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# **CSBP KWINANA AMMONIUM NITRATE PRODUCTION EXPANSION PROJECT: PHASE 2**

## **Construction Environmental Management Plan**

Prepared for  
CSBP Limited by Strategen and Parsons Brinckerhoff  
November 2010





# **CSBP KWINANA: AMMONIUM NITRATE PRODUCTION EXPANSION PROJECT: PHASE 2**

Construction Environmental  
Management Plan

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### ***Acknowledgement***

Strategen has prepared this report as a subcontractor to Parsons Brinckerhoff Australia Pty Ltd (PB). PB is the prime contractor to CSBP Limited.

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## CSBP KWINANA: AMMONIUM NITRATE PRODUCTION EXPANSION PROJECT: PHASE 2

### CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

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## **1. INTRODUCTION**

This Construction Environmental Management Plan (CEMP) has been prepared as a compilation of specific management plans to be implemented during the construction phase of the Ammonium Nitrate Production Expansion Project: Phase 2 (the Proposal).

### **1.1 IMPLEMENTATION**

This CEMP will be required to be implemented by all relevant CSBP personnel and construction contractors engaged to implement the construction phase of the proposal

#### **1.1.1 Public complaints**

Where any public complaints are received with respect to any environmental issues associated with the construction of the Proposal, they will be managed by CSBP. CSBP will record and investigate all public complaints and will take all reasonable and practicable measures to avoid further grievances. A complaints register will be maintained and available for public perusal on request.

#### **1.1.2 Training and awareness**

The Construction Contractor will provide training to all construction personnel to ensure that employees have the necessary knowledge awareness and skills to fulfil their environmental responsibilities and meet the organisations environmental objectives.

An environmental training program will be undertaken and will consist of induction training, job-specific training and awareness training, as described in the sections below.

#### **1.1.3 Induction training**

Construction personnel will be required to participate in a full site induction program covering health, safety, security and environmental matters. The environmental component of the induction will provide an acceptable level of environmental awareness prior to work commencing. This induction program will be directed to assist in minimising any on-site and off-site environmental problems. The Construction Contractor will maintain a record on site of environmental training undertaken for all employees, detailing the type and purpose of the training.

The induction will include the following subjects:

- CSBP Environmental Policy
- overview of this CEMP
- client, statutory and individual obligations
- community expectations
- specific procedures and work standards.

#### **1.1.4 Job specific training**

Job specific training will be conducted where risk assessments identify duties that have a potential to impact on the environment, such as abrasive blasting/spray painting.

This training will be conducted prior to commencing the activity and personnel will be assessed as to their level of understanding.

#### **1.1.5 Awareness training**

Environmental awareness training will be included in toolbox meetings and focus on topics relevant to the Proposal.

This may include:

- new procedures or work standards
- results of inspection and audits
- environmental incidents and corrective actions.

Specific attention will be made to incident management and reporting, use of plant and equipment, water management and conservation, dust and noise control, and complaints management.

#### **1.1.6 Incident reporting**

All environmental hazards or incidents will be recorded in the on-site incident report system, investigated, remediated if necessary and reported as required, including within any required compliance reports.

#### **1.1.7 Roles and responsibilities**

CSBP will have overall responsibility for implementation of this plan; however, as an agent of CSBP under the construction contract, the Construction Contractor will be responsible for the day to day implementation and maintenance of this CEMP by all personnel working on the site.

The Construction Environmental Representative will be responsible for implementation of Construction Contractor commitments to meet the requirements under this CEMP.

## **1.2 REPORTING AND REVIEW**

### **1.2.1 Measurement and evaluation**

CSBP will measure and evaluate environmental performance in terms of:

- compliance with CSBP, legislative and CEMP requirements
- achievement of stated objectives and targets
- environmental incidents – outcomes, significance and implementation of corrective actions.

This will be undertaken by the means described in the following Sections.

#### ***Environmental audits***

The audit will identify actual or potential environmental risks and will evaluate compliance against CSBP, legislative or the CEMP requirements, and then assesses the effectiveness of the CEMP in managing construction related environmental activities.

#### ***Monitoring program***

The monitoring program will utilise quantitative measurements of performance, which are measured against stated targets and objectives. Records will be maintained for tracking of the monitoring data and audit results.

#### ***Environmental reporting***

This is a means of communication on environmental incidents or issues between employees, management and CSBP and provides the vehicles for external reporting to statutory authorities in accordance with legislative requirements.

### **1.2.2 Review and improvement**

The CEMP will be reviewed by CSBP on a six monthly basis throughout the construction period to ensure its continuing suitability, adequacy and effectiveness to drive continuous improvement, and to address any possible changes to policy, objectives, procedures, or work standards.

The review will take into account feedback from employees, CSBP, or statutory authorities, audit findings and legislative changes.

## 2. WASTE MANAGEMENT PLAN

### 2.1 ENVIRONMENTAL RISKS

The waste generated is likely to include:

- timber
- wire
- steel off-cuts
- used lubricating oils
- paint or solvent containers
- sewage
- general domestic refuse.

A local contractor (to be advised), approved by CSBP to provide appropriate bins or receptacles, will be used to remove and dispose of waste in a manner acceptable to the Construction Contractor, CSBP, the DEC and the local Shire.

CSBP will place a high priority on recycling waste materials wherever practicable. All waste not able to be re-used or recycled will be disposed in a licensed landfill.

### 2.2 APPLICABLE LEGISLATION

CSBP employees and contractors will comply with all Commonwealth and State legislation that applies to the Proposal. Legislation relevant to waste management is summarised in Table 2.1.

**Table 2.1 Relevant legislation for waste management**

Relevant Legislation	Scope	Administering Body
<i>Environmental Protection Act 1986</i>	Part IV defines the process of referral and assessment of proposals subject to formal assessment under the EP Act. Works Approvals and Licences are issued under Part V of the EP Act.	Department of Environment and Conservation and Environmental Protection Authority
Environmental Protection Regulations 1987	Part III - General control of pollution (administration, works approval, licensing & registration of prescribed premises); Part VI - Disposal of tyres.	Department of Environment and Conservation
Environmental Protection (Rural Landfill) Regulations 2002	Applicable to the construction and management of registered Putrescible Landfill Sites with a design capacity of more than 20 but less than 5000 tonnes per year (i.e. prescribed premises category 89).	Department of Environment and Conservation and Environmental Protection Authority
Environmental Protection (Controlled Waste) Regulations 2004	Obligations relating to the transportation and disposal of 'controlled' (generally hazardous) wastes. Controlled wastes listed in Schedule 1 of the Regulations.	Department of Environment and Conservation and Environmental Protection Authority

Relevant Legislation	Scope	Administering Body
Environmental Protection (Unauthorised Discharges) Regulations 2004	Defines materials that must not be burnt or discharged into the environment.	Department of Environment and Conservation and Environmental Protection Authority
<i>Waterways Conservation Act 1976</i>	Conservation and management of waters and the associated land and environment.	Department of Water
<i>Litter Act 1979</i>	Defines actions legally considered as littering and associated penalties	Keep Australia Beautiful Council
<i>Health Act 1911</i>	Regulates the use of apparatus for the treatment and disposal of sewage	Department of Health, and local authority
Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations 1974	Applicable to the construction or installation of apparatus for the treatment of sewage and disposal procedures	Department of Health, and local authority

## 2.3 MANAGEMENT PROGRAM

### 2.3.1 Environmental objectives and key performance criteria

Waste from the construction of the Proposal will be managed to meet the environmental objectives as set out in Table 2.2.

**Table 2.2 Environmental objectives and performance indicators for waste management**

Issue	Environmental Objective	Performance Indicator
Contamination	Manage all wastes so as to minimise potential contamination to the receiving environment.	Compliance with all legislation and regulatory requirements for waste management.
Waste minimisation	Maximise reduction, recycling and reuse of waste materials.	Volume of construction wastes generated, recycled and/or re-used.

### 2.3.2 Management actions

During the construction phase, the Construction Contractor will be responsible for ensuring responsible disposal and minimisation of waste is carried out. All construction personnel will be advised of the waste management and disposal procedures outlined below during the site induction and prior to commencing work.

The management actions to be implemented are set out in Table 2.3.

**Table 2.3 Management actions for waste management**

Aspect	Action	Responsibility
Planning	Construction Contractor will utilise the services of a local contractor to: <ul style="list-style-type: none"> <li>provide suitable containers for the storage and collection of waste materials.</li> <li>collect and dispose of site generated domestic and industrial waste at CSBP approved disposal sites.</li> <li>recycle waste materials wherever practicable.</li> <li>provide documentation to verify the type of waste and quantity disposed of, the disposal method, the location of disposal.</li> </ul>	Construction Contractor

Aspect	Action	Responsibility
Records	The Construction Contractor will maintain a record on site of the types and quantities and destinations of all waste material taken off-site during construction (see Table 2.4).	Construction Contractor
Waste storage	Where practicable, timber, scrap-metal, bricks and other major recyclable wastes will be segregated and stored in safe, secure areas away from drains, prior to re-use or collection by recycling contractors. Construction wastes that are not suitable for reuse but can be recycled will be temporarily stored on-site in dedicated and secure skips prior to reuse.	Construction Contractor
Waste minimisation	Construction waste will be minimised through accurate material quantity calculations prior to construction, and by limiting materials packaging where appropriate.	Construction Contractor
Recycling	This waste will be separated from general site waste, stored in designated bins and disposed of at local recycling centres.	Construction Contractor
Non-recyclable wastes	This waste will be placed in the general waste bins located around site, collected and disposed of at CSBP approved location in accordance with DEC and local council requirements.	Construction Contractor
Putrescible Waste	Putrescible waste will consist mainly of food scraps from the construction crib huts. These scraps will be placed in domestic rubbish bins with tight fitting lids, which will be located at each crib hut.  These bins will be emptied daily into a contractor supplied industrial waste bin. This bin will be emptied at least twice weekly.  The waste will be disposed of at an approved landfill site in accordance with local council regulations.	Construction Contractor
Waste oils	Waste oils will be stored in a suitably bunded facility prior to collection by a licensed waste contractor for recycling.	Construction Contractor
Controlled wastes	Any controlled waste that may be generated during construction works will be handled and transported in accordance with the Environmental Protection (Controlled Waste) Regulations 2004.	Construction Contractor
Hazardous materials	Hazardous waste may include paint on solvent containers, insulation materials, oils, cleaning chemicals, etc.  All hazardous materials brought on to site will have a material safety data sheet (MSDS).  These materials will be stored, all separated, in accordance with the MSDS.  Impervious bunds or containment areas will be provided where required by legislation or the MSDS.  Hydrocarbon wastes will be collected stored and transported off site for recycling or disposal at an approved location.  Chemical wastes will be stored in accordance with the requirements of the MSDS and Statutory Authority and the wastes will be disposed of in accordance with DEC and local council requirements following approval by CSBP.  Any contaminated soil will be removed from site and disposed of at an authorised location.	Construction Contractor

Aspect	Action	Responsibility
Liquid Waste	<p>Liquid wastes generated on site would consist of:</p> <ul style="list-style-type: none"> <li>• crib hut and ablution hand washing facilities</li> <li>• sewage</li> <li>• pipe cleaning/hydro test waters</li> </ul> <p><b>Crib Hut/Ablution Hand Washing Water</b></p> <p>Crib Hut/Ablution Hand Washing Water will be disposed of in accordance with Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations 1974</p> <p><b>Sewage</b></p> <p>CSBP will install a septic system for the increased amount of people needed during construction. Sewage will be disposed of in accordance with Health (Treatment of Sewage and Disposal of Effluent and Liquid Waste) Regulations 1974.</p> <p><b>Pipe Cleaning/Hydrotest Water</b></p> <p>Wherever possible pipe cleaning or hydro test water will be recycled for secondary use, i.e. Dust suppression.</p> <p>Dust suppression will only occur where the water quality is within the statutory water quality guidelines and with the approval of CSBP.</p> <p>Where this water is to be disposed, a plan will be developed with the CSBP Environmental Manager for safe disposal in accordance with DEC and local council requirements.</p>	Construction Contractor
Housekeeping	<p>High standards of housekeeping will be maintained on site to ensure:</p> <ul style="list-style-type: none"> <li>• crib and eating facilities are clean, tidy and maintained in a hygienic condition.</li> <li>• waste bins are provided in work areas to ensure litter accumulation is avoided.</li> </ul>	Construction Contractor
Storm water	Storm water management requirements are defined in Section 3	Construction Contractor

### 2.3.3 Monitoring

Monitoring of waste management will be undertaken as set out in Table 2.4.

**Table 2.4 Monitoring program for waste management**

Parameter(s)	Source	Frequency	Purpose
Waste storage and handling	Waste storage containers	Weekly	To confirm all wastes are handled, segregated and stored in dedicated areas.
<p>All waste disposed off site will have a completed form (Waste Disposal and Storage Form SF 2250) obtained from CSBP and in most cases a Field Direction Sheet. Both these records will be retained in the Waste Storage and Disposal File stored in the Environmental Offices.</p> <p>An inventory of all waste material will be established and maintained by the Construction Environmental Representative.</p> <p>All wastes removed from the site, recording:</p> <ul style="list-style-type: none"> <li>• date and time</li> <li>• description of waste</li> <li>• quantity</li> <li>• storage location/s</li> <li>• details of waste transporter and/or disposal/recycling operator</li> <li>• intended treatment/disposal destination of waste.</li> </ul> <p>This disposal contractor will provide a receipt or invoice which verifies the above and is signed by the driver. This receipt will be filed and kept with the inventory register for verification of compliance.</p>	Waste inventory register	All waste movements	To enable a review of management practices for effectiveness in maximising re-use/recycle of materials where practicable.

## 2.4 CONTINGENCIES

Actions to be followed as contingency actions in the event of an incident are set out in Table 2.5.

**Table 2.5 Contingencies for waste management**

Trigger	Action	Responsibility
Any non-compliant incidents of site waste management practices, including unauthorised removal of wastes from the premises	Investigate cause.	Construction Contractor
	Report to the CSBP Site Manager, including actions taken to rectify the situation.	Construction Contractor
	Determine and implement any remedial action in consultation with the DEC.	Construction Contractor
	Review waste management procedures	Construction Contractor
	All incidents will be reported to the appropriate authorities.	CSBP Limited



### 3. EROSION AND SEDIMENT CONTROL MANAGEMENT PLAN

#### 3.1 ENVIRONMENTAL RISKS

Ground disturbance can cause soil loss or degradation if erosion of soil occurs. Erosion of soil could also cause impacts such as dust emissions during windy conditions (as described in Section 5) and sedimentation via erosion by stormwater runoff.

#### 3.2 MANAGEMENT PROGRAM

##### 3.2.1 Environmental objectives and key performance criteria

The construction of the Proposal will be managed to meet the environmental objectives as set out in Table 3.1.

**Table 3.1 Environmental objectives and performance indicators for erosion and sediment control**

Issue	Environmental Objective	Performance Indicator
Soil loss or degradation	To minimise any potential for soil loss or degradation and to prevent any adverse impacts on water quality.	Erosion or sedimentation risks identified and mitigation measures implemented.

##### 3.2.2 Management actions

The management actions to be implemented are set out in Table 3.2.

**Table 3.2 Management actions for erosion and sediment control**

Aspect	Action	Responsibility
Ground disturbance	If excavations are undertaken, batters will be flatter than cysotechnical stable slopes to minimise scouring. Disturbed soil will not be left exposed unnecessarily.	Construction Contractor
Erosion and sedimentation	Temporary and/or permanent soil erosion berms, drains and sediment barriers will be installed, where required, for erosion protection.	Construction Contractor
	Design of erosion and sediment control measures will consider site conditions such as wind, rainfall frequency and intensity, soil type, infiltration rates, gradient, catchment area, vegetation cover and condition.	Construction Contractor
Stormwater management	Stormwater will be directed through existing sediment basins. Inspection of the worksite for erosion will form part of the weekly inspection regime.	Construction Contractor

### 3.2.3 Monitoring

Monitoring of erosion and sediment control will be undertaken as set out in Table 3.3.

**Table 3.3 Monitoring program for erosion and sediment control**

Parameter(s)	Source	Frequency	Purpose
Erosion	Ground disturbance areas	Weekly and after a major rain event.	To enable consistent monitoring and early identification of areas that may be affected by soil erosion.
Sedimentation	Ground disturbance areas	Weekly and after a major rain event.	To enable consistent monitoring and early identification of areas that may be affected by sedimentation.

### 3.3 CONTINGENCIES

Actions to be followed as contingency actions in the event of an incident are set out in Table 3.4.

**Table 3.4 Contingencies for erosion and sediment control**

Trigger	Action	Responsibility
Significant amount of erosion or sedimentation is found in a disturbed area.	CSBP Environmental Manager will be notified	Construction Contractor
	Joint inspection by CSBP and Construction Contractor to be conducted in affected area	CSBP and Construction Contractor
	CSBP representative and the Construction Contractor will identify if control measures are necessary.	CSBP and Construction Contractor
	CSBP representative and the Construction Contractor will discuss any control measures necessary and agree who should action the control measures.	CSBP and Construction Contractor

## 4. NOISE MANAGEMENT PLAN

### 4.1 ENVIRONMENTAL RISKS

Noise generated during construction of the Proposal is not expected to have a significant impact on surrounding land uses due to the distance to the nearest residential receptors from the site.

Noise sources from the construction activities include the following:

- civil works involving earth moving machinery and compaction equipment
- cranes and other construction machinery
- power tools and compressors
- vehicle movements
- pile driving
- plant commissioning
- other construction activities.

The assigned noise levels in the Environmental Protection (Noise) Regulations 1997 (Noise Regulations) do not apply to construction activities carried out between 0700 and 1900 hours on any day except Sunday and public holidays provided:

- construction work is carried out in accordance with Section 6 of the Australian Standard 2436-1981 “Guide to Noise Control on Construction, Maintenance and Demolition Sites”
- the equipment used is the quietest reasonably available.

### 4.2 APPLICABLE LEGISLATION

CSBP employees and contractors will comply with all Commonwealth and State legislation that applies to the Proposal. Legislation relevant to noise control is summarised in Table 4.1.

**Table 4.1 Relevant legislation for noise**

Relevant Legislation	Scope	Administering Body
<i>Environmental Protection Act 1986</i>	Part IV defines the process of referral and assessment of proposals subject to formal assessment under the EP Act. Works Approvals and licences are issued under Part V of the EP Act.	Department of Environment and Conservation
Environmental Protection (Noise) Regulations 1997	The Environmental Protection (Noise) Regulations 1997 stipulate the allowable noise levels at any noise sensitive premises from other premises. Noise from construction works is covered by regulation 13 of the Environmental Protection (Noise) Regulations 1997.	Department of Environment and Conservation, Local Government

## 4.3 MANAGEMENT PROGRAM

### 4.3.1 Environmental objectives and key performance criteria

The construction of the Proposal will be managed to meet the environmental objectives as set out in Table 4.2.

**Table 4.2 Environmental objectives and performance indicators for noise**

Issue	Environmental Objective	Performance Indicator
Noise emissions	To ensure that noise emissions from construction activities do not cause unreasonable impacts on the adjacent community.	Comply with all Regulations in relation to noise emissions.  No complaints received due to noise emissions from the construction of the Proposal.

### 4.3.2 Management actions

The management actions to be implemented are set out in Table 4.3.

**Table 4.3 Management actions for noise**

Aspect	Action	Responsibility
Planning	Where work is required to be undertaken outside normal work hours, the Construction Contractor will provide full details of the activities to CSBP for approval.  Following CSBP approval, the Construction Contractor will provide local councils with adequate notice of construction activities to be conducted outside normal work hours, if there is the potential to cause noise nuisance, the following is to be provided: <ul style="list-style-type: none"> <li>• details of, and reasons for, out of hours construction work</li> <li>• details of, and duration of, activities likely to result in noise emissions that fail to comply with legal requirements</li> <li>• predicted noise emissions</li> <li>• procedures for monitoring noise emissions.</li> </ul>	Construction Contractor
Construction Operations	All plant and equipment brought on site will comply with relevant legislative requirements for noise control.  Where a dispute exists in regard to noise compliance of a particular item of plant or equipment, a compliance check will be undertaken.  Welders, generators etc will be located away from under structures to minimise noise impact on workers.  Where construction activities i.e. use of rattle guns, creates high noise levels, the areas will be signposted as compulsory hearing protection areas.  Where there is a concern over noise levels during construction activities, noise monitoring will be conducted, documented and the results and recommendations communicated to the workforce at scheduled toolbox meetings.	Construction Contractor
Reporting	The Construction Contractor will report at the weekly meeting any incidents or issues, noise monitoring and recommendations that have occurred.	Construction Contractor

### 4.3.3 Monitoring

Monitoring of noise control will be undertaken as set out in Table 4.4.

**Table 4.4 Monitoring program for noise**

Parameter(s)	Source	Frequency	Purpose
Noise performance.	Complaints register.	As complaints are received.	To provide a record of all noise complaints and associated follow up actions and outcomes.

## 4.4 CONTINGENCIES

Actions to be followed as contingency actions in the event of an incident are set out in Table 4.5.

**Table 4.5 Contingencies for noise**

Trigger	Action	Responsibility
Receipt of public complaint regarding noise or vibration.	Investigate operations and activities to identify likely source of noise problem.	Construction Contractor
	If complaints are justified: <ul style="list-style-type: none"> <li>initiate corrective action if impact likely to continue if no action taken</li> <li>review construction procedures and modify to avoid future incidents</li> </ul>	Construction Contractor
	Advise complainant of outcome of investigation and any follow up actions.	Construction Contractor
	Record incident in complaints register.	Construction Contractor
In the event of an incident or failure to comply with statutory or guideline noise criteria, one or more of the following corrective actions will be undertaken by the construction contractor.	Investigate operations and activities to identify likely source of noise problem.	Construction Contractor
	Measure sound power and pressure levels emitted from the equipment identified as the likely cause of the problem, and review possible mitigation techniques.	Construction Contractor
	Adopt or implement effective noise mitigation strategies, and report corrective action to CSBP.	Construction Contractor
	Record incident in complaints register.	Construction Contractor

## 5. DUST MANAGEMENT PLAN

### 5.1 ENVIRONMENTAL RISKS

Ground disturbing activities during construction will expose soil which may be eroded by wind and impact the local area in the form of dust emissions. Dust can cause visual and health (respiratory) impacts.

The CSBP Kwinana Industrial Complex has been classified as ‘*Possibly Contaminated – Investigation Required*’ by the Contaminated Sites Branch of the DEC under the *Contaminated Sites Act 2003*. As a result of historic industrial practices during fertiliser and chemicals manufacture, contamination has been reported in soil and groundwater. The main constituents of this contamination are arsenic, hydrocarbons, ammonium sulphate and heavy metals; however, only arsenic has been historically recorded in the Proposal area.

A recent human health and environmental risk assessment completed by URS Australia Pty Ltd found that concentrations of arsenic in soil were not of a level considered to be a risk to human health. Notwithstanding this, dust management will be implemented during construction of the Proposal to minimise dust emissions.

### 5.2 APPLICABLE LEGISLATION

CSBP employees and contractors will comply with all Commonwealth and State legislation that applies to the Proposal. Legislation relevant to dust control is summarised in Table 5.1.

**Table 5.1 Relevant legislation for dust**

Relevant Legislation	Scope	Administering Body
<i>Environmental Protection Act 1986</i>	Part IV defines the process of referral and assessment of proposals subject to formal assessment under the EP Act. Works Approvals and licences are issued under Part V of the EP Act.	Department of Environment and Conservation

Standards and goals for ambient air quality are given in the National Environmental Protection Measure (NEPM) for Ambient Air Quality.

## 5.3 MANAGEMENT PROGRAM

### 5.3.1 Environmental objectives and key performance criteria

The construction of the Proposal will be managed to meet the environmental objectives as set out in Table 5.2.

**Table 5.2 Environmental objectives and performance indicators for dust**

Issue	Environmental Objective	Performance Indicator
Dust emissions	To ensure that dust emissions from construction activities are minimised to prevent unreasonable impact on the construction workforce, adjacent residents and the surrounding environment.	Effective prevention and mitigation of dust emissions. No complaints received due to dust emissions from the construction of the Proposal.

### 5.3.2 Management actions

The management actions to be implemented are set out in Table 5.3.

**Table 5.3 Management actions for dust**

Aspect	Action	Responsibility
Planning	The Construction Contractor will ensure that adequate dust suppression measures are available to control dust in construction areas under their control.	Construction Contractor
Construction Operations	To minimise the impact of dust the following measures will be implemented: <ul style="list-style-type: none"> <li>vehicle speeds will be controlled on roadways and around construction areas</li> <li>construction areas will be watered during windy conditions</li> <li>plant and equipment movement will be closely monitored during windy conditions.</li> </ul>	Construction Contractor
Reporting	The Construction Contractor Environmental Representative will report to the CSBP representative any incident or concern over dust generated from other areas that have an impact on the Construction Contractor/contractor workforces.  During windy conditions the Construction Contractor Project Manager will agree with the CSBP representative on the type and frequency of watering requirements.  Any incidents will be reported at the weekly meeting.	Construction Contractor

### 5.3.3 Monitoring

Monitoring of dust control will be undertaken as set out in Table 5.4.

**Table 5.4 Monitoring program for dust**

Parameter(s)	Source	Frequency	Purpose
Visual monitoring of dust emissions by construction personnel.	Active construction areas.	Opportunistically during ground disturbance activities and during windy conditions.	To ensure dust emissions are identified and appropriate dust suppression measures to be undertaken.
Visual monitoring of dust emissions by construction personnel.	On unsealed roads and access ways.	Opportunistically during vehicle movements and during windy conditions.	To ensure dust emissions are identified and appropriate dust suppression measures to be undertaken.

## 5.4 CONTINGENCIES

Actions to be followed as contingency actions in the event of an incident are set out in Table 5.5.

**Table 5.5 Contingencies for dust**

Trigger	Action	Responsibility
Complaint received from an adjoining industry or member of the public.	Investigate operations and activities to identify likely source of dust problem.	Construction Contractor
	If complaints are justified: <ul style="list-style-type: none"> <li>• initiate corrective action if impact likely to continue if no action taken</li> <li>• review construction procedures and modify to avoid future incidents</li> </ul>	Construction Contractor
	Advise complainant of outcome of investigation and any follow up actions.	Construction Contractor
	Record incident in complaints register.	Construction Contractor



## 6. FIRE MANAGEMENT PLAN

### 6.1 ENVIRONMENTAL RISKS

The construction and operation of the Proposal presents a minimal fire risk to the surrounding area. However, were an uncontrolled fire event to occur, it could impact upon surrounding industries.

### 6.2 APPLICABLE LEGISLATION

The *Bush Fires Act 1954* is the applicable legislation for this factor.

### 6.3 MANAGEMENT PROGRAM

#### 6.3.1 Environmental objectives and key performance criteria

The construction of the Proposal will be managed to meet the environmental objectives as set out in Table 6.1.

**Table 6.1 Environmental objectives and performance indicators for fire**

Issue	Environmental Objective	Performance Indicator
Uncontrolled fire	To prevent uncontrolled fires that could impact the plant and surrounding industries, the degradation of air quality by fires created by hot work operations or the uncontrolled burning of waste materials.	No uncontrolled fires on the site

#### 6.3.2 Management actions

The management actions to be implemented are set out in Table 6.2.

**Table 6.2 Management actions for fire**

Aspect	Action	Responsibility
Planning	<p>Prior to undertaking hot works a risk assessment will be undertaken to identify any potential sources for fire to occur e.g. rubber lined vessels, conveyor belts.</p> <p>Suitable control measures will be documented that include:</p> <ul style="list-style-type: none"> <li>• prevention strategy</li> <li>• local control measures</li> <li>• emergency escapes from elevated areas</li> <li>• emergency response.</li> </ul>	Construction Contractor

Aspect	Action	Responsibility
Construction Operations	<p>Potential fire risk areas where hot work is undertaken will be controlled by permit.</p> <p>Fire suppressant equipment applicable to the potential risk will be located in areas of hot work, fuel or flammable liquid storage areas.</p> <p>Removal or covering with flame retardant tarps/mats any combustible or flammable material in hot work areas.</p> <p>Containment of hot metal particles at the source wherever practicable and preventing fall of hot metals to lower areas.</p> <p>Minimise the amount of fuels or flammables stored on site.</p> <p>Maintain plant and equipment in good working condition.</p> <p>Prohibition of burning of any waste or other material on site.</p> <p>Educating the workforce through training at inductions and toolbox meetings on site, requirements and fire prevention strategies.</p>	Construction Contractor
Reporting	Report all fire incidents to CSBP in accordance with the appropriate CSBP procedure.	Construction Contractor

### 6.3.3 Monitoring

Monitoring of fire control will be undertaken as set out in Table 6.3.

**Table 6.3 Monitoring program for fire**

Parameter(s)	Source	Frequency	Purpose
Occurrence of fires as a result of construction activities	Active construction areas.	As occurs	To determine if management measures are appropriate to prevent fires occurring as a result of construction activities.
Inspection	Active construction areas.	Opportunistic	To determine if management measures are appropriate to prevent fires occurring as a result of construction activities.

## 6.4 CONTINGENCIES

Actions to be followed as contingency actions in the event of an incident are set out in Table 6.4.

**Table 6.4 Contingencies for fire**

Trigger	Action	Responsibility
Localised (small) fire incident	<p>Extinguish fire.</p> <p>Determine the activity that caused the fire incident.</p> <p>Review fire management procedures and implement additional management measures as necessary to prevent another fire occurring.</p>	Construction Contractor
Significant fire incident	<p>Extinguish fire.</p> <p>Determine the activity that caused the fire incident.</p> <p>Review the fire management procedures and implement additional management measures as necessary to prevent another fire occurring.</p> <p>Advise stakeholders such as Fire and Emergency Services Authority, landholders and Department of Environment and Conservation.</p>	Construction Contractor

## 7. CULTURAL HERITAGE MANAGEMENT PLAN

### 7.1 ENVIRONMENTAL RISKS

There have been no cultural heritage sites recorded on the CSBP Kwinana site and, as the Proposal is being constructed on already disturbed land, it is unlikely that any new cultural heritage sites will be found. However, the following management is in place in the unlikely event that a culturally significant area is discovered on the CSBP Kwinana site during construction of the Proposal.

### 7.2 APPLICABLE LEGISLATION

The *Aboriginal Heritage Act 1972* is the applicable legislation for this factor.

### 7.3 MANAGEMENT PROGRAM

#### 7.3.1 Environmental objectives and key performance criteria

The construction of the Proposal will be managed to meet the environmental objectives as set out in Table 7.1.

**Table 7.1 Environmental objectives and performance indicators for cultural heritage**

Issue	Environmental Objective	Performance Indicator
Unauthorised incursions into culturally significant areas	To protect Aboriginal sites, artefacts and areas of cultural significance from uncontrolled access and damage.	No disturbance to identified culturally significant areas.

#### 7.3.2 Management actions

The management actions to be implemented are set out in Table 7.2.

**Table 7.2 Management actions for cultural heritage**

Aspect	Action	Responsibility
Induction	Ensure that the pre-start induction includes cultural heritage issues and restricted access areas.	Construction Contractor
Construction Operation	No person will enter restricted access areas. Cultural heritage issues will be discussed at inductions and toolbox meetings.	Construction Contractor
Reporting	All archaeological finds will be reported to this CSBP Environmental Manager.	Construction Contractor

### 7.3.3 Monitoring

Monitoring of cultural heritage control will be undertaken as set out in Table 7.3.

**Table 7.3 Monitoring program for cultural heritage**

Parameter(s)	Source	Frequency	Purpose
New (unrecorded) Aboriginal heritage sites, artefacts or skeletal remains.	During preparation of site and any earthworks.	All active construction areas.	To ensure no new heritage sites or artefacts (e.g. currently unrecorded sites) are disturbed or destroyed by construction activities in contravention of the <i>Aboriginal Heritage Act 1972</i> .

## 7.4 CONTINGENCIES

Actions to be followed as contingency actions in the event of an incident are set out in Table 7.4.

**Table 7.4 Contingencies for cultural heritage**

Trigger	Action	Responsibility
Previously unrecorded Aboriginal heritage site/artefact is uncovered or identified	Immediately cease construction operations within 30 m of the potential heritage site.	Construction Contractor
	Establish a 30 m buffer around the potential heritage site, outside which work may continue and notify CSBP.	Construction Contractor
	Notify the Department of Indigenous Affairs (DIA) of the potential find.	CSBP and Construction Contractor
	Implement advice from the DIA.	CSBP and Construction Contractor
	Complete and forward an Incident Report to the appropriate person(s).	Construction Contractor
Disturbance of an existing Aboriginal heritage site identified for protection	Immediately cease all work in the area of the heritage site	Construction Contractor
	Investigate the cause of disturbance	Construction Contractor
	Implement actions to prevent disturbance from reoccurring (e.g. fencing site or re-informing workforce).	Construction Contractor
	If necessary, consult with relevant stakeholders (e.g. DIA) to determine actions required to restore the site to its original condition.	Construction Contractor
	Complete and forward an Incident Report to the appropriate person(s).	Construction Contractor