

PORT OF AIRLIE MARINA DEVELOPMENT

12. Waste Management

12.1 Waste Disposal Facilities

Whitsunday Shire Council operates a licensed landfill at Kelsey Creek, 3 km east of Proserpine and a transfer station at Cannonvale. The current landfill cell is unlined and nearing capacity. Approval has been gained for a new lined landfill cell which is expected to open within the next 2 years.

The landfill accepts building waste, putrescible waste and limited regulated waste. Grease trap waste is processed prior to disposal. Oil is stockpiled at Kelsey Creek and Cannonvale transfer station for removal and reprocessing by North Queensland Resource Recovery. Tyres are not accepted for disposal.

Council accepts green waste which is shredded and composted and then available for resale.

A fee is payable for all waste deposited at the transfer station or landfill by non-residential waste generators.

(pers com, Peter Driemel, Whitsunday Shire Council)

12.2 Construction Waste

12.2.1 Waste Types and Quantities

The composition of waste generated during construction will vary and be dependent on the stage of construction. **Table 12-1** below, details the particular type and estimated quantity of waste which may be generated during the dredging and land reclamation phase.

■ **Table 12-1 Waste Generation During Dredging and Land Reclamation**

By Products and Waste	Estimated Quantity	Management Method
Vegetation	Up to 6000m ³	<input type="checkbox"/> Shred and place in Kelsey Creek landfill
Waste oil (from equipment maintenance)	400L/month	<input type="checkbox"/> Store in bunded area
Packaging	Unknown	<input type="checkbox"/> Dispose of to oil recyclers (NQRR)
		<input type="checkbox"/> Sort into wood, cardboard, paper, plastic, metal
		<input type="checkbox"/> Recycle where possible, otherwise dispose of to licensed landfill
Sewage	Up to 20 EP	<input type="checkbox"/> Chemical toilets
Food wastes	Unknown	<input type="checkbox"/> Store in sealed container
		<input type="checkbox"/> Dispose to licensed landfill
Steel sheet piling	9000 lineal metres	<input type="checkbox"/> Reused by contractor in another project

All spoil from dredging and excavation will be used in land reclamation (see also **Section 2.7.1**). Vegetative waste, such as mangroves, will have a high saline composition. This green waste cannot be used as landscape mulch and will be sent to landfill.

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During construction of buildings and other features of the Port of Airlie a range of other wastes may also be generated, including:

- ❑ Concrete;
- ❑ Timber;
- ❑ Other building materials;
- ❑ Cardboard and plastic packaging;
- ❑ Food scraps;
- ❑ Waste oil; and
- ❑ Waste resins and paints.

12.2.2 Proposed Management

In addition to the management principles for individual waste streams outlined in **Table 12-1**, the following management methods will be used to manage waste:

- ❑ Contractors will be required to identify wastes requiring disposal off-site and assess the potential for these wastes to be:
 - Avoided or reduced;
 - Reused;
 - Recycled; and
 - treated
- ❑ Under no circumstances will wastes be buried or burned on the site; and
- ❑ Any regulatedⁱ wastes that cannot be reused, recycled, treated or safely disposed of at Kelsey Creek landfill must be transported to a properly licensed waste disposal facility.

12.2.3 Potential Impacts

The majority of waste materials that are not reused will be sent for disposal to approved landfill. With the proposed development of a new cell at Kelsey Creek landfill, the volumes of waste should not create any overall shortage in waste disposal facilities in the region. The proponent will pay a disposal cost to Whitsunday Shire Council which will contribute to the costs of operating the landfill.

12.3 Operational Waste

12.3.1 Waste Types

Residential Wastes

Residential and tourist accommodation developments will create a range of wastes including:

- ❑ Food scraps; and
- ❑ Paper, cardboard, plastic and metal packaging.

Whitsunday Shire Council or a waste contractor will provide garbage collection for the residential areas as part of its standard waste collection service. Each accommodation building will have a centralised waste collection and storage system.

Recycling facilities available to other residents of Airlie Beach will also be available to residents of the Port of Airlie.

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Marina and Marine Facilities

Waste similar to the residential wastes will be generated by marina patrons, including live aboard boats.

Solid waste bins will be provided on the marina pontoons for collection of solid wastes from boats. The marina operator will transfer the wastes to central sealed containers in the marina facilities area for collection by Whitsunday Shire Council.

Residential type wastes will also be generated from the tour boats operating out of the marina. A separate facility for offloading these wastes will be provided in the marine facilities area.

In addition, a range of wastes may be generated from the marina facilities area. These are likely to include:

- ❑ Inert wastes including wood, plastic, fibreglass and fabrics;
- ❑ Oily wastes, including wastes from the oil-water separator;
- ❑ Oil;
- ❑ Metals; and
- ❑ Paint scrapings.

These wastes will be segregated as appropriate and, where they cannot be reused or recycled, disposed of to Kelsey Creek landfill, with appropriate payment to the Council.

Oil will be collected by a waste oil recycler.

The operator(s) of the boat repair facilities will be required to hold Environmental Authorities under the *Environmental Protection Act 1994* for the following environmentally relevant activities:

- ❑ Boat maintaining or repairing facility—operating a commercial facility for maintaining or repairing any type of boat or inboard or outboard marine engine. (ERA 69); and
- ❑ Abrasive blasting—commercially cleaning equipment or structures using a stream of abrasives (ERA 23).

Information on proposed methods for management of contaminants will be required to be submitted to EPA as part of the application for an Environmental Authority and will be considered by EPA in issuing the Authority. Requirements for management and monitoring will be incorporated into the Environmental Authority and the operator(s) will be required by law to comply with these conditions.

Maintenance Dredge Spoil

Maintenance dredging of the channel and harbour will take place every 10 to 15 years and generate in the order of 10,000m³ of dredge spoil. This material is unlikely to be contaminated (see **Section 6.2.1**). It is also unlikely to produce acid sulphate soils, however this will be tested for at each dredging event.

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Dredge spoil will be disposed of in the same manner as spoil generated during construction, to a bunded area. This is discussed in more detail in **Section 2.7.1.5**.

Sewage wastes are discussed in more detail in **Section 14.3**.

12.3.2 Potential Impacts

Potential impacts of on site waste management include:

- ❑ Visual impacts;
- ❑ Vermin – rats, mice and flies;
- ❑ Vector - mosquito breeding;
- ❑ Odour nuisance; and
- ❑ Release of contaminants to the marine environment.

With proper handling, containment and disposal of wastes, these impacts are expected to be negligible.

Notes:

ⁱ The *Environmental Protection Regulation 1998* is subordinate legislation to the EP Act, Schedule 7 of this Regulation lists substances and materials regarded as regulated wastes.

A ‘regulated waste’ is defined in the *Environmental Protection Regulation 1998* as ‘non-domestic’ waste mentioned in schedule 7. The EPP (Waste) states that:

“*Regulated waste* means a waste which:

- ❑ Contains a significant quantity and concentration of a hazardous contaminant; or
- ❑ The hazardous contaminant exhibits hazardous characteristics because of its toxicity, carcinogenicity, mutagenicity, teratogenicity, flammability, corrosivity, reactivity, ignitability or infectiousness, through its physical, chemical or biological characteristics; or
- ❑ The waste may cause environmental harm if improperly stored, transported, disposed or otherwise managed”.

The following substances are regulated wastes that will be generated during the operation of the marina and associated facilities:

- ❑ Oil interceptor sludges – sludges from the bilge water interceptors;
- ❑ Oils – used and waste oils will be collected for recycling;
- ❑ Paint sludges and residues; and
- ❑ Treatment tank (sewage tank) sludges and residues.

A number of recycling and disposal options are available for these regulated wastes and other waste which will be generated at the site. These management techniques will be constantly reviewed throughout the life of the project.