



CONSTRUCTION ENVIRONMENTAL MANAGEMENT  
PLAN  
SQUIRE'S LANDING SHADE STRUCTURE  
TENANCY 5, OVERSEAS PASSENGER TERMINAL

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# Construction Environmental Management Plan

Initiated:

1/08/2017

Reviewed

Revision: 1

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## CEMP - Revision Control Contents

This CEMP issue no.	Date Issued	Amended Page(s)	Action / Amendment Description	Approved By
1	06/09/2018	All	Issue for SEAR's	James Irving

## 1. Introduction

Xenia has been engaged by Jimmy's on the Mall as the Construction Manager for the Construction of the 'Squire's Landing Shade Structure' facility located in Tenancy 5 of the Overseas Passenger Terminal.

The project seeks to Install 2 shade structural steel shade structures to the forecourt area of Squires Landing and will consist of the following works:

- Establishment of crane pad and delivery/lift area outside the tenancy
  - This will includes all engineering, approvals and permits involved in the works
- Relocation of loose furniture and equipment located around installation area
- Removal of pavers located directly above existing footings and hold down bolts and removal of approx. 300mm of fill around hold down bolts
- Establishment of exclusion zone utilising traffic control
- Lifting and securing of Shade Structures to hold down bolts
- Structural sign off of installed Shade Structure
- Rectification works to paved area around shade structures
- Demobilise crane pad and delivery/lift area outside tenancy

Principal Contractor: Xenia Constructions NSW

Site Contact (24 hrs): Chris Pullar 0403 249 601

Alt Contact: Brad Matthews 0417 587 231

Work Hours: TBC



Figure 1 - Site Photo

### 1.1 Purpose

The Construction Environmental Management Plan (CEMP) has been developed for the Project for demolition, construction and fit-out works. The CEMP is compliant with the requirements of the Relevant Guidelines including the *Guideline for the Preparation of Environmental Management Plans* (DIPNR, 2004), *NSW Government Environmental Management Systems Guidelines 3rd Edition, August 2013* (updated 16 September 2013) (NSWGEMSG).

The purpose of this CEMP is to outline how the XENIA Construction's (XC) will manage environmental aspects and potential impacts associated with the works and address how XC will meet relevant contract, planning approvals and other statutory requirements.

In summary, the main purpose of the CEMP is to:

- Describe the Project and relevant activities and how they will impact on the environment;



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- Identify the aspects of the works that may potentially impact on the environment and how these will be managed;
- Allocate roles and responsibilities for employees and sub-contractors who will be working on the Project;
- Ensures that the Project meets planning approval, legal, environmental, stakeholder and other related requirements;
- Minimises negative environmental impacts of the works; and
- Provides all personnel and sub-contractors with information, systems, procedures and documentation necessary to undertake the Project in accordance with environmental requirements.



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## 1.2 Site Location

The Project is located at the Overseas Passenger Terminal Circular Quay and is close to the Sydney Harbour foreshore. The Passenger Terminal is an operating terminal and will be operating during the works.



Figure 2 Site Location & Aerial Photograph

## 1.3 Conditions of Consent

Relevant Conditions of Consent are addressed in Table 1.

Table 1 - Conditions of Consent

Conditions	Requirement	Reference in the CEMP
Item 3 SEARs	Construction Environmental Management Plan	All



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## 1.4 Construction Environmental Management Plan

XC, its employees and Sub-contractors will implement this CEMP.

## 1.5 Environmental Policy

XC will implement its corporate Environmental Policy on the Project (refer Appendix A).

## 2. Planning

### 2.1 Key Legislative Requirements

This CEMP incorporates applicable Environmental Legislation, Codes of Practice, Australian Standards and other Guidelines for the Project. XC workers (including subcontractors) must comply with relevant Environmental, WHS legislation, Codes of Practice, Industry Standards and Regulatory Approvals as applicable to their work activities.

A legal register will be maintained by XC and a copy can be made available on request.

Table 2 - Key Legislation

Legislation Title	Application/Relevance to the Project	Administering Authority
<b>NSW Legislation</b>		
Environmentally Hazardous Chemicals Act 1985 as amended and Regulation 2008	Use of environmentally hazardous chemicals on site (if required)	NSW Environment Protection Authority (EPA)
Dangerous Goods (Road and Rail Transport) Act 2008 and Regulation 2009	Transport of dangerous goods / and transport of contaminated materials	EPA WorkCover
Protection of the Environment Operations Act 1997 (POEO)	Environmental protection and prevention of pollution.	NSW Environment Protection Authority(EPA)
POEO (Noise Control) Regulation 2008	Noise control	NSW Environment Protection Authority
Dangerous Goods (Road and Rail Transport) ACT 2006	A licence may be required for the storage of prescribed quantities of dangerous goods	Work Cover NSW
POEO (Penalty Notices) Regulation 2004	Penalty Notices	EPA
POEO (Clean Air) Regulation 2010	Atmospheric pollutants including dust and odour	EPA
POEO (Waste) Regulation 2005 and Waste Management amendment 2008	Waste management and recycling	EPA
Waste Avoidance and Resource Recovery Act 2001	Waste management and recycling	EPA
Protection of the Environment Administration Act 1991 and Regulation 2012	Environment Protection	EPA
Environmental Planning and Assessment Act 1979	Planning and Assessment	Department of Planning and Environment (DP&E)
Heritage Act 1977	Management of Heritage listed structures on site	NSW Office of Environment and Heritage (OEH)
Local Government Act 1993	Planning and Assessment	City of Sydney Council
Work Health and Safety Act 2011	Workplace safety	SafeWork NSW (WorkCover)
Work Health and Safety Regulations 2011	Workplace safety and asbestos handling	SafeWork NSW (WorkCover)
NSW Contaminated Land Management Act 1997 and Regulation 2013	Land Contamination	EPA
Roads Act 1993 Roads and Maritime Service	Act to regulate the carrying out of various activities on public roads.	NSW Roads and Maritime Services (RMS)



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## 2.2 Licensing and approvals

Table 3 - Licensing and Approvals

Regulatory Authority / Other	License/Permit/Approval	Purpose	Approval Holder
Department of the Environment and Planning	Planning Approval	CSSI infrastructure Approval	
SafeWork NSW (WorkCover)	Demolition Permit	Demolition to be undertaken by SafeWork Licensed Contractor	XC
SafeWork NSW (WorkCover)	Asbestos Removal Permit AS1 or AS2	Removal of Asbestos	Asbestos Removal Sub-Contractor
SafeWork NSW (WorkCover)	Lead Removal Notification	Removal of Lead	Lead Removal Sub-Contractor
Sydney Water Corporation	Trade Waste Permit (where required)	Permit to pump to sewer	XC
Neighbour	Air Space Approval (where required)	Install equipment or other equipment above adjoining neighbours property	
Neighbour	Ground Space Approval (where required)	Install anchors, infrastructure or other equipment under adjoining neighbours property	
City of Sydney – Sydney Traffic Control Committee (STC) RMS	Traffic Control Plan Approval & Temporary Road Closure Permit (where required)	To manage traffic and pedestrians requiring access to site or other road operations	XC/Sub Contractor
RMS	Wide Load Permit (where required)	Transport of wide/long loads such as Float Vehicle for plant	XC/ Sub contractor
EPA	Licensed to transport hazardous waste (where required)	Transport hazardous liquid waste within NSW to recycling facility or landfill	Hazardous Waste Removal Sub-Contractor

## 2.3 Standards and Guidelines

The relevant Standards and guidelines are listed in Table 4.

Table 4 - Codes of Practices, Standards and Guidelines

Policy / Standards / Guidelines	Application
AS 2601 Demolition of structures	Specific demolition guidelines
Code of Practice – Demolition work, SafeWork NSW	Specific demolition guidelines
Code of Practice - How to safely remove asbestos, WorkCover NSW	Asbestos removal
EPA Asbestos & Waste Tyre Guidelines 2014	Asbestos Transport
AS 1940 The storage and handling of flammable and combustible liquids	Dangerous Goods and Hazardous Chemicals
Storing and handling liquids – Environmental Protection Participants Manual (DEEC 2007)	Dangerous Goods and Hazardous Chemicals
Environmental Compliance Report Liquid Chemical Storage, Handling and Spill Management, Part B – Review of best practice and regulations (DECC 2005)	Dangerous Goods and Hazardous Chemicals
Code of Practice – Managing noise and preventing hearing loss at work , SafeWork NSW	Noise/Vibration
AS 2670.2 Annex A Evaluation of human exposure to whole body vibration	Noise/Vibration
EPA Guidance Statement #8 – Environmental Noise (Draft)	Noise/Vibration
EPA Interim Construction Noise Guideline	Noise/Vibration
Code of Practice: Construction Hours/Noise within the Central Business District 1992 (City of Sydney)	Noise/Vibration
AS 2436-Guide to noise control on construction, maintenance and demolition sites	Noise/Vibration
AS4282:1997 Control of the Obtrusive Effect of Outdoor Lighting	Outdoor Lighting
EPA Guidance Statement #18 – Prevention of air quality impacts from development sites	Dust, Odour & Fumes
National Environmental Protection Measure – (NEPM) Ambient Air Quality	Dust, Odour & Fumes
Urban erosion and sediment control field guide – BLUE BOOK (Department of Land and Water Conservation)	Erosion and Sediment Control
NSW Guidelines for construction sites 1998	Erosion and Sediment Control
Code of Practice – Excavation Work (WorkCover NSW)	Erosion and Sediment Control
Manual Managing Urban Stormwater – Soils and Construction 2008 (Department of Housing)	Stormwater Management
Planning Guidelines SEPP 55 – remediation of land	Land Contamination
NSW Government Resource Efficiency Policy 2014	Energy/Water /Waste Management
NSW Waste Classification Guidelines, 2014 (EPA)	Waste Management
Environmental Guidelines: Assessment, Classification & Management of Liquid & Non-Liquid Wastes 1999 DEC	Liquid waste



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## 2.4 Environmental Risk Assessment

An Environmental Risk Assessment (ERA) has been completed for the Project and documented. A copy of the ERA is provided in Appendix D. The ERA describes control procedures to manage environmental aspects, impacts and procedures to manage risks.

The ERA for the Project is based on AS/NZS ISO 31000:2009 the Australian Standard for Risk Assessments. A risk management approach is used to determine the severity and likelihood of each activity's impact on the environment and to prioritise its significance. This process considers potential regulatory and legal risks as well as taking into consideration the concerns of community and other key stakeholders.

## 2.5 Environmental Aspects and Impacts

The Project environmental aspects and impacts have been assessed as part of this CEMP and are included in the Project's ERA.

## 2.6 Objectives and Targets

Table 5 - XC project site specific objectives and targets (O&T) are presented in Table 5 below. These provide details of the XC's corporate environmental targets and objectives that will apply to the Project.

**Table 5 - XC project site specific objectives and targets (O&T)**

Objective	Targets
To comply with applicable legal and other requirements (environmental laws, regulations, statutory requirements and instruments of approval)	Nil instances of non-compliance with environmental statutory requirements (e.g. infringement notices, clean-up notices, etc.)
To implement a rigorous and comprehensive CEMP that meets the requirements of Sydney Ports Authority	Weekly Environmental Inspections completed; and All Non-Conformances closed out.
To minimise waste to land fill, maximise the recycling of waste and ensure traceability	Over 85% of waste produced from the Project to be recycled; and All waste generated and transported off site to be sent to EPA licensed landfills or recycling facilities and disposal dockets to be retained on file.
Encourage all workers to report all environmental incidents and complete incident reports	All identified incidents are reported and documented
To provide training and information on environmental aspects/impacts and controls for the Project to workers	All workers are inducted into CEMP prior to commencement of works on site



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## 3. Roles and Responsibilities

The key project roles and responsibilities of XC are presented in Table 6.

Table 6 - Project Roles and Responsibilities

Roles / Position	Responsibilities
Project Manager	<ul style="list-style-type: none"> <li>Implement the CEMP</li> <li>Have overall responsibility for environmental matters on site</li> <li>Ensure that works are undertaken in accordance with XCs Environmental Policy and Objectives and other requirements of this CEMP</li> <li>Ensure workers are aware of XCs environmental requirements and undertake appropriate training as required</li> <li>Liaise with and other stakeholders as required</li> <li>Arrange and provide resources for the Project</li> <li>Ensure CEMP objectives and targets are being met</li> <li>Ensure the CEMP is maintained for the duration of the Project</li> </ul>
Site Supervisor	<ul style="list-style-type: none"> <li>Implement the CEMP on site</li> <li>Ensure effective environmental controls are implemented for the life of the Project</li> <li>Identify, recommend and implement solutions to environmental issues where required</li> <li>Ensure that all workers are properly inducted as per the requirements of this CEMP</li> <li>Provide sufficient resources for the successful management of environmental matters</li> <li>Communicate site environmental issues, incidents and environmental performance to management</li> <li>Ensure relevant environmental records are maintained</li> </ul>
Worker	<ul style="list-style-type: none"> <li>Carry out their work in accordance with XCs Environmental Policy, Objectives and the requirements of this CEMP</li> <li>Take immediate steps to control identified environmental hazards in the workplace where appropriate</li> <li>Work in a manner without risk to themselves, others or the environment</li> <li>Participate in pre-start and toolbox meetings, inspections and audits as required by XC</li> <li>Report all incidents to the Site Supervisor</li> <li>Follow instructions as required by the Site Supervisor</li> </ul>
Sub-Contractor / Consultants / Specialists	<ul style="list-style-type: none"> <li>Conduct their work activities in an environmentally sensitive manner in accordance with this CEMP relevant environmental legislation and other requirements</li> <li>Ensure all plant and equipment is fit for use and appropriately tested and maintained</li> <li>Adequately instruct their workers in correct methods and environmental safe working practices</li> <li>Report all incidents to the Site Supervisor</li> <li>Follow instructions as required by the Site Supervisor</li> </ul>
Visitor	<ul style="list-style-type: none"> <li>Register their attendance and departure to and from site</li> <li>Abide by all work site instructions provided by XC management and work site signage</li> <li>Unless a full project site specific induction is completed, ensure they are accompanied by XC representative at all times</li> <li>Report all incidents to the Site Supervisor</li> </ul>

### 3.1 Community Complaints Register

XC will maintain a Complaints Register in Appendix C that records the following:

- Number of complaints received;
- Number of people affected in relation to a complaint; and
- Nature of the complaint and means by which the complaint was addressed and whether resolution was reached, with or without mediation.

The Complaints Register will be made available to the Ports Authority on request. Ports Authority will be made aware of any complaints received directly by the contractor/proponent as soon as practicably possible.

### 3.2 Sub-contractor Management

XC will ensure that appropriate resources are scheduled to the Project including budget allocation to ensure adequate supply of environmental control equipment including Geotech socks and spill kits.

The timely supply of requested items (e.g. spill kits, Geotech socks, Geotech material, pads and other equipment) is to be coordinated by the site supervisor to ensure that objectives are achieved. There is to be no delay in project performance and the environment is not to be compromised due to insufficient supplies or unavailability of requested resources.

All Sub-contractors will be advised of the relevant DA/Planning Approval conditions and will be required to operate within the requirements of this CEMP and associated documents.



## General

All Sub-contractors engaged by XC for works shall undertake works in accordance with:

- Relevant Environmental Legislation, Codes of Practice and Australian Standards, and
- XCs policies and procedures and CEMP requirements;

## Monitoring

Sub-contractors are expected to provide a high level of supervision of their workers on site and implement appropriate monitoring practices such as: work area inspections, task observations and ERA review.

XC will monitor Sub-contractor's environmental compliance through mechanisms such work area inspections, observations, audits and reviews.

### **3.3 Competency, Training and Awareness**

All workers and Sub-contractors attending site will receive a site-specific induction that includes details of environmental and compliance obligations. This training also includes environmental management and mitigation requirements for noise, air pollution, water pollution, waste management, contamination, hours of work, incident and complaint response, sensitive receivers and location of critical services. Any worker not inducted will be unable to commence works on site.

Evidence of training and competency is to be provided prior to commencement of works. Some key competency environmental standards for this Project may include:

- ARC License to remove refrigerants
- Specific hazardous liquid removal license
- Environmental Risk Assessment
- Traffic Management qualifications
- Asbestos Removal Supervisor
- Asbestos Awareness (removal)

The Project Manager is responsible for identifying and assessing the training needs for the Project. The Site Supervisor is responsible for monitoring the skills required by workers to effectively implement the CEMP, Sub Plans and associated procedures on site. Records of induction and other training will be maintained by XC.

Pre starts and toolbox talks will be held on a regular basis in order to provide the Project decision makers with an update, including any key or recurring environmental issues.

Workers will be made aware of this CEMP and Sub Plans including XCs Management System policies, procedures, site rules and other requirements through the site-specific induction, consultation and communication processes. Further awareness may be achieved by:

- Pre-start, toolbox talks and meetings; and
- Environmental Risk Assessments

## **4. Stakeholder and Community Involvement**

Throughout the Project XC will work with stakeholders and the community including the Ports Authority.

XC will notify stakeholders of any significant events or changes that affect or may affect individual properties, residences and businesses. This will include but is not limited to noisy works and interruptions to utility services outside of normal hours. XC will manage and record complaints as detailed in Section 3.1.

All communication to neighbours/surrounding businesses regarding the project will be provided to Ports Authority for review prior to issue.

## **5. Emergency and Incident Response**

The Emergency and Incident Response Plan, as per the Work Health and Safety Plan, includes:

- Categories for environmental emergencies and incidents;
- Notification protocols for each category of environmental emergency or incident, including notification of notification to owners / occupiers in the vicinity of the incident. This is to include relevant contact details;
- Identification of personnel who have the authority to take immediate action to shut down any activity, or to affect any environmental control measure (including as directed by an authorised officer of the EPA);
- A process for undertaking appropriate levels of investigation for all incidents and the identification, implementation and assessment of corrective and preventative actions;
- Notification requirements depending on the nature of the incident (i.e. the EPA, Department of Planning and Environment or OEH) will be notified by the XC Project Manager.
- Ports Authority will be notified immediately of all incidents



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## 6. Environmental Inspections and Monitoring

### 6.1 Environmental Inspections, Monitoring and Auditing

#### 6.1.1 Inspections

All XC workers and Sub-contractors working on behalf of XC are required to monitor work activities in accordance with their site-specific environmental documentation, the requirements of this CEMP and Sub Plans.

Table 7 – Environmental Monitoring, Inspections and Auditing activities that will be undertaken on site are listed in Table 7.

Table 7 – Environmental Monitoring, Inspections and Auditing

Site/Activity Inspections	Frequency	By Whom
<i>Weekly Environmental Site Inspection</i>	Once per week	Site Supervisor
<i>Inspection Test Plans (ITPs)</i>	As Required	Site Supervisor
<i>Plant Inspection</i>	Daily	Operators
<i>Emergency Preparedness Inspections</i>	At Project Start	XC Site Supervisor
<i>Community Complaints Register</i>	On going	XC Site Supervisor
<i>Waste Tracking</i>	On going	XC Site Supervisor
<i>Noise / Vibration</i>	On going	XC Site Supervisor

Sub-contractors are responsible for inspection of their own areas of control and equipment used. This will be monitored and checked by XC Site Supervisors.

#### 6.1.2 Audits

An internal environmental auditing programme will be established by XC for the Project and consist of systems audits focusing on:

- Compliance with Approval, Permit and Licence sections that are relevant to current operations;
- Compliance with the CEMP;
- Community consultation and complaint response; and
- Environmental Training Records.

### 6.2 Environmental Non-Compliances

#### 6.2.1 Incident Reporting

The following summary of XC's Incident Management and Reporting process covers all potential incidents (safety, compliance and environmental). Potential Environmental incidents include:

- Emissions to Air;
- Discharge to Land or Water;
- Damage to adjoining property due to environmental impacts;
- Complaints from public;
- Hazardous Building Materials;
- Wastes untracked;
- Chemical incidents; and
- Other environmental hazards that cannot be address immediately.

#### 6.2.2 Incident Investigation

A formal documented investigation will be required for:

- Any notifiable incident resulting in a significant release to land, air, and water or that had the potential to incur a penalty from the relevant authority;
- Environmental incidents that have the potential to incur a penalty from the relevant authority; and
- Where requested by the Project Manager.

The Project Manager will review all incidents to verify that corrective and preventive actions resulting from incident investigations (documented process within the related forms include actions, responsibilities, and timeframes), are appropriate, track closure and are signed-off.

Information about on-site incidents, lessons learnt and similar operations to prevent reoccurrence is to be provided to the workers during pre-start/toolbox meetings.

Ports Authority will be provided all incident investigation reports.



### 6.2.3 Corrective Action

The need for corrective and preventive action may be initiated following:

- Audit(s);
- A site inspection, e.g. plant, worksite;
- An Incident Report or an Investigation Report;
- An Inspection, testing, repair and maintenance reports;
- Issues raised at Pre-start/Toolbox meetings, project meetings or by the ER;
- Complaints;
- Changes to procedures, processes, systems or documentation;
- Legislative change;
- Adverse trends;
- Regulator enforcement activities such as Improvement Notice, Prohibition Notice or Infringement Notice; or
- Management reviews.

### 6.3 Environmental Monitoring and Inspection Records

XC will establish a uniform system of document management and record keeping that maintains currency of information and is able to demonstrate compliance to the CEMP and regulatory requirements. This will include:

- Site inspections, audits, monitoring, reviews or remedial actions.
- Documentation as required by performance Conditions, Approvals, Licenses and Legislation.
- Modifications to site environmental documentation (e.g. CEMP, ERA).
- Other records as required including:
  - Qualifications of personnel;
  - Monitoring and inspection reports;
  - Induction and training records;
  - Reports of environmental issues, incidents and complaints and action taken to rectify these;
  - Internal and external audit reports;
  - Evidence of action taken as a result of a recommendation from such meetings;
  - Records of Sub-contractors monitoring their own activities;
  - Records of the Contractor monitoring the Sub-contracted activities;
  - Non-conformance and corrective action records; and
  - Risk management records

Compliance reports detailing the outcome of any environmental surveillance activity including internal and external audits will be produced by the XC, Environmental Manager or delegate and records will be retained onsite for the duration of the Project.

## 7. Review and Improvement

### 7.1 Continual Improvement

XC will continually improve its suitability, adequacy and effectiveness of the CEMP and Sub Plans. This review will include:

- Ensuring corrective actions implemented are effective;
- Corrective actions can be extended to other operational activities (where relative);
- Lessons learnt from root causes are extended to other operational activities (where relative);
- Implement additional corrective and preventative actions as required for improvement.

Corrective actions will be undertaken in the event of a complaint or incident and based on the results of monitoring and auditing.

### 7.2 Management Review

Periodic assessments and reviews of this CEMP will be conducted by the project management personnel where identified or biannually (6 monthly). Reviews may be conducted due to:

- Changes in internal/external issues (e.g. Legislation, risks, aspects etc.);
- Results of Internal/external/compliance audit results;
- Interested party feedback;
- Status of corrective and preventative actions;
- Results of site inspection,
- Outcomes of incident and near miss investigations;
- Any concerns which have been expressed by relevant parties



## 7.3 Documentation Control

### Revision Control

The Project Manager is responsible for ensuring the initial developed CEMP (draft) is reviewed and given a starting version number (i.e. 1) at CEMP approval. Any amendments or revisions to the CEMP to be given with the next version number series (e.g.2, 3 etc.) for the life of the Project.

### Distribution Control

Where controlled copies are used, controlled copies will be distributed to key workers prior to commencement of works, so that they are aware of the CEMP contents and for retention purposes. Amendments to this CEMP will be communicated to persons issued with controlled copies. Awareness of the contents of the CEMP will be communicated during site inductions. The Project Manager or delegate is responsible for the distribution of revised versions or sections thereof to project site management.

### Uncontrolled Copies

In the majority of occasions uncontrolled copies (latest version) will be distributed to key workers (or internal or external stakeholders) prior to commencement of works, so that they are aware of the CEMP contents. Such copies will not be numbered nor kept up to date. Awareness of the contents of the CEMP and amendments will be communicated during site inductions, Daily Pre-start/Toolbox Meetings. Uncontrolled copies will only be distributed on the authority of the Project Manager.

### Construction Environmental Management Plan CEMP, Approval

The CEMP to be reviewed by each person nominated on the covering page of this CEMP and necessary amendments / revisions made prior to approval by the Project Manager. This CEMP to be written and developed prior to work commencing on site.

## 7.4 Records Management

All relevant environmental records shall be maintained in a secure and orderly manner such that they remain legible, identifiable and traceable to the activity, product or services for which they were generated until the period for retention expires (as required by specific Australian Standards, WHS & Environmental legislation).

During the Project, environmental records including all subsequent versions of the CEMP and Sub Plans are to be kept on site with the latest version. A copy is to be made available to workers carrying out work in connection with the CEMP and Sub Plans, maintained and located in the Site Office until completion of the Project.

Example of environmental records include (where generated):

- CEMP and all revisions
- ERA
- Records of management reviews
- Induction and training records
- Environmental Checklist
- Records of work environmental controls
- Minutes of tender/contract reviews
- Register of Calibration and certificates
- Work Method Statements
- Waste disposal dockets
- Risk assessments
- Permits
- Monitoring of subcontractor records
- Audit Reports
- Schedule of Inspection/Test Plans (where used)
- Records of any testing/analysis
- EPA Disposal receipts for Hazardous Materials
- Site Inspection Records
- Non-conformance and Corrective Action
- Complaint and Incident Reports
- Contract information
- Waste disposal dockets



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## 8. Terms and Definitions

Table 8 – Terms and definitions

CEMP	Construction Environmental Management Plan
CSSI	Critical State Significant Infrastructure
CNVMP	Construction Noise and Vibration Management Plan
Department	NSW Department of Planning
DP&E	Department of Planning and Environmental
EMS	Environmental management System
EP&A Act	Environmental Planning and Assessment Act 1979
EPA	Environmental Protection Authority
ERA	Environmental Risk Assessment
ER	Environmental Representative
Heritage Item	Listed on the State Heritage Register
Incident	An occurrence that causes or threatens to cause material harm to the environment
Minister	NSW Minister of Planning
NSW Heritage Council	Heritage Council of NSW
OEH	NSW Office of Environment and Heritage
POEO Act	Protection of the Environment Operations Act
XC	XENIA Construction



## Appendix A – XENIA Environmental Policy

### XENIA Environmental Policy

XENIA Construction is a design-driven construction organisation with offices in both Sydney and Brisbane. XENIA Constructions invest time to develop smarter designs that effectively de-risk projects, achieve construction efficiencies and better time, cost and quality outcomes.

At Xenia Constructions we believe that the environment must be protected throughout the delivery of all services provided with particular attention to waste minimisation, recycling of natural resources and the prevention of pollution.

**In order to develop and measure our environmental performance we shall as required:**

- Comply with the spirit and word of applicable environmental legislation;
- Establish and review measurable environmental objectives and targets;
- Ensure all workers, contractors and visitors are aware of their environmental responsibilities;
- Implement and maintain environmental risk management processes to ensure environmental aspects and impacts are properly identified, assessed (where appropriate), controlled and regularly reviewed;
- Consider cost effective new and improved technologies to minimise environmental impact;
- Encourage an open reporting culture to ensure that all environmental incidents that may occur in the workplace are appropriately reported and assessed to minimise potential future occurrences;
- Actively communicate and engage with workers, regulators and external stakeholders to recognise and respond to environmental concerns; and
- Prominently display this policy in the workplace and make available to interested parties as required.

It is a requirement that all workers, contractors and visitors comply with this environmental policy.

**Authorised by:**

John Gough

(Director)

5<sup>th</sup> 8<sup>th</sup> 2017

.....  
**XENIA CONSTRUCTIONS**

.....  
**Signature**

.....  
**Dated**



# Construction Environmental Management Plan

Initiated: 1/08/2017

Reviewed

Revision: 1

## Appendix B – Site Environmental Checklist

**Supervisor:**

**Project Title:**

**Date:**

Air Quality	Comments
Check good housekeeping procedures are in place – including wet sweeping of dusty work areas	
Check plant and equipment to be fitted with standard pollution control devices. Copies of compliance certificates to be supplied plant and equipment before commencing on site	
Minimise stockpiling of materials on site	
Any stockpiles on site are to be kept damp by use of water sprays	
Monitor roads for signs of sediment tracking and cleaned	
Hand sweep to manage tracked sediment on roads and footpaths.	
Check vehicles wheels before leaving site for mud and debris	
Check concrete cutting water is vacuumed up and not left to dry out, leaving a source of very fine silica dust.	
Cover disturbed areas and stockpiles when not active	
Wet down demolition wastes that is generating dust during loading onto trucks prior to lifting	
<b>Erosion &amp; sediment Controls</b>	
Check erosion and sediment Controls established around works area	
Establish Geotech sock and fabric before works commence on site	
Cease works if Erosion and Sediment Controls are not effective	
Check Hydrovac is working before concrete cutting	
Remove sediment laden water with Hydrovac	
Inspected vehicles wheels before leaving the site for sediment on tyres.	
<b>Water Quality</b>	



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Check no chemicals, fuel or wastes to be kept on site	
Check erosion control measures are preventing sediment from entering waterways	
Check there is no discharge of water without a permit	
Ensure all sealants & liquid chemicals including, diesel, paints, are banded and remain in work vehicle after use and not left on site	
Check all vehicles for any leakage of oil or diesel	
Report any leakage of oil and diesel spills	
<b>Comments Flora and Fauna</b>	
No mechanical trenching around tree roots	
Trees to be removed or pruned are to be checked against City of Sydney	
Works adjacent to trees to be protected by cladding	
Exclusion fencing is in place	
No equipment or stockpiles under tree canopies	
<b>Waste Management</b>	
The site is in an orderly state free of litter	
Waste dockets are received from the Waste Contractor	
<b>Noise Management</b>	
Check all plant and equipment complies with Guidelines	
Remove tonal indicators from mobile equipment & fit with residential type	
Ensure plant and equipment maintained	
<b>Chemical and Waste Storage Checklist</b>	



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Check refuelling is by Mini Tankers	
Check work areas for any sign of fuel or oil leaks	
Check all storage containers for leaks, ensure all lids are on properly, that containers are stable	
Check all secondary containment (permanent/mobile) for leaks, spills or rainwater	
Check all road work areas for spills or staining	
Check all spill kits are in good condition and have sufficient material for spill response	
Check labels on all chemical storage containers, update and replace if necessary	
Check all signage on site is intact	
Maintain chemical SDSs on site	
Review chemical storage register and update if necessary	





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## Appendix D – Environmental Risk Assessment



# Environmental Risk Assessment

## XENIA Constructions

Controlled Document Number: 01

XENIA Constructions Risk Assessment				
<b>Scope of Works</b> The project seeks to use Tenancy 5 as an indoor and outdoor restaurant and bar (incorporating a micro-brewery) landscaping of outdoor areas located at the Passenger Terminal Circular Quay. The Project includes the fitout and alterations and additions to Level 1 & 2 for use as a restaurant and bar.				
<b>Expected Start Date:</b>	<b>Expected Completion Date:</b>	<b>Person Responsible Position:</b>	<b>Prepared by: Jo Drummond Date</b>	<b>ER Reviewed by: Date:</b>
Legislation			Guidelines	



# Construction Environmental Risk Assessment

Initiated: 1/08/2017 Reviewed Revision: 1

<p>Environmentally Hazardous Chemicals Act 1985          Planning Approval Consistency Procedure SM ES –PW 314          Environment &amp; Sustainability Policy SM SE MM 102          Protection of the Environment Operations Act and Regulations 1997 (POEO)          Heritage Act 1977          Local Government Act 1993          Work Health and Safety Act 2011          Fisheries Management Act 1994 under legislation in response to Part 7 of the Act          Environmental Planning and Assessment Act 1979          POEO (Noise control) Regulation 2008          POEO (Waste) Regulation 2005 and amendment 2008          Waste Avoidance and Resource and Recovery Act 2001          Catchment Management Authorities Act 2003          Waste Classification Guidelines (OEH)</p>	<p>NSW Guidelines for Construction Sites 2004          ISO 31000 Risk Management Guidelines and Principle          NSW Government Environmental Management System Guidelines September 2004          Australian Standard 4361 Guide to Lead Paint Management          AS 4964-2004 Guideline for assessing asbestos</p>
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Risk Ranking Table		CONSEQUENCE				
PROBABILITY	1 Insignificant	2 Minor	3 Moderate	4 Serious	5 Disaster	
1 Rare	1	3	6	10	15	
2 Unlikely	2	5	9	14	19	
3 Could Occur	4	8	13	18	22	
4 Likely	7	12	17	21	24	
5 Almost certain	11	16	20	23	25	

  

Level	Risk Descriptor	Description
High Risk (18 - 25)	High Risk (18 - 25)	Long Term damage, catastrophe, and toxic release off-site with detrimental effect and huge financial loss, environmental disaster.
Significant Risk (10 - 17)	Significant Risk (10 - 17)	Soil, water air adversely affected in long term, economic and financial loss.
Moderate Risk (6 - 9)	Moderate Risk (6 - 9)	Soil, water air adversely affected in short term
Low Risk (1 - 5)	Low Risk (1 - 5)	Could affect environment but release contained and managed on site.

Activity	Impacts	Inherent Risk	Mitigation Measures	Residual Risk Score	Action By	Legal /Planning Requirements
<b>1.0 Pre Start</b>						
1.1	Installation of site hoarding	5	Construction Noise and Vibration Management Noise monitoring if required Conduct Pre Starts, Tool Box talks with reference to the Environmental Controls	1	All site personnel	Protection of the Environment Operations Act 1997
1.2	On site traffic	13	Noise monitoring Check vehicles for leaks	4	All site personnel	Protection of the Environment Operations Act 1997



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1.3	Silt run off	Noise pollution Sediment laden water pollution	12	Works primarily occur around sealed areas: Install sediment control Cover external drains	4	All site personnel	Protection of the Environment Operations Act 1997
<b>2.0 Demolition of existing structures</b>							
2.1	Demolition of existing structures	Generation of dust Air pollution	12	Stockpiles of demolition material will be covered when not being actively worked or when visual monitoring observes dust generation from these areas During windy conditions, visual monitoring - for dust - will be documented in the daily checklist	7	All site personnel	Protection of the Environment Operations Act 1997
2.2	Movement of vehicles may generate dust	Generation of dust Air pollution	3	Minimise stockpiling of materials onsite	1	All personnel	Protection of the Environment Operations Act 1997 Clean Air (Plant and Equipment) Regulation 1997
2.3	During loading of trucks with demolition materials dust may escape	Generation of dust Air pollution	7	Trucks to be covered after filling and before leaving the site. Trucks transporting material from the site will be covered immediately after loading to prevent wind-blown dust emissions and spillages. Covering to be maintained until immediately before unloading.	3	All personnel	Protection of the Environment Operations Act 1997 Clean Air (Plant and Equipment) Regulation 1997
	<b>Activity</b>	<b>Impacts</b>	<b>Inherent Risk</b>	<b>Mitigation Measures</b>	<b>Residual Risk Score</b>	<b>Action By</b>	<b>Legal /Planning Requirements</b>
2.4	Dust may be blown onto surrounding streets and harbour.	Generation of airborne dust Air Pollution	12	When demolishing the structures hosing with mist at demolition site face may be utilised where required once adequate sediment controls are in place. Loading will cease in windy conditions. Good housekeeping procedures will be in place – including wet sweeping of dusty work areas and vacuuming slurry	2	All personnel	Protection of the Environment Operations Act 1997 Clean Air (Plant and Equipment) Regulation 1997
2.5	Concrete Cutting	Generation of airborne dust Air Pollution	12	Concrete cutting water will be vacuumed up on the spot and not left to dry out. Any residual staining of very fine silica dust will be cleaned up Dust suppression devices will be used on concrete cutters	5	All personnel	Protection of the Environment Operations Act 1997 Clean Air (Plant and Equipment)



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							Regulation 1997
2.6	Demolition and Construction Activity	Generation of airborne dust Air Pollution	12	Regular housekeeping/cleaning by sweepers from the onsite demolition staff, covering of wastes that could be borne by wind from the site.	3	All personnel	Protection of the Environment Operations Act 1997
2.8	Demolition of existing structures causing exposure to potential Asbestos Containing Materials (ACM)	Generation of dust containing asbestos particles	13	The following is recommended to manage the Asbestos Containing Materials(ACM) if found in the tenancy: <ul style="list-style-type: none"> <li>Follow the unexpected finds procedure which documents the procedures for action when asbestos-containing materials are potentially encountered at the site including wetting down soil and barricading the area.</li> </ul>	6		Protection of the Environment Operations Act 1997 Australian Standard 4361 AS 4964-2004 Guideline for assessing asbestos POEO (Waste) Regulation 2005 and amendment 2011
<b>3.0 Demolition and Construction of structures causing noise and vibration</b>							
3.1	Demolition of existing structures	Generation of Noise Pollution Vibration causing dilapidation	17	Noise monitoring will be undertaken to establish background levels and be ongoing during demolition. The Construction Noise and Vibration Management Procedures will identify the locations of sensitive receivers and the type of monitoring required. Plant and equipment to be filtered with standard noise pollution control devices. Reduce volume of quakers (sound alert system) Monitor specific works areas if noise indicators or receivers identify that works exceed noise level guidelines Maintain a complaints register and respond to complaints Conduct Pre Starts, Tool Box talks with reference to the Environmental Controls	12	All personnel	Protection of the Environment Operations Act Noise Control Regulation 2008
3.2	Use of plant and equipment	Generation of Noise Pollution	17	All plant used onsite will be checked for noise level compliance prior to arrival for use onsite. Demolition ,Construction and Fitout works will be undertaken at times as per the DA requirements indicating specified areas and during specified times and the plant used intermittently	12	All Personnel	Protection of the Environment Operations Act Noise Control Regulation 2008
	<b>Activity</b>	<b>Impacts</b>	<b>Inherent Risk</b>	<b>Mitigation Measures</b>	<b>Residual Risk Score</b>	<b>Action By</b>	<b>Legal /Planning Requirements</b>
3.3	Managing plant and equipment	Generation of Noise Pollution	17	Plant & Equipment Register to be kept detailing approved equipment, noise compliance certificates and relevant restrictions/ conditions	12	All personnel	Protection of the Environment Operations Act Noise Control



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				Remove tonal indicators from mobile equipment & fit with residential type silencers Ensure plant and equipment is maintained Work hours comply with guidelines and regulations including 'out of hours' work Plan for respite periods for high noise generating activities			Regulation 2008	
3.4	Trucks loading may cause excessive noise	Generation of Noise Pollution	17	Hours of operation as per conditions of approval Hours varying by permission Respond to complaints Maintain a complaints register	12	All personnel	Protection of the Environment Operations Act Noise Control Regulation 2008	
3.5	Saw cutting concrete may cause excessive noise	Generation of Noise Pollution	17	Saw cutting will be staged at appropriate times to minimise noise impacts on receivers Variation of hours to be approved the City of Sydney where required.	12	All personnel	Protection of the Environment Operations Act Noise Control Regulation 2008	
3.6	Noisy Work Times	Noisy works during restricted hours	17	All workers to be inducted into the noisy works restrictions on site	9	All Personnel	Protection of the Environment Operations Act Noise Control Regulation 2008	



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	Activity	Impacts	Inherent Risk	Mitigation Measures	Residual Risk Score	Action By	Legal /Planning Requirements
4 .0	<b>Construction ,Demolition works causing water pollution</b>						
4.1	Demolition of existing structure	Sediment Laden Water  Water Pollution Pollution of water Impact on aquatic ecology Sedimentation of waterways Regulatory action Community impacts	6	All material removed from works area is to be completed in a way to ensure re use of all materials. All materials to be stored in neat fashion away from work area and in an area that will not impact waterways or drains	3	All personnel	Protection of the Environment Operations Act 1997 Sydney Water Act 1994
4.2	Use of machinery on site may cause oil or fuel spill	Water Pollution	13	Plant & Equipment Register to be kept detailing approved equipment, noise compliance certificates and relevant restrictions/ conditions Ensure onsite spill kits are stocked and maintained, at the ready and fit for purpose Ensure onsite personnel are trained in the use of spill kits and emergency response Ensure Sediment controls are in place prior to use of plant and machinery Bund and label all chemicals. Ensure all sealants & liquid chemicals including, diesel, paints, are banded. Check routinely all vehicles and cranes for any leakage of oil or diesel Report any leakage of oil and diesel spills and schedule for off-site maintenance	5	All personnel	AS 1940 – 2004 ‘The Storage and Handling of Flammable and Combustible Liquids’
	Activity	Impacts	Inherent Risk	Mitigation Measures	Residual Risk Score	Action By	Legal /Planning Requirements
4.4	Concrete cutting	Wash out into sediment laden storm water Water Pollution	9	Any excess water will be collected disposing in a suitable facility A geo-tech bund and installation of geo-tech socks will be placed around each concrete cutting area before works commence to prevent any escape of slurry or contaminated water. If required as further back-up establish container and pump on standby for saw cutting washout in case Hydro-vac breaks down during works Conduct Pre Starts, Tool Box talks with reference to the Environmental Controls	3	All personnel	Protection of the Environment Operations Act 1997



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4.5	Removal of material off-site.	Material escaping from vehicles and polluting roadways Storm water Pollution Air pollution	9	Cover all loads with tarpaulin before leaving the site Check truck before leaving the site Induct all site personnel on possible impacts on sensitive receivers Cover all loads with tarpaulin before leaving the site Check truck before leaving the site	3	All Personnel	Protection of the Environment Operations Act 1997
4.8	Disturbed and exposed areas due to soil removal if forecourt	Rain on exposed soil causing run off Storm water pollution	9	Install sediment controls around excavation Minimise disturbed areas during works Make good disturbed areas prior to leaving sites	2	All personnel	Protection of the Environment Operations Act 1997
4.11	Traffic movement	Mud on roads Litter in storm water	8	Sweep Roads Cover storm water drains	3	All personnel	Protection of the Environment Operations Act 1997
	<b>Activity</b>	<b>Impacts</b>	<b>Inherent Risk</b>	<b>Mitigation Measures</b>	<b>Residual Risk Score</b>	<b>Action By</b>	<b>Legal /Planning Requirements</b>
<b>5.0 Waste Removal</b>							
5.1	Waste Removal	Illegal dumping of material	8	All materials removed from works area are to be removed in a way to ensure re-installation. Any material required to be removed off site, is to be completed by contractor and dumped in the correct location based on waste classification Minimal waste removal is expected for works	2	All personnel	Protection of the Environment Operations (Waste) Regulation 2005 Waste Avoidance and Resource Recovery Act 2001
	<b>Activity</b>	<b>Impacts</b>	<b>Inherent Risk</b>	<b>Mitigation Measures</b>	<b>Residual Risk Score</b>	<b>Action By</b>	<b>Legal /Planning Requirements</b>
<b>6 Protection of Palm Tress During Works</b>							
6.1	Protect Trees on forecourt	Loss of Bio Diversity	20	Cease works if any flora or fauna is likely to be adversely impacted or disrupted Lifting Plan to capture procedures are lifting around trees Spotters to be used during all lifts	12	All personnel	Protection of the Environment Operations Act 1997
<b>8.0 Air Quality Management</b>							
	Dust Control	Air Pollution	21	Exhaust fans to be utilized with plastic duct socks to direct all dust away from pedestrians and public/environmental areas During works involving excess dust, water is to be utilized to decrease airborne dust pollution and ensure settlement is contained within the site	9	All personnel	Protection of the Environment Operations Act 1997
	Exhaust Control	Air Pollution	21	All plants and machinery to be set up in way that ensures exhaust is not directed towards harbor / pedestrians If required redirection valves to be fitted to exhausts to ensure vertical	9	Plant Operators	Protection of the Environment Operations Act 1997



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	Strong Odors	Air Pollution	18	dispersion Any materials that have a strong odor to be applied with exhaust or dispersion fans Appropriate SDS's to be on site at all times	9	All personnel	Protection of the Environment Operations Act 1997
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**Environmental Risk Assessment Consultation and Sign off in regard to acceptance of proposed work method and associated responsibilities**

Name	Signature	Date	Name	Signature	Date