Commercial Systems Australia Pty. Ltd.

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Environmental Management Plan

05/08/2010

Version No.: 2 -20100805

Revision date: 05/08/2010

Prepared by: Jade Shoppee

Position: General Manager

Approved by: Russell Wilson

Position: Director

Approvers signature:

…… Date: ……

COPY No.: 1 HELD BY:

Document Control Statement:

To ensure this Environmental Management Plan (EMP) is kept up-to-date and that the most recent version is used by staff and contractors, its distribution and revision will be controlled. Jade Shoppee (General Manager) will:

- manage the master copy and any other paper or electronic copies of the EMP
- keep a summary of updates, versions and dates and distribution lists
- ensure EMP updates are distributed to all relevant staff as controlled copies
- ensure any uncontrolled copies are marked as uncontrolled copies
- ensure any out-of-date copies are discarded when updates are distributed

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Company, site and environment

1. Company description and site location

Commercial Systems Australia Pty. Ltd.(CSA) have been the proud manufacturers of public furniture items for over 20 years. Located in Croydon, Victoria, CSA premises includes a metal and timber workshop as well as head office

2. Scope of this EMP

CSA's environmental management plan (EMP) is an action or combination of actions implemented to reduce the environmental impacts of our business operations. There are two types of pollution prevention: source reduction and recycling. Source reduction reduces or eliminates the generation of waste. Recycling takes used materials, modifies their form, and makes them available for future reuse. The EMPs are a combination of source reduction and recycling strategies, which provide economic as well as environmental and safety benefits.

3. Site activities, facilities and stores

Office Management, marketing, sales, accounts, production, design.

- Computers
- Printers
- Stationary supplied
- Document files

General Fabrication including welding and assembly.

- Welding equipment
- Guillotine
- Bender
- Drill
- Bobo saw
- Folder

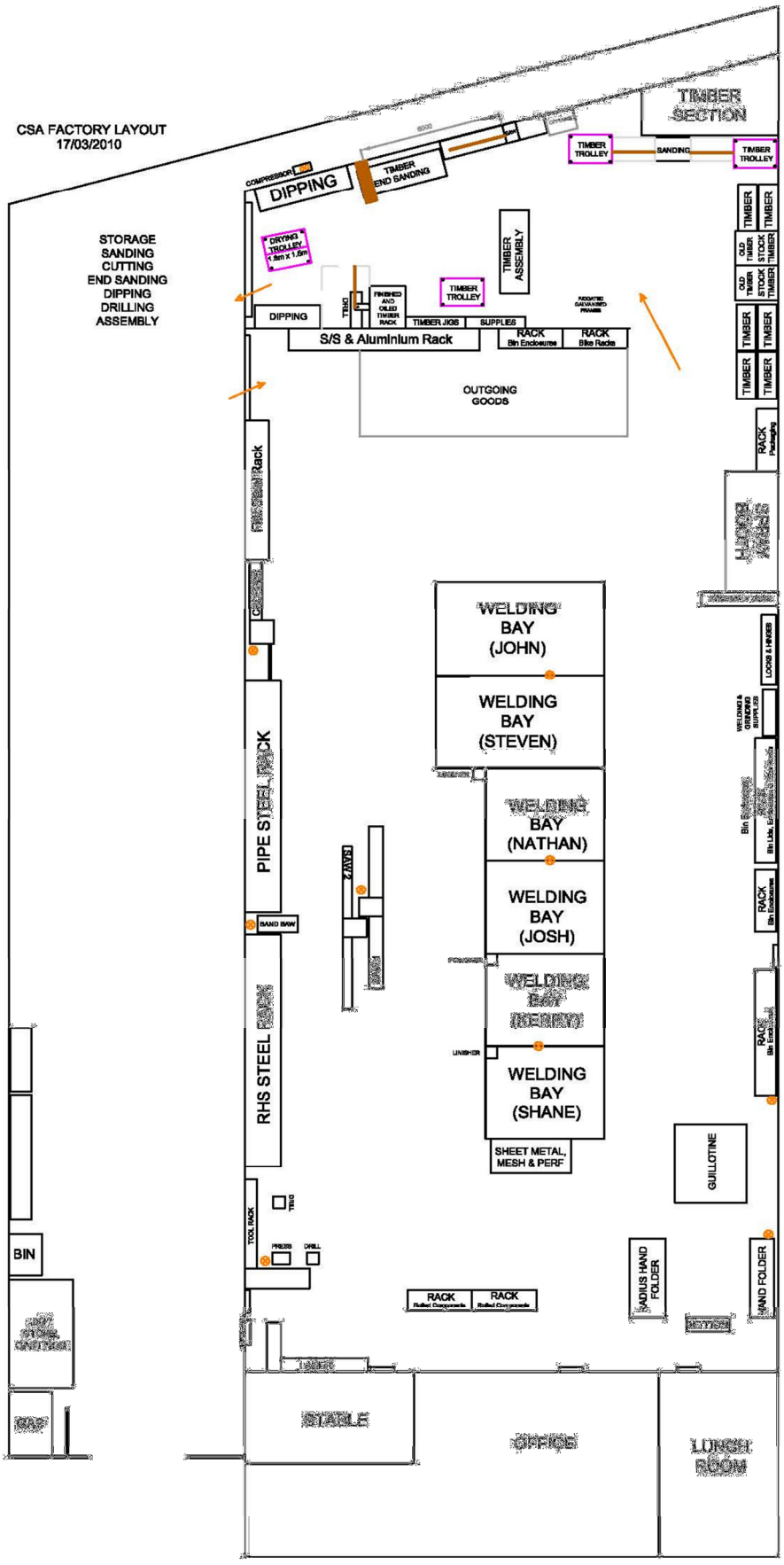
Painting / Staining

- Spray Booth
- Extraction unit
- Paint / Chemical store

Timber Assembly

- Bobo saw
- Belt Sander
- Drill
- Timber store
- Oil dipping tanks

4. Site layout



5. Site receiving environments

All goods enter the factory premises by Vinter Avenue. Gas bottles are stored in an open cage outside the factory. All paints and hazardous materials are transferred directly to the paint store by foot.
Materials carried by foot enter through the small side door and are carried through the pedestrian walkways.
Forklift access is provided outside of the factory and in through the timber or general factory roller doors.

6. Authorisations, consents and permits

49-51 Vinter Avenue is registered as an Industrial 1 Zone in Maroondah City Council. Industrial 1 Zone, provides for manufacturing industry, the storage and distribution of goods and associated uses in a manner which does not affect the safety and amenity of local communities.

Must not adversely affect the amenity of the neighbourhood, including through the:
- Transport of materials, goods or commodities to or from the land.
- Appearance of any stored goods or materials.
- Emission of noise, artificial light, vibration, odour, fumes, smoke, vapour, steam, soot, ash, dust, waste water, waste products, grit or oil.

Pollution risks and controls

7. Pollution risks

Cutting Fluids

Cutting and grinding fluids can consist of water-soluble or non-soluble petroleum based oils. Cutting fluids improve the life and function of cutting tools by providing cooling and lubrication. The fluid is also used to carry away chips and fines produced in machining and cutting operations. Water is the most efficient way to cool machines, but can cause rusting. Cutting fluids contain oils or chemicals to prevent rust and provide other benefits (i.e., friction reduction). Build up of an oil layer in a machine sump encourages the growth of anaerobic bacteria which creates a rotten egg smell (hydrogen sulphide) and can cause skin irritation. The bacteria may make the solution acidic enough to dissolve metal particles creating a hazardous waste. In addition, oil and grease negatively impact water quality. Coolant baths are often discarded monthly to maintain desired characteristics.

Chips and Fines

One of the primary wastes from metalworking is the chips and fines that result from cutting and grinding metals. These wastes, when left in the sump, promote the growth of bacteria, causing health problems amongst employees.

Metal Coatings

Coatings such as paint are often spray applied to the metals. Alternatively, coatings can be applied by plating parts in zinc, copper, nickel, or chrome solutions. The rinse water produced after the coating process is often hazardous waste.

Degreasing

Degreasing is critical to remove oil, particles, and/or buffing compound contamination. Manufacturing have historically used mineral spirits as a solvent to remove grease and oil from tools, parts, and equipment. A quantity of hazardous waste is usually produced in the process.

Volatile Organic Compounds (VOCs)

Most coatings used in finishing contain Volatile Organic Compounds (VOCs), which may be carcinogenic. VOCs are toxic air pollutants released from a wide range of industrial processes, including cleaning with solvents and the application of paints and finishes to furniture pieces. Additionally, VOCs contribute to the formation of smog and can contaminate water due to their high solubility and mobility. VOCs are very difficult to remove once they reach the environment.

Chemical methods of finish removal employ either caustic or solvent solutions. Formulations of
these chemicals are used extensively in both flow-over and immersion (dip) tanks in furniture finishing operations.

Waste Reduction

Sometimes, products expire or otherwise deteriorate before they are used. Ensuring that CSA does not have excess amounts of finishing materials which may expire within the same time frame will help reduce wasted materials.

8. Pollution Controls

Structural and procedural controls – existing:

Cutting Fluids

The following best management practices relate to extending the life of coolant solutions, to minimize waste and prevent the disposal of these fluids in ways that are not environmentally sound.

- Investigate opportunities to extend the life of machining coolants used by:
- Filtering out and removing suspended particles;
- Using de-ionized water to mix coolant concentrate;
- Adding an oil water separation system to remove oil contamination, or remove floating oil using an absorbent pad or skimmer;
- Creating procedures to reduce the introduction of contaminants, such as cigarette butts, spit,
- food, and dirt; and
- Removing chips, fines, or sludge regularly.
- Remove tramp oil, chips, and fines to prevent septic conditions from occurring in cutting fluids. The treated solution may be suitable for disposal in the municipal sewer treatment system. Be sure to get approval from local wastewater authorities before using this disposal option.
- Fluid should be recycled every 2 to 3 weeks, and may be usable for one to two years or more.
- Create a system to regularly monitor coolant condition and concentration. Weekly monitoring is the minimum, while daily monitoring is suggested for small sumps or stand-alone machines. Minimizing waste by maintaining machine coolant is the best approach for dealing with waste disposal issues.
- Perform daily inspections and routine maintenance of machines to prevent hydraulic and metalworking fluid leaks. As machine gaskets, seals, and wipers become worn and cracked, fluid drips onto the floor, machine parts, or in the case of hydraulic fluids, into the metalworking fluid baths. These leaks require cleanup that results in wastes such as wash water and used absorbent rags or pads. Hydraulic fluids dripping into metalworking fluid baths also provide a site for bacterial growth, and cause smoke and odour problems, resulting in frequent fluid changing.

Chips and Fines

- Completely drain excess cooling fluid from chips prior to recycling using a screen, perforated container, chip wringer, or centrifuge. The drained coolant can then be reused.
- Locate opportunities to recycle chips, fines, and sludge for metal value.

Metal Coatings

- Reduce drag-out in plating tanks by:
- Increasing parts drainage time;
- Using low pressure air to blow off parts;
- Using drip bars to hold parts over bath to drain more completely.
- Collect rinse waters to use as make-up water in plating tanks, to reduce both water use and the amount of wastewater produced.
- Create a schedule to monitor plating bath concentrations, to catch problems early to avoid having to dispose of an entire tank.
- Limit the number of employees allowed to adjust tank concentrations to control fluctuations and prevent errors caused by miscommunication. This can also improve product quality.
- Get permission from your local sewer utility before any rinse water enters the sewer (for example, if you take engine parts out of a hot tank and hose them off directly to a sewer drain).
- Provide covers for solution containers, such as sumps, dip and plating tanks, and cleaning baths. This will decrease the introduction of outside contaminants when the containers are not in use.
- Create reusable masking devices for sprayed parts. This reduces the amount of solid (possibly hazardous) waste produced and eliminates the use of masking tape or paint. It may also make spray residue more suitable for recycling.

Degreasing

- Use the least amount of chemical that will suffice for the task. Create standard operating procedures specifying that solvents should be wiped onto parts using a rag instead of poured onto them.
- Replace mineral spirits and other solvents with a water based solution for cleaning parts. Switching to an aqueous based solution may reduce regulatory requirements, decrease labour required to clean parts, and eliminate unpleasant odours and fumes. If non emulsifying solutions are used, oils and dirt can be removed, allowing the cutting fluid to be used longer.
- Solvents keep oils and dirt in solution, and once they become saturated, the solvent can no longer be used.

Volatile Organic Compounds (VOCs)

- Use adhesives that are low-VOC or VOC-free.
- Keep material containers closed tightly when not in use to reduce evaporation.
- Determine the most efficient air and fluid pressure for spray guns. The ideal setting should provide good atomization, but minimize overspray and blowback.
- Train employees to use proper coating techniques to reduce waste. Skilful use of spray guns can significantly and consistently increase transfer efficiency of coating materials while reducing product consumption and VOC emissions. Practices could include:
- Adjusting spray patterns for different sized pieces.
- Holding the spray gun 8-10 inches away from the piece.
- Holding the spray gun perpendicular to the piece and spraying using a sweeping motion.
- Stopping the spray of material after the end of each pass; and
- Making strokes overlap each other by 50%.

General

- Use absorbent pads that can be wrung out and reused, to reduce both the amount of waste material produced and the amount of new material that must be purchased.

9. Emergency Spill Response Plan

Spill response procedure - Major Spill

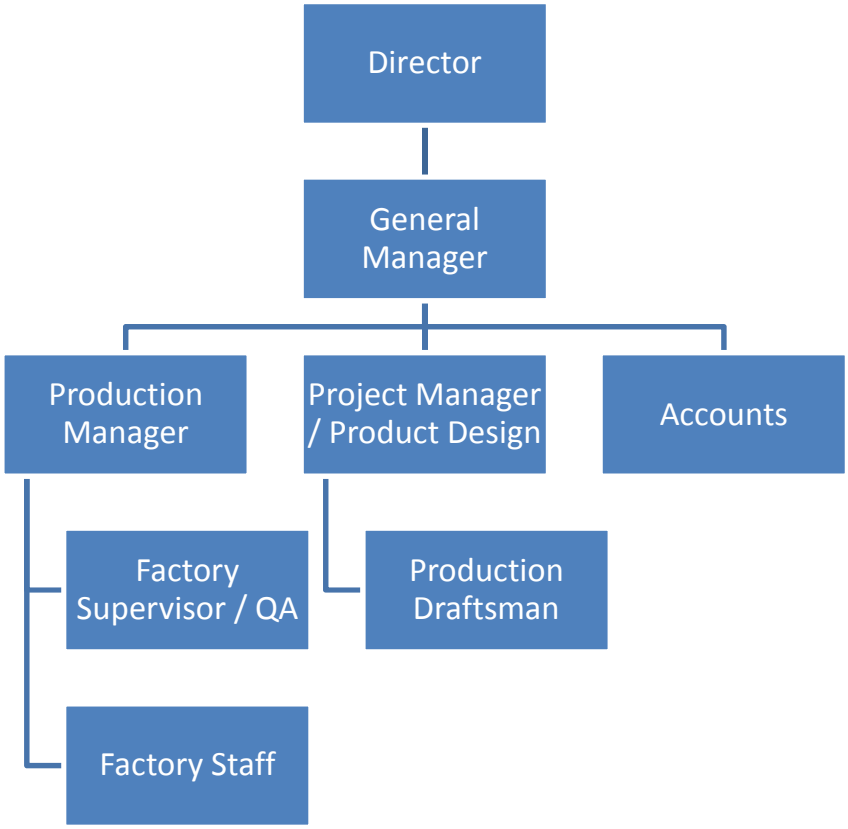
In the event of a spill which:
1) Involves the release of a type or quantity of a chemical that poses an immediate risk to health; or
2) Involves an uncontrolled fire or explosion:
• Evacuate the building by activating the nearest fire alarm.
• Call 000 and give details of the accident including location, types of hazardous materials involved, and whether there is personal injury.
• If the accident involves personal injury or chemical contamination, follow the above steps as appropriate and at the same time:
• Move the victim from the immediate area of fire, explosion, or spill (if this can be done without further injury to the victim or you).
• Locate nearest emergency eyewash or safety shower. Remove any contaminated clothing from the victim and flush all areas of the body contacted by chemicals with copious amounts of water for 15 minutes.
• Administer first aid as appropriate and seek medical attention.

Spill response procedure - Minor Spill

In the event of a spill involving the release of a type or quantity of a chemical which does not pose an immediate risk to health and does not involve chemical contamination to the body:
1) Notify Director and neighbours of the accident.
2) Isolate the area. Close doors and evacuate the immediate area if necessary.
3) Remove ignition sources and unplug nearby electrical equipment.
4) Establish exhaust ventilation. Vent vapours to outside of building only (open windows and turn on fume hoods).
5) Locate spill kit.
6) Choose appropriate personal protective equipment (goggles, face shield, impervious gloves, lab coat, apron, etc.)
7) Confine and contain spill. Acid and base spills should be neutralized prior to cleanup. Cover with appropriate absorbent material. Sweep solid material into a plastic dust pan and place in a sealed container.
8) Wet mop spill area. Be sure to decontaminate broom, dustpan, etc.
9) Put all contaminated items (gloves, clothing, etc.) into a sealed container or plastic bag.

10. Project Team and Responsibilities and Authorities

Organisation Chart



Director

Has the ultimate responsibility for environmental management within the organization.

General Manager

The General Manager has overall authority in the determination of all matters affecting the implementation and operation of environmental practices at the factory. The General Manager reports to the Director and is responsible for:

- Identifying resources and equipment for environmental purposes;
- Ensuring training is provided to improve awareness of environmental issues and responsibilities;
- Incorporating environmental management aspects in project planning;
- Ensuring operations are performed in accordance with legal and other requirements;
- Reviewing the effectiveness of the system for continual improvement.
- Reviewing of the Environmental Management Plan;
- Auditing the Environmental Management System;
- Providing support to the Operations Manager.

Operations Manager

- Preparation of the Environmental Management Plan
- Consulting with the Project Manager on environmental matters;
- Liaising with employees on environmental matters;
- Monitoring and reporting on environmental management system performance;
- Conducting site inspections and assisting with audits;
- Reviewing inspection reports and ensuring any actions required are executed;
- Conduct environmental monitoring such noise monitoring and preparing reports.
- Facilitate the implementation of environmental improvements and initiatives where practicable;

• Ensuring the EMP and sub- plans are implemented to meet the requirements for the site;
• Arrange the assignment of project staff to perform verification duties;
• Ensuring Environmental non-conformances and environmental incidents are identified, investigated, reported and suitable corrective actions are determined and completed;
• Ensuring subcontractors fulfil their environmental obligations;
• Attend meetings to discuss environmental issues

Supervisors
• Fundamental checking by site supervisory staff and subcontractors is a feature of the management system. Placing responsibility for the achievement of company objectives at the worksite will lead to greater accountability at this level.

Employees
• Report environmental incidents as observed on-site
• Follow instructions given by supervisory personnel in relation to matters that affect the environment
• If trained to do so, conduct initial emergency response activities such as place bunds around spills

11. Training Competence and Awareness

11.1 Environmental Inductions
It is the policy of CSA to ensure that adequate training and instruction is provided to personnel to allow them to perform their duties whilst ensuring the environmental impacts
associated with working on site and installation projects are prevented or minimised.

All CSA and Subcontractor personnel must be inducted prior to commencement of work, which includes
but will not be limited to the following environmental topics:
• Overview of key environmental issues and personnel responsibilities
• Promoting awareness of significant environmental issues and personnel
• Reporting of environmental incidents - which will include how an event is reported and to whom the event is reported (all incidents are to be reported including near misses).
• Emergency procedures - which will cover the procedure for an emergency and for evacuation of the site in the event of a catastrophic situation arising
• Contingency Plans - e.g. for chemical Spills

11.2 Environmental Awareness
Toolbox meetings are held on a fortnightly basis, for all staff and subcontractors. Toolbox meetings focus on environmental and safety items relevant for production or site installations during that time, and are used as the main tool to further increase awareness in significant environmental and safety issues and to communicate the relevant items contained in the Environmental and Safety Management Plans.

11.3 Training
Training of site personnel (inclusive of sub contractors), includes training in environmental awareness in the induction package and ongoing Toolbox meetings. It often includes field instruction on appropriate implementation of environmental controls (dependent on nature of duties).

12. Documentation

All requirements for document control, correspondence & filing, superseded documents, and other quality control items are described in detail in the Quality Assurance Plan.

Control of environmental records
Records, including pertinent subcontractor project records, will be maintained to provide evidence of conformity to requirements and of the effective operation of the environmental management system. Such records include, but are not limited to:
• Correspondence to/from interested parties
• Permits, licenses and approvals
• Induction training records

- Inspection and test documentation (including calibration)
- Non-conformance and corrective action / complaints
- Environmental incidents
- Audits and inspections
- Monitoring Records
- Delivery / waste dockets

Contractors
Environmental Management Plan
For

(Project Title)

(Location)

Specification Number;.....

(Contractor)

(Date)

Produced For

Project;……

Specification number;……

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Attachment A - Copies of Approvals, Licences and Permits

Contractor;……

Prepared by;……..

Date;……

1. INTRODUCTION

The Environmental Management Plan (EMP) has been prepared by > for > .

The EMP provides a framework for environmental management to be implemented by all contractors working on the site.

The works will include>

2. RESPONSIBILITIES

The responsibilities for implementing and monitoring this EMP are as follows;

3. background

4. Objectives of the emp

This EMP aims to provide a framework for environmental management of the site and to ensure that impacts on the environment are minimised.

5. approvals, licences and permits

The following approvals, licences and permits have been obtained for this project;

-
-
-
-
-
-

ATTACHMENT A

Copies of all approvals, licences and permits obtained for this project are attached at the back of this document under Attachment A.

6. environmental safeguards

6.1 Environmental Induction and Training

Action	Responsibility	Timing	Sign Off
All site staff will be made aware of the site EMP, environmentally sensitive areas and environmental responsibilities.	Site Manager	Prior to construction	

6.2 Community Liaison

Action	Responsibility	Timing	Sign Off
Members of the affected community will be notified of the proposed works prior to their commencement, where required.	Site Manager	Prior to construction	
Complaints received will be recorded and attended to promptly. On receiving a complaint, works will be reviewed to determine whether issues relating to the complaint could be avoided or minimised. Feedback will be provided to the complainant explaining what outcomes resulted.	Site Manager	Prior to construction During Construction	

6.3 Stockpile Sites

Action	Responsibility	Timing	Sign Off
All stockpile sites will be located in previously cleared and disturbed areas within the site boundaries. No stockpile site will be established within the following areas without prior consultation with the Superintendent. - an environmentally sensitive area - vegetated areas - on floodplains or within 40 m of a watercourse - where it will affect a cultural and/or heritage site.	Site Manager	Pre, during and Post Construction	

6.4 Soil Erosion and Sedimentation Management

Action	Responsibility	Timing	Sign Off
An Erosion and Sediment Control Plan will be prepared and implemented and will incorporate appropriate erosion and sediment control measures. Erosion and sediment control measures will be maintained regularly and after rainfall events. Erosion and sediment control measures will not be removed until disturbed areas have been stabilised.	Site Manager	Pre, during and post Construction	

	Disturbed areas will be stabilised progressively with vegetation during construction, where necessary, and stabilisation will be undertaken after works are complete.			

6.5 Water quality

Actions	Responsibility	Timing	Sign Off
Water quality control measures will be implemented to prevent any materials entering drain inlets and waterways.	Site Manager	Pre, during and post construction	
Storage areas for fuels, oils and chemicals will be surrounded by an impervious bund that contains 120% of the largest container stored in the Bund. The location of storage areas will not be within 20 metres of any areas of concentrated water flow, flood and poorly drained areas, on slopes above 10^0 or near any areas of native vegetation.			
Drums used as markers will not contain chemicals or fuels.			
Refuelling plant and equipment will be undertaken within bounded areas and more than 50m away from waterways.			
Cleaning of spray bars or equivalent equipment will be undertaken in appropriate areas and in a manner, which prevents or minimises pollution to waters.			
Spill containment equipment kits will be available on site.			
Works in waterways will be postponed during or immediately following heavy rainfall or when waterways are running high.			

6.6 air quality

Action	Responsibility	Timing	Sign Off
Spraying of paint and other materials with the potential to become air borne particulates will not be undertaken during windy conditions.	Site Manager	During Construction	
Dust generated during maintenance activities will be controlled.			
Community notification will be undertaken where appropriate where work is likely to cause dust impact on the public and nearby residents.			
No burning of vegetation or other materials will be permitted on site.			
Exhaust emissions from plant and equipment will be minimised.			
Any vehicle transporting waste or other materials that may produce odours or dust will be covered during transportation.			

6.7 noise and vibration

Action	Responsibility	Timing	Sign Off
Affected residents and businesses will be notified when work is likely to cause vibration or offensive noise to impact on the public. Works will be undertaken during normal working hours. Any work that is undertaken on Sundays, Public Holidays or outside normal working hours will require the approval of the Principal. All reasonable practical steps will be undertaken to reduce maintenance activity noise and vibration from the site.	Site Manager	During Construction	

6.8 vegetation and fauna

Action	Responsibility	Timing	Sign Off
Parking areas and turning points for plant and equipment in previously disturbed areas will be identified prior to commencement of works and provided to site personnel to minimise roadside vegetation disturbance. Vegetation identified to be significant, including trees, shrubs, ground cover plants or grasses will not be disturbed by either direct physical or non-direct means. Significant vegetation will be protected by physical barriers to exclude machinery, vehicles or pedestrians from the proximity of the plant's foliage. Vegetation refuse that is deemed as a valuable habitat will be avoided so that it continues to provide a wildlife refuge.	Site manager	During Construction	

6.9 heritage

Action	Responsibility	Timing	Sign Off
Conditions attached to any Aboriginal Areas Protection Board Certificate will be complied with. Should any item be encountered which is suspected to be a relic of heritage value or any relic, artefact or material suspected of being of Aboriginal origin, all construction work that might affect the item will cease and the item protected from damage and disturbance. The Principal will be notified immediately. All personnel working on site will receive training regarding their responsibilities regarding cultural heritage and will be made aware of any sites or areas which must be avoided. Such sites or areas will be identified on a site map and made available to all relevant personnel during the works.	Site Manager	Pre, during and post construction	

6.10 waste management

Action	Responsibility	Timing	Sign Off
Waste generated from maintenance activities will be sorted and amounts estimated and recorded.	Site Manager	During and Post construction	
Where available, waste suitable for reuse or recycling will be reused or recycled.			
Materials and products with recycled content will be proposed for the works wherever these are cost and performance competitive and they are environmentally preferable to the non-recycled alternative.			
Waste oil will be sent to approved recyclers where appropriate.			
Waste and containers not able to be recycled will be disposed of at a licensed landfill site.			
No construction waste material will be left on site once the maintenance activity has been completed.			
The site will be left in a clean and tidy state on completion of the maintenance works.			

6.11 weed management

Action	Responsibility	Timing	Sign Off
All noxious weeds will be managed in accordance with the Weeds Management Act, including preventing the spread of noxious weeds through movement of contaminated plant and equipment into un-infested areas.			
Weed infestation areas will be identified then avoided during construction activities.			
Weed infested areas that are programmed for disturbance will be treated appropriately prior to construction to avoid germination of weed seeds.			
All personnel managing and using pesticides will receive appropriate training prior to commencing work. Only pesticides registered for use over water will be used within 10m of watercourses.			
Machinery will arrive at and depart from the site in a clean condition, free of seed or mud.			
Vehicles and machinery will be cleaned on a hardstand area where weed seeds can be separated from runoff and treated appropriately.			
Fill that is contaminated with weed seeds will be quarantined with visible barriers and a notice, then treated appropriately. Alternatively, it will be buried under 300 mm depth of clean, weed seed free fill.			

7. non conformance and corrective action procedures

8. emergency response procedures

9. environmental audit program

Compliance with the EMP will be monitored on an ongoing basis.

Environmental audits will be undertaken at the following times;

4 Weeks

3 months

6 months

10. soil erosion and sediment control plan

- Staging of operations and sequence of work under the Contract
- Diversion of upstream water around the site;
- Provision of temporary drains and catch drains;
- Application of diversion, dispersal and/or retention measures to concentrate flows to control and dissipate stormwater through the site without damage;
- Spreader banks or other structures to disperse concentrated runoff;
- Silt traps and silt fencing to prevent discharge sediment materials to downstream areas;
- Temporary grassing or other treatments such as contour ploughing or bounding to disturbed areas and long term stockpiles;
- Restoration of disturbed areas in progress with the work under the Contract; and
- Use of mulch materials to protect disturbed or exposed areas where suitable

The Soil Erosion and Sedimentation Control Plan includes all site areas and access and haulage tracks, borrow pits, stockpile and storage areas and compound areas.

11. waste management plan

Identify major waste streams that will be generated during the Contract including;

- green waste
- construction waste, including;
  - spoil
  - demolition waste
  - asphalt or bitumen
  - concrete and metal
  - paint materials
- office waste
- kitchen waste
- sewage effluent;

- For each waste stream indicate how and where the waste is to be reused, recycled, stockpiled or disposed of

- How the waste will be transported between the site and point of reuse, recycling, stockpiling, treating or disposal and who will be responsible.
- Methods for monitoring the Waste Management Plan.

12. weed management plan

- Identify weeds and infestation zones within the work site/ investigation date
- Subcontractors who will treat weed infestations
- Chemical handlers/ qualifications/ date/ spray type used/ target weed and its identified location by Chainage or Latitude and Longitude.
- Method of cleaning vehicles & machinery/ cleaning date
- Cleaning bay location/ treatment date
- Contaminated fill stockpile/ treatment type/ treatment date
- Methods for monitoring the Weed Management Plan and who is responsible

ATTACHMENT A

Refer to the Clause titled – APPROVALS, LICENCES AND PERMITS.