vibration and dust will be managed as per the relevant sections of this Plan.	Construction	MPX
Earthworks	Excavations are to be monitored as required by the ethnographic consultant.	Construction	The Client
Object discovery	Objects found during construction works will be salvaged and managed according to advice from archaeologists. Location and nature of objects will be reported to the local heritage office, local Department of Indigenous Affairs (DIA) etc.	Construction	The Client
Skeletal remains	If suspected skeletal remains found – works will cease immediately until all clear is given by Police, DIA and archaeologists.	Construction	MPX
	Suspected skeletal remains will be immediately reported to Police Service, local DIA office. If remains are found to be of an Aboriginal Heritage matter and not a police matter, they will be left in situ until a decision is made at an on-site meeting about how to proceed in respect to the remains.	Construction	The Client

14.8.3 Monitoring and Reporting

Type of Monitoring / Reporting	Timing	Responsibility	Record
Report findings to Client and relevant authorities	As required	MPX	Environmental Incident Report
Presence of official monitors during earth works (as required)	As required	MPX	Environmental Incident Report Attendance Records

14.9 Flora and Fauna Management Sub-Plan

14.9.1 Objectives and Targets

Objective	Target	Key Performance Indicator
To reduce the impact of construction on native flora and fauna.	No damage / injury to preserved flora and fauna.	Weekly Environmental Inspection

14.9.2 Management Strategies

Parameter	Action	Timing	Responsibility
Induction	Undertake a site induction addressing the management of flora and fauna including: No employee on the Project will intentionally injure native fauna including reptiles. Construction personnel are not to handle fauna. All rubbish and food scraps must be placed in lidded bins that will be serviced regularly. Native fauna are not to be fed by project employees.	Establishment	MPX/ All subcontractors
Fencing and bunting	Fencing/bunting and signage is to be installed to protect vegetation identified for retention within the works area.	Establishment	MPX
Vegetation Clearing	A clearing permit must be obtained and approved from the relevant authority prior to any clearing works undertaken. Vegetation removal is to be minimised wherever possible by clearly defining designated work areas. Designated exclusion zones (i.e. retained vegetation) are to be made secure with fencing/bunting and signage.	Construction	MPX / clearing subcontractor
Arborist	All works carried out on either foliage or root systems will be carried out as per the Australian Standard 4970-2009 <i>Protection of Trees on Development Sites</i> and will be undertaken in consultation with a qualified Arborist.	Construction	MPX / Clearing subcontractor
Excavation	All trenches / excavations are to be inspected each morning by the excavation subcontractor. Where flora and fauna are discovered, personnel are to cease work in the subject area and notify the WHS&E Manager/Coordinator / MPX Supervisor / or appointed Catcher.	Construction	MPX / Excavation subcontractor
Unidentified Flora or Fauna	If any previously unidentified flora or fauna is discovered on-site, personnel are required to notify the Site Manager.	Construction	All subcontractors
Active Nests of Native Birds	Any trees or shrubs to be removed from the site are to be checked for the presence of active nests of native birds (i.e. those containing fertile eggs or nestlings) and arboreal mammals (e.g. possums) prior to removal or relocation by a Qualified Wildlife Spotter / Catcher.	Construction	All subcontractors
Rehabilitation	Monitor disturbed areas for weed invasion, and undertake control measures as necessary. Regularly water, weed and fertilise rehabilitated areas to ensure their success.	Construction	MPX / Landscape subcontractor

Parameter	Action	Timing	Responsibility
Weed Management	<p>All declared weeds within the site are to be removed in accordance with the below procedures:</p> <p>The use of pesticides and herbicides is to be restricted, have specific application, storage and clean up procedures, and meet requirements of relevant agencies.</p> <p>Herbicides are to be administered by contractors licensed in accordance with the provisions of State Legislation.</p> <p>Chemical products must always be used as per Safety Data Sheets.</p> <p>Only qualified personnel should undertake chemical control of weeds.</p> <p>Correct disposal of weeds is to be undertaken ensuring accidental spread of weeds does not occur. Weeds or material containing weed matter must be transported to a landfill under covered load. The cover must seal the top and sides of the load to prevent any weed material being transported by wind.</p>	Construction	MPX / Landscape subcontractor

14.9.3 Monitoring and Reporting

Type of Monitoring / Reporting	Timing	Responsibility	Record
Protected trees	Weekly	MPX	Environmental site inspection
Clearing Monitoring	Daily during clearing works	MPX / clearing subcontractor	Clearing permit
Rehabilitation Areas	Weekly	MPX	Environmental site inspection

14.10 Site Office Environmental Management Sub-Plan

14.10.1 Objectives and Targets

Objective	Target	Key Performance Indicator
Maximise the efficient use of resources within the office environment.	Recycle 100% office paper	Monthly Recycling Reports
	Recycle 100% of materials where available	Monthly Recycling Reports

14.10.2 Management Strategies

Parameter	Action	Timing	Responsibility
Use of Resources	Recycle office paper and cardboard cans, bottles and printer cartridges.	Commencement to completion	MPX
Use of Energy	Turn off electrical equipment where practicable and use energy efficient products.	Establishment to completion	MPX
Use of Resources	Use office paper with recycled content.	Commencement to completion	MPX
Double Sided Printing	Use double sided printing on photocopiers where possible.	Commencement to completion	MPX

14.10.3 Monitoring and Reporting

Type of Monitoring / Reporting	Timing	Responsibility	Record
Percentage of diversion from landfill	Monthly	Waste Contractor	Monthly recycling report.

15. Appendices

15.1 Appendix 1: Environmental Policy



OUR COMMITMENT

Multiplex and its senior management is committed to:

- Protecting the health and safety of everyone within our workplaces including employees, contractors, visitors, public, neighbours and the community.
- Ensuring that our activities place minimal impact on the environment including pollution.
- Delivering projects that add economic, social and environmental value to our clients, our community and those who invest in us.

OUR STRATEGIES

Multiplex works collaboratively with key stakeholders, including our clients, regulators, industry peers, suppliers and contractors, to exceed our legal, contractual and other compliance obligations through the following key strategies:



- Managing risks and opportunities through early intervention in planning and design.
- Monitoring constantly the changing landscape over the project lifecycle and develop rigorous controls in response.
- Creating an outlook and culture in which our commitments are front of mind and part of everyday business.
- Valuing the competency (skills, knowledge and experience) of all persons to perform and find better ways of doing the work.
- Providing employees and other stakeholders the opportunity and expectation to acquire the appropriate competency to enable them to carry out their work safely without risk to themselves, fellow workers and the public.
- Focusing on open conversations between our employees, our clients and the people we work with not just paperwork.
- Creating a culture that encourages the reporting of incidents and occurrences to enable knowledge sharing, learning and information to facilitate improvements in performance.
- Promoting strategies that are driven and embedded by senior management who encourage ownership and continuous improvement in behaviours, practices and outcomes by all persons.
- Aligning our behaviour to our values with an emphasis on teamwork and recognition for innovation and initiative.

CEO
Multiplex Australasia
September 2016

15.2 Appendix 2: EMS Forms and Guides

Category	Forms	Guides
Planning	Environmental Subcontractor Documentation Status Chart	Schedule of Environmental Legislation and Other Requirements NSW
Communication and Consultation		Environmental Fact Sheets
Incident and Emergency Management	Incident Investigation Report	
Induction and Training	Induction Training Handout Project Induction and Declaration	
Hazardous Chemicals		Trade Washout Guide
Inspection and Monitoring	Environmental Site Inspection	
Subcontractor Management	Environmental Management Plan Review Checklist Environmental Safe Work Method Statement Review Checklist	Subcontractor Environmental Management Plan Template
Audits	Environmental Internal Audit Checklist	

Note: Reference should be made to the Multiplex Operating System Document and Forms library to obtain the current versions of the documents above.

15.3 Appendix 3: Design Guidance Note No. 15

ASBESTOS MANAGEMENT

BACKGROUND

The purpose of this Guidance Note is to provide the minimum outline of requirements of asbestos management for dealing with small uncomplicated sites. More complicated projects will require additional due diligence and management.

OUTLINE OF REQUIREMENTS ON MANAGING ASBESTOS:

1. As an initial step in part of any site assessment and/or investigation and before ANY work commences, the LHD asbestos register should be reviewed and the presence and extent or otherwise of asbestos should be verified.
2. The LHD asbestos register is required to be supplied to all contractors undertaking work on site and should form a standard part of any tender documentation.
3. If asbestos is identified as being present on the site, then an appropriate strategy for dealing with its removal or encapsulation should be developed. Appropriate consultants should be engaged to develop and review this strategy.
4. If asbestos is not identified then an appropriate engagement with LHD personnel, historical records and other sources should be undertaken to validate that the likelihood of the presence of asbestos is low.

Should this not be the case appropriate investigations by a hygienist or other suitably qualified contamination expert should be undertaken.
5. Standard operating procedure on all our sites is to get confirmation from an appropriate contamination consultant that the site is clear or otherwise of asbestos.
6. Depending on the outcomes of these investigations, an appropriate strategy to deal with asbestos removal must be developed and adhered to.
7. Appropriate notifications to SafeWork NSW and other authorities should be undertaken, depending on the complexity, extent of asbestos and its identified risk.
8. Air monitoring and other suitable management and controls should be put in place.
9. All asbestos should be removed to a licensed facility and appropriate tracking of loads and dockets obtained.
10. The final requirement on any site where asbestos has been found and removed or dealt with is to obtain a Clearance Certificate from the relevant consultant that all asbestos has been removed from the site and disposed of appropriately.
11. This Clearance Certificate should form part of the handover pack from the Contractor to HI and the LHD and is a condition precedent to achieving completion by the Contractor and occupation by the LHD.

IMPORTING MATERIAL ON TO THE SITE

The Contractor must ensure that *Material* to be imported on to the site, including fill material, is accompanied by a Clearance Certificate provided by the supplier. The Contractor shall undertake and provide the Principal with further testing (conducted by an independent person) when the *Material* arrives on site (and before using or incorporation into the Works) to verify that it is free of contaminants.

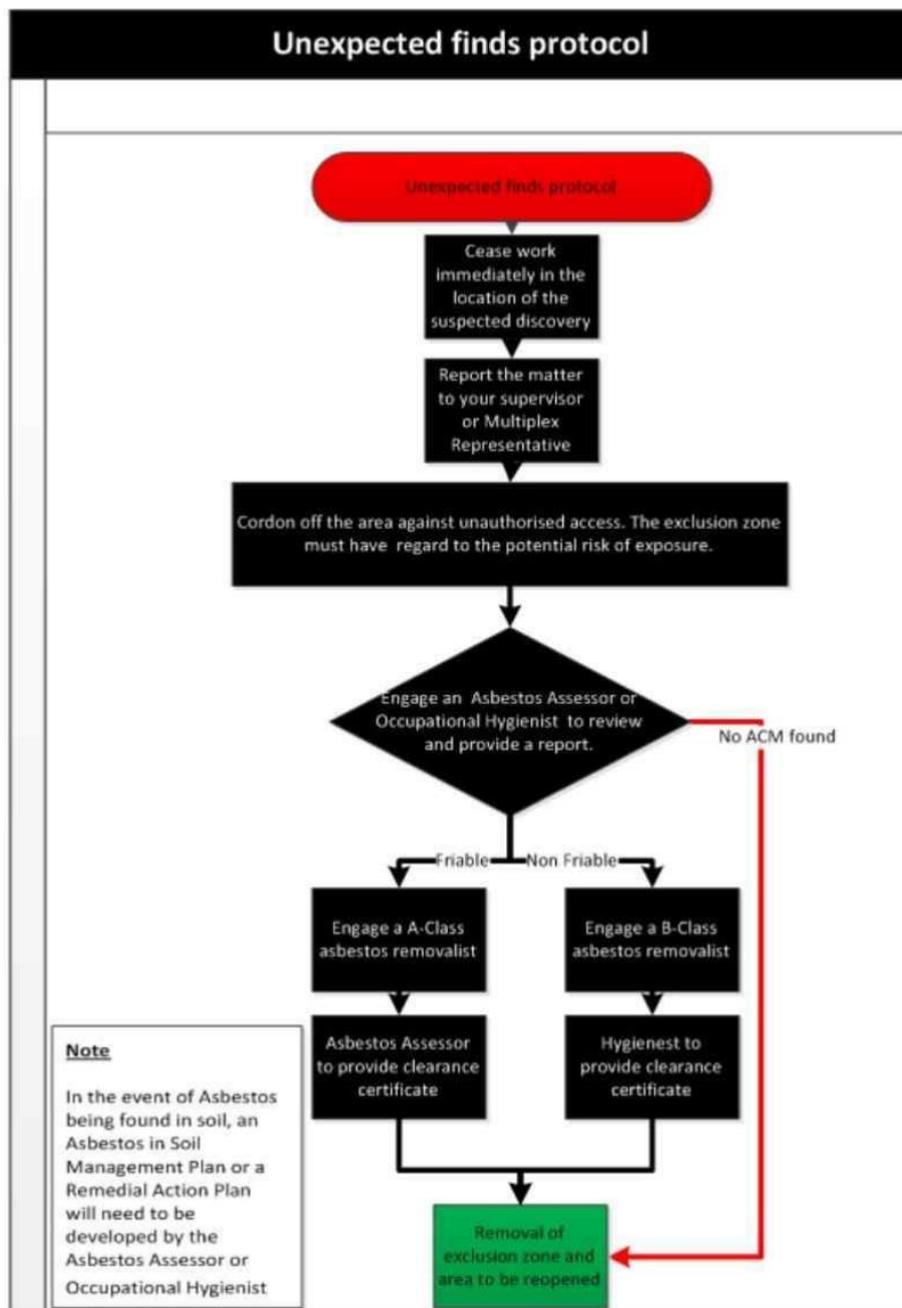
IMPORTING MATERIAL FROM COUNTRIES WHERE ASBESTOS IS NOT PROHIBITED

If the Contractor intends importing *Materials* (including imported tiles, plasterboard products and any insulated cladding and roofing panels) from countries where asbestos is not yet prohibited to ensure the *Materials* do not contain asbestos prior to supplying or using them in or about the *site* or for the purposes of the Works, the Contractor must provide evidence of the materials suitability for the Works by way of testing conducted by an independent authority registered with National Association of Testing Authorities (NATA).

SafeWork NSW

Further information can be found on the [SafeWork NSW Site](#)

15.4 Appendix 4: Unexpected Finds Protocol



15.5 Appendix 5: Asbestos/Hazardous Materials

N Moit and Sons (NSW) Pty Ltd have been engaged as the demolition and civil subcontractor on St Leonards Health Organisations Relocation Project. They have been scoped with the removal of Asbestos Containing Materials (ACM) – and have engaged Pure Contracting to do these removed. Below is the Asbestos Removal Control Plans for each of the buildings.

Moits – Asbestos Management



Asbestos
Management.pdf

Douglas Partners – Asbestos Management



Asbestos Management Plan Consultant.pdf

Building 34 Asbestos



B34 ARCP.pdf

Building 37 Lead



B37 LRCP.pdf

Building 37 Asbestos



B37 ARCP.pdf

Building 38 Asbestos



B38 ARCP.pdf

Building 51



B51 ARCP.pdf

Building 52



B52 ARCP.pdf

15.6 Appendix 6: Noise and Vibration



Noise and Vibration
Report.pdf

15.7 Appendix 7: Erosion and Sediment Control



Sediment and Erosion Control Plan.pdf



Sediment and Erosion Control Details.pdf

15.8 Appendix 8: Air and Dust Quality



Air and Dust Quality -
Moits.pdf

15.9 Appendix 9: Tree Management



Tree Management
Plan.pdf

15.10 Appendix 10: Water Quality Management Strategy



Dewatering
Management Plan - IV