



# **Operational Environmental Management Plan**

## **Waste and Reuse Management Sub Plan**

### **Bonville Pacific Highway Upgrade**

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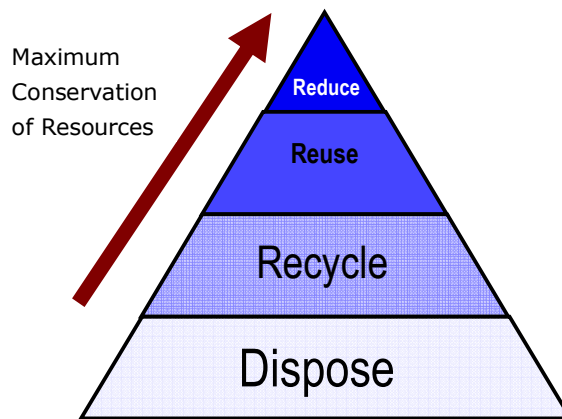
## 1 Background

The *Protection of the Environment Operations Act 1997* broadly defines waste as:

- any substance which is discharged, emitted or deposited in the environment in such a volume or manner that causes an alteration to the environment; or
- any discarded, rejected, unwanted, surplus or abandoned substance.

The hierarchy of waste management shown in Figure 1 will be used to prioritise and plan waste management activities during the maintenance period. This approach will help to conserve natural resources, minimise resource wastage and ensure that disposal options are well considered, and acceptable.

**Figure 1: Waste hierarchy**



### **Reduce**

Waste avoidance by reducing the quantity of waste being generated is the simplest and most cost-effective way to minimise waste. It is the most preferred option in the Waste Management Hierarchy and is therefore ranked first.

### **Reuse**

Reuse occurs when a product is used again for the same or similar use with no reprocessing. Reusing a product more than once in its original form reduces the waste generated and the energy consumed, which would have been required to recycle.

### **Recycle**

Recycling involves the processing waste into a similar non-waste product consuming less energy than production from raw materials. Recycling spares the environment from further degradation, saves landfill space and saves resources that were used to make the item in the first place.

### **Dispose**

Removing waste from worksites, compounds and offices and dumping in a licensed landfill site, or other appropriately licensed facility.

## **2 Objectives**

The objectives of the Sub Plan are:

- to identify the types of waste likely to be generated as a result of the operation and maintenance of the upgrade.
- to identify options for waste avoidance, reuse, recycling and the disposal, consistent with the waste hierarchy.
- to encourage energy and water conservation and the sustainable use of resources.
- to facilitate compliance with the Project’s waste obligations.

## **3 Environmental Aspects and Impacts**

Maintenance activities that have the potential to produce waste or result in an environmental impact are listed in Table 1.

**Table 1: Aspects and Impacts**

<b>Maintenance Activities (Aspects)</b>	<b>Potential Impacts of the Maintenance Activity</b>
Purchasing decisions	<ul style="list-style-type: none"> <li>• Material wastage</li> <li>• Increased disposal volumes, transport requirements and cost</li> <li>• Pollution of the environment</li> </ul>
Office activities	<ul style="list-style-type: none"> <li>• Material wastage</li> <li>• Under-utilisation of resources</li> </ul>
Remove and replacement of infrastructure including pavement and asphalt surfaces, fencing	<ul style="list-style-type: none"> <li>• Release of sediment and waste water to the environment</li> <li>• Disposal of bulk solid waste to landfill</li> <li>• Under-utilisation of a resource</li> <li>• Loss of a commercially valuable product</li> </ul>
Maintenance of the Rest Area and the collection of waste from litter bins and roadside areas	<ul style="list-style-type: none"> <li>• Pollution of the environment</li> <li>• Reduced visual amenity</li> <li>• Harm to fauna</li> <li>• Illegal dumping impacting on amenity, safety and the</li> </ul>

	environment (ie if a hazardous substance)
Pollution control devices (eg GPT, spill basins and nutrient removal devices)	<ul style="list-style-type: none"> <li>• Potential blocking of stormwater systems rendering controls and drainage ineffective</li> <li>• Reduced capacity of spill control devices</li> <li>• Pollution of the environment</li> </ul>
Fuel and chemical storage, use and accidental spillage	<ul style="list-style-type: none"> <li>• Pollution of the environment and waterways</li> <li>• Contamination of soil or groundwater</li> <li>• Generation of waste liquids and containers</li> <li>• Costly clean up and disposal costs (following an incident)</li> </ul>
Landscape maintenance	<ul style="list-style-type: none"> <li>• Litter pollution</li> <li>• Reduced amenity</li> <li>• Environmental pollution associated with chemical use</li> <li>• Harm to fauna</li> <li>• Spread of weeds</li> </ul>

## 4 Environmental Controls and Procedures

### 4.1 Waste Classification

The classification of waste is based on the DECC (EPA) document "Environmental Guidelines: Assessment, Classification and Management of Liquid and Non- Liquid Wastes". The classification of wastes is necessary to determine whether licensed transporters are required and at which landfill the waste may be disposed.

**Non-liquid wastes** are divided into four categories as follows:

1. *Inert* - waste that is unlikely to release significant quantities of greenhouse gasses or leachates contaminated with nutrients and/or chemicals;
2. *Solid* - likely to release higher quantities of contaminants than inert waste and therefore need to be handled with greater care;
3. *Industrial* - contain higher (four times) levels of contaminants than solid waste and needs to be managed with more stringent environmental controls than solid waste; and
4. *Hazardous* - this type of waste contains contaminants at levels high enough to require treatment to render them safe before disposal.

**Liquid wastes** are divided into separate groups namely:

- Group A (controlled aqueous or non-aqueous liquids, liquids contaminated with non-harmful chemicals solvents or chemicals);
- Group B (grease laden waste, liquid food waste); and
- Group C (effluent) and hazardous liquid wastes.

Waste materials produced during the maintenance period are likely to include:

- Office materials: paper, glass, cardboard, plastic, food waste (inert solid waste)
- Construction materials: remove and replace asphalt, roadbase, concrete (inert solid waste)
- General waste/litter: food containers and waste (inert solid waste)
- Curing compounds: (liquid group A)
- Herbicides: (liquid group A)
- Infrastructure: fencing, guard rail, packaging (inert solid waste)
- Excavated materials: rocks, soil (inert solid waste)
- Sanitary waste: (liquid group C)
- Vegetation cuttings and debris (insert, green waste)

## 4.2 Waste Management Options

Waste will be managed based on the hierarchy of avoidance, resource recovery and disposal. A list of local recycling and waste disposal contacts are provided in Table 2.

**Table 2: Local Waste Management Contacts – Waste disposal and recovery**

Sources of Information	
Department of Environment & Climate Change	(02) 6640 2500
Coffs Harbour City Council	(02) 6648 4000
Bellingen Shire Council	(02) 6655 7300

<b>Waste Contractors / Recyclers</b>			
Contractor	Contact Details	Waste Accepted	Waste Recycled
Cleanaway	Lot 2 Englands Rd Coffs Harbour NSW 2450 Tel: (02) 6652 7566	Building waste, hazardous waste	Paper, cardboard
Handybin Waster Services	23 Wingara Drv Coffs Harbour NSW 2450 Tel: (02) 6652 1733	Building and construction waste, liquids, contaminated soils	Brick, steel, concrete, timber

*NOTE: Other contacts will be added as they become available*

<b>Recycled Product/ Material Supply</b>		
Contractor	Contact Details	Service
Aarvbee Recyclers	Waste Depot Englands Rd Coffs Harbour NSW 2450 Tel: (02) 6658 0544	Plastic, fibre, metal and glass products
Visy Recycling	Various locations in NSW Tel: 1300 368 479	Steel, aluminium, plastic, glass, paper and cardboard

*NOTE: Other contacts will be added as they become available*

<b>Oil/Oily Rags/Absorbent Materials/Radiator Fluid (Glycol)</b>		
Contractor	Contact Details	Service
Coffs Paper and Oil	Southgate Industrial Centre Coffs Harbour NSW 2450 Tel: (02) 6652 3136	Oil reconditioning

*NOTE: Other contacts will be added as they become available*

<b>Additional Recyclers for Construction Materials</b>		
Contractor	Contact Details	Service
Contaminated Waste Services (CWDS)	PO Box 396 St Marys NSW 2760 Phone: 9623 0888	Dispose of PCBs
<i>NOTE: Other contacts will be added as they become available</i>		

<b>Waste Management Facilities</b>	
Facility	Location
<b>Council's Waste Management Centre</b>	England's Road, Coffs Harbour South
<i>NOTE: Other contacts will be added as they become available (refer to the white pages for contact numbers as necessary)</i>	

### **4.3 Roadside Litter and Rest Areas**

Roadside and rest areas will be checked regularly (as required) to identify litter build up, damage to facilities and abandoned vehicles. Litter collected by maintenance crews will be placed in a skip (located within a secure waste compound area) or taken directly to a licensed landfill site.

Where the Maintenance Supervisor determines that it is practical and safe to do so, roadside litter will be collected prior to mowing or slashing to prevent the further spread of this material through the environment.

Locations where illegal dumping is observed to occur regularly or consistently will be identified and reported in the monthly reports. Consideration will be given to providing a barrier or signage to deter further dumping. Advice will be provided to the Police and/or Council of the location of abandoned vehicles. If collection and disposal is required, recycling options will be considered.

### **4.4 Construction Materials**

Aggregate, concrete, asphalt, steel or timber required for the maintenance phase of the project will be ordered as required. Quantities will be calculated at the time the materials

are needed to reduce the site storage and generation of waste. Any surplus that can be reused elsewhere on site will be undertaken as soon as possible. All waste will be removed from site as there is negligible space for materials storage.

#### **4.5 Fuel and Chemical Stores**

All liquid chemicals, fuels and oils will be stored in a secure bunded area. Regular maintenance will be implemented to ensure they continue to function effectively and without risk to the environment. This will be undertaken in accordance with Standard Operating Procedure BBS-PC-BU-703.

Empty drums and containers stored within the bunded area will be periodically removed by a licenced recycling or waste contractor.

Excess chemicals or liquid wastes will be reused or disposed of using a contractor or facility licenced to accept, process or dispose of such wastes.

#### **4.6 Office Waste**

Bins will be provided in office areas for the collection of office wastes and recyclables such as clean office paper and cardboard. A Council collection service will be arranged to service the office. The bins will be clearly marked as "Recycling" or Rubbish" to prevent mixing.

Refillable cartridges will be returned to the supplier/manufacturer for recycling.

#### **4.7 Landscape Maintenance and Vegetative Waste**

In general green waste arising from landscape maintenance such as mowing, brush cutting, trimming, tree prunings and weeding will remain in-situ. Vegetation from tree lopping activities will be mulched and reused in landscaped areas if considered practical by the Maintenance Manager.

Green waste and trimmings will be kept away from drainage lines and waterways.

If in the opinion of the Maintenance Manager very large quantities are generated, then the Maintenance Supervisor will arrange for off site green waste disposal. Where vegetative waste is to be disposed of, it will be taken to an approved facility that accepts green waste.

Damaged tree guards, stakes, pots and tree ties will be collected for disposal to prevent them from being blown away, becoming a hazard to fauna or washing into waterways.

## 4.8 Contaminated Soil Waste

Minor fuel spills may be managed in-situ or by removing the soil to a secure area, and applying an appropriate absorbent product in accordance with the manufacturer’s directions. Preference should be given to products with absorption and bioremediation properties (eg Enretech). Dynamic lifter (containing bacteria) can also be added to the soil to assist with the breakdown of the contamination.

For significant fuel or chemical spills, emergency procedures will be implemented in accordance with the Environmental Management Plan and Standard Operating Procedure SOP-BBS-PC-602. Spillages will be cleaned up immediately to prevent the spread of the contaminant or its entry to surface or groundwater sources. In these situations soil waste material will be collected and taken to a licensed landfill facility with details recorded in the Waste Register.

## 4.8 Waste Register

A Waste Register will be maintained for all wastes removed from the site. A sample template is provided.

<b>Date</b>	<b>Waste Classification</b> (inert, solid or hazardous)	<b>Description / Type of Waste</b> (e.g. concrete, asphalt, vegetation)	<b>Amount of Spoil or Waste Collected</b>	<b>Transporter</b>	<b>Receival Facility</b>

## 5 Action Plan for Waste Management

The following action plan will be implemented to promote the use of recycled materials and the conservation of energy and water:

Aspect	Action	Timing
Administrative	Induct maintenance personnel and provide training on waste management.	Prior to commencing work
	Ensure that all personnel are aware of their obligations to use recycling and waste facilities on site.	At all times
	Encourage the identification of innovative options for the re-use and recycling of waste materials.	Ongoing
	Maintain accurate and comprehensive records of waste removed from site.	Ongoing
	Maintain adequate stocks of spill control equipment in compound and storage areas.	At all times
Water and energy conservation	Promote energy and water conservation through education and the placement of appropriate signage in office and crib areas.	Ongoing
	Turn off electrical equipment such as air conditioning units and office equipment at the end of each day.	Ongoing
	Implement water reduction strategies including flow restriction devices and take immediate action to fix dripping taps.	At all times
Purchasing	Purchase products from suppliers that provide a collection and reuse or refill service, where possible.	At all times
	Avoid over-ordering through careful planning and accurate material estimates.	At all times
	Discuss packaging options (ie reduced, reusable or recyclable packaging material) and the availability of bulk product orders, with suppliers.	As required
	Investigate and give consideration to the purchase of products with a recycled content.	At all times
Collection and Storage	Store waste within secure, designated compound areas and remove at regular intervals.	At all times
	Sort and store different waste types for ease of collection, recycling and disposal. Provide signage on waste and recycling receptacles to prevent 'contamination' (mixing) of waste streams.	Ongoing
	Undertake inspections of waste compounds to identify incorrectly stored or sorted waste, maintain a tidy work environment and determine waste removal needs.	Monthly
	Store chemicals and other liquids in secure, banded areas.	At all times
Disposal	Ensure that waste depots are licenced to process the type of waste being received.	Check prior to disposal
	Ensure that only authorised waste contractors are used to transport waste.	Check prior to collection.
	The waste material removed from the GPT and the Nutrient Removal Tank will be disposed at a licensed waste disposal facility.	As required
	Green waste from vegetation trimming, tree prunings, grass mowing and the like will be disposed within the project site. However, if in the opinion of the Maintenance Manager very large	Ongoing

quantities are generated, then the Maintenance Supervisor will arrange for off site green waste disposal.

## **6 Communication and Reporting**

### **6.1 Communication**

Communication processes including consultation with sub-contractors, government Agencies and the community is addressed in Section 3 of the OEMP.

A quarterly report will be prepared in accordance with Section 3 of the OEMP.

## **7 Evaluation and Review**

The effectiveness of waste management activities will be assessed based on:

- the outcome of regular inspections and audits by Abigroup, the RTA or the DEC
- the completion of records including inspection sheets and waste register
- compliance with approval conditions and project requirements.

### **7.1 Auditing Procedures**

Auditing Procedures are addressed in Section 5 of the OEMP.

## **8 Emergency Response Procedures**

Details of emergency response procedures and incident management are provided in the OEMP and Standard Operating Procedure BBS-PC-602 as detailed in the Safety Management Plan found within the Maintenance Manual.

All incidents will be investigated in accordance with the OEMP.