

Guide To Best Practice At Resource Recovery
And Waste Transfer Facilities
July 2004

Acknowledgments

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Project Advisory Committee
Meinhardt Infrastructure and Environment Pty Ltd
Eva & Associates Pty Ltd
WorkSafe Victoria

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Preface

In mid-2003 EcoRecycle Victoria began a review of its *Guide to Best Practice at Transfer Stations*. The purpose of the review was to update the guide taking into account experiences, improvements and changes to legislation and strategy since the release of the original Guide in 1998. Occupational health and safety issues warranted particular attention.

To help develop the revised document, a consultant was appointed (Meinhardt Infrastructure and Environment) and an advisory committee was formed representing operators, local government, the EPA Victoria, WorkSafe Victoria, the Victorian Waste Management Association and the insurance industry. A draft document was released for public comment in October 2003 and workshops were held in Ballarat and Melbourne the following month to discuss its contents.

EcoRecycle planned to finalise the draft on completion of the initial round of consultation, however a number of issues proved contentious. There were particular concerns about:

- The degree of prescription in the draft
- Emphasis on residual waste management infrastructure
- Best practice in relation to drops and the risk of falls
- Hazardous waste issues
- Rural issues.

While it is difficult to produce an effective document that pleases everyone, EcoRecycle was keen to ensure that all views were fully taken into account before the document was finalised. Consequently, the document development process was extended to allow for further discussion of a second draft document, which incorporated amendments responding to previous public comment and submissions. Further workshops were held during March 2004 and written submissions invited by mid April 2004.

This final document reflects comments received at workshops and via written submissions. The advisory committee met to consider comments and submissions in June 2004. The majority of changes made to the document relate to additional information on occupational health and safety issues and advice regarding hazardous wastes.

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Glossary

Amenity	The quality of a local environment in relation to health and pleasantness.
Best practice	Best practice represents the current 'state-of-the-art' and aims to produce outcomes consistent with the community's social, economic and environmental expectations. Continuous improvement is an important component of best practice.
Buffer distance	The distance between a facility and residential or other sensitive land uses.
Category	This Guide classifies resource recovery and waste transfer facilities into four categories according to throughput range. See Section 1.3.
Composting	The controlled biological decomposition or treatment of an organic material in an aerobic environment to produce a material sufficiently stable for safe and beneficial use in land applications.
Container	The term used to describe a bin, skip or other receptacle at a transfer station or resource recovery facility.
Contamination	Materials and items within a recycling process that are not readily recycled by that process.
Garbage	Residual waste unsuited to reuse or recycling.
Green organics	Refers to grass clippings, tree cuttings, plants and leaves.
Groundwater	Any water contained in or occurring in a geological structure or formation or an artificial landfill.
Hard waste	Waste such as old furniture, whitegoods or other household waste that is too large to fit in the conventional kerbside waste collection service
Hazardous waste	Waste with the potential to have a significant impact on the environment, such as explosive and toxic waste.
Landfill	A facility used for disposal of waste to land.
Leachate	Liquid released by waste, or contaminated water that has percolated through or drained from waste, and containing dissolved or suspended material from the waste.
Litter	Any material, generally waste, left where it should not be.
Practicable	(From the <i>Occupational Health and Safety Act 1985</i> .) Having regard to (a) the severity of the hazard or risk in question; (b) the state of knowledge about that hazard or risk and any ways of removing or mitigating that hazard or risk; (c) the availability and suitability of ways to remove or mitigate that hazard or risk; and (d) the cost of removing or mitigating that hazard or risk.
Prescribed waste	Wastes listed in the <i>Environment Protection (Prescribed Waste) Regulations 1998</i> . These wastes require careful management and regulation because of their potential impact on human health or the environment.
Processing	Activities that recover resource value from waste or prevent harmful emissions from residual materials.

Putrescible waste	Waste containing a significant proportion of material able to be decomposed by bacterial action.
Residual waste	(See 'garbage')
Resource recovery facility	A facility where unwanted materials can be taken for subsequent transport to recycling operations or landfill. Also often called a transfer station.
Sensitive land uses	Land in a residential zone, Business 5 Zone, Capital City Zone or Docklands Zone, land used for a hospital or an education centre or land in a Public Acquisition Overlay to be acquired for a hospital or an education centre (Section 52.10 of the Victorian Planning Provisions).
Solid inert waste	Material which poses a low environmental risk when disposed to landfill, such as demolition material, concrete, bricks, timber, plastic, glass and metals.
Transfer station	(See 'Resource recovery facility')
Waste	Material deposited at a resource recovery or waste transfer facility. (A detailed definition of waste is provided in the <i>Environment Protection Act 1970</i> .)

Abbreviations

EPA	Environment Protection Authority
OH&S	Occupational Health & Safety

1 Introduction

1.1 The Purpose of This Guide

This Guide is intended to promote best practice in the establishment and operation of resource recovery and waste transfer facilities. It may be used as the basis for risk assessments at these facilities.

The Guide provides direction only – compliance is not mandatory unless required by a planning approval, tender brief or similar.

EcoRecycle Victoria released the first Guide to Best Practice at Transfer Stations in 1998; this updated guide incorporates experiences, improvements and legislative changes since then. This Guide also incorporates strategies outlined in EcoRecycle Victoria’s draft Towards Zero Waste strategy.

1.2 What is Best Practice?

Best practice represents the current ‘state of the art’ and aims to produce outcomes consistent with the community’s social, economic and environmental expectations. Best practice encompasses all aspects of resource recovery and waste transfer facility planning, design, operation and rehabilitation. Resource recovery, environmental impacts, safety and quality must be adequately addressed. Continuous improvement is an important component of best practice.

1.3 To Which Facilities Does This Guide Apply?

This guide applies to transfer stations and resource recovery centres, where unwanted materials are taken for subsequent transport to recycling operations or landfill.

New resource recovery and waste transfer facilities that are open to the public in Victoria, in both rural and urban areas, should be developed and operated in accordance with the Guide.

Facilities are classified into four categories according to throughput range (see below). The guidance provided is tailored to the varying needs and capabilities of the different categories.

Classification	Throughput (tonnes/annum)
Category 1	0 – 1,000
Category 2	1,001 – 10,000
Category 3	10,001 - 30,000
Category 4	> 30,000

1.4 What About Existing Facilities That Do Not Meet Best Practice?

The Guide provides direction to pre-existing facilities towards reaching best practice standards. Owners and operators should review their operations against the Guide and, where necessary, prepare a plan to upgrade their facility in line with the recommendations of the Guide. The improvement plan should describe the changes to be made and a timetable for implementation. Where changes are not considered

appropriate, a rationale should be documented together with alternative measures, which may be in place (or put in place) to address the specific issue.

1.5 Why Adopt Best Practice?

Adopting best practice at a resource recovery or waste transfer facility can:

- improve environmental performance
- reduce the risk of community complaints
- reduce environmental and social risk
- improve Occupational Health & Safety at the facility
- assist in developing a long-term sustainable business
- enable access to EcoRecycle Victoria infrastructure support funding.

Facilities that do not reach best practice standards may increase the risk of exposure to environmental, social, health, safety and insurance problems

1.6 Who Should Use This Guide?

The Guide should be used by all stakeholders involved in the establishment, operation or management of resource recovery and waste transfer facilities, including:

- those involved in planning, siting, design, construction and operation
- operators, managers, equipment suppliers and contractors
- local communities that use or accommodate these facilities.

1.7 Statutory Framework

Resource recovery and waste transfer facilities should be developed as part of an integrated waste management system. They must be consistent with all statutory planning, environmental and occupational health and safety requirements.

The *Planning and Environment Act 1987* sets out the framework for land use, planning and development in Victoria, including the preparation and administration of planning schemes. There is a planning scheme for each municipality that is binding on all people and corporations.

The *Environment Protection Act 1970* is a key legislative tool used in Victoria to protect the environment. Subordinate legislation under the Act includes:

- state environment protection policies for specific segments of the environment (e.g. air, groundwater)
- waste management policies governing the management of specific wastes
- environment protection regulations.

Resource recovery and waste transfer facilities must comply with all relevant legislation, policies and regulations. The Act also requires that these facilities must be consistent with the regional waste management plan and with EcoRecycle Victoria's solid industrial waste management plan.

The *Occupational Health and Safety Act 1985* establishes the statutory framework for providing a safe working environment. Like the *Environment Protection Act 1970*, this Act has subordinate legislation and several guidance documents relevant to resource recovery and waste transfer facilities.

1.8 Contents of this Guide

This Guide addresses the following aspects of resource recovery and waste transfer facilities:

- planning and siting
- design and construction
- operation and management
- rehabilitation and aftercare.

Each section focuses on maximising resource recovery, minimising environmental impacts and providing a safe environment for operators and users.

The Guide contains details of what should be done to achieve best practice. The word 'must' is used where legal requirements are referred. References to key statutory documents are included at the end of each section and link to the additional references given in Section 6.

A checklist is provided as Attachment B. Auditors, inspectors, planners, designers, owners and operators could use this. It is recommended that the checklist be amended to suit individual circumstances.

2 Planning and Siting

This section provides step-by-step guidance on the planning and siting processes needed to establish a resource recovery and waste transfer facility. It covers preliminary assessments, community consultation, site selection and planning approvals. Regional waste management groups often carry out the preliminary assessments (of need, material pathways and type of residual waste infrastructure) as part of their planning processes. Other elements of the planning and siting process are usually the responsibility of the proponent. The checklist provided as Attachment B can be used to check that best practice is being adhered to.

2.1 Needs Assessment

The need for a resource recovery or waste transfer facility should be justified, for example by demonstrating that it will:

- reduce costs
- increase resource recovery
- reduce the amount of waste disposed to landfill
- improve transport efficiencies of garbage and recovered resources
- restrict access to operating landfill(s)
- reduce the number of landfills operating in an area.
- provide a safe environment that is supervised/controlled by suitably trained staff.

A needs assessment should be made by or in consultation with the relevant Regional Waste Management Group. This should consider existing and planned waste management facilities, the level of service expected by the local community, potential resource recovery increases, State and regional waste management programs and targets, and broad economic impacts. The results should be documented.

2.2 Determining Material Pathways

When the need for a facility is established, material pathways to, within and out of the proposed facility should be predicted to determine broad siting, design and operational requirements. This will involve determining:

- the customer base (residential, municipal and / or commercial)
- OH&S requirements for material pathways
- the materials to be accepted (e.g. inert, putrescible, green organics, commercial and industrial hard waste)
- the expected quantity and composition of deposited materials now and in the future
- potential markets or disposal options for deposited material
- the segregated material types to be transferred
- the expected quantity and composition of materials to be transferred now and in the future (consideration should be given to local trends and to relevant State and regional waste management programs and targets).

Where feasible, materials should be recycled in order to conserve landfill space and natural resources, provide an income from sale of materials, reduce greenhouse gas emissions and other environmental impacts, and meet community expectations for recycling. The following materials are commonly received at resource recovery and

waste transfer facilities and are readily recyclable. Sites in Categories 3 and 4 should normally be able to recycle all of these, and Category 2 sites should be able to recycle some of them:

- glass bottles and jars
- plastic containers
- aluminium cans
- scrap steel
- newspapers, cardboard, magazines and office paper
- green organics
- lead acid batteries.
- hard waste

Additional materials should be recovered where feasible.

2.3 Selecting Residual Waste Infrastructure Type

Having worked out the preferred material pathways, the most appropriate type of infrastructure should be selected for managing the residual waste. Considerations should include Occupational Health and Safety, throughput, transport economics, capital constraints, resource recovery opportunities and regulatory compliance. The main residual waste management infrastructure options are discussed below.

Any drop into a container/push-pit/other pit represents a safety risk that will need to be addressed and control measures put in place.

Containers

In this type of facility, garbage is deposited directly into containers that may range from 1 m³ to 70 m³ depending on throughput. Containers are trucked directly to landfill or emptied into transport vehicles.

Push-Pits

Waste is emptied into a push-pit an item of plant then pushes the waste into a container or truck. This process can allow for additional separation of recyclable materials. Push-pits are generally wide and shallow, and may allow for some compaction of garbage by the loading vehicle. Operators sometimes use prime movers with trailers of up to 90 m³ to haul the material to landfill.

Vehicles and pedestrian should be kept separate by clearly defined roadways and pathways.

Other

There may be future opportunities or requirements to process residual wastes in order to recover additional materials for recycling or reduce environmental risks at landfills. Resource recovery and waste transfer facilities may be cost-effective locations for these processes.

Mechanical Ram

Residual waste is deposited into a deep pit incorporating a mechanical ram that compacts the material into a transport vehicle. The transport efficiency gains from compacting the garbage are maximised when a large enclosed trailer is used, usually pulled by a prime mover.

2.4 Identifying Potentially Suitable Sites

Potentially suitable sites should be identified taking into account the following issues.

Planning Scheme requirements

Facilities must be sited in accordance with local planning schemes.

Area required

Potential sites should provide sufficient land, taking into consideration:

- current and projected waste handling requirements
- infrastructure for resource recovery, queuing, equipment storage and maintenance, etc.
- potential processing operations, such as composting, concrete crushing and sorting equipment
- recyclables storage stockpiles
- future expansion capacity.

Buffer distances

An appropriate buffer distance should be kept between the site and designated residential areas or other sensitive land uses in order to preserve their amenity. All planning schemes set out a minimum threshold distance between transfer stations and residential and other sensitive land uses. It may be possible to have lower buffer distances if it can be shown that controls are in place to prevent any environmental nuisance. Where relevant, reference should be made to the EPA *Environmental Guidelines for Composting and Other Organic Recycling Facilities*.

Key Statutory Documents:

Environmental & Planning Legislation: 8, 10, 12.

Environmental & Planning Other: D, E.

Site history

New resource recovery and waste transfer facilities should not be located at sites listed on the Victorian Heritage Register or containing indigenous heritage. Proponents should investigate previous site uses and planning controls to identify any restrictions placed on site functions and activities. The risk of pre-existing soil pollution should be assessed.

The siting of new facilities at an established waste management site, such as a rehabilitated landfill, may be better accepted by the community than a new site.

Key Statutory Documents:

Environmental / Planning Legislation: 1, 4, 5, 11.

Transport distances

Transport distances are critical to the viability and acceptability of a waste transfer station.

The distance that the local community and other facility users are willing to travel to dispose of garbage and recyclables should be established (e.g. by conducting a community survey). The facility should be located within an acceptable distance from the community it is designed to serve.

The distances from the facility to landfill and resource processing plants should be minimised. Larger facilities will be able to transport materials further due to economies

of scale. Utilising compaction equipment will extend the economically viable transport distance of some materials.

Natural conditions at the site

Natural site will influence the design, management practices and control measures adopted at a facility. The following should be considered:

- *Topography* – For most waste transfer facility designs it is useful to have a site with a slope. This also facilitates drainage and prevents ponding.
- *Climate* – Local climatic conditions should be considered since these can affect litter generation, storage requirements, odour generation, site amenity and stormwater management requirements.
- *Hydrological and hydrogeological features* – Sites with high water tables or in groundwater recharge or discharge areas should be avoided where possible. Also avoid sites having a large catchment area so that works associated with diverting surface water flows are minimised.
- *Ecology* – If previously undisturbed land or land containing areas of remnant vegetation are being considered, a flora and fauna study should be conducted to determine whether any unique, endangered or threatened species or vegetation communities are present. Such sites should be avoided if possible.

Key Statutory Documents:

Environmental / Planning Legislation: 2.

Supporting infrastructure

A resource recovery or waste transfer facility should have good road access that does not go through residential or other sensitive areas (e.g. schools, hospitals). A traffic impact assessment should be undertaken for Category 3 and 4 facilities. Where possible, there should be access to power, sewer, reticulated water and phone lines or mobile coverage.

2.5 Community Consultation

Resource recovery and waste transfer facilities are generally developed to serve the local community and should be tailored to particular community circumstances. The community should be involved as early as possible in the development process so that expectations and concerns can be identified and addressed. Proposed extensions or modifications to existing facilities should also involve community consultation.

The level of community consultation will vary depending on the type, size and location of the planned facility. A Community Consultation Plan should be developed and implemented detailing:

- who will be consulted (e.g. local residents, waste contractors, others)
- how information will be communicated (e.g. public meetings, letter drops, formation of a community consultative committee)
- what information is to be communicated
- how the community can comment on proposals (e.g. written / verbal submissions)
- the consultation period.

Consultation outcomes should be documented and distributed. On-going community consultation requirements are discussed in Section 4.6.

2.6 Site Selection

The suitability of potentially suitable sites should be assessed ranked based on the issues listed above. In some instances, it may be beneficial to weight some criteria as more important than others. This should be done in consultation with the local community and planning consent authority.

2.7 Planning Approval

Once a site has been chosen, a planning permit may be required. Before applying for a permit, the proposal should be discussed with a Council planning officer. Early discussion will confirm whether a permit is necessary and identify other Council requirements. Applicants will be required to provide supporting information to the Local Council or other responsible authority. This information may be in the form of an assessment of the potential impacts of the facility on the environment, traffic and surrounding land use. EPA approval may also be required if the facility is proposed to be located at an existing landfill, to accept prescribed waste or to conduct large scale composting (generating more than 10 tonnes of product each day).

Key Statutory Documents:

Environmental / Planning Other: E.

3 Design and Construction

3.1 Risk Management in Design

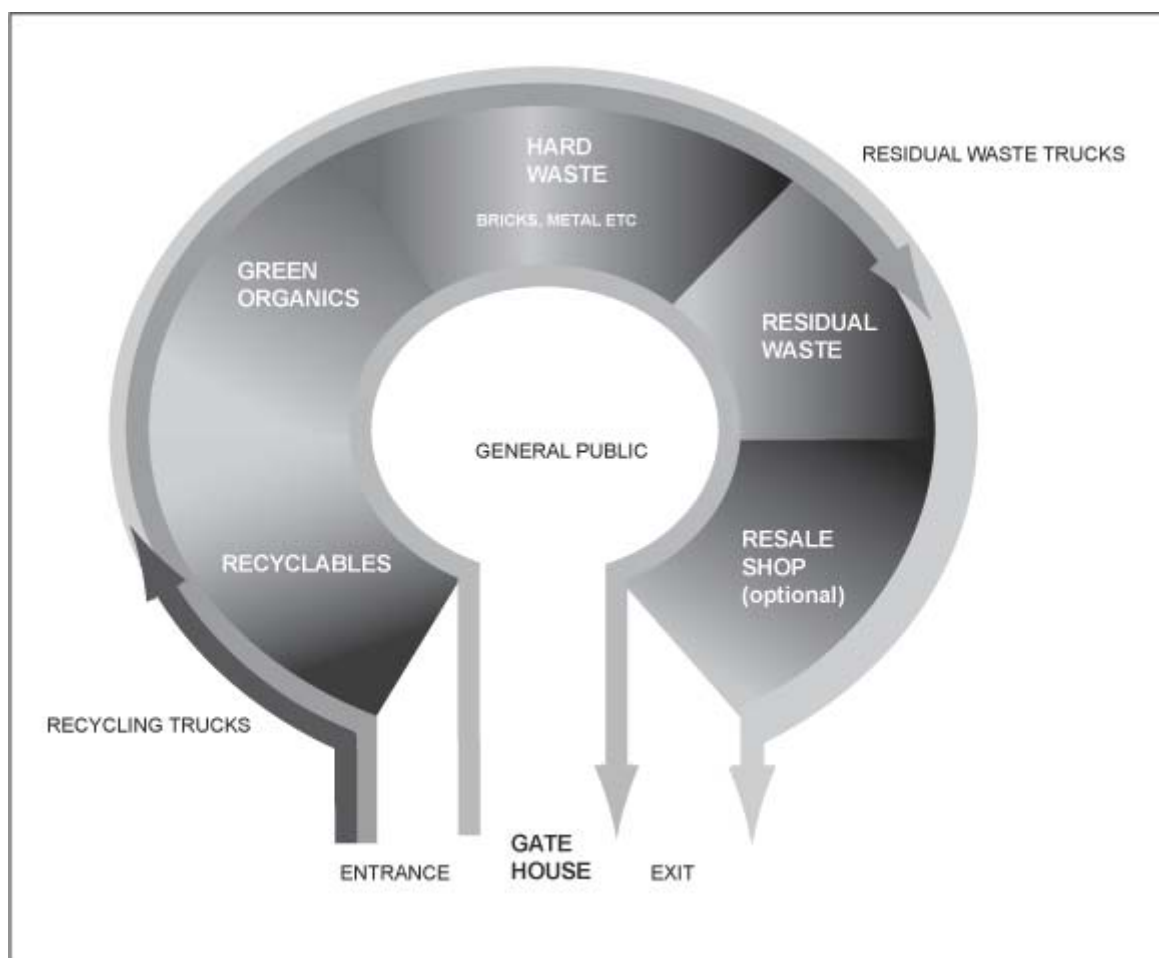
Resource recovery and waste transfer facilities should be designed to minimise risks to the safety of workers, customers, neighbours and the environment. Risks should be considered throughout the design process through consultation with employees, contractors/manufacturers etc. The draft facility design should be subjected to a risk assessment and be revised as needed. Risk assessment procedures are outlined in Section 4. The checklist provided as Attachment B can be used to check that best practice is being adhered to.

3.2 Site Layout

Key layout considerations are safety, efficiency and maximisation of resource recovery. The site layout should:

- provide a safe and efficient traffic flow (see Section 3.6)
- encourage diversion of materials from landfill by placing recycling drop-off areas so they are reached before the residuals disposal area
- where feasible, use natural site features in the facility design to minimise works required, e.g. make use of existing slopes
- where feasible, provide a separate area not accessible to facility users for processing operations.

Figure 3.1 An ideal site layout



3.3 Design for Resource Recovery

All facilities should be designed to maximise diversion of resources from landfill and minimise contamination of these materials and promote OH&S practices. Material pathways should have already been established (see Section 2.2). Designers should make provision for users to drop-off particular materials in dedicated areas using visually distinct containers (e.g. using different colours), and standard signage.

Green organics recovery

Category 3 and 4 facilities should provide areas for the separate collection of green organics. Category 1 and 2 facilities should provide for this where feasible. Designers should ensure that green organics collection areas:

- have sufficient space for stockpiles (see Section 4.3)
- are not adjacent to flammable materials stores
- are equipped with fire control measures
- are located on hardstand areas
- are protected from the wind to prevent wind-blown litter
- have stormwater run-off diverted to appropriate leachate management.

Where green organics processing is to occur on site, reference should be made to the EPA's *Environmental Guidelines for Composting and Other Organic Recycling Facilities*. This document is available from EPA Victoria (www.epa.vic.gov.au)

Construction and demolition waste recovery

Where stockpiling of construction and demolition waste is planned, provision should be made for a hardstand area with adequate drainage to divert and manage run-off. Measures to control dust (such as sprinkler systems) may be needed.

Commercial and industrial waste recovery

Facility designers should provide infrastructure to maximise, to the extent feasible, the recovery of recyclable materials from commercial operators expected to use the site.

Waste oil

Waste oil facilities should be provided at Category 4 facilities and smaller sites where needed. Tanks should comply with Australian Standard, AS1692, should have full rust protection and be hot dip galvanised after fabrication.

Units should be double-skinned or provided with an adequate bund complying with EPA guidelines. They should be fitted with a graduated dipstick or similar so that operators can readily assess the amount of oil in the tank. Spill protection should be provided around the drain points. Users should be able to pour in oil without using ladders or platforms. Units should be fully lockable.

Waste oil units should be as far as possible away from stormwater drains, battery stores or potential sources of acid leaks or sparks. They should be placed on a flat, impervious surface, preferably a concrete slab incorporating a bund.

EcoRecycle has developed siting guidelines and operator training manual for the management of waste oil facilities (see www.ecorecycle.vic.gov.au).

Note: Waste oil facilities are currently for domestic use only (ie 20 litres or less).

Resale areas

Resale areas provide an outlet for goods recovered from the waste stream to be sold directly to the public, after repair if necessary. They provide a community service and

may operate on a non-profit basis. They are not feasible at all sites, however. Resale areas should be readily accessible and should provide separate access to pedestrians and vehicles. Large resale areas should be operated from a roofed and enclosed building, be lockable for security purposes and be equipped with adequate fire detection / fire fighting devices.

Legal advice should be taken concerning the obligations of the facility operator arising from sale of goods (especially electrical items and items for which safety standards apply). Second-hand dealer registrations requirements do not usually apply.

Key Statutory Documents:

Environmental / Planning Legislation: 2.

Environmental / Planning Other: D.

3.4 Design for Environmental Protection

Litter

The facility design should employ the following to minimise litter:

- provide covers (e.g. lids, tarps) for exposed bins containing lightweight materials
- provide walls on three sides of waste unloading, loading and storage areas (excluding Category 1 facilities)
- where possible, locate enclosed facility entrances and exits away from the prevailing wind
- include litter traps to protect the stormwater drainage system
- use trees and shrubs around the site as windbreaks
- where necessary, locate litter screens around the site to reduce wind-blown litter (security fencing may suffice)
- prominently display signs warning of Council penalties for uncovered loads.

Odour

Potential odour sources include stored putrescible waste, contaminated stormwater and green organics. The facility design should employ the following to minimise odour problems:

- locate potential odour sources away from and downwind of sensitive receptors
- pave and grade unloading and waste storage areas (including skip storage areas) to facilitate cleaning
- ensure putrescible waste is not stored for more than 24 hours (excluding Category 1 facilities), check local regulations for overnight storage
- provide roofs for unloading and waste storage areas to stop ingress of water (excluding Category 1 facilities)
- allow for retrofitting of odour control devices (e.g. deodorant sprays) should these prove to be necessary
- ensure that enclosed facilities are well ventilated
- ensure any ponds accepting leachate are not more than 1.5 metres in depth in order to maintain aerobic conditions.

Vermin

The need for covers or mobile screens to deter vermin should be considered during the design phase. Structures should be designed to minimise bird infestation and nesting where appropriate.

Stormwater

The facility design should employ the following to prevent stormwater runoff from the site becoming contaminated with waste or leachate:

- divert off-site stormwater around the site
- include sufficient drainage to collect stormwater at the site
- ensure that potentially contaminated stormwater is kept separate from non-contaminated stormwater
- bund and roof hazardous waste (e.g. waste oil, batteries) collection areas to prevent stormwater infiltration and contain potential spills
- roof areas where waste is unloaded, stored, loaded into transport vehicles or processed to prevent rainwater from carrying litter and contaminants from the waste (excluding Category 1 facilities)
- manage all run-off collected from the receipt, storage, unloading and processing areas as leachate (excluding Category 1 facilities)
- use stormwater pre-treatment systems where feasible.
- structures should be designed to minimise water absorption.

Facilities in Categories 3 and 4 may still generate leachate in quantities sufficient to require management. This should preferably be discharged to sewer. On-site pre-treatment (e.g. interceptors) may be required by the sewerage authorities. If no sewer connection exists, leachate management options include transporting leachate offsite or on-site evaporation pond or treatment. Following effective treatment, water may be reused on the site.

Noise

Resource recovery and waste transfer facilities should not cause a noise nuisance to surrounding areas. Where necessary, the facility design could employ the following to control noise:

- locate noisier operations so as to minimise nuisance to surrounding land users
- design access and internal roads to minimise noise
- provide earthen embankments
- enclose noisy operations within constructed screens (care should be taken that noise levels within the enclosure do not exceed Occupational, Health and Safety levels for operators or customers).

Occupational Health and Safety (Noise) Regulations 2004

This Regulation is available from Information Victoria on 1300 366 356 or Victorian Law Today at www.dms.dpc.vic.gov.au.

Water and energy efficiency

The facility design should employ the following to minimise use of water and energy:

- use low maintenance and preferably local native vegetation for site screening and landscaping
- collect stormwater for reuse on site

- use natural light and ventilation.

Dust

The facility design should employ the following to minimise dust:

- pave of all operating, storage, unloading and loading areas
- seal roads if dust is considered likely to be a significant issue
- minimise areas of exposed earth through suitable landscaping.

Ecology and aesthetics

Any areas of ecological significance should be protected and left undisturbed. Consideration should be given to using existing vegetation to visually screen the site, provide a windbreak and limit litter dispersion. Facilities should be designed to blend in with the surrounding environment. Vegetation should be planted to screen unpleasant views.

Key Statutory Documents:

Environmental / Planning Legislation: 2, 8, 9, 10, 11, 12.

Environmental / Planning Other: E.

3.5 Equipment and Infrastructure design

Site security

Adequate site security measures should be incorporated to keep intruders and animals out of the facility, prevent theft and vandalism and prevent illegal dumping of unacceptable waste.

Facilities in Categories 2 to 4 should have a perimeter fence, lockable gates and be attended when open. A wire mesh fence at least two metres high should be constructed around the site boundary.

Gatehouse

Facilities in Categories 2 to 4 should have a gatehouse to allow for managing traffic; inspecting incoming waste; recording incoming waste types and quantities; collecting gate charges; and giving directions to unloading areas. Gatehouses should feature:

- facilities for viewing the waste load on incoming vehicles (such as an elevated mirror or platform)
- a weighbridge to ensure accurate recording of the waste quantity (Category 4 facilities)
- other control and supervision features as required (e.g. closed circuit television with time lapse recording has proven highly effective, including for dispute resolution).

Safety barriers and fall prevention devices

All resource recovery and waste transfer stations must conduct a site assessment and take appropriate measures to ensure that persons do not fall in containers, pits etc. These measures should provide protection for people operating at a variety of heights (e.g. barrier protection, or ground level concrete pad. These measures should not present a trip hazard to facility users or operators.

Occupational Health and Safety (Prevention of Falls) Regulations 2003

This Regulation is available from Information Victoria on 1300 366 356 or Victorian Law Today at www.dms.dpc.vic.gov.au.

Also refer to the Hierarchy of Control, which is listed in Section 4, Operation and Management, 4.1 Risk Control, page 16 of this document.

Site structures

Site structures must comply with relevant building codes, building regulations and planning regulations and should be designed in accordance with the needs of the community the facility serves. Site structures should be provided that are sufficient to comply with the *Code of Practice for Workplaces 1998*.

Code of Practice – (No. 03) - Workplaces

This Code is available from WorkSafe Victoria (www.workcover.vic.gov.au)

Utilities

The design of resource recovery and waste transfer facilities should feature:

- adequate fire fighting facilities
- sufficient lighting to allow work to be performed safely on dull days in accordance with Australian Standard AS1680
- adequate water supply to meet requirements for fire control, drinking, washing, cleaning and dust suppression
- a method of communication from the site in case of emergency.

Plant and equipment

Equipment must comply with *Australian Standard AS4024.1 Safeguarding of Machinery Part 1 – General Principles*. Plant and Equipment must also comply with Plant Safety Regulations 1995.

Controls for all equipment must be:

- clearly labelled
- operable only from inside the cabin or control room
- be protected from accidental operation by shielding or by their location.
- equipment must be operated and maintained in accordance with the manufacturers specifications.

There must be an emergency stop button (ESB) that can be used in case of emergency to immediately stop all operations. The ESB must be clearly labelled and, for stationary equipment, should be clearly sign-posted.

Occupational Health and Safety (Plant) Regulations 1995

This Regulation is available from Information Victoria on 1300 366 356 or Victorian Law Today at www.dms.dpc.vic.gov.au.

Key Statutory Documents:

Occupational Health & Safety Legislation: 3, 13, 20.

Occupational Health & Safety Other: P, S.

3.6 Design for Traffic Access and Flow

Roads and traffic management devices should comply with relevant Australian Standards. Reference should also be made to Austroads publications. Traffic management procedures should be documented.

All facilities should have a Traffic Management Plan.

For regulations concerning Moving Plant, see *Occupational Health and Safety (Plant) Regulations 1995*.

Occupational Health and Safety (Plant) Regulations 1995

This Regulation is available from Information Victoria on 1300 366 356 or Victorian Law Today at www.dms.dpc.vic.gov.au.

Site access

The entrance to the facility should provide:

- safe, orderly entry
- all-weather access
- sufficient queuing area for vehicles using the facility so that external traffic flows are not interrupted
- preferential access to recycling facilities
- access for emergency vehicles at all times (possibly through a separate entrance)
- if appropriate, separate access from the public road network (e.g. turn-off lane).

The facility entry should be controlled so that the type of waste entering the facility can be scrutinised.

Traffic flow and control

Effective on-site traffic circulation should be maintained to minimise vehicle accidents and increase operational efficiency (see Section 3.2). The facility design should feature the following:

- maximise vision across the site for supervisory staff
- one-way flow throughout the site with a minimum number of intersections
- well defined separation of vehicles and pedestrians
- effective traffic control devices (e.g. directional lines and traffic lights)
- line marking of the roads to guide the traffic flow
- prominent traffic information signs (refer to Section 3.7)
- kerbs at the edge of the unloading area to prevent vehicles rolling into the skips or storage pits
- roads wide enough to accommodate at least two trucks.

Interaction between cars and trucks should be minimised by:

- channelling trucks through the weighbridge by delineation of lanes (at Category 4 facilities)
- providing separate access for cars and trucks where possible
- limiting access hours for compactor trucks and transfer trucks to times when car movements are low, where possible.

Unloading areas should be on stable, level ground to eliminate the risk of runaway vehicles or overturning when users are dropping off materials.

Consideration should also be given to local wind conditions where tipping vehicles are involved.

In severe cases, the instillation of a windsock may be appropriate.

Reversing should be kept to a minimum. Where vehicles need to reverse into drop-off areas, sufficient space should be allowed for users unfamiliar with reversing trailers,

and drivers should have a line of sight between the rear of their vehicle and the drop-off area.

Buildings that are accessed by vehicles should be designed so that:

- there is sufficient height clearance for transport vehicles proposed to be used now and in the future
- there are sufficient areas for such vehicles to turn
- vehicles do not need to turn more than 180°.
- there is sufficient illumination

3.7 Signage

Signage should comply with relevant Australian Standards and should be clear and prominently displayed. Schematics should be used where possible for the benefit of people with poor literacy or English language skills.

There should be signage on major approach roads to direct users to the facility and signs on approach roads warning of Council penalties for uncovered loads.

If the site is open outside daylight hours, illumination must be provided for signs within the site and at the entrance. Illumination must always be provided for signs in dim areas. Signage should be consistent at all facilities in an area or region.

Signage at the site entrance should state:

- the opening hours
- waste types which may be deposited and those which may not
- materials to be separated for recovery
- disposal costs
- directions to unloading and recyclable drop-off areas
- name and contact details of the site operator
- after-hours contact details.

Signage should be provided to indicate where particular materials should be placed. Standard recycling signage developed by EcoRecycle Victoria for use at resource recovery and waste transfer facilities is provided in Attachment A.

Internal signage may also be needed to:

- provide directions to unloading areas
- control traffic e.g. directional lines, speed limits, vehicle safety
- protect safety of workers and the general public
- identify fire control equipment and emergency exits
- point out hazards at particular locations.

3.8 Construction

Proponents should ensure that potential environmental and nuisance impacts during the construction phase are well managed. At facilities in Categories 3 to 4 that are close to neighbours or that pose particular environmental risks, an environment improvement plan should be prepared in accordance with EPA guidelines. Reference should also be made to EPA's *Construction Techniques for Sediment Pollution Control*.

Key Statutory Documents:

Environmental / Planning Legislation: 2.

Environmental / Planning Other: C, D, F

4 Operation and Management

4.1 Risk Management

A formal organisational risk management process should be established encompassing risks to health and safety, the environment and other contingencies such as the break down of the transfer truck. A formal risk management process will help management to identify, analyse and treat risks.

The organisation's risk management process should be documented in plain English, communicated throughout the organisation and regularly reviewed.

Occupational Health and Safety risks

Employers must provide and maintain, so far as is practicable (see glossary for definition of 'practicable'), a working environment that is safe and without risks to health. To do this, they should identify Occupational Health and Safety hazards; determine the level of risk presented by these hazards, and implement appropriate hazard control strategies. Site managers' responsibilities cover their staff, site visitors and independent contractors and their employees working at the facility (to the extent the site manager's control). Guidance is provided in WorkSafe Victoria's *Occupational Health and Safety Guidelines for the Collection, Transport and Unloading of Non-hazardous Waste and Recyclable Materials, 2003*.

Hazards can be identified in a number of ways such as:

- observation
- consultation with employees about any hazards they have experienced or identified
- knowledge of other competent people or safety audits
- job Safety Analysis
- analysis of workplace injury and illness records
- regular workplace inspections.

Risk assessment is used to determine the level of risk of identified hazards and to prioritise actions required. Risk assessments should consider the likelihood, frequency and severity of an injury or illness occurring as a result of the identified hazard (level of risk) and assess the likelihood and consequence that the hazard may cause an injury or illness. The risk may increase depending on the length or intensity of exposure to the hazard.

A Job Safety Analysis should be conducted for all tasks that occur onsite. Employees who perform the work and Health and Safety representatives should be involved in this process.

All risk assessments should be recorded in writing.

Risk control strategies should be determined using the hierarchy of control (see below). When introducing a new control measure, training must be provided and it must be ensured that the control measure is safe. Risk control strategies should be recorded in writing. The Site Operations Manual is a good place for this information.

The OH&S hierarchy of control

1. *Eliminate* the risk by discontinuing the activity or not using that particular piece of equipment.

2. Minimise the risk by substituting the system of work or plant with something safer, modifying the system of work or plant to make it safer, isolating the hazard (e.g. introducing a restricted work area) or introducing engineering controls (e.g. guarding, fencing).
3. As a last resort, and as an interim measure, control the risk by using personal protective equipment such as eye, respiratory and hearing protection or adopting administrative controls such as hazard warning signs and specific training and work instructions.

Environmental and other risks

Environmental and other risks (e.g. breakdown of key equipment) should be periodically assessed and controls put in place. The main elements of the risk management process outlined in *Australian Standard AS 4360* are outlined below.

- *Establish the context*, establish criteria against which risk will be evaluated and define the structure of the analysis.
- *Identify* what, why and how problems can arise as the basis for further analysis.
- *Analyse risks*. Determine the existing controls and analyse risks in terms of consequence and likelihood in the context of those controls. The analysis should consider the range of potential consequences and how likely those consequences are to occur. Consequence and likelihood may be combined to produce an estimated level of risk.
- *Evaluate risks*. Compare estimated levels of risk against the pre-established criteria to identify management priorities. If levels of risk established are low, they may fall into an acceptable category and treatment may not be required.
- *Treat risks*. Accept and monitor low-priority risks. For others, develop and implement a management plan, which includes consideration of financial costs.
- *Monitor and review* the risk management system.
- *Communicate and consult* with internal and external stakeholders as appropriate at each stage of the risk management process and concerning the process as a whole.

Key Statutory Documents:

Occupational Health & Safety Legislation: 3, 7, 8, 9, 10, 11, 12, 13, 14, 18, 19, 20.

Occupational Health & Safety Other: S

4.2 The Site Management System

A management system is needed to ensure the facility is safe for staff and customers, does not impact on the local environment and does not cause a nuisance for neighbours. It should also ensure that the site runs efficiently and effectively.

Larger facilities – Site Operations Manual

Category 3 and 4 facilities should document operational and management procedures and make these available to staff. Preferably, all procedures should be combined in a Site Operations Manual. This should be written in plain English with visual interpretations and translations into other languages where necessary. The manual should take into account the outcomes of the risk management process and external obligations such as the planning permit conditions.

Good reference documents for preparing the manual include:

- Relevant Australian Standards (AS/NZS ISO 14001 Environmental management systems with guidance for use; AS/NZS ISO 9001 Quality management systems – requirements and AS/NZS 4801 Occupational health and safety management systems – specification with guidance for use). These documents have been designed to allow for easy integration into a single management system document.
- EPA Victoria’s Guidelines for the Preparation of Environment Improvement Plans.

The Site Operations Manual should contain:

- senior management endorsement and commitments to safety, environmental protection and continuous improvement
- an organisational chart and an outline of site staff roles and responsibilities
- risk assessments of the site, including environmental and OH&S risks (see Section 4)
- procedures for the induction and on-going training of all employees and contractors
- emergency response procedures
- crisis management procedures for any mishap which may occur and present an occupational health and safety hazard
- safe operating procedures for all aspects of the site operation, including waste receipt, user supervision, traffic management, dealing with hazardous waste, and use and maintenance of plant and equipment
- procedures for environmental management and control covering litter, odour, stormwater, noise, water and energy efficiency, dust, vermin and aesthetics
- procedures for collecting and maintaining relevant workplace records such as workplace inspection records, training records, hazard report forms, OH&S committee records and action plan
- procedures for complaint response and customer service
- procedures for monitoring and reporting
- a strategy for improving environmental, OH&S and operational performance
- forms to support the operating procedures
- a timetable for regular review of the manual and all procedures (at least every three years).

Guidance on establishing many of these procedures is given below.

At least one copy of the Site Operations Manual should remain on site at all times. Site staff should be trained to follow the procedures in the Site Operations Manual.

Smaller sites

A Site Operations Manual may not be appropriate for Category 1 and 2 facilities, but the site operator must be trained in operating and OH&S procedures for the facility. Where a number of small facilities are operated by the same organisation, a single operations manual should be prepared to cover all of them.

Key Statutory Documents:

Occupational Health & Safety Legislation: 3.

Occupational Health & Safety Other: S

4.3 Managing for Resource Recovery

Work procedures in the site management plan should ensure that resource recovery is maximised in accordance with the following guidance.

Facilitation and promotion

Resource recovery facility operations should be affordable and easy to use in order to encourage patronage by the community, commerce and industry. The objectives of recycling and the facility's role in resource recovery should be promoted in the local community by:

- media promotion and / or advertising
- financial incentives for customers to segregate recyclable material from waste
- public education on the reasons why proper separation of waste is desirable.

Access to recyclable drop-off

The operating hours of the facility should be structured to cater for all sectors of the user community. Where feasible, it should be open during weekdays and the weekend.

Recovery of recyclable materials

Decisions on which materials to segregate for recycling should be based on an analysis of markets, transport costs of processing, savings in disposal and environmental benefits. A list of normally recyclable materials is given in Section 2.2. The material types recovered at a resource recovery facility should be regularly reviewed and diversified where feasible.

Operators should point out which materials are recyclable and where they should be deposited

Site operators should inspect material entering the facility to identify potentially hazardous material (see Section 4.5) and show the customer where materials should be taken. Customers should be able to get help with material separation if needed. At Category 3 and 4 sites, supervision should be provided where waste is deposited. Signage in these areas should be maintained and kept up to date.

A regular cleaning schedule should be established to minimise litter, dust and other contaminants. This will encourage users to maintain a high standard when using recycling drop-off facilities.

On-site processing

Where viable, selected materials may be processed on-site to increase their value (e.g. concrete crushing, wood chipping). Waste processing should be conducted away from site users and managed so that it does not affect the amenity of the surrounding area, disrupt normal operations or create an occupational health and safety risk to operators or facility users.

Green organics

Green organics should not be burnt. As far as possible, contaminants should be removed prior to processing operations. Appropriate controls should be in place to minimise odour during all stages of collection, storage and processing.

Mulching and chipping operations should be conducted during normal working hours to prevent nuisance noise. Prevailing wind conditions should be checked prior to processing to ensure particles do not become airborne.

Stockpiles of unprocessed material should not exceed 1,000 m³. To minimise fire risk, stockpiles should be at least 5 m apart, should be kept clear of flammable materials and should be protected by well maintained fire control measures. Regular monitoring should be undertaken to record stored quantities and to ensure stockpiles are not impacting on the environment or causing a nuisance (e.g. through dust). Indefinite stockpiling is unacceptable.

Any green organics sold or given away should comply with the relevant Australian Standard unless it is to be further processed. Reference should be made to the EPA's *Environmental Guidelines for Composting and Other Organic Recycling Facilities* where relevant.

Construction and demolition waste

Construction and demolition materials suitable for recycling should be segregated as much as possible and kept free of contamination. Stockpiles should be regularly monitored to ensure they are not impacting on the environment or causing a nuisance (e.g. through dust). Stockpile sizes should be regularly monitored and recorded. Indefinite stockpiling is unacceptable. Site operators should further separate construction and demolition waste and other residues for recycling where necessary and feasible.

Waste oil

Where waste oil is collected, operators should take note of EcoRecycle's waste oil recovery training program available from the EcoRecycle website. Where possible, decanting should be carried out by staff wearing eye protection. Flammable liquids such as petrol should not be placed in or near the tank, and ignition sources such as cigarettes or mobile phones should not be used within three metres of the tank.

Resale areas

Resale areas should be supervised at all times and kept clean and tidy. Staff should undergo continual training to ensure they have current information on items that should and should not be resold. Legal advice should be periodically updated to ensure facility operators are aware of new regulations and guidelines affecting the resale of items.

Key Statutory Documents:

Environmental / Planning Legislation: 2.

Environmental / Planning Other: D

4.4 Managing For Environmental Protection

Work procedures in the site management plan should ensure that the local environment is protected in accordance with the following guidance.

Litter

A litter inspection and removal program should be established for on-site, off-site and litter entrapment device cleaning. Sites should be inspected at the end of each operating day and litter removed as required. Lids/Tarps should cover bins at all times when not in use. Bin lids should be regularly inspected to ensure they are not damaged. Vehicles depositing and collecting waste and recyclables from resource recovery and waste transfer facilities should be covered where possible.

Odour

There should be no odour at the boundaries of the premises where this may cause offence. To prevent odour generation, putrescible waste should be cleared within 24 hours of receipt facilities in Categories 2 to 4. Hard waste should be removed within seven days at most. Skips and pits that receive putrescible waste should be cleaned daily when in use and a disinfectant should be used regularly. Wastewater from cleaning

should be treated as leachate. The whole site should be cleaned regularly. Where the site contains a leachate pond, control measures and practices should be adopted to avoid odour generation.

Vermin

Poor quality housekeeping, uncovered bins / storage areas and litter are major factors in attracting vermin at transfer stations. The odour controls outlined above (i.e. regular cleaning and removal of waste) should minimise vermin. If vermin problems still arise, a pest control program should be considered (e.g. baiting, spraying, traps, use of gas guns).

Stormwater

Stormwater diversion drains and litter entrapment devices should be inspected after major rainfall events and should be regularly maintained to ensure they are not impaired. All facilities should have procedures for dealing with spills, and appropriate equipment and materials should be available (e.g. dry mulch, dry sand, kitty litter or other absorbents). Site operators should be trained in spill management techniques and should implement control measures as soon as spills are detected.

Noise

Noise from resource recovery and waste transfer facilities should not cause a nuisance to surrounding areas. Facilities in the Melbourne metropolitan area must comply with the *State Environment Protection Policy (Control of Noise from Commerce, Industry and Trade, No. N1)*. Other facilities should take guidance from the EPA. It is recommended that:

- the maximum operating hours of plant and equipment at urban facilities are 7:00 am to 6:00 pm Monday to Friday and 7:00 am to 2:00 pm weekends and public holidays.
- processing operations such as concrete crushing and mulching of green organics should be undertaken only during normal working hours
- noise screens are provided where operations prove particularly noisy.

Occupational noise should be managed by:

- consulting with employees and Health and Safety representatives to identify noise hazards and minimise employee exposure through application of the hierarchy of control (see Section 4.1)
- establishing noise management procedures that consider noise elimination; reduction and control; noise risk assessment; and audiometric testing
- providing personal protective equipment where exposure to noise is above 85dB(A) average over an 8-hour work shift, or above a peak of 140dB(A),
- implementing a 'buy quiet' policy where feasible
- regularly reviewing employee exposure to noise, considering to the number of exposed persons and the duration and intensity of exposure
- providing training to employees in hearing conservation.

Water and energy efficiency

Water and energy should be used efficiently. On-site taps and hoses should be maintained to prevent leakage and equipment using power should be turned off when not in use. Category 4 facilities should audit water and energy use regularly.

Dust

Any dust transported off-site must not affect the amenity of the surrounding area. Where necessary, dust should be managed by:

- Utilising dust suppressants (e.g. light water spray)
- Installing wind breaks to prevent particulates becoming airborne
- Regular suction sweeping of surfaces.

Where water or chemicals are used as a dust suppressant, they must not create contaminated run-off from the site.

Aesthetics

The aesthetic appearance of resource recovery and waste transfer facilities should be maintained by vegetation screening and regular cleaning and maintenance.

Key Statutory Documents:

Environmental / Planning Legislation: 2, 8, 9, 10, 11, 12.

Occupational Health & Safety Legislation: 3, 19.

Occupational Health & Safety Other: S

4.5 Hazardous or Prescribed Waste

General requirements

Incoming loads should be inspected to ensure that only acceptable materials from domestic sources are deposited and that acceptable materials are deposited in the appropriate place.

Where potentially hazardous wastes (such as asbestos, batteries or oils) are expected at the facility, the Site Operations Manual should specify procedures for safe storage, handling and emergency response. Personnel handling wastes must be appropriately trained, equipped and clothed. Employees should be trained in emergency procedures and suitably trained personnel should be available to respond in the event of an emergency. Prominent signs regarding the handling of hazardous wastes are displayed. Material Safety Data Sheets should be held on-site for any hazardous substances or dangerous goods commonly received, stored or used on-site.

NOTE: All efforts should be made to ensure that hazardous materials are removed from the site for appropriate disposal/recycling as soon as practicable.

Arrangements need to be made for a licensed contractor to collect hazardous materials as soon as practicable, making sure that relevant transport certification requirements are adhered to. Any loading or unloading of hazardous materials should occur only in the presence of trained staff or contractors (this may require training in the recognition of chlorofluorocarbons, poisons and similar).

Asbestos

“Asbestos, in particular friable asbestos products, pose health risks during removal and transport and disposal. It is important therefore, that asbestos be handled appropriately during these operations”.

Occupational Health and Safety (Asbestos) Regulations 2003

These regulations are available from WorkSafe Victoria (www.workcover.vic.gov.au)

The disposal of waste asbestos, whether of industrial origin or domestic origin, is controlled by the EPA. In addition EPA controls the transportation of asbestos of industrial (including commercial or trade) origin”. See EPA Publication 364C [“The Transportation and Disposal of Waste Asbestos” October 2002](#). This publication is available from EPA Victoria (www.epa.vic.gov.au).

Gas bottles

Gas bottles should be stored in a secure area with adequate ventilation and safety signs (e.g. no smoking).

Liquid wastes

Liquid wastes should be stored in a distinct and secure area with adequate ventilation, safety signs (e.g. no smoking), roofing and bunding. Different liquid wastes should not be mixed under any circumstances (mixing some liquids, such as oil and chlorine, may create an explosion hazard).

drumMUSTER is the national program for the collection and recycling of empty, cleaned, non-returnable crop production and on-farm animal health chemical containers.

www.drummuster.com.au

Chemclear is a rural waste chemical program. You can register interest in collection and disposal of rural chemicals.

www.chemclear.com.au

Household Chemical Collection EcoRecycle Victoria, in partnership with regional waste management groups and local government, runs free household chemical collections to help you dispose of your old and unwanted chemicals in an environmentally safe way.
<http://www.ecorecycle.vic.gov.au/www/default.asp?casid=2675>

Procedures for hazardous waste that is not acceptable at the facility

Resource recovery and waste transfer facilities often have to cope with customers presenting unacceptable wastes presented for disposal (e.g. gas bottles, paints, oils and asbestos). Good signage and information (for example on the Council website) are the first guard against this.

Gate staff should be trained to identify risk loads and recognise unacceptable materials, and should know what to do should they find them. In particular, they should be able to identify waste that might include asbestos. This may require training in materials recognition as well as communication so that operators know to ask customers the age of the materials (renovation debris from homes built prior to 1984 is likely to contain asbestos).

Where materials are identified that are not acceptable at the facility, operators should inform the person where these materials can be safely taken and, if necessary and practicable, provide advice and assistance to make the materials safe to transport.

Operators should have procedures dealing with hazardous wastes identified subsequent to disposal (e.g. in a push pit). Dumped hazardous waste should be safely separated from the waste stream, appropriately stored and taken to an appropriately licensed facility within a short period of time. The operator should ensure that the EPA is satisfied with these procedures.

Contingency procedures should be in place in the event that dumped friable asbestos is found at the site. These should specify responsibilities, ensuring that staff required to respond are appropriately trained, equipped and clothed. Unwrapped asbestos should be wetted to contain potential fibres, packed in accordance with the relevant OH&S requirements and stored in a sectioned off area (Category 4 facilities should have a designated receptacle for dumped asbestos). An occupational hygienist may be needed to assess exposure risk.

Key Statutory Documents:

Environmental / Planning Legislation: 6.

Occupational Health & Safety Legislation: 3, 7, 10, 14, 18.

Occupational Health & Safety Other: S

4.5 Emergency Response and Fire Risk Minimisation

Emergency response procedures must be developed for accidents, fires, spills and similar. The procedures must document after-hours contacts (name, address and phone number) and relevant authorities to be contacted. In an emergency, facility operators may agree to temporarily store non-conforming waste. Procedures must be in place to ensure that this is done only with the written approval of the EPA and any other relevant authorities, and that correct environmental and safety measures are followed.

Site operators must be equipped with adequate fire fighting facilities at the site and must take immediate action if a fire occurs. To minimise fire risk, a limited number of tyres (no more than 200) should be stored. Green organics storage areas must incorporate adequate fire protection measures (see Green Organics in Section 4.3).

Key Statutory Documents:

Environmental / Planning Legislation: 7.

Occupational Health & Safety Legislation: 3, 8, 9, 11, 13, 19, 20.

Occupational Health & Safety Other: S

4.6 Community Consultation and education

Community consultation

As part of the local community, transfer station managers should engage with and take note of community views. A contact number should be included on signs and suggestions to improve the facility should be noted and assessed. The Site Operations Manual should cover procedures complaints, including:

- recording details of the complaint, including the date and time
- identifying the cause of the complaint
- taking action(s) to prevent further complaints where necessary
- providing feedback to the complainant detailing actions taken
- reporting complaints received on an annual basis.

Community education

The efficient operation of the facility depends on community support and appropriate use. Facility operators should help users to understand the operation through supervision, signs, posters and/or pamphlets as appropriate.

4.7 Equipment and Infrastructure Operation and Maintenance

Facility operators should provide equipment and machinery to enable workers to carry out their responsibilities effectively and safely. Equipment should comply with relevant standards and legislation. Employees, and particularly the site health and safety representative(s), should be consulted before any new equipment or plant is purchased.

Only licensed and trained personnel should operate equipment. Training records should be maintained. There should be documented risk assessments and safe operating procedures for all plant and equipment. Employees should be instructed of any known hazards associated with the work, vehicle, plant or equipment with which they will be required to work. The operator should ensure that users complete pre-start inspections / checklists prior to daily use and that records are maintained. Training should be provided in the procedure for reporting any defect in a vehicle, plant item, machine, equipment or work system, and a 'tag out' procedure should be implemented for faulty equipment. Back-up equipment or contingency arrangements should be in place to enable the continued operation of the facility.

Infrastructure, plant, equipment, vehicles and tools should be properly certified, maintained and inspected on a regular basis. Responsibility for these tasks should be assigned to employees or contractors having the required competencies, licences or certificates. A maintenance program should be developed in accordance with manufacturers' guidelines, together with a Maintenance Register that links to the defective plant / equipment reports and 'tag out' procedure. Maintenance records and faulty equipment reports must be maintained, and where feasible a maintenance history file for each item of plant and equipment should be kept.

4.8 Traffic Management

Traffic management procedures should be developed in consultation with employees. These should address vehicles entering or leaving the site, or vehicles used at the workplace, and should ensure that:

- adequate staff supervision is provided to ensure that no employee, contractor or customer stands in the body of trucks, utes or other vehicles whilst moving, this is strictly prohibited (all such incidents involving

employees or contractors should be reported and followed up with disciplinary processes)

- all transfer vehicles are fitted with appropriate visible safety signs
- transfer trailers are fitted with an audible warning device and flashing rear lamps, and these are used during unloading
- employees and contractors wear high visibility clothing when working in areas where vehicle movement occurs or in poor light conditions (this should be extended to regular users where possible)
- fall protection systems are established for staff or contractors who need to climb on their vehicle to place or remove tarpaulins
- all employees and contractors are inducted to the site OH&S and traffic management procedures.

Key Statutory Documents:

Occupational Health & Safety Legislation: 3, 8, 9, 20.

Occupational Health & Safety Other: S

4.9 Business Management

Regular reports

Financial reporting procedures should be established for the facility in accordance with established accounting practices. Regular reports should be made available to facility operators and appropriate stakeholders. These should include details of user numbers, types of waste deposited, amount of waste handled and material recovery rates. For ease of access this data should preferably be maintained on computer.

Pricing policies

Facility operators should seek to increase materials recovery rates and be innovative in locating markets for recycled products. This can often improve the economics of the facility by reducing disposal and transport costs and increasing revenue. It is usually appropriate to impose lower charges for deposition of recyclables than garbage.

Contract packaging

Some facility activities, such as recyclables processing, may lend themselves to external contracting. These should be cost efficient while maintaining the facility's ability to operate effectively. Any contracts entered into should focus on delivery of services within cost and time parameters without sacrifice of quality.

4.10 Inspections, Monitoring and Reporting

Occupational Health and Safety workplace inspections

Regular workplace hazard inspections should be conducted. Working with the site OH&S representative or OH&S committee, the site management should document hazards to be inspected and prepare inspection checklists and an inspection calendar. Daily pre-start checklists should be completed for all items of plant. Completed inspection checklists should be kept in a place that can be accessed by all employees.

Other monitoring and reporting

Procedures should be established for monitoring that the facility is not negatively affecting the surrounding environment. Regular monitoring of litter, stormwater drains and litter entrapment devices should be conducted (see Section 4.4).

All facilities should also monitor and record:

- the quantity and composition of waste and recyclables accepted at the site

- the source of the material accepted (industrial or municipal) so that an appropriate landfill levy can be calculated if it is disposed of to landfill
- the quantity and composition of materials taken from the site and their destination
- incidents involving the deposit of unacceptable waste types and resultant actions
- complaints
- equipment and infrastructure maintenance.

Category 4 facilities should monitor and record traffic movements so that growth projections can be considered in reviews of the Traffic Management Plan.

Records should be periodically collated and reviewed to identify any anomalies.

Facilities should be periodically audited to ensure the measures in place to address potential impacts from the site are effective. A checklist that may assist with periodic audits is provided in Attachment B. This should be customised to individual site needs as required.

It is important that consistent data monitoring techniques are utilised at all facilities so that comparable data is obtained, particularly for waste acceptance data. Operators should refer to EcoRecycle Victoria's *Municipal Data Collection Reports* for waste category definitions. Where additional information is required, operators should contact EcoRecycle Victoria.

Key Statutory Documents:

Environmental / Planning Legislation: 2, 8, 9, 10, 11, 12.

4.11 Other Management Aspects

Supervision

Resource recovery and waste transfer facilities should be supervised at all times when open.

Supervision of facility users is required to ensure that:

- unsuitable material is detected prior to disposal
- resource recovery is maximised
- materials are correctly placed, especially batteries, oils and other potentially hazardous waste
- a safe operating environment is maintained.

The general public must not be allowed to enter a push-pit area under any circumstances. Children will not be permitted out of the vehicle they are travelling in.

Staff should be supervised to ensure correct procedures and safe work instructions are followed.

Staff training

Staff should be inducted into the site operating procedures and receive training that enables them to do their job safely and properly. Training would be expected to include:

- identification of waste types, particularly hazardous wastes
- information on the health risks posed by site hazards
- safe operational procedures

- methods for supervising facility users
- drumMUSTER procedures, where applicable
- safe manual handling techniques
- emergency response procedures, including spill and fire management
- first aid.

The Operations Manual should be readily available to all staff as a quick reference should they be in doubt of any procedures.

First aid

The following should be provided:

- at least one adequate first-aid kit for the site, and kits in the cabins of each machine / plant used on site
- appropriate first-aid signage
- trained first-aid officer(s) holding appropriate accreditation (except perhaps at Category 1 and 2 sites)
- a well-maintained register of first-aid staff.

Personal protective equipment

If a risk is evident and cannot be eliminated or controlled, staff should be provided with appropriate protective clothing and equipment and must be inducted and trained in its use and maintenance. Personal protective equipment should not affect communication or introduce other risks. Facilities for cleaning and storing should be provided for any personal protective equipment. Operators should ensure that staff wears suitable footwear at all times.

Workplace standards

The *Code of Practice for Workplaces* requires employers to provide certain minimum standards, facilities and amenities in workplaces, including:

- a supply of drinking water
- UV protection
- a comfortable temperature range (outdoor workers should be protected from extremes of weather by the erection of a shelter, tent or wind break or provision of suitable clothing)
- adequate toilet facilities
- effective means of emergency communication
- hand washing facilities.

These facilities may or may not be available for public use.

Insurance

Adequate insurance should be held by facility operators to cover fire, theft and malicious damage. The level of cover may differ at each facility but should cover the cost of replacement. Adequate public liability insurance must also be held to cover injuries and damage sustained by users of the facility.

Site security

Where a safe is kept on site, procedures should be implemented to adequately guard against theft. Cash should not be left on-site overnight. Additional security measures, such as guard dogs, security patrols, electronic alarms and closed circuit television, may be appropriate.

Key Statutory Documents:

Occupational Health & Safety Legislation: 3, 8, 9, 20.

Occupational Health & Safety Other: S

5 Rehabilitation and Aftercare

This section details the site rehabilitation and aftercare requirements resulting from the site's use as a resource recovery or waste transfer facility only. Site owners should investigate whether any additional rehabilitation or aftercare requirements are needed due to previous site uses.

Rehabilitation of a resource recovery or waste transfer facility should involve removal of all waste and other materials deposited at the site and all infrastructure and equipment not required by the proposed future use of the site.

The future use of the site should be determined in consultation with the local community, planning authorities and other relevant stakeholders. Rehabilitation may include landscaping or paving areas of bare earth, ensuring site drainage will not result in pooling of water on site, etc.

Site owners should obtain an independent audit to confirm that the site has been adequately rehabilitated and that there will be no ongoing impacts from the site as a result of its use as a resource recovery or waste transfer facility, if the site is to be sold.

The most likely ongoing impact as a result of a site's use as a resource recovery or waste transfer facility is illegal dumping of waste. Regular post-closure monitoring should be undertaken and if dumping is found to be an ongoing issue, response strategies should be developed and implemented. These may include:

- informing the community of alternative waste disposal facilities
- community education detailing potential impacts of illegal dumping
- introduction of enforcement action (e.g. fines)
- creating physical barriers to illegal dumping 'hot spots' (e.g. by planting large vegetation or installing lockable gates).

Key Statutory Documents:

Environmental / Planning Legislation: 2, 11.

6 References

The following is a list of documents referred to in the Guide. Additional information and guidelines relevant to resource recovery and waste transfer facilities is available and should be referred to where necessary.

6.1 Australian Standards

AS 1319 Safety Signs for the Occupational Environment
AS 1680 Lighting and the Visual Environment
AS 1692 Tanks for flammable and combustible liquids
AS 1742 Manual of Uniform Traffic Control Devices
AS 1743 Road Signs: Specifications
AS 2293.3 Emergency Evacuation Lighting for Buildings – Emergency Luminaries and Exit Signs
AS 3760 In Service Testing of Portable Electrical Equipment
AS 4012 Recycled Paper – Glossary or Terms
AS 4024 Safeguarding of Machinery Part
AS 4360 Risk Management
AS 4419 Soils for Landscaping and Garden Use
AS 4454 Composts, Soil Conditioners and Mulches
AS/NZS 4801 Occupational Health and Safety Management Systems- Specifications with guidance for use
AS/NZS ISO 9001 Quality Management System - Requirements
AS/NZS ISO 14001 Environmental Management System with guidance for use
AS/NZS ISO 14021 Environmental Labels and Declarations

6.2 Environmental & Planning

Legislation

1. *Australian Heritage Commission Act 1975*
2. *Environment Protection Act 1970*
3. *Environment Protection and Biodiversity Conservation Act 1999*
4. *Heritage Act 1995*
5. *National Heritage Trust of Australia Act 1997*

Regulations & Policies

6. *Environment Protection (Prescribed Wastes) Regulations 1998*
7. *Environment Protection (Vehicle Emissions) Regulations 2003*
8. *State Environment Protection Policy (Air Quality Management)*
9. *State Environment Protection Policy (Control of Noise from Commerce, Industry and Trade) No.N1*
10. *State Environment Protection Policy (Groundwaters of Victoria)*
11. *State Environment Protection Policy (Prevention and Management of Contaminated Land)*
12. *State Environment Protection Policy (Waters of Victoria)*

Other

- A. *EcoRecycle Victoria (1998) Guide to Best Practice at Transfer Stations*, prepared by Meinhardt for EcoRecycle Victoria, Melbourne
- B. *EcoRecycle Victoria (2003) Draft Towards Zero Waste: A Materials Efficiency Strategy for Victoria*, EcoRecycle Victoria, Melbourne
- C. *EPA Publication 739 Construction Techniques for Sediment Pollution Control*
- D. *EPA Publication 508 Environmental Guidelines for Composting and Other Organic Recycling Facilities*
- E. *Planning Schemes*

- F. EPA Publication 739 *Guidelines for the Preparation of Environment Improvement Plans*.
- G. EPA Publication 364C "The Transport and Disposal of Waste Asbestos" October 2002

6.3 Occupational Health and Safety

Legislation

- 1. *Dangerous Goods Act 1985*
- 2. *Equipment (Public Safety) Act 1994*
- 3. *Occupational Health and Safety Act 1985*
- 4. *Road Transport (Dangerous Goods) Act 1995*
- 5. *Road Transport Reform (Dangerous Goods) Act 1995 (Cth)*

Regulations

- 6. *Dangerous Goods (Explosives) Regulations 2000*
- 7. *Dangerous Goods (Storage and Handling) Regulations 2000*
- 8. *Equipment (Public Safety) (Incident Notification) Regulations 1997*
- 9. *Equipment (Public Safety) (General) Regulations 1995*
- 10. *Occupational Health and Safety (Asbestos) Regulations 2003*
- 11. *Occupational Health and Safety (Certification of Plant Users and Operators) Regulations 1994*
- 12. *Occupational Health and Safety (Confined Spaces) Regulations 1996 (S.R. No. 148/1996)*
- 13. *Occupational Health & Safety (Prevention of Falls) Regulations 2003*
- 14. *Occupational Health and Safety (Hazardous Substances) Regulations 1999*
- 15. *Occupational Health and Safety (Incident Notification) Regulations 1997*
- 16. *Occupational Health and Safety (Issue Resolution) Regulations 1999*
- 17. *Occupational Health and Safety (Major Hazard Facilities) Regulations 2000*
- 18. *Occupational Health and Safety (Manual Handling) Regulations 1999*
- 19. *Occupational Health and Safety (Noise) Regulations 1992*
- 20. *Occupational Health and Safety (Plant) Regulations 1995*
- 21. *Occupational Health and Safety (Lead) Regulations 2000*
- 22. *Road Transport (Dangerous Goods) (Licence Fees) Regulations 1998 **
- 23. *Road Transport Reform (Dangerous Goods) Regulations 1997 **
- 24. *Workers Compensation Regulations 1995 **

* Only applicable if dangerous goods are transported

Codes of Practice

- A. Building and Construction Workplaces (No. 13, 1990)
- B. Confined Spaces (No. 20, 1996)
- C. Dangerous Goods Storage and Handling (No. 27, 2000)
- D. Demolition (No. 14, 1991)
- E. Demolition (Amendment No. 1) (No. 21, 1998)
- F. Electrical Installations on Construction Sites (Industry Standard, 2002)
- G. First Aid in the Workplace (No. 18, 1995)
- H. Hazardous Substances (No. 24, June 2000)
- I. Lead (No.26, 2000)
- J. Manual Handling (No. 25, 2000)
- K. Noise (No. 17, 1992)
- L. Plant (No. 19, 1995)
- M. Plant (Amendment No 1) (No. 23, 1998)
- N. Provision of Occupational Health and Safety Information in Languages Other Than English (No. 16, 1992)
- O. Safe Use of Cranes in the Building and Construction Industry (No. 11, 1990)
- P. Workplaces (No. 3, 1988)

Other

- Q. *Asbestos In the Home*, Department of Human Services, June 2003
- R. WorkSafe Victoria (February 2003) *Prevention of Bullying and Violence at Work, Guidance Note*, WorkSafe Victoria, Melbourne
- S. WorkSafe Victoria (June 2003) *Occupational Health and Safety Guidelines for the Collection, Transport and Unloading of Non-Hazardous Waste and Recyclable Material*, WorkSafe Victoria, Melbourne
- T. WorkSafe Victoria (August 2003) *Draft Industry Standard for Identifying and Assessing Occupational Health & Safety on Contaminated Construction Sites* WorkSafe Victoria, Melbourne

6.4 Other

- A. Austroads (1991) *Road Maintenance Practice*, Austroads, Sydney
- B. Austroads (1994) *Road Asset Management Guidelines*, Austroads, Sydney
- C. Austroads (1998) *Guide to the Design of New Pavements for Light Traffic; a Supplement to the Austroads pavement Design*, Austroads, Sydney
- D. Austroads (1997) *Pavement Design: A Guide to the Structural Design of Road Pavements*, Austroads, Sydney

Attachment A

Standard Recycling Sign

Signs For Transfer Stations and Landfills

Source: This information is taken from the EcoRecycle Victoria website (www.ecorecycle.vic.gov.au)

These signs may be downloaded, used copyright free and adapted for other print materials.

The ink colour specified is PMS 340 green. For easy recognition at a distance, we recommend that signs at Transfer Stations and Landfill Sites be a minimum of 900mm by 1200mm.

Disclaimer

While all reasonable efforts have been made to ensure that the graphics are factually correct, EcoRecycle Victoria does not accept responsibility for loss or damages incurred as a result of reliance placed upon these images. These images are provided on the basis that all persons accessing it undertake responsibility for assessing the relevance and accuracy of its content.



Aluminium



Aluminium Cans



Bitumen & Asphalt



Bric-a-brac Reusable Goods



Bricks



Car Batteries



Cardboard



Clothing and Material



Garbage



Garden Organics



Garden Waste



Gas Bottles

Signs for Transfer Stations and Landfills cont...



Glass Bottles & Jars



Lead & Copper



Milk & Juice Cartons



Mixed Recycling



Mobile Phone Batteries



Motor Oil



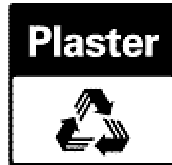
Paint



Paper



PET Plastic Bottles



Plaster



Plastic Bottles



Recycling Logo



Small Appliances



Smoke Detectors



Soil and Clean Fill



Steel



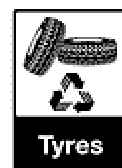
Steel Cans



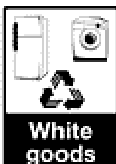
Timber



Triple Rinsed Chemical Drums



Tyres



White Goods



Window Glass

Attachment B
Standard Facility Checklist

Standard Checklists For Resource Recovery and Waste Transfer Facilities

This checklist has been provided for guidance purposes. It is recommended that operators tailor the checklist to meet their specific requirements. Auditors or inspectors from various authorities may use the checklist for assessing site performance. The checklist does not cover Occupational Health and Safety issues as sufficient guidance is available in the various WorkSafe Victoria guidance documents.

In addition to the general information below, the checklist has separate sections on:

- Planning and siting
- Design and construction
- Operation and management.

The following symbols are used in the checklist: ✓ = expected * = recommended

General Information

Facility Name	
Facility Address	
Site Owner (Contact name, organisation, contact details)	
Site Operator* (Contact name, organisation, contact details)	
Council	
Date checklist completed	
Personnel completing checklist (name, position, organisation, signature, contact details)	

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Facility Planning and Siting Checklist

For guidance on how to respond to the issues raised in this checklist, refer to the sections of this document listed in the left-hand column.

Ref	Requirement	Yes / No	Details
1.3	In what size category is the facility?		
2.1	Has the need for the facility been demonstrated & documented?	Yes / No	
	Material pathways:		
	a. Who will the facility customers be?		
	b. What materials will be accepted at the facility?		
	c. How much of each material type is expected to be deposited at the facility? Estimates should be projected over the anticipated life of the facility.		
2.2	d. What markets exist or can be developed for recovered materials?		
	e. Where will waste from the facility be taken for disposal? What is the travel distance? (km)		
	f. How much of each segregated material type is expected to be taken from the facility? Estimates should be projected over the anticipated life of the facility.		
	Does the facility provide infrastructure for the collection of those recyclables listed in Section 2.2 of the Guide? (Categories 3 & 4)		

Ref	Requirement	Yes / No	Details
2.3	What type of residual waste infrastructure is to be used?		
2.4	Does the Local Planning Scheme allow the site be used as a Resource Recovery or Waste Transfer Facility?	Yes / No	
	Approximately what area is required for the facility and associated infrastructure? (ha)		Area (ha).....
	Does the estimated area allow for future expansion ?	Yes / No	
	What is the minimum threshold distance to sensitive land uses set out in local planning scheme?		Minimum Buffer Distance (m).....
	Is the site located beyond the minimum threshold distance?	Yes / No	Actual Buffer Distance (m).....
	Is the site listed on the Victorian Heritage Register?	Yes / No	
	Does the site contain indigenous heritage?	Yes / No	
	Will previous site uses restrict the use of the site as a resource recovery or waste transfer facility?	Yes / No	
	Is the facility located at an acceptable distance from expected facility users?	Yes / No	
			Material Distance (km)..... Travel time
			Material Distance (km)..... Travel time
	Is the facility located at an economically viable distance from landfills and resource processing plants?	Yes / No	Material Distance (km)..... Travel time
			Material Distance (km)..... Travel time
			Material Distance (km)..... Travel time
	Is the site gently sloping or undulating?	Yes / No	
	Have local climatic conditions been considered? (e.g. wind direction and strength)	Yes / No	
	Does the site have a high water table?	Yes / No	

Ref	Requirement	Yes / No	Details
	Is the site in a region of groundwater recharge or discharge?	Yes / No	
	Does the site contain areas of ecological significance?	Yes / No	
	Is a flora and fauna study of the site required? If so, has it been completed?	Yes / No	
	Could existing vegetation be used to screen the site?	Yes / No	
2.4	Will the facility significantly affect existing road traffic?	Yes / No	
	Has a traffic impact assessment been completed? (Only required for Categories 3 & 4)	Yes / No	
	Does the site have access to power, sewer, reticulated water and communications?	Yes / No	
2.5	Has a community consultation plan been developed?	Yes / No	
2.6	Has the site selection process outlined in the Guide to Best Practice been followed?	Yes / No	
2.7	Has the proposed facility been discussed with Council?	Yes / No	

Facility Design and Construction Checklist

For guidance on how to respond to the issues raised in this checklist, refer to the sections of this document listed in the left-hand column.

Ref	Requirement	Required for Category				Is requirement met?	Actions Required to Meet Best Practice	Comments
		1	2	3	4			
3.1	Has a risk assessment of the draft design been completed?	✓	✓	✓	✓	Yes / No		
3.2	Is the site layout consistent with the guide?	★	★	✓	✓	Yes / No		
	Does the facility design maximise diversion of resources from landfill while minimising contamination in accordance with the Guide?	★	✓	✓	✓	Yes / No		
	Have separate areas for green organics collection been provided?	★	✓	✓		Yes / No		
	Are green organics stockpiles designed in accordance with the Guide?	✓	✓	✓		Yes / No		
3.3	Is construction and demolition waste recovered at the facility?	★	★	★		Yes / No		
	Are construction and demolition stockpiles designed in accordance with the Guide?	✓	✓	✓		Yes / No		
	Is the waste oil facility designed in accordance with the guide?	★	★	✓		Yes / No		
	Is the resale area designed in accordance with the Guide?		★	★		Yes / No		
	Has legal advice on the resale of items been sought?		✓	✓		Yes / No		

Ref	Requirement	Required for Category				Is requirement met?	Actions Required to Meet Best Practice	Comments
		1	2	3	4			
3.4	Is the facility designed to minimise litter in accordance with the Guide?	✓	✓	✓	✓	Yes / No		
	Is the facility designed to minimise odour in accordance with the Guide?	✓	✓	✓	✓	Yes / No		
	Is the facility designed to minimise vermin in accordance with the Guide?	✓	✓	✓	✓	Yes / No		
	Is the facility designed to prevent contamination of stormwater in accordance with the Guide?	✓	✓	✓	✓	Yes / No		
3.4	Is leachate managed in accordance with the guide?			✓	✓	Yes / No		
	Is the facility designed to minimise noise impacts in accordance with the Guide?	✓	✓	✓	✓	Yes / No		
	Is the facility designed to minimise water and energy use?	★	✓	✓	✓	Yes / No		
	Does the facility design minimise impacts on areas of ecological significance?	✓	✓	✓	✓	Yes / No		
	Are vegetation screens used to help the facility to blend in with its surroundings?	★	★	★	✓	Yes / No		
3.5	Has site security been provided in accordance with the Guide?	★	✓	✓	✓	Yes / No		
	Does the site gatehouse meet the requirements of the Guide?	★	✓	✓	✓	Yes / No		
	Have adequate safety barriers and fall prevention devices been incorporated into the site design?	✓	✓	✓	✓	Yes / No		

Ref	Requirement	Required for Category				Is requirement met?	Actions Required to Meet Best Practice	Comments
		1	2	3	4			
3.5	Do site structures comply with relevant building codes, building regulations, planning regulations and the Guide?	✓	✓	✓	✓	Yes / No		
	Do the site utilities comply with the Guide?	★	✓	✓	✓	Yes / No		
	Does plant and equipment design meet the requirements of the Guide?	✓	✓	✓	✓	Yes / No		
3.6	Are roads and traffic management devices designed in accordance with relevant Australian Standards?	★	✓	✓	✓	Yes / No		
	Is the site access designed in accordance with the Guide?	★	✓	✓	✓	Yes / No		
	Is traffic flow and control in accordance with the Guide?	★	✓	✓	✓	Yes / No		
3.7	Is signage designed in accordance with the relevant Australian Standards?	★	✓	✓	✓	Yes / No		
	Does the signage meet the requirements of the Guide?	★	✓	✓	✓	Yes / No		
	Is signage utilised consistent throughout the region?	★	✓	✓	✓	Yes / No		
3.8	Have adequate measures been identified and implemented to minimise environmental impacts of the facility construction?	✓	✓	✓	✓	Yes / No		

Facility Operation and Management Checklist

For guidance on how to respond to the issues raised in this checklist, refer to the sections of this document listed in the left-hand column.

Ref	Requirement	Required for Category*				Is requirement met?	Actions Required to Meet Best Practice	Comments
		1	2	3	4			
4.1	Has a formal risk management process been established and implemented?	✓	✓	✓	✓	Yes / No		
	Have OH&S hazards been identified and risks assessed?	✓	✓	✓	✓	Yes / No		
4.2	Have operational and management procedures for the facility been documented and implemented?	✓	✓	✓	✓	Yes / No		
	Has an OH&S Plan been prepared for the site (can be incorporated into a Site Operations Manual)?	✓	✓	✓	✓	Yes / No		
	Are operational and management procedures available to site staff with a copy on site?	★	✓	✓	✓	Yes / No		
	Has a Site Operations Manual been completed?		★	✓	✓	Yes / No		
4.3	Are the objectives of resource recovery being promoted throughout the local community?	★	✓	✓	✓	Yes / No		
	Are the material types recovered at the facility regularly reviewed?	★	✓	✓	✓	Yes / No		

Ref	Requirement	Required for Category*				Is requirement met?	Actions Required to Meet Best Practice	Comments
		1	2	3	4			
	Are waste depositors encouraged to separate recoverable materials?	★	✓	✓	✓	Yes / No		
	Is site cleanliness maintained?	✓	✓	✓	✓	Yes / No		
	If on-site processing of materials occurs, does it comply with the Guide?	✓	✓	✓	✓	Yes / No		
	Are green organics managed in accordance with the Guide?		✓	✓	✓	Yes / No		
4.3	Are construction and demolition stockpiles regularly monitored & their size recorded?		✓	✓	✓	Yes / No		
	Is the waste oil facility operated in accordance with the Guide?		✓	✓	✓	Yes / No		
	Is the resale area operated in accordance with the Guide?		✓	✓	✓	Yes / No		
	Is legal advice on the resale of items regularly updated?		✓	✓	✓	Yes / No		
4.4	Does the facility have documented procedures to manage potential environmental impacts?	★	✓	✓	✓	Yes / No		
	Are the following managed in accordance with Section 4.4 of the Guide:							
	a. litter?		✓	✓	✓	Yes / No		
	b. odour?		✓	✓	✓	Yes / No		

Ref	Requirement	Required for Category*				Is requirement met?	Actions Required to Meet Best Practice	Comments
		1	2	3	4			
	c. vermin?	*	✓	✓	✓	Yes / No		
	d. stormwater?	*	✓	✓	✓	Yes / No		
	e. noise?	*	✓	✓	✓	Yes / No		
	f. water and energy efficiency?	*	✓	✓	✓	Yes / No		
4.4	g. dust?	*	✓	✓	✓	Yes / No		
	h. facility aesthetic appearance?	*	*	*	*	Yes / No		
4.5	Does the facility have a documented complaints management procedure?	✓	✓	✓	✓	Yes / No		
	Is community consultation & education conducted in accordance with the Guide?	✓	✓	✓	✓	Yes / No		
	Are all materials inspected as they enter the facility?	*	✓	✓	✓	Yes / No		
4.6	Does the facility have documented hazardous waste management procedures?	✓	✓	✓	✓	Yes / No		
	Are facility operators trained in the management of hazardous waste?	✓	✓	✓	✓	Yes / No		
	Does the facility have an asbestos disposal bin on-site?				✓	Yes / No		

Ref	Requirement	Required for Category*				Is requirement met?	Actions Required to Meet Best Practice	Comments
		1	2	3	4			
4.7	Are plant, equipment and machinery operated and maintained in accordance with the Guide, Australian Standards and manufacturer's guidelines?	✓	✓	✓	✓	Yes / No		
	Is supplementary machinery available in the event of breakdown?	✓	✓	✓	✓	Yes / No		
4.7	Has infrastructure been kept in good working order by means of a regular maintenance program?	✓	✓	✓	✓	Yes / No		
	Are fire control operations in accordance with the Guide?	✓	✓	✓	✓	Yes / No		
4.8	Are traffic management procedures in place?	★	✓	✓	✓	Yes / No		
	Are staff issued with high visibility clothing?	✓	✓	✓	✓	Yes / No		
4.9	Does the facility financial management comply with the requirements of the Guide?	★	★	★	★	Yes / No		
4.10	Have regular workplace inspections been conducted?	✓	✓	✓	✓	Yes / No		
	Has the facility undergone regular monitoring in accordance with the Guide?	✓	✓	✓	✓	Yes / No		
	Have monitoring results been recorded in accordance with the Guide?	✓	✓	✓	✓	Yes / No		

Ref	Requirement	Required for Category*				Is requirement met?	Actions Required to Meet Best Practice	Comments
		1	2	3	4			
	Have traffic movements been monitored and recorded?			*	✓	Yes / No		
	Has an annual report of monitoring results been produced?	*	*	✓	✓	Yes / No		
	Has the facility undergone periodic audits?	✓	✓	✓	✓	Yes / No		
	Do the following meet the requirements of the Guide:							
	a. staff training?	✓	✓	✓	✓	Yes / No		
	b. supervision?	*	✓	✓	✓	Yes / No		
	c. emergency response?	✓	✓	✓	✓	Yes / No		
4.11	d. additional site security?	*	*	*	*	Yes / No		
	e. personnel protective equipment?	✓	✓	✓	✓	Yes / No		
	f. workplace standards?	✓	✓	✓	✓	Yes / No		
	g. first aid?	✓	✓	✓	✓	Yes / No		
	h. insurance?	✓	✓	✓	✓	Yes / No		