

# Environmental Management System

## Waste Management Program

### 1. Scope

This program is limited to the management of all waste streams that are generated at The University of Queensland campuses and sites. Waste operating procedures are in place for each waste stream, along with site specific work instructions.

The University of Queensland is a Wastewise partner with the Environmental Protection Agency and seeks to minimise the waste going to landfill.

Please note: Appendix 1 lists common wastes and the procedure to which it belongs.

The Waste Management Program includes:

1. Scope
2. Objectives
3. Waste Management Procedures
4. Training
5. Budget
6. Records
7. Responsibilities
<a href="#">Appendix 1. List of common wastes and appropriate waste disposal stream</a>
<a href="#">Appendix 2. Cleaning Contacts by Precinct</a>
<b>Operating Procedures</b>
<a href="#">OP – Animal Waste</a>
<a href="#">OP – Chemical Waste</a>
<a href="#">OP – Clinical and Related Wastes</a>
<a href="#">OP – Cytotoxic Drugs and Related Waste</a>
<a href="#">OP – Green Waste</a>
<a href="#">OP – Maintenance Waste</a>
<a href="#">OP – Radioactive Waste</a>
<a href="#">OP – Recycling</a>
<a href="#">OP – General Waste</a>

### 2. Objectives

The University of Queensland will:

- Minimise the impacts of University wastes on human health and the environment by addressing solutions to the waste by the following strategies in hierarchal order (i) minimisation, (ii) recycling and/or re-use; (iii) treatment and (iv) disposal of wastes;
- Schedule audits on various waste streams to identify problem areas where waste management strategies can be successfully implemented;

- Ensure that all relevant licences, permits and approvals for waste management activities are in place;
- Implement an waste management education program; and
- Define responsibilities and budget allocations for waste management.

## 2.1 Waste Management Strategies

### 2.1.1 Strategies

Waste minimisation strategies incorporate a hierarchical approach to waste reduction. The strategy contains four principles:

1. **Source Reduction** is the most beneficial strategy as it avoids generation of waste. Waste is therefore not created and does not enter the waste stream (ie reducing excess packaging, returning packaging to supplier, etc);
2. **Recycling or re-use** is a process that diverts resources from the waste stream to be used for other means, either directly or as an input for further processing (eg. recycling paper to cardboard);
3. **Treatment** of waste is the processing of waste prior to disposal in order to minimise environmental impacts (eg. incineration) or accelerate biodegradation (eg. composting). Hazardous waste disposal must follow the Hazardous Waste Hierarchy. That is, **the most hazardous waste component should be treated first as set out below;**

<b>Hazardous Waste Hierarchy</b>
<b>Radioactive</b> <b>Cytotoxic</b> <b>Clinical</b> <b>Chemical/PCB</b> <b>General/Maintenance</b> Recyclable/Green/Biological/Animal Waste

4. **Disposal** of wastes is the least preferred option, which is used when it is not feasible to use any of the above strategies due to economic, market or technological constraints.

### 2.1.2 Application

Table 1 lists the current application of the above strategies. This list is not exhaustive and the University is always looking for new ways to increase source reduction.

**Table 1 - Waste Minimisation Practices at The University of Queensland**

Strategy	Process	Means	Result
Source Reduction	Electronic technology	<ul style="list-style-type: none"> <li>• E-mail</li> <li>• Duplex function for photocopiers and printers</li> <li>• Voice mail</li> </ul>	Reducing paper usage by eliminating written correspondence.
	Bulk purchasing	Establishment of central chemical and general store	Reduces and/or eliminates individual packaging.
Recycling /Re-use	Waste Diverting	Recycling scheme for paper, cardboard and metals with other streams to be addressed	Reduces volumes going to landfill.
	Auction	Auction of machinery	Reuse of equipment considered obsolete for

			University use.
Treatment	Incineration	Treating noxious wastes to more benign forms	Reduction of health and environmental risks
	Mulching and Composting	Biodegradation of biomass then reuse of soils and gardens.	Improves resource management and overall soil quality
Disposal	Landfilling	N/A	Resources and opportunity lost

## 2.2 Legislation

Waste contractors may be required to be licensed under the *Environmental Protection Act (1994)* to carry out waste management activities. Therefore, waste contractors are required to provide the following:

- Copy of the relevant environmental licence conditions for collection and/or treatment and/or disposal of wastes and a copy of the cover sheet of the licence;
- Credentials to carry out the waste management activity on behalf of The University of Queensland;
- Details of the landfill sites used under permission of Local Authorities; and
- Details of licensed waste treatment methods.

## 2.3 Audits

Waste audits shall be carried out in accordance with the procedures set out in The University of Queensland Auditing Program. It is the responsibility of the Environmental Engineer of the Property and Facilities Division to conduct waste audits on the University campuses.

## 2.4 Monitoring

Monitoring programs will be set as required, and are subject to the results and recommendations included in waste audit reports. It is the responsibility of the Environmental Engineer of the Property and Facilities Division to set up waste monitoring programs on the University campuses.

## 3. Training and Awareness

### 3.1 Training

It is the responsibility of the Heads of Schools and Centres, Managers of Farms and Research Stations and other Senior Officers to ensure that their personnel are adequately trained in environmental management issues.

**Refer to the training program for further information.**

### 3.2 Awareness Program

Community participation is a pre-requisite for the development and implementation of recycling schemes. For further information, see the UQ Sustainability website at:

[www.uq.edu.au/sustainability](http://www.uq.edu.au/sustainability)

Other UQ sub committees may also address waste management issues as required.

## 4. Budget

It is the responsibility of the Services Manager of the Property and Facilities Division to allocate the necessary resources to the waste management program on a yearly basis.

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## 5. Records

All documents issued with respect to waste management are held by the Property and Facilities Division and/or farm and research stations as appropriate. The term documents for the purpose of the waste management program includes Waste contracts, Operational Procedures, Checklists, Notes, Letters, Memoranda, Invoices and Reports.

## 6. Responsibilities

Waste management responsibilities are allocated to individual schools and centres and personnel. Levels of responsibilities under the waste management program are listed in Table 2.

**Table 2 Waste Management Responsibilities**

<b>Responsible Person</b>	<b>Duties</b>
Students, Laboratory technicians, Researchers and Academic staff	<ul style="list-style-type: none"><li>• Ensure understanding of the waste management procedures and work instructions applicable to their workplace; and</li><li>• Segregate waste into various streams as appropriate.</li></ul>
Heads of Schools and Centres and Executive Officers	<ul style="list-style-type: none"><li>• Ensure that students and staff are trained in relevant waste management procedures and work instructions;</li></ul>
Property and Facilities Division	<ul style="list-style-type: none"><li>• Engage waste contractors for the collection and disposal of wastes;</li><li>• Ensure that waste contractors are licensed or have necessary approvals to collect, treat and/or dispose of wastes;</li><li>• Liaise with Heads of Schools and Centres, and Executive Officers to ensure that waste management is effectively carried out;</li><li>• Conduct waste auditing or monitoring; and</li><li>• Review waste management procedures at least every 3 years.</li></ul>

## 7. Contacts

Any enquiries regarding waste management – see relevant operating procedure or work instruction.

[Appendix 1](#) provides a list of common wastes and the appropriate waste disposal stream they should be disposed in.

[Appendix 2](#) provides the Cleaning Contacts by Precinct.