

# ENVIRONMENTAL MANAGEMENT PLAN

**Project Name: Twin Towns Services Club**

**JUNE 2007**



• Project Managers • Development Consultants  
• Cost Managers • Quantity Surveyors

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## ISSUE DETAILS

Rev No.	Issue date	Description	Issued to:			Issue method		
			Company	Name	Position	By hand	Mail	Email

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## APPROVAL

Approved by:

Position:

Signature:

Date:

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## APPLICATION AND AUTHORISATION

This Environmental Management Plan (EMP) addresses environmental issues associated with the XXXXX and construction of the project and any impacts (permanent or otherwise) that construction activities may have on the building footprint and/or the surrounding areas.

This EMP is the lead document that dictates environmental performance for the project .

Environmental performance will be continuously monitored and Work Method Statements reviewed with the aim of eliminating risk and ensuring continual improvement.

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## SCOPE OF THIS EMP

The scope of this plan covers:

- Environmental impacts from construction works.
- Long term impacts that may be influenced by construction methods.
- Environmental impacts potentially created by the design of the project.

## SYSTEM INTRODUCTION

### Introduction

This Environmental Management Plan has been produced for the following purposes:

- Compliance to current Environmental legislation.
- Establishment of environmental objectives for the project.
- Identification of environmental risks and the control measures to be used to mitigate such risks.
- Subcontractor environmental management requirements.
- Other environmental management requirements as required for this project.

### Key components of the EMS

<b>Legislative requirements:</b>	Requirements of current Environmental legislation (including Regulations, Policy's and other relevant information) have been incorporated as required.
<b>Risk review:</b>	<p>A generic risk review has been incorporated into this EMP.</p> <p>Where additional site specific risks are identified, these risks, including their control measures will be identified under the heading of "Project Specific Information".</p> <p>Additionally, as required, risk reviews for other construction activities or work activities will be completed by either or both of the Principal Contractor and applicable Subcontractors.</p> <p>The review of project risks will be an on-going activity during the construction phase of this project.</p>
<b>Aspects and Impacts:</b>	A generic list of environmental aspects, their impact on the environment and their control measures is attached to this document.
<b>Work method statements:</b>	As required according to the type of work to be completed, a WMS may form a fundamental part of daily environmental management on site and may be required to be provided by persons completing a work activity which is deemed to have an element of environmental risk (i.e. PASS, asbestos removal, use of petrol or diesel).
<b>Project environmental procedures:</b>	<p>General environmental procedures are included in this document – (refer Project Environmental Procedures).</p> <p>Additional procedures, as required (i.e. written instructions for the environmental management of daily site activities) will be developed.</p> <p>All environmental procedures are intended to ensure a consistent and practical approach to environmental management.</p>
<b>Project induction program:</b>	<p>All construction personnel (and other persons by agreement) will be required to attend a site specific induction prior to commencing any work activity on site.</p> <p>The intent of the site induction program is to provide information on key safety, environmental, quality and behaviour requirements of site personnel.</p>
<b>Emergency response plan:</b>	<p>A general plan of the site emergency response procedures for the project is included in the site environmental system.</p> <p>Applicable information will be provided to subcontractors at the time of attending site induction.</p>
<b>Environmental documentation:</b>	Environmental forms, registers and records will be maintained on site to provide an accurate record of information obtained throughout the project life.

### Definitions

	<b>WMS – Work Method Statement</b>	<b>EMS – Environmental Management System</b>
<b>SMS – safety management system</b>	<b>SMP – safety management plan</b>	
<b>MSDS – Material Environmental Data Sheet</b>	<b>Notifiable incident</b> - An environmental incident that poses a serious risk to human health and/or the environment and could significantly impact on construction activities. The incident would require the involvement of one or more of the emergency services.	

# PROJECT ENVIRONMENT GOALS AND OBJECTIVES

## Principal objective

- To implement and manage a system which ensures that the project remains free of incidents and accidents capable of causing environmental harm to persons, flora or fauna.
- To promote a proactive attitude towards and work practices which have an element of environmental risk.
- To develop a high standard of interpersonal relations and mutual respect between all persons associated with the project.

## Key targets

Type	Description	Objective
Accident and incidents	<b>1. Environmental Emergency</b> An environmental incident that poses a serious risk to human health and/or the environment and could significantly impact on construction activities.  The incident would require the involvement of one or more of the emergency services.	<b>Primary:</b> Nil for the project <b>Secondary:</b> Nil for the project
	<b>2. Moderate environmental incident</b> An environmental incident that poses a moderate level of risk to human health and/or the environment and may impact on construction activities.  The incident is likely to require a co-ordinated response at project level.	<b>Primary:</b> Nil for the project <b>Secondary:</b> maximum 1 for the project
	<b>3. Minor environmental incident</b> An environmental incident that poses a minor risk to human health and/or the environment the effects of which are short term and can be dealt with using standard procedures. (i.e. small diesel spill)	<b>Primary:</b> Nil for the project <b>Secondary:</b> maximum 1 for the project
Penalties and Infringement Notices	As issued by a local council or the Environmental Protection Agency.	<b>Primary:</b> Nil for the project <b>Secondary:</b> maximum 1 for the project
Recycling and waste management	A quantifiable reduction in the amount of waste generated by the project AND an increase in the amount of waste recycled by the project.	Refer to the "Sustainable Resources Management" section of this EMP for further detail.
Objectives and targets:	A generic list of project objectives and targets is attached to this document	

## Lead indicators

- Investigate all actual and potential incidents, accidents or unsafe work activities and conditions within specified time frames\*.
- Close out unsafe work activities and conditions within specified time frames\*.
- Follow up and close out of Notices and Instructions within specified time frames\*.
- Close out audit non-compliances within specified time frames\*.
- Ensure review and close off of Subcontractor environmental documentation within specified time frames\*.
- Achieve > 80% performance result on environmental audits.

## PROJECT INFORMATION

<b>Project address</b>			
<b>Duration of project</b>	<b>Weeks:</b>	<b>Start:</b>	<b>End:</b>
<b>Project Overview</b>			
<b>Construction overview</b>			
<b>Building use summary</b>			
<b>Project risk matrix</b>	<p>Where required (due the type, location or level of contamination of the project) an environmental risk assessment may be undertaken for the project.</p> <p>Any risk assessment process is based on the Australian standard for risk assessment (AS/NZS 4360:1999) and covers aspects of construction including normal and abnormal operations or activities and any potential emergency situations.</p> <p>The outcomes of the process are reflected in, and managed via, an EMP</p> <p>In addition to an overall project risk assessment, persons or companies completing work on the project will be required to provide environmental documentation which includes (but is not limited to) the identification and control of such risks.</p>		
<b>Project work hours</b>	<b>Weekdays</b>	06h30 – 18h30	
	<b>Saturday</b>	06h30 – 18h30	
	<b>Sunday</b>	Nil	
	<b>Public Holidays</b>	Nil	

# PROJECT ENVIRONMENTAL MANAGEMENT PROCEDURES

Legislation applicable to the project	Acts/Regulations/Policy's												
Project environmental procedures	<p>The environmental procedures noted below provide a general overview of:</p> <p>a) The environmental procedures required for the risks identified in the Project Risk Review, and</p> <p>b) The procedures for the management of other general project risks.</p> <p><b>Note:</b></p> <p>a) The information contained below applies to any person or company completing work activities on this project site.</p> <p>b) The information and responsibilities contained in this section is not deemed to be exhaustive. Additional project specific risks will require the implementation of additional environmental procedures and/or Work Method Statements by either or both of the Principal Contractor or subcontractors.</p>												
	<p><b>Risk ratings:</b></p> <p><b>S</b></p> <p>The risk has the potential permanently impact on the environment or harm persons</p> <p>Corrective action is immediate</p>	<p><b>H</b></p> <p>The risk has the potential to cause a serious impact on the environment or persons.</p> <p>Corrective action within 24 - 48 hours.</p>	<p><b>M</b></p> <p>The risk has the potential to cause a minor impact on the environment or persons.</p> <p>Corrective action within 72 hours.</p>	<p><b>L</b></p> <p>The risk does not have the potential to cause any impact to the environment or persons but may require observation.</p>	<p><b>Risk level on this project</b></p>								
Accidents and Incidents – reporting and action	<p>Subcontractors are required to immediately advise the Site Manager or Safety Officer of an (or a potential) environmental accident, incident or risk occurring on this site.</p> <p>Accidents, incidents, near misses and risks will be investigated to identify essential factors and corrective action (as applicable).</p> <p>A register of such issues will be maintained by the Principal Contractor.</p>				All								
Approval to proceed with works	<p>No subcontract company or individual is permitted to proceed with any work, which has an element of environmental risk until:</p> <ul style="list-style-type: none"> <li>Environmental documentation has been received and approved by the Principal Contractor.</li> <li>Relevant Permits have been issued by the Principal Contractor.</li> </ul>				H								
Authority to Work requirements	<p>Prior to any work as identified below being completed on site, the following procedures will be adopted:</p> <table border="1" data-bbox="742 1787 1316 1899"> <thead> <tr> <th data-bbox="678 1798 734 1832">Risk</th> <th data-bbox="750 1798 949 1848">☑ Contaminated material</th> <th data-bbox="957 1798 1157 1832">☑ DG/Hazsub – use</th> <th data-bbox="1165 1798 1316 1848">☑ Work on/over water</th> </tr> </thead> <tbody> <tr> <td data-bbox="750 1854 949 1899">☑ Work above 2 metres</td> <td data-bbox="957 1854 1157 1899">☑ Work on/over footpaths</td> <td data-bbox="1165 1854 1316 1899">☑ Work on/over roads</td> <td></td> </tr> </tbody> </table>				Risk	☑ Contaminated material	☑ DG/Hazsub – use	☑ Work on/over water	☑ Work above 2 metres	☑ Work on/over footpaths	☑ Work on/over roads		H
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☑ Work above 2 metres	☑ Work on/over footpaths	☑ Work on/over roads											

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	<p><b>Certification and inspection of plant and equipment</b></p>	<p>Where a subcontractor intends to use plant or equipment which requires the use of oil, petrol or diesel, the Principal Contractor will complete a review of:</p> <ul style="list-style-type: none"> <li>the equipment for compliance and maintenance documentation (i.e. Registration, log books, maintenance records, noise level readings)</li> <li>the condition of the equipment</li> <li>the operator's licence/s</li> <li>the Subcontractor Work Method Statement/s for the works to be undertaken to ensure that environmental risks have been addressed.</li> </ul> <p>Non-compliant equipment will not be permitted on to the project site.</p>	<p>S</p>
	<p><b>Clearing</b></p>	<ul style="list-style-type: none"> <li>Clearing methods will follow procedures, which incorporate acceptable erosion and stormwater control management.</li> <li>There will be no burning off on site.</li> <li>Contractors will be required to remove sediment distributed by vehicles on any road areas (i.e. using sweeper trucks).</li> <li>Any stockpiles will be positioned in locations as agreed with the Superintendent.</li> </ul>	<p>S</p>
	<p><b>Complaints and Environmental Incident Handling</b></p>	<ul style="list-style-type: none"> <li>All complaints received during construction are to be managed by the Principal Contractor.</li> </ul> <p>Any notifiable incident will be reported to the Environmental Protection Agency (EPA) by the Principal Contractor.</p> <p>Examples of notifiable incidents include fire, chemical and petrochemical (oil, grease, fuel) spills which escape off site, endanger life or result in land contamination, etc.</p>	<p>N/a</p>
	<p><b>Consultation</b></p>	<p>The Principal Contractor will as required advise the Superintendent of the timing and duration of activities likely to give rise to environmental concerns.</p>	<p>N/a</p>
	<p><b>Cultural heritage</b></p>	<p>Personnel working on site will be advised that any discoveries of evidence of artefacts or human activities must be reported to the Superintendent.</p> <p>Where such artefacts are discovered, work in the affected area must cease and care be taken to avoid unintentional damage.</p>	<p>N/a</p>
	<p><b>Dust management</b></p>	<p>Where applicable to the contracted works the following protocols apply:</p> <ul style="list-style-type: none"> <li>Where practical, a stable surface will be provided for main haul routes in the construction area and maintained to minimise dust.</li> <li>A shakedown grid (i.e. comprised of 75mm crushed rock or concrete) will be established at site entrances.</li> <li>Access roads and earthworks will be watered (using recycled water only) to minimise dust emissions. The use of waste oil for dust suppression will be prohibited.</li> <li>All transport of soil, sand, gravel and asphalt loads to the site must be in covered loads.</li> <li>Appropriate speed limits over site roads will be established and enforced.</li> <li>Stockpiles (generated as a result of contractual requirements) of topsoil, spoil and sand will be dampened down, netted or covered to prevent dust pollution.</li> <li>In keeping with good housekeeping practices, work areas will be swept down regularly to minimise airborne pollution by way of rising dust.</li> <li>Temporary barriers, constructed from hay bales, geo-fabric or other materials to be located around storm water pit entrances (etc), to preclude erosion and sediment from entering the system.</li> </ul>	<p>L</p>

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	<p><b>General waste management</b></p>	<ul style="list-style-type: none"> <li>Disposal of waste must be in accordance with local government and/or D.A. requirements.</li> <li>As required, specific areas will be designated on site for the temporary management of various waste streams, cleared vegetation or contaminated waste.  The location of such areas will seek to minimise the potential for impact on the surrounding environment.</li> <li>Waste may not be buried on site.</li> <li>Residue substances, Hazardous/DG goods must be stored in designated storage areas/containers within the site compound and disposed of under a separate waste management protocol (to be included in the subcontractor's WMS).</li> <li>In the event that a spillage does occur contaminated ground or material must be removed to an approved disposal area, the spillage locality made good and the material disposed of under a separate waste management protocol (to be included in the subcontractor's WMS).</li> </ul>	<p>M</p>
	<p><b>Housekeeping</b></p>	<p>Housekeeping is the responsibility of all personnel working on the project site. In general, the following guidelines relating to environmental management apply:</p> <ul style="list-style-type: none"> <li>Construction waste skips will be located within the project area in locations which minimise the risk of debris/waste becoming a hazard to the environment.</li> <li>Amenities are to be maintained in a clean and hygienic condition.</li> <li>The escape of soil/mud off site onto roadways is to be managed by regular inspection and cleaning of the roadway, particularly during rainy periods and immediately following periods of rain.</li> <li>Vehicle shake down areas will be established at site exits to ensure soil does not escape onto public streets. (Refer <b>Dust Management</b>).</li> <li>Rubbish is to be removed from site on a regular basis.</li> <li>Materials and equipment must be stacked and stored correctly and in designated areas.</li> <li><b>Water management</b> – refer separate heading</li> <li><b>Waste management</b> – refer separate heading</li> <li><b>Substances</b> – refer separate headings</li> </ul>	<p>L</p>
	<p><b>Noise Management</b></p>	<p>The following provides a guideline of noise management practices to be implemented on project site:</p> <ul style="list-style-type: none"> <li>Contractors must discuss with the Principal Contractor, any requirement to use machinery which would create noise levels in excess of acceptable levels.</li> <li>Contractors must use acoustically treated equipment where possible.</li> <li>Contractors must schedule services (e.g. – concrete deliveries) so that there is no congestion or waiting queues to block roads or entrances.</li> </ul> <p>Should any item, equipment or work activity appear to be producing noise beyond acceptable levels, noise measurement assessments will be conducted and recorded.</p> <p>As required, corrective action may be implemented.</p>	<p>L</p>
	<p><b>Personal Protective Equipment (PPE)</b></p>	<p><b>Entry to site</b> On entering the project area, all persons are required to wear:</p> <ul style="list-style-type: none"> <li>safety eye wear</li> <li>safety footwear</li> <li>hard hats</li> <li>hi-visibility upper clothing (vest or shirt) including sleeved shirts</li> </ul>	<p>L</p>

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		<p><b>Additional project requirement</b></p> <p>Where, due to a Risk Assessment or change to a WMS, additional PPE is required, Subcontractors are required to supply such equipment to their personnel.</p> <p>Additionally Subcontractors must ensure that their employees have been instructed in the safe use, inspection, cleaning, maintenance and storage of the equipment.</p>	M
	Plant refuelling	<p>On-site refuelling may only occur subject to:</p> <ul style="list-style-type: none"> <li>• Application to and approval by the Principal Contractor to complete the activity.</li> <li>• The activity, including an emergency plan being included in a Work Method Statement supplied by the Subcontractor.</li> <li>• The requirements of "Substances – Dangerous Goods and Hazardous Substances" being complied with.</li> </ul>	S
	Prescribed Activity	<p>No Subcontract company or person is permitted to complete a prescribed activity unless they have:</p> <ul style="list-style-type: none"> <li>• Provided evidence that they are in possession of the appropriate certification.</li> <li>• Provided documentation (safety and environmental) relating to the works to be completed and such documentation has been approved by the Principal Contractor.</li> </ul>	S
	Principal Contractor environmental documentation	<p>Environmental documentation and records will be maintained.</p> <p>Examples of such include:</p> <ul style="list-style-type: none"> <li>• S &amp; E Committee Meeting minutes</li> <li>• Tool box Meeting minutes</li> <li>• Statistics and reports</li> <li>• Inspections and Audits</li> <li>• Alerts, risk assessments and work method statements</li> <li>• EPA notices, incidents and complaints</li> </ul>	N/a
	Public awareness	<p>All personnel on site are required to ensure that work activities completed on site are safe and without risk of injury or illness to members of the public at or near the workplace.</p> <p>Relevant issues of public environment concerns must be addressed in the Subcontractor's WMS (i.e. dust, smoke, noise).</p>	H
	Signage	<p>Environmental signage, as required will be prominently displayed at all times</p>	L
	Site accommodation	<ul style="list-style-type: none"> <li>• Site accommodation by way of site offices, amenities and ablution facilities will be operated in such a manner as to not cause environmental concern.</li> <li>• Temporary ablution facilities, including provision for sanitary waste, will be established in accordance with the requirements of local government and industry best practice.</li> <li>• Temporary buildings will be removed from the site when no longer required and the respective areas made good and/or landscaped as required.</li> </ul>	M
	Site smoking procedures	<p>No smoking is permitted in site sheds, eating areas, toilets, or enclosed work areas.</p> <p>Smoking is only permitted within demarcated and designated areas.</p> <p>Smoking butts and packaging are to be disposed off using identified receptacles.</p> <p>Non-compliant persons may be denied access to the project site.</p>	L

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	<p><b>Stacking and storage</b></p>	<p>All persons on site are responsible for ensuring that:</p> <ul style="list-style-type: none"> <li>• Substances, material, plant and machinery (etc) are stored in a manner which does not endanger the environment, work area or storage area of other subcontractors or the Principal Contractor.</li> <li>• Such items are stored in a manner which complies with any legislation or Standard requirement (i.e. segregation, temperature requirements, height, excluded areas, etc).</li> </ul>	<p>M</p>						
	<p><b>Subcontractor – environmental management</b></p>	<table border="1"> <tr> <td data-bbox="742 459 933 840"> <p><b>Legislative compliance</b></p> </td> <td data-bbox="933 459 1380 840"> <p>Contractors working on this project must comply with the following in force at any time:</p> <ul style="list-style-type: none"> <li>• Environmental legislation.</li> <li>• Applicable Australian Standards associated with such legislation.</li> <li>• Work method statements, Risk Assessments etc as developed specifically for the project.</li> <li>• Any other legislation as it applies to the work being completed by a relevant person.</li> </ul> </td> </tr> <tr> <td data-bbox="742 840 933 1030"> <p><b>On site Risk Assessments</b></p> </td> <td data-bbox="933 840 1380 1030"> <p>To ensure that unsafe work practices are eliminated or to ensure that new work practices are documented, additional written risk assessments and work method statements, may be required from Subcontractors prior to the commencement of particular works on site.</p> </td> </tr> <tr> <td data-bbox="742 1030 933 1120"> <p><b>Tool box talks</b></p> </td> <td data-bbox="933 1030 1380 1120"> <p>Subcontractors may be required to conduct Toolbox Meetings with their employees.</p> </td> </tr> </table>	<p><b>Legislative compliance</b></p>	<p>Contractors working on this project must comply with the following in force at any time:</p> <ul style="list-style-type: none"> <li>• Environmental legislation.</li> <li>• Applicable Australian Standards associated with such legislation.</li> <li>• Work method statements, Risk Assessments etc as developed specifically for the project.</li> <li>• Any other legislation as it applies to the work being completed by a relevant person.</li> </ul>	<p><b>On site Risk Assessments</b></p>	<p>To ensure that unsafe work practices are eliminated or to ensure that new work practices are documented, additional written risk assessments and work method statements, may be required from Subcontractors prior to the commencement of particular works on site.</p>	<p><b>Tool box talks</b></p>	<p>Subcontractors may be required to conduct Toolbox Meetings with their employees.</p>	<p>All</p>
<p><b>Legislative compliance</b></p>	<p>Contractors working on this project must comply with the following in force at any time:</p> <ul style="list-style-type: none"> <li>• Environmental legislation.</li> <li>• Applicable Australian Standards associated with such legislation.</li> <li>• Work method statements, Risk Assessments etc as developed specifically for the project.</li> <li>• Any other legislation as it applies to the work being completed by a relevant person.</li> </ul>								
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<p><b>Tool box talks</b></p>	<p>Subcontractors may be required to conduct Toolbox Meetings with their employees.</p>								
	<p><b>Substances - contaminated environment</b></p>	<p>Where a (geo) technical report indicates the presence of Asbestos, Acid Sulphate, petro or hydro carbon (or any other registered substance) contaminating substances within the soil, the following work protocols apply:</p> <ul style="list-style-type: none"> <li>• Establishment of an exclusion zone, (during excavation) restricting access to area.</li> <li>• Personnel working with contaminated materials are to ensure that their work method statements provide details for working with contaminated materials.</li> <li>• In addition to site-specific PPE requirements, subcontractors are to wear PPE as specified by their JSEA/WMS or Risk Assessment.</li> <li>• Personnel and vehicles involved in the removal of such materials are to practice approved decontamination procedures prior to leaving the site.</li> <li>• All persons coming into contact with the soil must wash their hands and face thoroughly before eating, smoking or leaving the site.</li> <li>• Persons working on the site are to report any abnormalities in the environment to the Site Manager or Safety Officer.  i.e. for Acid Sulphate soils :             <ul style="list-style-type: none"> <li>• discoloured or smelly soils.</li> <li>• a yellow efflorescence on the soil surface</li> <li>• a sulphurous smell</li> <li>• iron staining or iron flocs in stream</li> <li>• soil profiles showing red or brown iron staining</li> </ul> </li> <li>• Such substances may only be removed from the project site by a licensed waste transport company and must be removed to an approved waste receiving depot.</li> </ul>	<p>S</p>						

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	<ul style="list-style-type: none"> <li>The Principal Contractor is to be provided with documentary proof of the type, weight and location of depositing of such removed materials.</li> </ul> <p>In addition to the above, site specific control measures and work methods will be implemented by the Principal Contractor and/or subcontractors for the management of documented site contaminants.</p>	
<p><b>Substances – contaminating materials</b></p>	<p>No work is permitted to occur with such substances or material unless the following procedures have been complied with:</p> <p>The Subcontractor has:</p> <ul style="list-style-type: none"> <li>Provided the Principal Contractor with a minimum of 48 hours notice of the requirements to complete such works.</li> <li>Provided a site specific WMS detailing the work activities, risks and control measures. (No work will proceed until the Principal Contractor has approved the WMS).</li> <li>As required, complied with the Procedure for "Substances – Dangerous Goods and Hazardous Substances".</li> <li>Obtained an Authority to Work permit from the Safety Officer.</li> <li>Notified other subcontractors who may be affected by the work activity or substance.</li> <li>Installed appropriate warning/emergency panel signage to warn of the activity.</li> <li>Ensured that work is only completed within the excluded area.</li> <li>Ensured the exclusion of any persons not associated with the works.</li> </ul>	<p>S</p>
<p><b>Substances – Dangerous Goods and Hazardous Substances</b></p>	<p>No work is permitted to occur with such substances unless the following procedures have been complied with:</p> <p>The Subcontractor has:</p> <ul style="list-style-type: none"> <li>Provided the Principal Contractor with a minimum of 24 hours notice of the requirements to use such substances on site.</li> <li>Provided a site specific WMS detailing the work activities, risks and control measures. (No work will proceed until the Principal Contractor has approved the WMS).</li> <li>Provided a current MSDS for the substance.</li> <li>Provided a current Register of such substance as used on the site. (The Register detailing the nature, quantity and location of all hazardous material is to be maintained and regularly updated).</li> </ul> <p>Additionally:</p> <ul style="list-style-type: none"> <li>No more than 25 litres of such substances may be stored on site at any one time by any one Subcontractor.</li> <li>The substances and their containers must be correctly labelled and contained.</li> <li>Substances must be stored in a manner which complies with the Code (and with AS1940 and any other applicable legislation) and which does not endanger the work area or storage area of other subcontractors or the Principal Contractor.</li> <li>Appropriate warning/emergency panel signage must be erected to warn of the location of the substance.</li> </ul>	<p>H</p>

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	<ul style="list-style-type: none"> <li>• Appropriate fire suppression equipment must be provided and an emergency plan must be included in the Subcontractor's environmental documentation.</li> <li>• At the completion of the construction, all residual stocks of hazardous materials are guaranteed to be removed from the construction area and returned to an appropriate storage facility or disposed of at a licensed regulated waste facility in accordance with local authority requirements.</li> <li>• Spills of such substances must be rendered harmless and the Subcontractor must arrange for collection and disposal of such (including cleaning materials, absorbents and contaminated soils).</li> </ul>	
Substances - exclusion zones	<p>As dictated by legislation or applicable Standards, person using substances, hazardous substances or Dangerous Goods must implement segregation or exclusion zones as dictated.</p> <p>Maintenance of the exclusion zone will require that only persons directly associated with the works are permitted access into the zone.</p> <p>Signage and barricading will be required to identify exclusion zones.</p> <p>The management of such Zones will required to be detailed in the Subcontractors project specific WMS.</p>	S
Third-party subcontracting	<p>Subcontractors who are:</p> <ul style="list-style-type: none"> <li>• Engaged directly by the Principal Contractor, or</li> <li>• Novated by the Client to the Principal Contractor, or</li> <li>• Under the control of the Principal Contractor project area albeit being contracted to another party.</li> </ul> <p>are responsible for ensuring that their employees and subcontractors accept responsibility for, understand and comply with the requirements of this Plan and any other directives issued by the Principal Contractor on the project.</p>	
Trade interface	<p>Subcontractors are required to ensure that on-site activities, storage, and access (etc) does not unduly interfere with the activities of other subcontract personnel.</p> <p>Where activities may lead to a conflict of work space, plant (etc) the work activities must be discussed with the Site Manager.</p>	All
Traffic Management	<p>The following general site traffic management protocols apply on a project site:</p> <ul style="list-style-type: none"> <li>• A general speed limit of 20 klm/h will be in force for all vehicles on the project site.</li> <li>• Minimal obstruction and inconvenience is to be caused to other public users of roads and footpaths external to the site.</li> <li>• The safe conduct of traffic through or around works is to be practiced at all times.</li> <li>• Loads of landscaping material, crushed rock etc are to be covered until off loaded.</li> <li>• Exhaust brakes are not to be used on residential streets.</li> <li>• Road rules and regulations implemented by legislation and enforced by Police are to be abided by at all times.</li> </ul>	M
Vegetation Management	<ul style="list-style-type: none"> <li>• Vegetative material brought onto site must meet appropriate standards and be free of debris, seeds, etc.</li> <li>• Noxious or banned vegetative material is prohibited from being brought on to the project site.</li> <li>• For additional information, refer to Development Approval conditions.</li> </ul>	L

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	<p><b>Water quality management</b></p>	<p><i>In addition to any Development Approval requirements, the following protocols apply:</i></p> <ul style="list-style-type: none"> <li>• <i>Before commencing earthworks on any part of the project, materials sufficient to protect against storms will have been made available on site and the work scheduled to ensure that, wherever practicable, any permanent or temporary erosion works are in place before exposing earthworks to storm runoff.</i></li> <li>• <i>Where possible, site development and construction will be undertaken in stages to keep exposed soil areas to a minimum.</i></li> <li>• <i>Silt mesh fencing may be placed around low lying project areas and stockpiles to prevent erosion of stockpiles.</i></li> <li>• <i>No untreated wastes will be discharged directly or indirectly to waters.</i></li> <li>• <i>Potential pollutants (i.e.: oils, construction materials, rubbish, etc) will be located so as to minimise the potential for contaminants to enter waterways (i.e.: bunded or housed well away from drains, drainage channels or waterways).</i></li> <li>• <i>The pumping out of collected "muddy" stormwater will not be directly discharged to open drain or watercourse – settlement tanks, hay bale filters or geofabric will be used to filter the water prior to discharge.</i></li> </ul> <p><i>The Site Manager or Safety Officer will:</i></p> <ul style="list-style-type: none"> <li>• <i>routinely inspect areas identified as being most likely to contribute to sediment generation</i></li> <li>• <i>inspect sediment and water quality control mechanisms during and immediately following major rain events</i></li> <li>• <i>routinely inspect stockpiles to confirm that their location is not resulting in the generation and uncontrolled transport of sediment.</i></li> </ul>	<p><b>H</b></p>
	<p><b>Weather management</b></p>	<p><i>Where a project site is subject to weather variances (i.e. high wind) the following protocols apply:</i></p> <ul style="list-style-type: none"> <li>• <i>At site induction, Subcontractors will be advised of their role in the site procedures to prepare the site for severe weather conditions.</i></li> <li>• <i>As required, environmental documentation from Subcontractors likely to be affected by severe weather (i.e. cranes, scaffolding) is to include procedures for managing such conditions.</i></li> <li>• <i>Site Management are to keep up to date on weather warnings, review site conditions and determine actions to be taken to manage the site in such conditions.</i></li> </ul>	<p><b>M</b></p>

## CONSULTATION

### Consultation methods

### S & E Committee

### Other measures

Consultation and communication of environmental issues and non-compliance on the project will be managed through a number of avenues. These include but are not limited to:

- Site Safety and Environment (S & E) Committee.
- Issuing of RFI's, Instructions or Improvement Notices.

**Objective**

The objective of the S & E Committee is to assist in co-operation between subcontractors, the Principal Contractor and subcontract workers in developing and carrying out measures to ensure that the maintenance of standards or project safety and environmental management.

Other objectives of the Committee are:

- encouraging and maintaining at the workplace an active interest in safety and environmental issues;
- telling workers about the formulation, review and distribution of standards, rules and procedures about safety and the environmental at the workplace; and
- helping in the resolution of issues relating to safety and the environment at the workplace.

**Meeting frequency**

The Principal Contractor is responsible for determining the frequency of Site S&H Committee meetings and frequency of meetings may vary according to the types of activities that are occurring on the site.

**Minutes**

The Chairperson of the Committee will be required to:

- Complete a record of each committee meeting.
- Submit a copy of the meeting record to each committee member.
- Provide additional copies of the minutes to other on-site facilities (i.e. Lunch room)

**S & E Issue Notification**

As part of the consultation process subcontractors are encouraged to report potential or actual environmental issues and concerns to the Site Manager or Safety Officer.

Such issues are to be notified using the S & E Issue Notification Form and provided to the Safety Officer.

**RFI**

A document which provides a written record of a request to a Subcontract company or person for information relating to environmental documentation or environmental activities.

**Instruction**

A document which provides a written instruction to a person to correct a non-compliant activity or document.

## EMERGENCY MANAGEMENT INFORMATION

### Emergency planning

In an emergency situation, the Principal Contractor has full responsibility and authority for ceasing the works until suitable control measures are in place.

The Principal Contractor will implement temporary protection and/or control measures to minimize the potential of any environmental damage.

The Principal Contractor (or nominated other) will be on site at all times while work is in progress and are responsible for:

- Identifying emergency assembly and exit locations and detailing these on a site map and posting maps on site notice boards.
- Erecting emergency contact numbers at prominent locations throughout the site.
- Erecting appropriate signage (i.e. emergency assembly point, pedestrian signage, exit signs).
- Ensuring that access to assembly points and exits are kept free of obstructions.
- Ensuring adequate and appropriate spill management facilities and information are located at accessible locations around the site.
- Ensuring adequate first aid facilities for the site.
- Ensuring that a notification system (siren, hooter, alarm) is in working order and is located in an accessible position for emergency use.
- Ensuring that the correct fire suppression equipment is placed in strategic locations around site for emergency use.
- Ensuring that subcontract personnel are aware of the location of such equipment and the basis use of such equipment.
- Advising of the above information during site induction.
- Developing additional procedures as required by emergent situations on the project site.

### Emergency management

#### General

The requirements of this section will work in conjunction with any project specific emergency response plan which may be/have been developed.

The priority where an incident, injury or near miss occurs is to:

- Protect the work area from risk.
- Protect the environment from risk.
- Protect persons from risk.

#### Signage

The following signage will be posted around the project site:

Emergency contact personnel	Site gates, Site Office, Safety Officer shed, Lunch Room and Toilets
Emergency exit and assembly locations	As determined by the Principal Contractor when developing the site emergency plan.
Fire Extinguishers	Above FE locations
First Aid	Site Office, Safety Officer shed

## OPERATIONAL CONTROL

### General

The EMS is intended to ensure that any environmental requirements on this project are identified and their control measures are planned and incorporated into the works.

Items considered in the preparation of the project plan could include but are not limited to:

- control of environmental issues
- site facilities and compound and construction activities
- handling and storage of materials
- recycling and disposal of wastes
- incident management

In addition:

- The method of controlling the safe and environmentally appropriate work processes will be by means of Work Method Statements/Work Procedures and/or Risk Assessments.
- Subcontractors are required to ensure that all their employees are properly trained and/or qualified for the job that they will be performing and that they are familiar with their company's work method statements.
- The Site Manager and/or Safety Officer is responsible for the site implementation of all specified control measures and will maintain regular checks of the control measures that are in place.
- The monitoring of the environmental control measures employed on a project will be conducted continually during construction.
- Prior to commencing the construction project but before site establishment the Project Manager and/or Site Manager will ensure that all necessary environmental control measures are in place and that any necessary approvals have been obtained.

### Non-compliance

All personnel employed on this project are responsible for reporting any environmental and environmental non-conformances.

#### **Project Manager**

- Will evaluate and resolve (with client concurrence where required) the rectification of any non-conforming construction work or materials.

#### **Site Manager**

- Will evaluate and rectify non-conformance in the absence of the Project Manager, but subject to review by the Project Manager.
- Cease and/or restrict further work until the non-conformance has been rectified.
- Verify rectification methods chosen for their success or otherwise.
- Detect and rectify minor and major non-conformances.
- Assistance with Accident and incident investigation

#### Minor non-conformance

May be identified as being considered a potential hazard or environmental issue if not rectified

#### Major non-conformance

May be identified as being something that creates a environmental or environmental hazard

Where works have been ceased for an environmental issue, incident, or accident the Site Manager and/or Project Manager shall complete an incident investigation and notify the relevant Authorities.

#### Corrective Action

Corrective action must be taken promptly to prevent recurrence of any problems and may be initiated by any of the following:

- Non-conformance Reports and Audit Reports
- Hazard Notification
- Customer/Client Complaints
- Observation and Environmental Inspection/s

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**Training**

**General**

Training of employees is a vital part of the Principal Contractors environmental management practice.

All contractors will be required to attend a site induction before they are allowed to work on the project, where they will be made aware of environmental procedures (at varying levels of detail, depending on their duties).

**Site Induction**

All employees are briefed as to any special environmental concerns before commencing work on a project and are encouraged to suggest new ideas.

Typically, the environmental induction of site personnel occurs in parallel with the site safety induction procedures and recorded on induction register.

The project induction will include at least the following environmental content:

- EMP overview
- Project Environmental Policy
- Roles and responsibilities and site management contact details
- Green Star principles
- Required and precluded substances
- Waste Management Plan, including the site recycling targets and processes
- Recycle bin colour codes
- Prescribed and prohibited substances
- Environmental 'hot spots' (risks)
- Key environmental issues and controls
- Emergency response
- Incident reporting
- Penalties for waste contamination

**Qualifications**

Subcontract companies supplying personnel to work in the project are required to ensure, their personnel have been provide with training in any or all of the following applicable areas:

- Air quality monitoring
- Asbestos
- Contaminated land
- Erosion and sedimentation control – principles and practice
- Hazardous substances/dangerous goods management practices
- Noise monitoring
- Vibration monitor use and
- Water quality monitoring

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**Contracts  
 management**

**Measuring and  
 monitoring**

**Records  
 management**

<b>Toolbox meetings</b>	<p>Toolbox Talks include relevant environmental management awareness training as well as site-specific environmental information that may be required to undertake a particular work activity.</p> <p>Toolbox Talks may also be developed and delivered in response to a corrective action requirement.</p> <p>Details of each Toolbox Talk will be recorded including participants, presenter, site and content.</p> <p>Toolbox Talks topics include but are not limited to:</p> <ul style="list-style-type: none"> <li>• Environmental work method statements</li> <li>• Project environmental hotspots and issues</li> <li>• Sediment and erosion controls</li> <li>• Waste management and recycling</li> <li>• Noise and vibration controls</li> <li>• Fire Ant controls</li> <li>• Dust controls</li> <li>• Recognition of Aboriginal and cultural heritage relics</li> <li>• Changes in Environmental instructions (Including legislation)</li> <li>• Project environment issues (arising from time to time)</li> </ul>
<b>Purchasing</b>	<p>In compliance with any the Principal Contractors requirements, subcontractors and suppliers may be required to comply with any or all of the following requirements:</p> <ul style="list-style-type: none"> <li>• Supply of approved green products.</li> <li>• Use of designated recycle bins on site.</li> <li>• Removal of packaging material.</li> </ul>
<b>Compliance with legislation</b>	<p>Subcontractors must ensure work is undertaken in compliance with legislative and project environmental requirements.</p>
<b>Other</b>	<p>As directed by contract conditions or the Principal Contractors EMS, subcontractors may be required to comply with other environmental project conditions.</p>
<b>Informal</b>	<p>As part of an on-going commitment to environmental management site personnel are required to undertake informal daily, site inspections and implement corrective actions (i.e. site walk-about).</p>
<b>Weekly</b>	<p>On a weekly basis, the Safety Officer for the project site will conduct an environmental audit and record the results on a "Checklist – Site Inspection"</p> <p>The Safety Officer will maintain a file of audit reports in the site "Site Audits" file within the site environmental management filing system.</p>
<b>Formal</b>	<p>On a nominated basis, the Manager - SEQ will conduct a site audit. A copy of the audit report will be provided to the Site Manager and/or Safety Officer for review and action.</p> <p>Non-conforming items of these audits to be entered into a Non-conformance Register.</p>
<b>Records management</b>	<p>Any or all of the following records <u>may</u> be stored with project documentation (for a period of 7 years):</p> <ul style="list-style-type: none"> <li>• DPI certification for Fire Ants</li> <li>• Environmental Management Plan</li> <li>• Environmental Management Complaints</li> <li>• Environmental reports on soils testing (i.e. for contamination)</li> <li>• Geo-technical report</li> <li>• MSDS's and Haszubs Registers</li> <li>• Non-conformance reports</li> </ul>