Warehouse and Logistics Hub, Orchard Hills (SSD 7173)

Waste Management Plan

Report Number 610.15775-R1

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ALTIS Property Partners
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Warehouse and Logistics Hub, Orchard Hills (SSD 7173)

Waste Management Plan

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1 INTRODUCTION

SLR Consulting Australia Pty Ltd (SLR) has been engaged by ALTIS Property Partners to prepare a Waste Management Plan (WMP) for the construction and operation of a proposed Warehouse and Logistics Hub to be located at 585 to 649 Mamre Road, Orchard Hills NSW.

1.1 Secretary's Environmental Assessment Requirements

The NSW Department of Planning and Environment (DP&E) issued Secretary's Environmental Assessment Requirements (SEARs) for the State Significant Development (SSD 7173) on 11 September 2015. The SEARs are outlined below in **Table 1**.

Table 1 Secretary's Environmental Assessment Requirements – SSD 7173

Key Issue	Assessment Requirement	Addressed in Section
Waste	Details of the quantity and type of liquid and non-liquid waste generated, handled, stockpiled, processed or disposed of on and off site for both construction and operation.	Table 4 and Table 10
	Details of the proposed measures for managing all waste generated.	Whole document, Section 5.5 – 5.8, Section 6.3 – 6.7
	Details of the measures that would be implemented to reduce and (where possible) to recycle waste in line with NSW Government waste policy.	Section 2, Section 5.5 – 5.6, Section 6.3 – 6.4

Source: NSW Department of Planning and Environment Major Projects Portal (http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=7173).

The SEARs require that the assessment be performed in accordance with relevant policies, guidelines and plans including:

- The NSW Waste Avoidance and Resource Recovery (WARR) Strategy 2014-21, Environment Protection Authority (EPA);
- The EPA's Waste Classification Guidelines 2014;
- The Protection of the Environment Operations (Waste) Regulation 2014 (2005 version superseded);
- Resource Recovery Exemption; and
- Technical Guidelines: Bunding and Spill Management (DECC 1997) (superseded by the Storing and Handling Liquids: Environmental Protection Participants Manual, DECC 2007)

This Plan addresses the key issues raised within the SEARs and has been prepared in accordance with the relevant policies and guidelines.

1.2 Scope

This WMP applies to the construction and on-going operation of the proposed Stage 1 development area (see **Figure 2**).

The provisions contained in the WMP must be implemented at all stages of the development, and may be subject to review upon expansion or changes in operational procedures.

- See page 7 for the Construction WMP.
- See page 18 for the Operational WMP.

1.3 Objectives

The principal objective of this WMP is to identify all potential wastes likely to be generated at the site during the development and operational phases, including a description of how waste would be handled, processed and disposed of (or re-used/recycled), in accordance with the relevant regulatory requirements and to meet the requirements set out by the SEARs.

The specific objectives of this WMP are as follows:

- To encourage the minimisation of waste production and maximisation of resource recovery.
- To propose measures for management of all waste generated.
- To outline measures that will be implemented to reduce and (where possible) recycle / reuse wastes.
- To identify procedures and chain of custody records for waste management.
- To assist in ensuring that any environmental impacts during the operational life of development comply with development consent conditions and other relevant regulatory authorities.

2 BETTER PRACTICE FOR WASTE MANAGEMENT AND RECYCLING

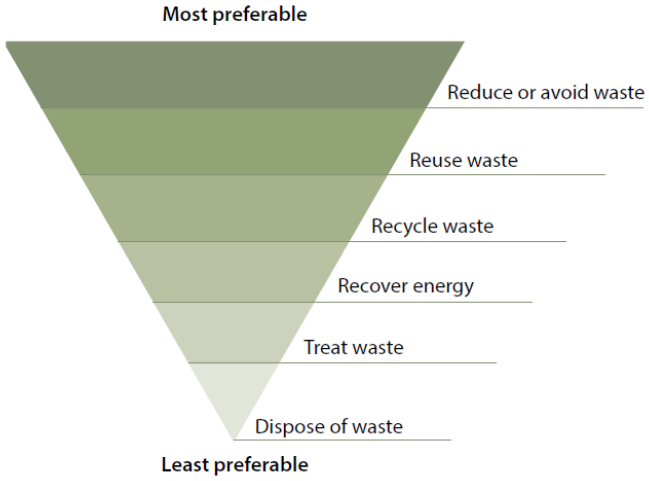
2.1 Waste Management Hierarchy

Where appropriate, this WMP aims to meet the principles of the waste management hierarchy, by promoting waste as a resource through the following in order of preference:

- Waste avoidance through prevention or reduction of waste generation. Waste avoidance is best achieved through better design and purchasing choices.
- Waste reuse, without substantially changing the form of waste.
- Waste recycling through the treatment of waste that is no longer usable in its current form to produce new products.
- Energy recovery through thermal treatment of residual waste materials and from green waste processing.
- Waste disposal, in a manner that causes the least harm to the natural environment.

The waste hierarchy pictured below demonstrates a classification of waste management options in order of their environmental impacts, as established under the Waste Avoidance and Resource Recovery Act 2001.

Figure 1 Waste Hierarchy



Source: NSW WARR 2014-21 (EPA 2014)

2.2 Benefits of Implementing Better Practice for Waste Management and Recycling

- Enhanced social and environmental reputation of an organisation.
- Reduced costs associated with waste disposal.
- Increased safety and reduced liabilities through good site waste management.
- Cleaner ecosystems.
- Benefits to all stakeholders and the wider community.
- Improved environmental outcomes.

3 WASTE LEGISLATION AND GUIDANCE

The legislation and guidance outlined in **Table 2** below should be referred to during construction and operational phases of the development.

Table 2 NSW Waste Legislation and Guidance Summary

Legislation	Objectives
Waste Avoidance and Resource Recovery Act 2001	To promote extended producer responsibility in place of industry waste reduction plans. Specific objectives include: • To encourage efficient use of resources. • To minimise the consumption of natural resources and the final disposal of waste by encouraging the avoidance of waste and the reuse and recycling of waste. • To ensure that industry shares with the community the responsibility for reducing and dealing with waste. • To ensure the efficient funding of waste and resource management planning, programs and service delivery.
Protection of the Environment Operations Act (POEO) 1997 & Amendment Act 2011	Administered by the NSW Environmental Protection Authority (EPA) to enable the Government to establish instruments for setting environmental standards, goals, protocols and guidelines. *Important Note: The owner of a premises, the employer or any person carrying on the activity which causes a pollution incident is to immediately notify the relevant authorities when material harm to the environment is caused or threatened.* A list of each relevant authority is provided in the POEO Amendment Act and will be noted in the site's incident register.
POEO (Waste) Regulations 2014 (previous version dated 2005)	Contains provisions relating to the waste levy, waste tracking, management requirements for certain waste types, payment schemes for councils, consumer packaging recycling and other miscellaneous provisions.
Resource Recovery Exemption, (Clauses 91 and 92 of the POEO (Waste) Regulation 2014	Where it can be demonstrated that a specific waste type can safely be used for another purposes, the NSW EPA may grant permission for that waste to be used for the specified purposes, subject to strict conditions contained within the exemption.
EPA's Waste Classification Guidelines (Part 1) 2014	To assist waste generators to effectively classify, manage, treat and dispose of waste to ensure the environmental and human health risks associated with waste are managed appropriately and in accordance with the POEO Act and is associated regulations.
EPA's Waste Avoidance and Resource Recovery (WARR) Strategy 2014-21	A key component of the State Government's vision for the environmental and economic future of the state that will be supported by the *Waste Less, Recycle More* funding initiative providing long-term targets for key result areas including reduced illegal dumping.
Building Code of Australia (BCA) and relevant Australian Standards (AS)	The BCA (and AS) have the aim of achieving nationally consistent, minimum necessary standards of relevant health and safety, amenity and sustainability objectives efficiently.
Storing and Handling Liquids: Environmental Protection Participants Manual (DECC 2007, now the EPA)	Also, Environmental Compliance Report: Liquid Chemical Storage, Handling and Spill Management – Part B Review of Best Practice and Regulation. *Note: These documents have superseded the Technical guidelines: Bunding and Spill Management (DECC 1997)*
NSW EPA's Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities 2012	The EPA's Better Practice Guidelines (2012) encourage efficient waste minimisation and resource recovery for commercial and industrial facilities and is used as a benchmark document when assessing waste production rates within Australia and details a range of waste management provisions.
City of Penrith Development Control Plan (DCP)	Part C, Waste Management of the DCP contains general provisions for new developments in the City of Penrith Local Government Area (LGA).
Australian Packaging Covenant	Each building should be encouraged to establish an Action Plan to demonstrate their contribution to the achievement of the Australian Packaging Covenant's (APC) goals. The three main performance goals of the APC are: • Design: Optimise packaging to use resources efficiently and reduce environmental impact without compromising product quality/safety. • Recycling: Efficiently collect and recycle packaging. • Product Stewardship: Demonstrate commitment of all signatories.

4 DEVELOPMENT OVERVIEW

The development site is located at 585 - 649 Mamre Road in Orchard Hills, NSW, approximately 40 kilometres (km) west of Sydney Central Business District (CBD) in the local government area of the City of Penrith and is within the Western Sydney Employment Area. The site covers an area of approximately 48 hectares (ha) and is currently agricultural / grazing land.

4.1 Proposed Development

Consent is sought to develop the site for the purposes of a Warehouse and Logistics Hub. The concept plan establishes the road layout, allotments and building pads as well as built form and infrastructure relating to a warehouse and logistics development. The development site will ultimately comprise of approximately eight industrial lots that will be prepared and released to the market. Development structures are expected to include warehouses, industrial sheds, and freight handling facilities. Use of the facility will be for warehousing and distribution on a 24 hour, 7 day basis, consistent with surrounding operations.

The Stage 1 development site would be accessed via Mamre Road to the east of the site via a wide access road that runs along the southern, western and most of the northern boundary lines of the Stage 1 development area. The layout of the proposed Stage 1 development is presented in **Figure 2**.

4.2 Development Stages

The construction phase of the development will consist of three main stages:

- Bulk earthworks to form level building pads, batters and earth retaining walls.
- Building and construction of new roads, pavements and services.
- Integrated building fit-out and commissioning.

Bulk earthworks and road construction will be completed in a staged manner. The establishment of building pads will provide flexibility for the design of future facilities as consent for the building footprints (other than the Stage 1 Development) is not sought under this application.

The existing topography is relatively flat and low-lying, varying from a reduced level of RL 38 m in the south-east to RL 32 m in the north-west (i.e. a slight grade of about 1°). According to plans, filling up to 2 m high will be required to create level pads for development and to provide a minimum 0.5 m freeboard for potential flooding from South Creek.

The staged development will allow building and other structural works to commence in conjunction with importation and placement of the required fill. Vehicles bringing fill would enter the site via a site entrance on Mamre Road.

Details of the proposed development site (Stage 1 Development) are provided in **Table 3**.

Table 3 Activity Areas

Activity Areas	Area (m^2)
Lot 7	36,370
Lot 7 Office	1,695
Lot 8A	18,170
Lot 8A Office	1,000
Lot 8B	19,120
Lot 8B Office	1,000

Figure 2 Site Layout of the Proposed Development

Source: ALTIS Property Partners (dated February 2016)

5 CONSTRUCTION WASTE MANAGEMENT

Demolition and construction stages of developments have the greatest potential for waste minimisation.

Key construction activities will include:

- site clearing and earthworks;
- construction of site infrastructure lead-in services including electricity, sewer and potable water;
- construction of multiple warehouse and office buildings;
- construction of an internal wide access road that will be capable of accommodating both heavy and light vehicles;
- construction of a stormwater system and basin; and
- landscaping and finishing works.

5.1 Targets for Resource Recovery

The performance of each development contributes to overall NSW State recycling targets, which for the construction and demolition (C&D) sector, is 75% (increasing to 80% by the year 2020-21) of total C&D waste recycled (see NSW WARR Strategy 2014-21).

Waste minimisation measures that can be implemented to assist in achieving this resource recovery target are provided in the following sections. Waste audits will determine the actual percentage of wastes that were recycled and disposed of at landfill during the Project.

5.2 Waste Streams and Classifications

The development is likely to generate the following broad waste streams:

- excavation material;
- construction wastes;
- plant maintenance waste;
- packaging waste;
- work compound (on-site employee) waste; and
- waste water.

Possible waste types along with their waste classification are provided in **Table 4**.

Table 4 Potential Waste Generation and EPA Classifications – Construction Stage

Waste Types	NSW Classification	Proposed Reuse / Recycling / Disposal Method
Site Preparatory & Construction		
Cleared vegetation	General solid (non-putrescible) waste	Re-use on site, reuse for similar projects and/or disposal for composting at landfill
Topsoil	General solid (non-putrescible) waste	Reuse within landscaped areas where possible

Waste Types	NSW Classification	Proposed Reuse / Recycling / Disposal Method
Excavated material (VEMN, EMN)	General solid (non-putrescible) waste	Reuse on-site as engineered fill where possible or reuse for similar projects. Sandstone may be incorporated in design or sold.
Sediment fencing, geotextile materials	General solid (non-putrescible) waste	Reuse at other sites where possible or disposal to landfill
Concrete (solids and washouts) and asphalt	General solid (non-putrescible) waste	Reuse on-site where possible or recycled off-site
Steel reinforcing, other metals (eg wire mesh and bulk electrical cabling)	General solid (non-putrescible) waste	Off-site recycling
Conduits and pipes	General solid (non-putrescible) waste	Off-site recycling
Timber formwork	General solid (non-putrescible) waste	Reuse on-site or off-site recycling
Plasterboard	General solid (non-putrescible) waste	Off-site recycling or disposal
Bricks	General solid (non-putrescible) waste	Off-site recycling
Glass	General solid (non-putrescible) waste	Off-site recycling
Plant Maintenance		
Tyres	Special waste	Off-site recycling or disposal
Empty oil and other drums / tins (e.g. fuel, chemicals, paints, spill clean ups)	Hazardous waste if the containers were previously used to store Dangerous Goods (Class 1, 3, 4, 5 or 8) and from which residues have not been removed by washing or vacuuming. General solid (non-putrescible) waste if the containers have been cleaned by washing or vacuuming.	Transport to comply with the transport of Dangerous Goods Code applies in preparation for off-site recycling or disposal at licensed facility. (Note: Discharge to sewer subject to Trade Waste Agreement with Sydney Water.)
Air and oil filters and rags	General solid (non-putrescible) waste	General solid (non-putrescible) waste
Batteries	Hazardous waste	Off-site recycling
Packaging		
Packaging materials, including wood, plastic (including stretch wrap or LLPE), cardboard and metals	General solid (non-putrescible) waste	Off-site recycling
Wooden crates	General solid (non-putrescible) waste	Reused for similar projects, returned to suppliers, or off-site recycling
Work Compound and Associated Offices		
Recyclable beverage containers (glass and plastic bottles, aluminium cans), tin cans	General solid (non-putrescible) waste	Co-mingled recycling at off-site licensed facility
Clean paper and cardboard	General solid (non-putrescible) waste	Paper and cardboard recycling at off-site licensed facility
General domestic waste generated by workers (soiled paper and cardboard, food stuffs, polystyrene)	General solid (non-putrescible) waste mixed with putrescible waste	Disposal at landfill
Pump-out waste and septage (sewage)	Liquid (trade) waste	Off-site disposal at licensed facility or disposal direct to sewer where arranged with Sydney Water.

For further information on how to determine a waste's classification, refer to the EPA's Waste Classification Guidelines (2014).

5.3 Construction Waste Generation Rates

The Construction Site Manager will need to record the types and quantities (including the volume in cubic metres and weight in tonnes) of wastes produced during the site preparatory and construction stages of the development, and on this basis, the numbers and capacity of skips/bins can be determined.

A guide/estimate of the potential waste percentages is provided based on "rule of thumb" waste generation rates for construction projects, as indicated in **Table 5**. These figures have been referenced from a number of sources including the Inner Sydney Waste Board's Waste Planning Guide for Development Applications (1998) and (in lieu of suitable Australia references) the UK's WRAP composition and conversion factors. Conservative estimates have been made where indicative waste compositions were not available.

Table 5 Guideline to Waste Composition and Volumes – Construction of Buildings

Material	Estimated Waste % (Apartment Levels)	Conversion Factors (tonnes per m^3)
Hard Material (i.e. bricks, tiles)	32%	1.20
Timber	24%	0.34
Plasterboard / Gypsum Material	6%	0.33
Concrete	9%	1.27
Metals	6%	0.42
Plastics	15%	0.25
Cardboard	4%	0.20
Green waste / Vegetation	3%	0.03
Soil	1%	1.20
Other (e.g. chemicals, paint)	0.3%	0.30

Source: UK WRAP

The UK Department of Environment, Food and Rural Affairs (DEFRA) and the UK Building Research Establishment (BRE) have developed a number of benchmark indicators to help determine approximate tonnages of waste produced during various construction projects including civil engineering and commercial retail works. The benchmarks include Environmental Performance Indicators (EPI) which measure the volume (m^3) of waste produced per 100 m^2.

The EPI indicators provided in **Table 6** have been used for the purposes of this WMP to estimate the amounts of construction wastes that could be generated by the development.

Table 6 Environmental Performance Indicator for Waste Volumes from New Developments

Project Type	Average Volume (m^3) of Waste per 100 m^2
Industrial Buildings	14.0
Commercial Offices	20.4
Civil Engineering	28.1

Source: UK BRE

5.4 Estimation of Waste Volumes / Tonnages

5.4.1 Topsoil

200 mm of topsoil will be stripped from the site and sold to landscapers for reuse. No excavation of soil will be undertaken. Fill will be imported for use at the site.

5.4.2 Construction of New Buildings

The estimated tonnes of waste materials generated during the construction of the proposed development are presented in **Table 7** and **8**.

Table 7 Estimated Waste Generation – Construction Activities

Building Area	Approximate Area (m^2)	Estimated Waste Generation (m^3)	Estimated Waste (t)
Lot 7 Warehouse	36,370	5,107	3,417
Lot 7 Office	1,695	347	232
Sub Total	**-**	**5,454**	**3,649**
Lot 8A Warehouse	18,170	2,551	1,707
Lot 8A Office	1,000	205	137
Sub Total	**-**	**2,756**	**1,844**
Lot 8B Warehouse	19,120	2,685	1,796
Lot 8B Office	1,000	122	68
Sub Total	**-**	**2,807**	**1,864**
Total	**-**	**11,017**	**7,357**

Table 8 Estimated Waste Volumes and Materials for the Development

Material	Split (Buildings)	Waste (m^3)	Conversion Factor	Waste (tonnes)
Hard Material (i.e. bricks, tiles)	6%	664	1.20	797
Timber	10%	1,098	0.34	373
Plasterboard / Gypsum Material	6%	664	0.33	219
Concrete	30%	3,271	1.27	4,154
Metals	25%	2,728	0.42	1,146
Plastics	15%	1,642	0.25	410
Cardboard	4%	447	0.20	89
Green waste / Vegetation	3%	338	0.09	10
Soil	1%	121	1.20	145
Other (e.g. chemicals, paint)	0.3%	45	0.30	13
Total	**100%**	**11,017[1]**	**-**	**7,357[1]**

Note: Totals may not add up due to rounding.

It is estimated that more than 60% of the predicted construction waste arisings can be re-used (on-site or at another development) or recycled off-site. It is noted that all waste generation rates are approximate only.

There will also be wastes generated during the construction of access roads, car parking areas, landscaped areas, stormwater system and public pathways.

5.5 Waste Avoidance Measures

The Construction Site Manager will identify opportunities for waste avoidance by:

- minimising site disturbance and eliminating unnecessary excavation;
- stripping topsoil from areas and storing it on site for re-use or for sale (if not re-used on site);
- selecting construction materials taking into consideration to their long lifespan and potential for reuse;
- identifying likely waste amounts generated and incorporating these volumes into a purchasing policy so that the correct quantities are purchased;
- ordering materials to size and ordering pre-cut and prefabricated materials;
- reuse of formwork (where possible);
- planned work staging and delivery arrangements of materials so materials are delivered as needed;
- combining concrete pours and estimation of concrete volumes prior to pour;
- use of prefabricated components for internal fit outs (including precast concrete and prefab steel);
- reducing packaging waste on-site by returning packaging to suppliers where possible, purchasing in bulk, requesting cardboard or metal drums rather than plastics, requesting metal straps rather than shrink wrap and using returnable packaging such as pallets and reels;
- co-ordination and sequencing of various trades;
- careful on-site storage and source separation;
- ensuring that separated materials are kept uncontaminated to guarantee the highest possible reuse value; and
- subcontractors informed of site waste management procedures.

The Construction Site Manager will also advise on material selection for the reduction of embodied energy and resource depletion. This includes:

- the use of recycled concrete and steel;
- the reduction of PVC use;
- the use of low volatile organic compounds (VOC) paints, floor coverings and adhesives;
- the use of low formaldehyde wood products and post-consumer reused timber or Forest Stewardship Council (FSC) certified timber where possible;
- the use of fittings and furnishings that have been recycled, are made from or incorporate recycled materials, and have been certified as sustainable or environmentally friendly by a recognised third party certification scheme; and
- the use of building materials, fittings and furnishings including structural framing, roofing and façade cladding chosen with consideration to their longevity, adaptation, disassembly, reuse and recycling potential.

5.6 Measures for Re-use, Recycling and Disposal

Effective management of construction materials and demolition/construction waste, including options for reuse and recycling where applicable and practicable, will be conducted. Only project wastes that cannot be cost effectively reused or recycled are to be sent to landfill or appropriate disposal facilities.

Refer to **Table 4** for an outline of the proposed reuse, recycling and disposal methods for potential waste streams generated by the development.

The following procedures are to be implemented:

- appropriate sorting and segregation of site preparatory and construction wastes to ensure efficient reuse and recycling of wastes;
- concrete, tiles (where applicable) and bricks will be reused or recycled off-site;
- steel will be recycled off-site, all other metals will be recycled where economically viable;
- framing timber will be reused on-site or recycled off-site;
- windows, doors and joinery will be recycled off-site (where possible);
- excess rebar used in the next stage of works with tracking by site team/engineers;
- waste oil will be recycled or disposed of in an appropriate manner;
- all used crates will be stored for reuse unless damaged;
- all glass that can be economically recycling will be;
- all solid waste timber, brick, concrete, rock that cannot be reused or recycled will be taken to an appropriate landfill site and disposed of in an approved manner;
- all asbestos, hazardous and/or intractable wastes are to be disposed of in accordance with Workcover Authority and EPA requirements;
- provision for the collection of batteries and other recyclable resources will be provided on site;
- beverage container and paper/cardboard recycling will be provided on-site for employee use or these items will be sorted recycling at an appropriately licensed facility;
- all garbage will be disposed of via a council approved system;
- washdown of equipment / plant / machinery and concrete delivery trucks will occur within a specified, appropriately bunded bay (or concrete delivery trucks will return to the batching plant before washing out). Liquid waste is often produced from the washing down of plant and apparatus. There may be a local sewer that this waste water can be connected to; alternatively, this could be transferred into a localised waste water treatment facility or plant;
- refuelling activities will be undertaken in designated areas with appropriate spill containment measures to avoid overspill to sensitive areas; and
- portable, self-contained toilet and washroom facilities will be provided at the site ensuring these units are regularly emptied and serviced by a suitably licensed contractor.

The Construction Site Manager will also investigate opportunities for materials exportation and reuse with other local construction operations. This will have two benefits: minimising energy through reduction of material reprocessing, encouraging material reuse.

5.7 Waste Storage

The Project will be managed ensuring effective source separation and appropriate collection of waste during site preparatory and construction works.

For construction stages, consider minimum dedicated skips for:

- timber;
- plasterboard/gyprock;
- concrete;
- bricks;
- steel/scrap metal;
- general waste; and
- other waste (i.e. for the collection of materials that may be re-used on future projects).

Separate provisions for the safe disposal of hazardous waste types (i.e. batteries, etc) will also be provided.

Employee beverage container recycling bins should be provided nearby to common areas at work sites for plastic and glass bottles, soft drink cans, aluminium cans to ensure these items do not end up at landfill. Specialised bins for cigarette butts should also be provided to ensure these do not become a potential source of fire if thrown in bins and/or skips.

5.7.1 Space and Amenity

Waste storage areas will be accessible and allow sufficient space for storage and servicing requirements. The storage areas will also be flexible in order to cater for change of use throughout the Project. Where space is restricted, dedicated stockpile areas are to be delineated on the site, with regular transfers to dedicated skip bins for sorting.

The positions of the designated waste holding areas on site will change according to building works and the progression of the development, but must consider visual amenity, health and safety, and accessibility in their selection. Appropriate siting of waste stockpile locations will take into account slope and drainage factors to ensure contamination of stormwater drains does not occur during rain events.

All waste placed in skips or bins for disposal or recycling shall be adequately contained to ensure that the waste does not fall, blow, wash or otherwise escape from the site. Waste containers and storage areas are to be kept clean and in a good state of repair.

Stockpiles of materials will be managed in accordance with the relevant environmental guidelines.

5.8 Waste Servicing

5.8.1 Servicing and Transport

The frequency of the waste removal will, in most cases, be dictated by the volume of material being deposited into each of the dedicated skips. Skips are to be checked on a daily basis by the Construction Site Manager to ensure that skips do not overflow. If skips and/or bins are reaching capacity, removal and replacement should be organised for the next 24 hours.

All skips/bins leaving the site or body of any vehicle or trailer used to transport waste from the premises, will be covered with a suitable tarpaulin to ensure that the spillage of wastes and escape of dust from the skips whilst in transit is eliminated. Mud, dust and any other material likely to fall from or be cast off the wheels or underside/body of any vehicle leaving the site will be removed before the vehicle leaves the premises.

All waste collection for site preparatory and construction works are to be conducted as per the SEARs. All site generated building waste collected in the skips and/or bins will be transported by appropriately licensed waste collection contractors and deposited in the approved and appropriately licensed recycling centre, transfer station or landfill site.

5.8.2 Contaminated/Hazardous Waste

During the construction phases of the Project, there must be a commitment to engage qualified and certified contractors to remove all contaminated/hazardous materials (e.g. asbestos) and dispose of all contaminated/hazardous waste at an appropriately licenced facility, where applicable.

In the event that any contaminated or hazardous materials are unexpectedly uncovered during demolition or excavation works, the Site Manager is to stop work immediately and contact the relevant hazardous waste contractor prior to further works being undertaken in the area. Handling, transport and disposal of asbestos will meet the requirements of the POEO (Waste) Regulation 2014. Consultation with Workcover NSW concerning the handling of any asbestos waste should also be undertaken.

It is noted that the Phase 1 Environmental Assessment did not locate contamination on site.

5.8.3 Liquid Waste / Stormwater / Wastewater Management

Liquid waste is often produced from the washing down of plant and apparatus. No liquid wastes or wash down waters will be disposed of via the stormwater drainage system. Any liquid wastes or dangerous goods wastes generated by the development (e.g. due to damage or leakage of containment) will be disposed of by a suitably qualified contractor to an appropriately licensed disposal facility.

Washdown of equipment, plant and machinery and concrete delivery trucks will take place within a specified, appropriately bunded, washdown bay or alternatively at an offsite facility having a suitable washdown bay. There may be a local sewer that this waste water can be connected to; alternatively, this could be transferred into a localised site waste water treatment facility or plant if available. Waste water storage tanks (where applicable) will be carefully monitored to ensure overflow does not occur. Any refuelling activities will be undertaken in designated areas with appropriate spill containment measures to avoid overspill to sensitive areas.

5.8.4 Spills Management

Spills on the worksite are most likely to involve fuel, hydraulic oil or engine oil spilled from plant items, and paints and solvents. If a spillage occurs, immediately identify the spilled materials, notify the Site Manager and contain the spill as soon as possible to avoid the spilled materials spreading to other areas.

Containment measures for spillages will be provided at appropriate locations and in close proximity to staff car park areas, dangerous goods stores areas and main Project work areas (e.g. a spill kit containing non-combustible absorbent material). Material Safety Data Sheets (MSDS) will also be located nearby spill kit areas for advice on spillage clean-up and disposal.

Liquid chemical storage areas will be managed according to the relevant Australian Standards (AS). Refer to the DECC's Storing and Handling Liquids: Environmental Protection Participant's Manual (2007) and recently updated AS documentation as available.

Outdoor areas should be designed and managed to ensure that only clean water leaves the site and enters the environment.

5.9 Signage

Standard signage will be posted in all storage and waste collection areas and all skips/drums/bins will be labelled correctly and clearly to identify materials stored within. Damaged signage / labelling will be renewed as observed.

Refer to the EPA's website under 'waste tools' and construction and demolition waste and recycling signs.

Figure 3 Photos of Australian Standard Signage

Source: http://www.epa.nsw.gov.au/wastetools/signs-posters-symbols.htm

5.10 Training and Awareness

All staff (including sub-contractors and site staff) employed during the construction phases of the development must undergo induction training regarding waste management for the development site.

Induction training is to cover, as a minimum, an outline of the WMP including:

- legal obligations;
- emergency response procedures on site;
- waste storage locations and separation of waste;

- the implications of poor waste management practices;
- incident response measures;
- correct use of general purpose spill kit; and
- responsibility and reporting (including identification of personnel responsible for waste management and individual responsibilities).

It is the responsibility of the Construction Site Manager or Environmental Management Representative (EMR) to notify Council of the appointment of waste removal, transport or disposal contractors.

5.11 Monitoring and Reporting

The following measures will be undertaken to improve construction waste management and to provide more reliable waste generation figures:

1. Compare projected waste quantities with actual waste quantities produced.
2. Conduct waste audits/visual waste audits during construction activities to compare to other projects.
3. Take note of waste generation amounts, waste types and disposal methods.
4. Review past waste disposal receipts.
5. Record this information to track waste avoidance, reuse and recycling performance and to help in waste estimations for future waste management plans.

Records of waste volumes recycled, reused or contractor removed are to be maintained on site. Additionally, dockets/receipts verifying recycling/disposal in accordance with the WMP must be kept.

Regular visual inspections of waste storage areas will be undertaken by site personnel and inspection checklists/logs recorded for reporting to the Construction Site Manager or EMR on a weekly basis. These inspections will be used to identify and rectify any resource and waste management issues, and reduce the potential for waste materials to become a source of wind-blown litter.

Waste audits are to be carried out by the Construction Site Manager or the EMR to gauge the effectiveness and efficiency of waste segregation procedures and recycling/reuse initiatives. Where audits show that the above procedures are not carried out effectively, additional staff training will be undertaken and signage re-examined.

5.12 Incident Response

Likely incidents to occur during the construction phase of the Project may involve fuel or chemical spills, seepage or mishandling of hazardous waste, or unlicensed discharge of pollutants to the environment.

All environmental incidents are to be dealt with promptly to minimise potential impacts. An incident register must be maintained on-site at all times and include the contact details of the 24 hour EPA Pollution line.

5.13 Roles and Responsibilities

All personnel have a responsibility for their own environmental performance and compliance with all legislation. It will be the responsibility of the Contractor to implement the WMP, and an employee responsibility to ensure that they comply with the guideline at all times.

Where possible, an Environmental Management Representative (EMR) should be appointed for the Project. Suggested roles and responsibilities are provided below.

Table 9 Recommended Roles and Responsibilities

Role	Responsibility
Construction Site Manager	• Ensuring plant and equipment are well maintained. • Ordering only the required amount of materials. • Keeping materials segregated to maximise reuse and recycling. • Ultimately responsible for routinely check waste sorting and storage areas for cleanliness, hygiene and OH&S issues, contaminated waste materials • Responsible for ensuring that all monitoring and audit results are well documented and carried out as specified in the WMP.
Environmental Management Representative (EMR)	• Approaching and establishing the local commercial reuse of materials where reuse on-site is not practical. • Establishing separate skips and recycling bins for effective waste segregation and recycling purposes. • Ensuring staff and contractors are aware of site requirements. • Provision of training and awareness of the requirements of the WMP and specific waste management strategies adopted for the Project. • Contaminated waste management and approval of off-site waste transport, disposal locations and checking licensing requirements. • Approval of off-site waste disposal locations and checking licensing requirements. • Assessment of suspicious potentially contaminated materials, hazardous materials and liquid wastes. • Monitoring, inspection and reporting requirements.

Regular (at least weekly) visual inspections of waste storage areas may be delegated to other on-site staff. All subcontractors will be responsible for ensuring that their work complies with the WMP through the Project induction and contract engagement process.

It is the responsibility of the Construction Site Manager or site operative to notify the Principal Certifying Authority (Private, Council and/or the EPA) of the appointment of waste removal, transport or disposal contractors.

6 OPERATIONAL WASTE MANAGEMENT

Ineffective waste management for commercial premises can lead to environmental pollution, offensive odours, litter, attraction of vermin and occupational safety and hygiene problems.

Effective waste management reduces costs through the reuse of resources and minimisation of fees associated with removal, transportation and disposal of waste, and improves environmental outcomes locally, regionally and globally.

Effective waste management is achieved through the implementation of a WMP for the operational life of the development.

6.1 Targets for Resource Recovery

The performance of each development contributes to overall NSW State recycling targets, which for the commercial and industrial (C&I) sector, represents 57% (increasing to 70% by 2020-21) of total C&I waste recycled (see NSW WARR Strategy 2014-21).

Waste minimisation measures that can be implemented to assist in achieving this resource recovery target are provided in the following sections. Waste audits will determine the actual percentage of wastes that were recycled and disposed of at landfill during operations.

6.2 Waste Streams and Classifications

The operation of the development site will generate the following broad waste streams:

- general waste;
- packaging wastes (cardboard, paper, plastic, pallets);
- office wastes;
- amenity wastes;
- maintenance wastes; and
- waste specific to the products stored in warehouse (e.g. potential dangerous goods).

Potential waste types along with their waste classification are provided below in **Table 10**.

Table 10 Potential Waste Generation and EPA Classifications – Operational Stage

Waste Types	NSW Classification	Proposed Reuse / Recycling / Disposal Method
General Operations		
General garbage (including non-recyclable plastics)	General solid (putrescible and non-putrescible) waste	Disposal at landfill
Recyclable beverage containers (glass and plastic bottles, aluminium cans), tin cans	General solid (non-putrescible) waste	Co-mingled recycling at off-site licensed facility
Food waste (staff lunch rooms)	General solid (putrescible) waste	Option to compost on site. Alternatively, off-site recycling or dispose to landfill with general garbage
Paper	General solid (non-putrescible) waste	Off-site secure shredding and recycling
Bulk cardboard	General solid (non-putrescible) waste	Cardboard recycling at off-site licensed facility

Waste Types	NSW Classification	Proposed Reuse / Recycling / Disposal Method
Plastic packaging materials (including stretch wrap or LLPE)	General solid (non-putrescible) waste	Baled and sent for off-site recycling
Bulk polystyrene	General solid (non-putrescible) waste	Recycling at off-site licensed facility or disposal at landfill
Wooden crates / pallets	General solid (non-putrescible) waste	Reused for similar projects, returned to suppliers, or off-site recycling
Maintenance		
E-waste, batteries, printer toners and ink cartridges	Hazardous waste	Off-site recycling
Spent Smoke Detectors[1]	General solid (non-putrescible) waste OR Hazardous waste (some Commercial varieties)	Disposal at landfill OR offsite disposal at licensed facility
Glass (other than containers)	General solid (non-putrescible) waste	Off-site recycling
Light bulbs	Hazardous waste	Off-site recycling
Maintenance waste (i.e. empty oil / paint drums, chemicals, solvents, area wash downs etc)	Hazardous waste if the containers were previously used to store Dangerous Goods (Class 1, 3, 4, 5 or 8) and from which residues have not been removed by washing or vacuuming. General solid (non-putrescible) waste if the containers have been cleaned by washing or vacuuming.	Transport to comply with the transport of Dangerous Goods Code applies in preparation for off-site recycling or disposal at licensed facility. (Note: Discharge to sewer subject to Trade Waste Agreement with Sydney Water.)
Air-conditioning parts and filters	General solid (non-putrescible) waste	Disposal to landfill
Garden organics (lawn mowing, tree branches, hedge cuttings, leaves etc)	General solid (non-putrescible) waste	Reuse on site or contractor removal for recycling at licensed facility
Amenities		
Grey water (from bathrooms)	Liquid waste	Discharge to sewer
Sewage	Liquid (trade) waste	Discharge to sewer
Sanitary Waste	General solid waste (putrescible)	Contractor disposal at licensed facility

Source: http://www.environment.nsw.gov.au/waste/envguidlns/index.htm

Note 1: The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) require that when more than 10 smoke alarms (particularly americium-241 sources) are collected for bulk disposal they must be treated as radioactive waste and the requirements of the National Health and Medical Research Council's *Code of practice for the near-surface disposal of radioactive waste in Australia (1992)* must be met. Contact ARPANSA for more information. http://www.arpansa.gov.au/radiationprotection/factsheets/is_smokedetector.cfm

For further information on how to determine a waste's classification, refer to the EPA's Waste Classification Guidelines (2014).

6.2.1 Operational Waste Generation Rates

Estimated commercial and retail waste generation rates are published in the EPA's Better Practice Guidelines. Waste generation rates have also been sourced from additional publicly available and published sources where relevant.

Table 11 Estimated Waste Generation Rates for Different Types of Premises

Type of Premises	Average L per 100m² per day	
	Waste	Recycling
Warehouses[1]	30	30
Offices	8	6

Note 1: Sourced from Randwick City Council's Waste Management Guidelines (Appendix A Waste Generation Rates)

The above waste generation rates have been applied as applicable to estimate waste arisings associated with the operation of the development site.

6.2.2 Estimation of Waste Volumes / Tonnages

The actual amount and composition of waste generated by the development will be influenced by the nature of the products stored in each of the warehouse buildings. The following waste arisings are an indication of typical waste generation volumes that can be expected during the operational phase of the development site.

Table 12 Anticipated Weekly Waste Generation

Type of Premises	Site Area (m²)	Average L per day		Average L per week	
		Waste	Recycling	Waste	Recycling
Lot 7 Warehouse	36,370	10,911	10,911	76,377	76,377
Lot 7 Office	1,695	136	102	949	712
Sub Total		**11,047**	**11,013**	**77,326**	**77,089**
Lot 8A Warehouse	18,170	5,451	5,451	38,157	38,157
Lot 8A Office	1,000	80	60	560	420
Sub Total		**5,531**	**5,511**	**38,717**	**38,577**
Lot 8B Warehouse	19,120	5,736	5,736	40,152	40,152
Lot 8B Office	1,000	80	60	560	420
Sub Total		**5,816**	**5,796**	**40,712**	**40,572**
Total	**77,355**	**22,394**	**22,320**	**156,755**	**156,238**

It is recommended that scheduled waste audits be undertaken approximately one month into the operational phase of the development to quantify actual waste composition and generation rates produced by each building occupant.

The assessment of generated waste volumes will also be influenced by management and employee attitude to recycling and disposal.

6.3 Waste Avoidance Measures

The following waste avoidance measures will be investigated for implementation:

- provision of take-back services to clients to reduce waste further along the supply chain;
- bulk purchasing or the purchase of items that use minimal packaging;
- re-work/re-packaging of products prior to local distribution to reduce waste arisings;
- review of packaging design to reduce waste but maintain 'fit for purpose';
- provision of ceramic cups, mugs, crockery and cutlery rather than disposable items;
- presentation of all waste reduction initiatives to staff as part of their induction program; and
- investigation into the use of leased office equipment and machinery rather than purchase and disposal.

6.3.1 Re-use, Recycling and Disposal

The following measures will be implemented on site:

- printer toners/ink cartridges will be collected in allocated bins for office use and appropriate recycling;
- beverage container and paper/cardboard recycling will be provided on-site for employee use (particularly clean office paper and cardboard boxes);
- provision of recycling receptacles within each of the offices and lunch areas to capture beverage containers and other recyclable items;
- recycling bins co-located with general waste bins as a policy to provide the public and employees with an option for recycling;
- provision for the collection of batteries and other recyclable resources (such as e-waste, fluorescent tubes, light bulbs) provided on site;
- waste oil/lubricating oil recovered and recycled wherever possible (if applicable);
- timber/broken crates recycled;
- water capture and re-use on site;
- where possible, wooden and plastic pallets and crates reused or returned to the supplier/processor for reuse or recycling;
- special bins provided for cigarette butts at outside locations to avoid these entering stormwater drains;
- signage and/or bins colour-coded using Australian Standard bin colours to identify general landfill waste, co-mingled or beverage container recycling, and paper/cardboard recycling; and
- all garbage will be disposed of via a Council / EPA approved system.

The following additional measures will also be investigated and implemented as appropriate:

- establish systems in-house and with supply chain stakeholders to transport products in re-useable packaging where possible;
- use of a shrink wrap baler for the collection of all plastic stretch wrapping and general plastic products for ease of recycling;
- flatten, bale or compact cardboard to reduce volume of cardboard collected for recycling to save space in bins;
- food organics collections if sufficient quantities are generated; and

- development of a 'buy recycled' or sustainable purchasing policy.

6.4 Waste Storage and Servicing Requirements

6.4.1 Waste Bins and Waste Management Equipment

The amount and type of bins used by the development will depend on the Waste Management System chosen for each warehouse.

Typical dimensions for mobile garbage bin (MGB) sizes anticipated for use by the hotel development are as follows:

Table 13 Typical Dimensions for MGBs

Bin Type	Height (mm)	Depth (mm)	Width (mm)	Approx. Footprint (m^2)
660 L	1,250	850	1,370	1.2
1100 L	1,470	1,250	1,770	1.7

Source: EPA's Better Practice Guidelines 2012

Smaller bins will be needed for office and lunch room areas. An example of a source separation bin system is provided in **Figure 4**. Larger waste management equipment (e.g. balers and compacting equipment) are illustrated in **Figure 5**.

Figure 4 Example of Potential Source Separation Bins for Offices / Lunch Rooms

Figure 5 Example Plastic Wrap Baler and Cardboard Compactor

Shring Wrap Baler

Cardboard Compactor

6.4.2 Waste Storage Areas

Each warehouse will have its own designated waste and recycling storage area where the recycling bins, garbage bins, cardboard and any other materials for reuse or separate recycling will be stored prior to collection. Appropriate waste storage areas will be identified by the operator of each building.

Waste and recycling storage areas will be constructed of an adequate size to accommodate all waste bins and recycling bales associated with the development. Sufficient storage area will also be provided for any waste management equipment (i.e. cardboard compactors, plastic wrap balers, packaging recycling bins) and for the segregation and storage of varying waste types including provision for the collection of fluorescent tubes, smoke detectors, e-wastes and other recyclable resources. Space will be provided for reuse items such as crates and pallets for occupational safety purposes.

Doors/gates to the storage area will be able to be opened from both the inside and outside and wide enough to allow for easy passage of waste/recycling containers.

Access between waste and recycling storage rooms and waste collection / pickup points will be free of ramps and steps for OHS purposes, particularly in the case that bins over 360 L are utilised by the development.

Compacters and/or other mechanical devices must be childproof where used in the storage of waste.

6.4.2.1 Construction of Waste Storage Areas

Waste storage areas should be flexible in their design so to allow for future changes in operation and uses.

The construction of waste storage areas/rooms and equipment/bins are to comply with BCA (Building Code of Australia) requirements and Australian Standards. The construction of the storage areas/rooms will comply with the below requirements:

- The waste storage rooms will be constructed in accordance with the requirements of the BCA ensuring impervious floors, walls and ceilings.
- The floors of waste rooms and recycling rooms must be constructed of concrete at least 75mm thick or other approved material graded and drained to a Sydney Water Corporation approved drainage fitting located in the rooms.

- The floor must be finished to a smooth even surface coved at the intersection with walls and plinths and provided with a ramp to the doorway where necessary.
- The walls of the waste and recycling rooms must be constructed of approved solid impervious material and shall be cement rendered internally to a smooth even surface coved at all intersections.
- The ceilings of waste and recycling rooms must be finished with a rigid smooth faced non-absorbent material capable of being easily cleaned.
- The waste and recycling rooms must be provided with an adequate supply of hot and cold water mixed through a centralised mixing valve with hose cock which is fitted with an aerator to increase water efficiency.
- A close fitting and self-closing door openable from within the room must be fitted to all waste and recycling rooms.
- Waste rooms and recycling room(s) must be constructed in such a manner as to prevent the entry of vermin.
- Waste and recycling rooms must be located for convenient access by users and must be well ventilated and well lit.
- Clear and easy to read signs and warning signs must be fixed to the external face of each waste and recycling room where appropriate.
- Smoke detectors will be fitted in accordance with Australian Standards and connected to the fire prevention system of the building.

6.4.3 Waste Servicing

Sufficient clearance will be provided to enable collection vehicles to access the bin storage area. Where possible, collection times should not coincide with peak operational delivery schedules. Section 2.6.4 Collection Points of the EPA's Better Practice Guidelines (2012) provides general guidelines for collection points which are reproduced below.

Collection points should:

- not be near intersections, ramps, roundabouts, pedestrian crossings, on busy roads or in narrow lanes;
- not be near awnings, overhead wires, trees or other overhead structures;
- be clear of air-conditioning and other service ducts and pipes, sprinklers, CCTV cameras, movement sensors;
- smoke detectors and other ceiling fixtures if located inside a building;
- be on level surfaces rated for heavy vehicles;
- have plenty of room for trucks to manoeuvre and reverse if necessary;
- have enough room for bins to be manoeuvred by the driver for servicing;
- be away from public areas;
- be well clear of vehicle, pedestrian, public, staff and visitor traffic areas;
- not be restricted by parked cars or vehicle loading or unloading;
- not be restricted by bollards, signs, plants, bins, seats or other street furniture;
- not require vehicles to reverse;
- not block the normal operations of the building; and

- be accessible at the times the collections are scheduled to take place and not behind locked gates.

Collection frequencies will be organised with those private contractors engaged for waste collection and treatment / disposal.

Written evidence of a valid and current contract/s with licensed waste collector/s will be held at the premises.

6.5 Special Wastes

6.5.1 Contaminated / Hazardous Wastes

- All contaminated and hazardous wastes (i.e. fluorescent tubing, batteries, e-wastes and smoke detectors) should be recycled at an appropriately licensed facility.
- E-waste (electronic waste such as computers, mobile phones, printer toners and ink cartridges) and batteries contain heavy metal contaminants and should be recycled at an appropriately licensed recycling facility.
- Commercial-use smoke detectors should be returned to the supplier for disposal (it is a condition of the supplier's licence to sell smoke detectors) and not disposed of with general landfill waste as they contain small amounts of radioactive material. Contact the supplier and/or the EPA for information on how to return used smoke detectors.

6.5.2 Liquid Waste / Dangerous Goods

- Liquid, semi-liquids or moist substances will not be placed in waste containers, unless securely wrapped or contained to prevent the substance from leaking.
- Any liquid wastes or dangerous goods wastes generated by the development (e.g. due to damage or leakage of containment) should be disposed of by a suitably qualified contractor to an appropriately licensed disposal facility.
- No liquid wastes or washdown waters should be disposed of via the stormwater drainage system. Wastewater storage tanks (including stormwater collection tanks) should be carefully monitored to ensure overflow does not occur.
- Any Dangerous Good Stores and associated work areas to comply with WorkCover and Australian Standards.
- All maintenance chemicals, oils and fuels including associated wastes will be stored separately in an appropriately bunded, well-ventilated area with a drain grease trap and allow sufficient space for handling and storage in accordance with relevant Australian Standards.

6.6 Stormwater Treatment

Car parking areas must drain to a stormwater treatment device capable of removing litter, oil, grease and sediment prior to discharge to the stormwater system.

All wastewater and stormwater treatment devices are required to be regularly maintained and cleaned to ensure these devices remain effective, with all solid and liquid wastes collected from these devices disposed of in accordance with this WMP and the POEO Act.

6.7 Spills Management

Containment measures for spillages should be provided at appropriate locations and in close proximity to staff car park areas, dangerous goods stores areas and main warehouse operation areas (e.g. a spill kit containing non-combustible absorbent material). Material Safety Data Sheets (MSDS) should also be located nearby spill kit areas for advice on spillage clean up and disposal.

6.8 Signage

Education and communication must be regular and ongoing to overcome the transient nature of contractors and visiting staff members. The main signage aspects to consider are:

- garbage and recycling bins must be clearly and correctly labelled at all times;
- waste storage areas must have clear signage instructing cleaners and tenants how to correctly separate (if required);
- the location of, and directions to, waste storage areas must be well signposted;
- all hazards or potential dangers associated with the waste facilities should be clearly identified, especially those linked to compaction or other waste handling equipment; and
- emergency contact information should be displayed in case there are any issues with the waste and recycling systems/services in the building.

All signage should conform to the relevant Australian Standard and the NSW EPA's standard recycling signs.

The full set of signage can be found on the EPA's website:

- http://www.epa.nsw.gov.au/wastetools/signs-posters-symbols.htm
- http://www.cityofsydney.nsw.gov.au/live/waste-and-recycling/collection-days-and-bins

The design and use of safety signs for waste rooms and enclosures should comply with AS 1319 Safety signs for the occupational environment. Australian Standards are available from the SAI Global Limited website (www.saiglobal.com).

6.9 Contract Clauses

Waste collection contracts and cleaning contracts should include clauses relating to waste servicing requirements. Lease agreements should also outline and enforce proper use of waste facilities.

Refer to Appendix H of the EPA's Better Practice Guidelines (2012) for example clauses.

6.11 Roles and Responsibilities

It should be the responsibility of Site Management to implement the WMP and a responsibility of the employees and cleaners to ensure that they comply with the guideline at all times.

Site Management should routinely check waste sorting and storage areas for cleanliness, hygiene and OH&S issues, and also ensure all monitoring and audit results are well documented and carried out as specified in the WMP.

An outline of waste management responsibilities are presented in **Table 14**.

Table 14 Waste Management Responsibility Allocation

Responsible Person	General Tasks
Management	Ensure the WMP is implemented throughout the life of the operation.
	Update the WMP on a regular basis (e.g. annually) to ensure the Plan remains applicable.
	Undertake liaison and management of contractor collections.
	Organise internal waste audits on a regular basis.
	Manage any complaints and non-compliances reported through waste audits etc.
	Perform inspections of all waste storage areas and waste management equipment on a regular basis.
	Organise cleaning and maintenance requirements for waste equipment.
	Monitor bins to ensure no overfilling occurs.
	Ensure effective signage, communication and education is provided to alert employees / cleaners about the provisions of this WMP and waste management equipment use requirements.
	Monitor and maintain signage to ensure it remains clean, clear and applicable.
	Ensure garbage holding area and storage rooms are kept tidy.
	Ultimately responsible for the management of all waste management equipment, cleaning requirements, waste transfer and collection arrangements.
Cleaners	Removal of general waste, recyclables, cardboard waste and hazardous waste from offices and locations around the warehouse for transfer to centralised waste and recycling collection rooms or holding area as required.
	Transport of all bins to the holding areas / collection areas as required.
	Cleaning of all bins and waste and recycling rooms on a weekly basis or as required.
Gardening Contractor	Removal of all garden organics waste generated during landscaping / gardening maintenance activities for recycling at an offsite location or reuse as organic mulch on landscaped gardens.