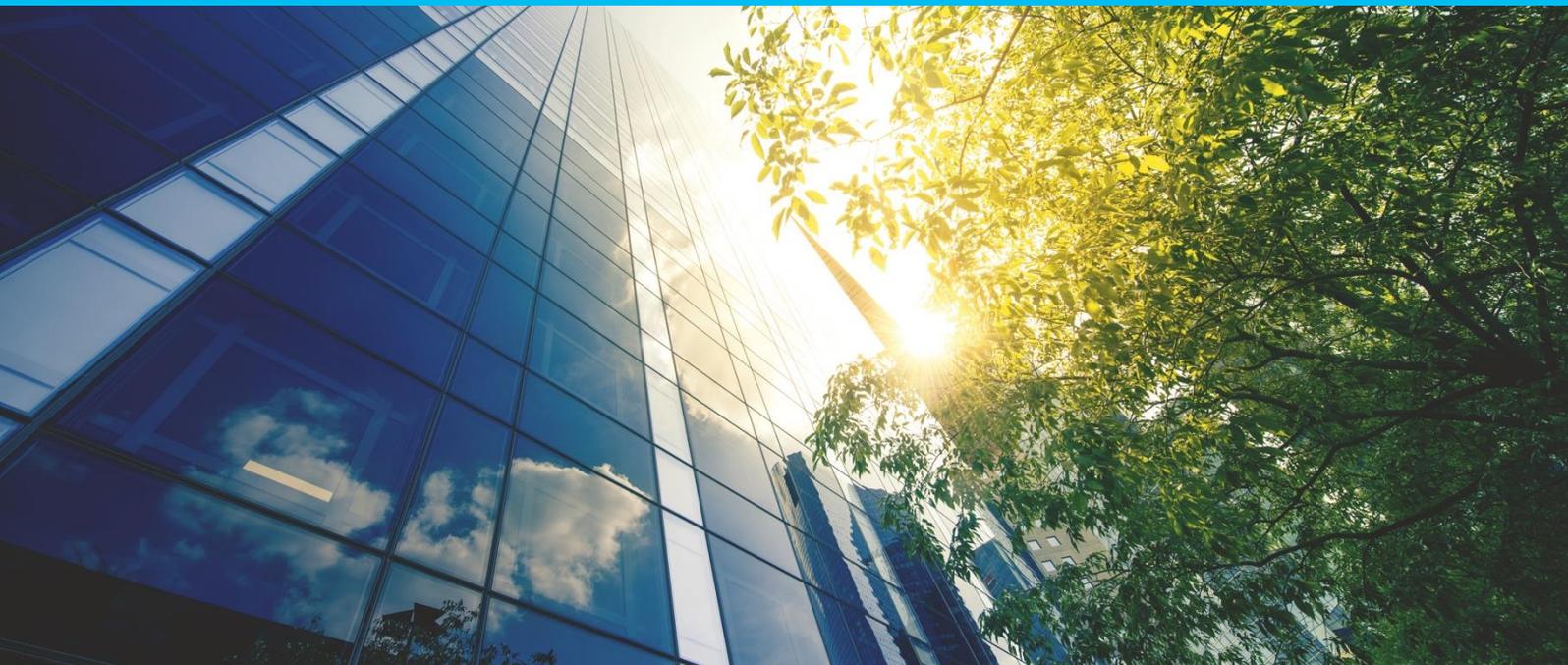


Minto Logistics Hub Modification – Waste Management Plan

A Submission to Texco

11th February 2022



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Glossary

Terminology	Definition
AS	Australian Standard
C&D	Construction and Demolition
CDCP	Campbelltown Development Control Plan 2015
CLEP	Campbelltown Local Environmental Plan 2015
DCP	Development Control Plan
ENM	Excavated Natural Material
EPA	Environment Protection Authority
LGA	Local Government Area
MGB	Mobile Garbage Bin
MSW	Municipal Solid Waste
SEPP	State Environmental Planning Policy
WMP	Waste Management Plan
WSEA	Western Sydney Employment Area
WSP	Waste Service Provider
WSRA	Waste Storage and Recycling Area

1 Introduction

MRA Consulting Group (MRA) was engaged by Texco to prepare an Operational Waste Management Plan (OWMP) for the proposed modification to an approved industrial development (SSD 7500), located at 5 & 9 Culverston Road, Minto. The site is legally described as Lot 400 DP87571 and Lot 3 DP817793, with a total approximate area of 30.63 Ha. The site is situated east of the Hume Highway and Campbelltown Road, approximately 39km southwest of Sydney’s CBD.

The proposal aims to develop four industrial warehouse buildings, to be delivered in stages, with ancillary car parking to be delivered with each stage (see Appendix A for staging plans). The proposed modification has undergone assessment by the Department of Planning, Industry and Environment (DPIE) and is subject to conditions which this WMP aims to address as follows (see Table 1).

Table 1: Table of conditions of consent related to waste management

Prior to Construction	B29	Waste Management	Classification	The Applicant must ensure that any waste generated from construction or operation activities on the site is classified in accordance with the EPA's Waste Classification Guidelines (DECCW, 2009), or any superseding document and disposed of to a facility that may lawfully accept the waste.
Prior to Construction	B30	Waste Management	Waste Management Plan	<p>Prior to the commencement of construction, the Applicant must prepare a Waste Management Plan (WMP) for the Development to the satisfaction of the Secretary. The WMP shall form part of the CEMP required by Condition C2 and the OEMP required by Condition C4 and be prepared in accordance with Condition C7. The Plan shall:</p> <ul style="list-style-type: none"> a) detail the type and quantity of waste to be generated during construction and operation of the Development; b) classify any waste generated from construction or operation activities on the site in accordance with the EPA's Waste Classification Guidelines (DECCW, 2009), or any superseding document and disposed of to a facility that may lawfully accept the waste; c) describe the handling, storage and disposal of all waste streams generated on site, consistent with the Protection of the Environment Operations Act 1997, Protection of the Environment Operations (Waste) Regulation 2014 and the Waste Classification Guideline (Department of Environment, Climate Change and Water, 2009); d) detail the materials to be reused or recycled, either on or offsite; and e) include the Management and Mitigation Measures included in Appendix B
Prior to Construction	B31	Waste Management	Waste Management Plan	<p>The Applicant must:</p> <ul style="list-style-type: none"> a) not commence operation until the Waste Management Plan required by Condition B30 is approved by the Secretary; and b) implement the most recent version of the Waste Management Plan approved by the Secretary for the duration of the Development.

The site is also subject to the Campbelltown Development Control Plan 2015 (CDCP) which lists the following objectives related to waste management, which have each been addressed in this WMP:

- Ensure waste systems are easy to use and that, where necessary, collection vehicles are able to access buildings to remove waste.
- Ensure that developments meet requirements for long term sustainability and best practice.
- Ensure developments achieve effective waste and resource recovery management.

- Ensure that developments protect and enhance the quality of life for the community.
- Ensure healthy and safe practices for the storage, handling and collection of waste and recycling materials.
- Prevent stormwater pollution that may occur as a result of poor or incorrect storage and management arrangements for recyclables and waste.
- Promote the principles of Ecologically Sustainable Development through appropriate resource recovery and recycling, leading to a reduction in the consumption of finite natural resources.
- To ensure that appropriate facilities are provided for the storage and collection of industrial waste and recycled materials.

Overall, the scope of the proposed modification (see Section 2.1) will contribute a similar or reduced impact as it relates to the management of waste through the remediation and construction of the proposed industrial warehouses. Waste management through early works and construction was addressed by Arcadis in a *Waste Management Assessment* dated 1 April 2016 – relevant sections relating to construction and demolition works from this report are included as Appendix D for reference. Early works have already commenced at the site and construction works are expected to result in a similar build scale compared to the approved DA and therefore, waste management classifications in accordance with classification guidelines, expected volumes and management methods detailed in the Arcadis report are assumed to remain relevant for the development as modified.

This WMP focuses on addressing changes to the site affecting operational management of waste according to the proposed modification, specifically referring to Stages 1 and 2 of the development, and applying latest waste generation rates and management methods.

2 Background

2.1 Description of Proposed Development

Construction, fit-out and operation of a warehouse and logistics hub with 93,378m² of gross floor area (GFA) including:

- Four warehouse buildings for warehousing and distribution uses, with ancillary offices, comprised of:
 - Stage 1: 9,078 m² of warehousing GFA and 300 m² of office GFA;
 - Stage 2: 9,500 m² of warehousing GFA and 500 m² of office GFA;
 - Stage 3: 31,000 m² of warehousing GFA and 1,000 m² of office GFA;
 - Stage 4: 40,000 m² of warehousing GFA and 2,000 m² of office GFA;
- 8.8 hectares of external hardstand storage space for warehousing and logistics uses;
- Bulk earthworks;
- Demolition of existing structures and hardstand areas;
- Remediation works;
- Upgrades to existing on-site infrastructure;
- Loading docks;
- Car parking;
- Site landscaping; and
- Estate and building identification signage.

The proposed modifications are summarised as follows:

- Modified staging to deliver the development in four stages in a revised order.
- Reduction in warehouse GFA, reduction in office GFA and increased external storage area for Warehouse 1B.
- Reduction in warehouse GFA, reduction in office GFA and increased external storage area for Warehouse 1C.
- Increase in warehouse GFA for Warehouse 1D to reflect revised boundary line between Warehouse 1D and Warehouse 1C.
- Revised car parking provision for Warehouses 1B, 1C and 1D to reflect amended GFA and tenant requirements.
- Reduction in total GFA from 112,000m² to 93,378m².
- Increase in outdoor storage area from 6.9 hectares to 8.8 hectares.

2.2 Location

The subject site is located at 5 & 9 Culverston Road, Minto (see site location in Figure 1); situated in the Campbelltown City Council local government area (LGA).

Figure 1: Aerial view of the subject site (5-9 Culverston Road, Minto)



Source: Urbis.

2.3 Strategies

Waste management for the site considers better practice, necessary equipment, and integration with other guidance documents including the NSW Waste and Sustainable Materials Strategy (NSW DPIE, 2021), and National Waste Policy: Less Waste, More Resources (DEE, 2018). The key policy aims that are considered are:

- Avoidance (to prevent the generation of waste);
- Reduce the amount of waste (including hazardous waste) for disposal;
- Manage waste as a resource; and
- Ensure that waste treatment, disposal, recovery and re-use are undertaken in a safe, scientific and environmentally sound manner.

The site is subject to the Campbelltown Development Control Plan (CDCP) 2015, including objectives and principles outlined in Section 1.

2.4 Assumptions

This report is a WMP, forming part of the development documentation and assumes:

- Drawings and information that have been used in waste management planning for this WMP are the latest development plans from the project architect, Watch This Space Design, dated 6th October 2021;

- Waste generation volumes are based on waste generation rates outlined in NSW EPA (2019) *Better Practice Guidelines for Resource Recovery in Residential Dwellings* and NSW EPA (2012) *Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities*. Waste management equipment and infrastructure recommendations have been made according to estimated waste generation;
- This WMP is a living document and therefore, waste management equipment and systems described in this report are subject to change based on future operations and available technology.

3 Operational Waste

3.1 Overview

Ongoing waste management requirements for the site will result of the daily operation of industrial warehouse and ancillary offices. Waste storage and management will be separate for each building as identified in attached plans (see Appendix A). Centralised waste storage areas for each warehouse will be maintained in or near loading docks for each warehouse, ensuring the waste management area is easily accessible by building tenants and waste collection vehicles for servicing.

The following calculations are based off the mobile garbage bin (MGB) dimensions sourced from NSW EPA's *Better Practice Guideline for Waste Management and Recycling in Commercial and Industrial Facilities (2012)* and *Better Practice Guide for Resource Recovery in Residential Developments (2019)* (Table 2 and Table 3).

Table 2: MGB capacity and footprint

Bin Capacity	Height (mm)	Depth (mm)	Width (mm)	Footprint (Approx. m ²)
240L	1,080	735	580	0.43
660L	1,250	850	1,370	1.16
1,100L	1,470	1,245	1,370	1.71

Source: *Better practice guide for resource recovery in residential developments (2019)*.

Table 3: Bulk bin capacity and footprint

Bin Capacity	Height (mm)	Depth (mm)	Width (mm)	Footprint (Approx. m ²)
1.5m ³	910 – 1,250	905 – 1,000	1,805 – 2,010	1.63 – 2.01
3m ³	1,020 – 1,580	1,470 – 1,700	1,400 – 2,010	2.1 – 3.4
4.5m ³	1,440 – 2,014	1,605 – 1,900	1,800 – 2,010	2.9 – 3.8
6m ³	1,650	1,900	2,000	3.8

Source: *Better practice guide for resource recovery in residential developments (2019)*.

3.2 Estimated Waste and Recycling Generation

The waste volume calculation for both waste and recycling for the proposed development is shown below. Table 4 Below outlines waste generation rates applicable for the proposed uses at the site, as derived from the CDCP and NSW EPA guidelines where the CDCP does not provide specific reference to a use.

Table 4: Model waste generation rates according to EPA guidelines

Premises type/use	Waste generation (L/100m ² /day)	Recycling Generation (L/100m ² /day)
Office	10	15
Industrial Warehouse*	5	10

*the CDCP and EPA Guidelines do not specify waste generation rates for industrial uses and therefore, MRA has relied on prior experience across other LGAs to determine this figure.

Note: Site assumed to operate 7 days a week.

With consideration to the above model waste generation rates, Table 5 below outlines the expected waste generation rates for the proposed development. Waste generation has been calculated based on site specific breakdown of commercial and industrial uses proposed.

Table 5: Site Waste and Recycling Generation

Building	Use	Area (m ²)	Daily Waste generation (L)		Weekly Waste generation (L)	
			General Waste	Recycling	General Waste	Recycling
Stage 1 Warehouse	Warehouse	9,078	454	908	3,178	6,356
	Office	500	50	75	350	525
	subtotal		504	983	3,528	7,056
Stage 2 Warehouse	Warehouse	9,500	475	950	3,325	6,650
	Office	500	50	75	350	525
	subtotal		525	1,025	3,675	7,350
Total			1,029	2,008	7,203	14,406

*Recycling waste volumes may be able to be managed with the use of a commercial paper/cardboard baler or other recycling waste diversion methods. For industrial uses, paper and cardboard in the form of packaging can make up a significant proportion of the total recyclable material generated. This should be done per building or individual industrial tenancy with uses which generate a substantial proportion of paper/cardboard compared to other recyclable material.

Greater resource recovery can be achieved by further diverting paper and cardboard materials from the above recycling volumes. This stream is cleaner and means the materials collected are less contaminated and much more likely able to be converted into recycled paper and fibre products.

3.3 Waste Storage Requirements

With consideration to the scale of the development and number of individual site uses, a separate waste management and storage area will be allocated for each building. Site waste storage areas for each building will be sized and located to accommodate necessary waste storage bins and other associated waste management equipment according to estimated site waste generation rates outlined in Section 3.2.

Individual tenancies will be responsible for retaining smaller internal bins for each relevant waste stream which can then be emptied into larger bins for collection as necessary. Internal bins should be retained in offices spaces and industrial buildings (on the industrial floor) and any other areas where waste will be generated in large quantities without direct access to the building waste storage area. Staff for each building will be responsible for transferring waste from each unit to the recycling collection bins and general waste bins or compactor for each warehouse.

Given the large volumes of general waste predicted to be generated onsite, there are several options that site management can use for stage 1 of the industrial estate. Table 6 below outlines the number and type of waste management containers that may be suitable for the proposed industrial uses, including frequency of waste collection.

Table 6: Industrial unit waste storage and collection options

Area	Waste Stream	L/Week	Option 1	Option 2	Option 3
Stage 1 Warehouse	General Waste	3,528	3 x 1,100L + 1 x 660L / collected once per week	1 x 3m ³ / collected twice per week	1 x 4.5m ³ / collected once per week
	Mixed Recycling	2,822	3 x 1,100L / collected once per week	1 x 3m ³ / once per week	-
	Paper and Cardboard	4,234	1 x 4.5m ³ / once per week	1 x 3m ³ / twice per week	Carboard Baler / bales collected as required
Stage 2 Warehouse	General Waste	3,675	3 x 1,100L + 1 x 660L / collected once per week	1 x 3m ³ / collected twice per week	1 x 4.5m ³ / collected once per week
	Mixed Recycling	2,940	3 x 1,100L / collected once per week	1 x 3m ³ / once per week	-
	Paper and Cardboard	4,410	1 x 4.5m ³ / once per week	1 x 3m ³ / twice per week	Carboard Baler / bales collected as required

Note 1: for the purpose of the above calculations, paper and cardboard is assumed to make up 60% of the volume of recyclable material.

Note 2: Mixed recycling stream includes materials such as plastic film and packaging.

3.4 Waste Stream Management

Bulk bins and Mobile Garbage Bins collected on a regular basis

Site management may elect to incorporate regular collection of bulk waste bins (front lift truck) and Mobile Garbage Bins (MGBs) (rear lift truck) for the management of general waste and recycling onsite.

These are calculated assumptions and actual requirements will be dependent on the waste generated by the associated industrial tenancies once operation has commenced. With the presence of food in the waste, more frequent collections may be required to prevent odour.

Waste Compaction Units

Site management will include a number of waste streams outside of general waste and recycling. All waste materials should be stored in the main waste storage areas at the rear of the site and separated by material type where necessary and/or applicable.

Space may be provisioned for the storage of a waste compactor in each warehouse. The waste compactor will be a hook-lift or Roll-On Roll-Off (RORO) unit which is collected at a schedule agreed with the elected private waste contractor. This type of compactor has a capacity of 10,000L and a compaction ratio of 5:1. A fully loaded and compacted unit would therefore have a capacity of 50,000L. A compactor of this size typically has a footprint of 9.2m². Compactor units can also be fitted with keycard and weighing to record disposal by multiple tenancies or users.

Each warehouse as part of stage 1 of the development can have its own waste compactor to service industrial units. General waste from café activities can also be disposed of using the warehouse 1 compactor if sited for easy access.

Large volumes of recycling waste are expected to be generated as a result of onsite warehouse activity. Equipment to reduce volumes of cardboard and plastic waste will allow the number of bins required onsite to be reduced.

Cardboard Baler

A paper and cardboard baler may be appropriate for use in each of the industrial units as this material is typically bulky and easily separated from other recycling streams. Paper and cardboard is also valuable as a separated commodity and may be able to be collected for free or sold for a profit, rather than incurring a fee for collection. Further information and examples of commercial cardboard balers is included in Appendix B.

Each warehouse as part of the Stage 1 development can have its own baler to service industrial units.

3.4.1 Pallets

Used pallets are expected to be generated in large quantities through general operations at the site. Site management can manage pallets in several ways, including (but not limited to):

- Organising a take-back agreement with suppliers for empty pallets; or
- Arrange collection of broken, damaged and/or unwanted pallets by a specialist pallet recycler.

Pallets will be removed from the site by the supplier for reuse where possible or removed by a suitably qualified waste contractor on a flatbed truck to be recycled at a pallet recycling facility.

3.4.2 Soft Plastics and Cardboard

Soft plastic from pallet and other plastic wrap is expected to be generated in large quantities at the site. In addition, cardboard from packaging is also expected to be generated in large quantities.

Given the volume of soft plastics and cardboard to be generated at the site, a commercial scale baler unit is proposed to manage these types of waste material (see Appendix B for examples). A single baler unit is capable of managing multiple different streams, however only one material type can be baled at a time. As such additional interim storage bins for soft plastics and cardboard may be made available near the proposed baler to store material prior to being baled for transport offsite.

Baled material will be collected by a suitably qualified waste contractor on a regular basis or as required by a flatbed truck.

3.4.3 Printer/Toner Cartridges

The site will produce a small amount of printer/toner cartridges as part of regular operation of office spaces. Waste cartridges will be stored after being expended and collected by the printing/toner supplier for reuse.

3.4.4 Problem Wastes

Cooking oil, light globes, paint tins, and cleaning chemicals are all examples of problem wastes which are unable to be disposed of through typical general waste or recycling services. Wastes such as these are to be stored separately from general waste and recycling bins if applicable. Liquid waste should be stored in an undercover, bunded area which mitigates the risk of spills or leaks and prevents runoff to stormwater drains.

Hazardous or special waste (where relevant) is to be stored in accordance with WorkSafe requirements and guidelines produced by the NSW EPA.

3.4.5 Secure Document Destruction

The site may require secure bins for disposal and destruction of sensitive documents. Typically, these bins are 240L size with locked lids to prevent retrieval of documents. Waste trucks with shredders would collect and destroy the documents, either on a scheduled service or on an as-needs basis.

3.4.6 Bulky Waste Management

Some of the site uses may generate bulky waste items (fit-out, whitegoods, etc), including items that would be returned to suppliers from deliveries (such as pallets, crates, etc). Additional space for the storage of bulky waste items will be available for each tenancy, nearby the bin storage areas.

Bulky waste will be serviced as required and can be organised between individual tenancies and their waste contractor(s). Bulky waste collection vehicles will be similar in size to those that will provide waste collection for general waste and recycling and therefore, no additional access considerations are likely to be necessary for bulky waste collection access.

4 Waste Management Systems

4.1 Collection Method and Loading Areas

Collection points for the waste service provider (WSP) and areas for handling and loading are as follows:

- Bins and other waste material storage will occur in each warehouse loading dock;
- Collection of waste materials will occur directly from the waste storage areas located at each warehouse loading dock;
- Clear, safe, accessible and convenient space for handling of bins and equipment and loading of collection vehicles; and
- Identifiable areas where staff can recognise and avoid any risk associated with moving vehicles, and bin moving and handling.

Table 7 outlines relevant requirements and specifications.

Table 7: Collection points and loading areas requirements and specifications

Component		Specification
Collection point	Allow safe waste collection and loading operations	<ul style="list-style-type: none"> - Adequate clearance and manoeuvring space; and - Sufficient clearance for the safe handling of materials and equipment.
Vehicle manoeuvring and loading space	Truck space for adequate lift clearance, manoeuvring and operation for a contractor collection vehicle	<ul style="list-style-type: none"> - Collection from the waste storage area directly; - Adequate collection area free from overhanging tree limbs that may impede operational height clearances; and - The provision of space clear of vehicle parking spaces.
Operating times	Appropriate collection times to limit noise and traffic disturbance	<ul style="list-style-type: none"> - Collection times will be arranged during general business hours.

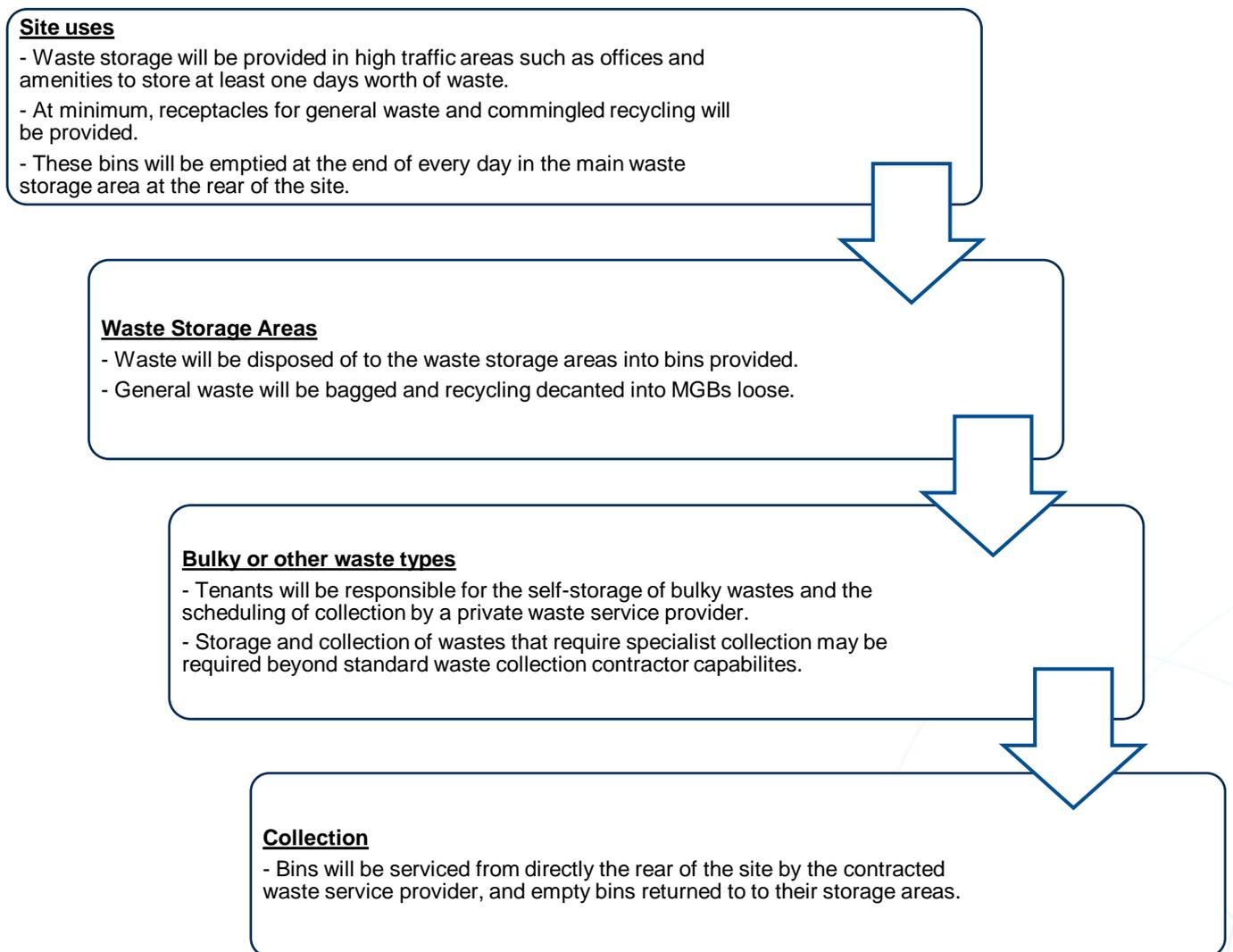
The internal roadways have been designed and constructed to facilitate the movement and manoeuvring of a waste collection vehicle, the dimensions of which are shown below:

Table 8: Waste Collection Vehicle Dimensions

Waste Vehicle Dimensions			
Length	Up to 11m	Operational Clearance	Up to 8.5m
Width	2.5m	Turning Circle	25m
Height	3.9m	Vehicle Tare Weight	16.5t
		Maximum Payload	11t

The below flow chart (Figure 2) outlines the movement of waste from generation to collection.

Figure 2: Waste flow diagram



4.2 Site Waste Management System

Building management will be responsible for the cleaning, disposal, and collection services for waste at the site. Should any issues impacting on the operational efficiency, safety and suitability of waste management be identified, site users should inform their waste contractor to revise waste management procedures as necessary.

Building management will be responsible for the following with regards to waste management:

- Using this WMP to inform waste management operations, design and infrastructure;
- Providing educational materials and information to users outlining:
 - Waste management system and use/location of associated equipment,
 - Sorting methods for recycled waste, awareness of waste management procedures for waste minimisation, maximising recovery and reducing contamination of recyclables,
 - Improving facility management results (lessen equipment damage, reduce littering, and achieve cleanliness).
- Making information available to users, site staff and visitors about waste management procedures;
- Ensuring correct signage is installed and maintained in waste storage and service areas;
- Encouraging waste avoidance and achievement of resource recovery targets;
- Providing operational management for delivery of waste objectives;
- Holding a valid and current contract with licensed collector(s) for waste and recycling collection;
- Ensuring waste service providers access the site appropriately;
- Ensuring timing of waste collections does not clash with peak traffic periods in relation to general operation of the site;
- Organising waste, recycling and bulky pick-ups by elected contractor;
- Organising, maintaining and cleaning the waste storage and service areas;
- Using contracts to define the allocation of responsibilities with site management and staff;
- Monitoring any vermin and pest issues and arranging appropriate controls (traps or fumigating) and maintenance of doors or other points of potential entry; and
- Holding a valid and current contract with a licensed contractor for any specialty waste collections and disposal (should the need arise);
- Maintaining general cleanliness when using waste storage areas to prevent the occurrence of odour, vermin or amenity issues;
- Organise additional bins or services as required;
- Recording hazards or damages related to the waste storage areas, including but not limited to:
 - Damaged bins,
 - Illegally dumped items,
 - Apparent miss-use of waste storage areas (such as vandalism, contamination, etc), and
 - Odour, vermin or amenity issues.
- Ensuring that workplace safety requirements according to WorkCover NSW Occupational Health and Safety are upheld.

4.3 Waste Storage Area

Waste storage areas in the loading dock of each industrial warehouse will be according to the following specifications:

- Signage for safety and waste bin identification;
- Safety precautions, staff training and signage for bins;
- Floors constructed of concrete or other approved solid, impervious material that can be cleaned easily;
- Grading and draining to an approved drainage fitting located in the room to facilitate bin washing;

- Smooth, even surface covered with vertical wall and plinth faces;
- Adequate supply of water with hose cock as close as practicable to the doorway;
- Security and lighting.

4.4 Signage

Signage that promotes resource recovery, waste minimisation, safety and amenity follows the Australian Standard for safety signs for the occupational environment (Standards Australia, 1994).

Signage will be designed to consider language and non-English speaking backgrounds, vision impairment and accessibility. Illustrative graphics must form a minimum 50% of the area of the signage. Signage is to be prominently posted in the waste storage area and near small bin receptacles, indicating:

- Details regarding acceptable recyclables;
- Recyclables are to be decanted loose (not bagged)
- Contact details for arranging the disposal of bulky items;
- The area is to be kept tidy.

Standard signage requirements and guidance for application apply (see Appendix C).

4.5 Prevention of Pollution and Litter Reduction

To minimise dispersion of litter and prevent pollution (to water and land via contamination of runoff, dust and hazardous materials), site management will also be responsible for:

- Maintenance of open and common site areas;
- Ensuring individual bin storage areas and the main waste storage area are maintained and kept clean;
- Ensuring bins are retained within the designated storage area(s);
- Identification and appropriate disposal of goods with hazardous material content (paints, e-waste, fluorescent tubes);
- Taking action to prevent unauthorised dumping of waste; and
- Cleaning up any spillage that may occur during waste servicing.

4.6 Bin Wash

Bin wash facilities will be made available near the waste storage area for use as required. Bin wash area will have the following features:

- Hot/cold water hose cock;
- Drainage to sewer;
- Space to safely manoeuvre, handle and wash bins; and
- Bunding to prevent overflow of water to other areas.

Waste material generated at the site through use of the site will be generally consistent with non-putrescible material types and therefore, bin washing is expected to be irregular in frequency.

5 References

Campbelltown City Council (2015) Development Control Plan.

Campbelltown City Council (2015) Local Environmental Plan.

Department of Environment and Energy (2018) National Waste Policy: Less Waste, More Resources.
Available at: <https://www.awe.gov.au/environment/protection/waste/publications/national-waste-policy-2018>.

NSW EPA (2012) Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities, Australian Standards and Statutory Requirements.

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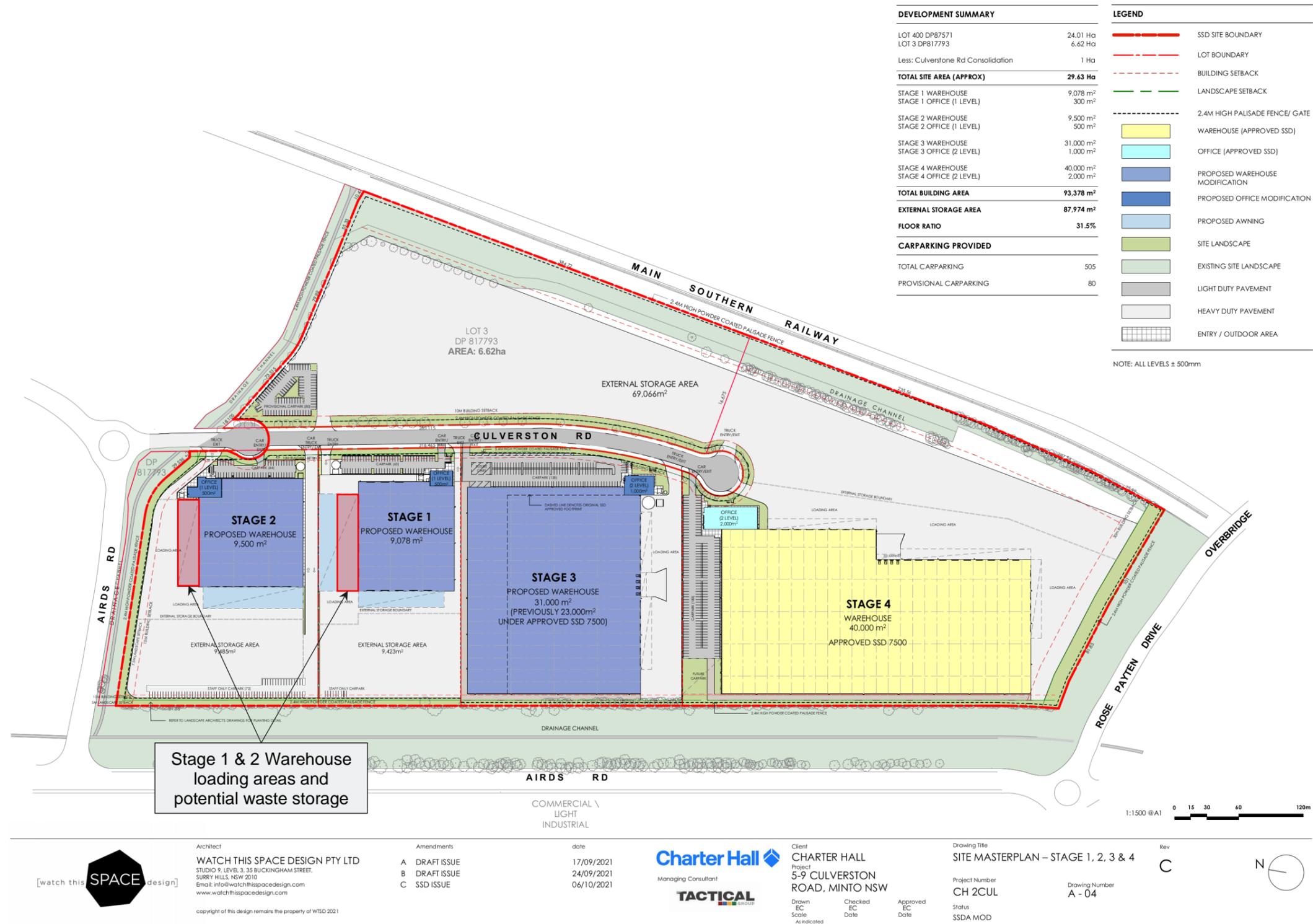
Standards Australia (1994) AS 1319: Safety signs for the occupational environment, Homebush, NSW: Standards Australia.

Standards Australia (2008) AS 4123 Mobile waste containers.

WorkCover (2011) Managing Work Environment Facilities Code of Practice.

Appendix A Site Plans

Figure 3: Overall site plan



Stage 1 & 2 Warehouse loading areas and potential waste storage

<p>Architect WATCH THIS SPACE DESIGN PTY LTD STUDIO 9 LEVEL 3, 35 BUCKINGHAM STREET, SURREY HILLS, NSW 2010 Email: info@watchthisspacedesign.com www.watchthisspacedesign.com</p>	<p>Amendments</p> <table border="0"> <tr> <td>A</td> <td>DRAFT ISSUE</td> <td>17/09/2021</td> </tr> <tr> <td>B</td> <td>DRAFT ISSUE</td> <td>24/09/2021</td> </tr> <tr> <td>C</td> <td>SSD ISSUE</td> <td>06/10/2021</td> </tr> </table>	A	DRAFT ISSUE	17/09/2021	B	DRAFT ISSUE	24/09/2021	C	SSD ISSUE	06/10/2021	<p>Client Charter Hall Project 5-9 CULVERSTON ROAD, MINTO NSW</p> <p>Managing Consultant TACTICAL</p>	<p>Drawing Title SITE MASTERPLAN – STAGE 1, 2, 3 & 4</p> <p>Project Number CH 2CUL</p> <p>Drawing Number A - 04</p>	<p>Rev C</p>
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B	DRAFT ISSUE	24/09/2021											
C	SSD ISSUE	06/10/2021											
<p>copyright of this design remains the property of WSD 2021</p>	<p>Client CHARTER HALL</p> <p>Project 5-9 CULVERSTON ROAD, MINTO NSW</p> <p>Managing Consultant TACTICAL</p> <p>Drawing Title SITE MASTERPLAN – STAGE 1, 2, 3 & 4</p> <p>Project Number CH 2CUL</p> <p>Drawing Number A - 04</p> <p>Rev C</p>												

Source: Watch This Space Design, 2021.

Appendix B Cardboard and Soft Plastics Baler Examples

MILL SIZE BALERS MODEL H500 & H600

KEY FEATURES

AUTOMATIC DOOR OPENING • SAFE & EASY TO USE & MAINTAIN • LOW NOISE LEVEL

INFORMATION

H600 Details:

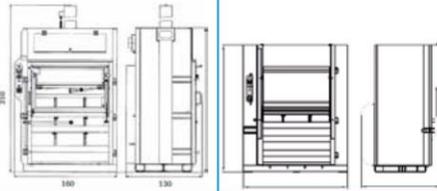
- Ideal Bale Size to maximise use of transport
- Small Footprint - No need for space to rear of machine
- Low machine height - 2,17 metres
- Multiple pressing options
- Full Automatic upper door opening to maximise input of material
- Automatic door opening, closing & bale ejection
- Emergency Stop facility



Safe and easy bale out system.
Very easy to operate.

With a pressing force of up to 50/60 tonnes, the balers makes bales of up to 450/500 kg.
The H600 bales are tied with steel wires.



Model	H500	H600
Bale weight*	350 - 450 kg	350 - 500 kg
Bale size (mm)	H: 800 W: 1200 D: 800	H: 800 W: 1200 D: 1100
Pressing cycle	41 sec.	36 sec.
Degree of compression	85 - 90%	85 - 90%
Working pressure	Up to 50 tonnes	Up to 60 tonnes
Door opening (mm)	Height (from floor): 940	Height (from floor): 1180
Feed opening	H: 670 W: 1200 D: 780	H: 550 W: 1160 D: 780
Dimensions		
H500:	Height: 3100 mm Width: 1600 mm Depth: 1300 mm	
H600:	Height: 2170 mm Width: 1890 mm Depth: 1400 mm	
Weight	2050 kg	2430 kg
Motor	7,5 kW - 400 V / 25 Amp	7,5 kW - 400 V / 25 Amp
Noise level	70 dB	70 dB
Approval	CE & GS	CE & GS

* Depending upon kind of material

Mil-tek WORLDWIDE

- The leading supplier of balers and waste presses worldwide.
- Dedicated sales and service offices in more than 50 locations around the world.
- The widest and most flexible product range on the market.
- Providing solutions to reduce cost and comply with legislation.
- Implementing recycling and modern waste handling techniques worldwide.
- Save Time, Save Space, Save Money.

AIR POWERED BALERS

Ver. 2009/EN_INT-5271

CE GS ISO 14001



Model 102 Cardboard & Plastic Model 205 Cardboard & Plastic Model 305 Cardboard & Plastic Model 306 Cardboard & Plastic Model 509 Cardboard & Plastic X-Press General Waste Model 101 Can Crusher

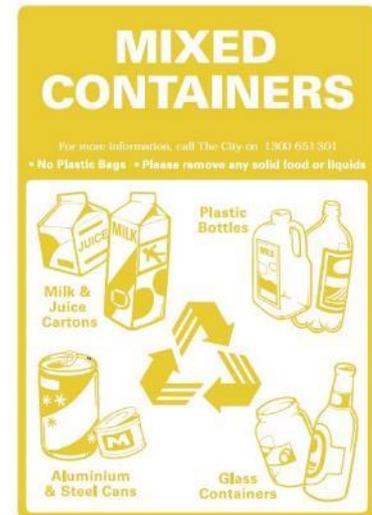
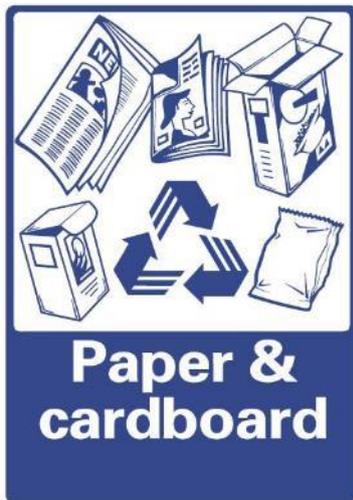
www.Mil-tek.com

Appendix C Standard Signage

Waste Signage

Signs for garbage, recycling and organics bins should comply with the standard signs promoted by the NSW Office of Environment and Heritage (NSW OEH, 2008b).

Standard symbols for use in signage, bin facade and educational materials are promoted through the NSW Environment Protection Authority. They are available for download from the NSW EPA website (NSW EPA 2016), in black and white and colour versions. The Australian Standard series AS 4123 (Part 7) details colours for mobile waste containers (Standards Australia, 2008).



Safety Signs

The design and use of safety signs for waste and recycling rooms and enclosures should comply with AS 1319 (Standards Australia 1994). Safety signs should be used to regulate, and control safety related to behaviour, warn of hazards and provide emergency information, including fire protection information. Below are some examples.

Appendix D Arcadis Waste Assessment (Construction Waste)

2 LEGISLATION AND POLICY CONTEXT

The waste management for the construction and operational phases of the Proposal is influenced by a series of pieces of legislation, policies and plans. Documents relevant to the Proposal are outlined in Table 2.

Table 2 Legislation and policy context

Instrument	Relevant provisions
<p>National Waste Policy: Less Waste, More Resources</p>	<p>The National Waste Policy, published in 2009 by the Federal Government, outlines the plans for waste management in Australia until 2020. The desired outcomes of the Policy are designed to steer the direction of waste management by all lower tiers of government. These outcomes are:</p> <ul style="list-style-type: none"> ▪ Australia manages waste, including hazardous waste, in an environmentally safe, scientific and sound manner, and has reduced the amount per capita of waste disposed ▪ Waste streams are routinely managed as a resource to achieve better environmental, social and economic outcomes, including saving water, energy, greenhouse gas emissions and finite resources, and to increase productivity of the land ▪ Australia has increased the amount of products, goods and materials that can be readily and safely used for other purposes at end-of-life ▪ Opportunities to safely manage, reduce and recycle waste are available to all Australians, including approaches that have been tailored to meet the needs of remote and rural communities ▪ Risks associated with waste and hazardous waste substances are understood and managed to minimise current and intergenerational legacy issues <ul style="list-style-type: none"> ▪ Australia manages its products, materials and chemicals that contain potentially hazardous substances, in particular those that are persistent, bio-accumulative and toxic, consistent with its international obligations and using best available evidence, techniques and technologies ▪ Local stockpiling of hazardous waste has been significantly reduced particularly from rural and remote areas ▪ There are consistent and clear requirements for disposal of hazardous material, and for content labelling of manufactured goods, that also provide a level playing field for Australian manufacturers and importers and informs consumers ▪ Interaction of regulatory frameworks and operational processes across government agencies aligns with world's best practice and facilitates waste avoidance, resource recovery and appropriate end-of-life management arrangements within their own operations as well as by businesses and the community

Instrument	Relevant provisions
	<ul style="list-style-type: none"> ▪ There are efficient and effective Australian markets for waste and recovered resources, and local technology and innovation are sought after internationally <ul style="list-style-type: none"> ▪ Businesses, including those in manufacturing and the supply chain, embrace innovations that support the creation of value from potential waste streams and minimise their environmental footprint ▪ As part of a seamless national economy, there is a consistent and coherent regulatory environment that facilitates business activity in resource recovery and waste management ▪ Governments, industry and the community have embraced product stewardship and extended producer responsibility approaches <ul style="list-style-type: none"> ▪ Product stewardship and extended producer responsibility is adopted in business operations, leading to improvements in the design, longevity and disassembly of products, a reduction in hazardous content, less waste, and more thoughtful consumer choices
<p>Product Stewardship Act 2011 (Commonwealth)</p>	<p>Product Stewardship refers to the ‘whole of life’ custodianship of products within the economy. This is achieved by encouraging or requiring manufacturers, importers, distributors and other persons to take responsibility for their products. Through Product Stewardship the amount of waste going to landfill is reduced, recycling rates are increased, valuable resource are reused for new products, and harmful substances in some products are prevented from entering the natural environment. The framework includes voluntary, co-regulatory and mandatory product stewardship.</p> <p>Voluntary accreditation schemes encourage product stewardship without the need for regulation. Organisations accredited under the legislation must meet specific requirements that ensure they carry out their activities in a transparent and accountable manner. Co-regulatory product stewardship schemes are delivered by industry and regulated by the Australian Government. The exact requirements are detailed separately in the regulations for the scheme. Mandatory product stewardship places legal obligations on parties to take certain actions in relation to a product. Requirements may include labelling of products, making arrangements for recycling products at end-of-life, or requiring a deposit and refund to be applied to a product.</p> <p>Items currently included in the 2015-2016 product list include:</p> <ol style="list-style-type: none"> 1. Waste architectural and decorative paint 2. End-of-life batteries less than 5kg in weight. <p>Until recently, end-of-life air conditioners and refrigerators with small gas charges were included in the product list. These items are now excluded as a cost benefit analysis of product stewardship of these products did not show a net benefit to society. Each year the Minister reviews the list for incorporation of suitable new product listings. The National Television and Computer Recycling Scheme came into effect in 2011 through the <i>Product Stewardship (Televisions and Computers) Regulations 2011</i>. The regulation supports a co-regulatory recycling scheme for televisions, computers, printers and computer products. In 2014 the federal government established a voluntary, industry-led tyre product stewardship scheme. The scheme is administered by Tyre Stewardship Australia (TSA). TSA aims to increase domestic tyre recycling, expand the market for tyre-derived products and</p>

Instrument	Relevant provisions
<p>NSW Waste Avoidance and Resource Recovery Act 2001 (WARR Act)</p>	<p>reduce the number of Australian end-of-life tyres that are sent to landfill, exported as baled tyres or illegally dumped.</p> <p>The NSW <i>Waste Avoidance and Resource Recovery Act 2001</i> (WARR Act) promotes waste avoidance and resource recovery by developing appropriate strategies and programs. The WARR Act includes the following objectives:</p> <ul style="list-style-type: none"> ▪ Encourage the most efficient use of resource and to reduce environmental harm in accordance with the principles of ecologically sustainable development ▪ Ensure that resource management options considered against the waste hierarchy ▪ Provide for the continual reduction in waste generation ▪ 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 ▪ Ensure the industry shares with the community the responsibility for reducing and dealing with waste ▪ Ensure the efficient funding of waste and resource management planning, programs and service delivery ▪ Achieve integrated waste and resource management planning, programs and service delivery on a state-wide basis ▪ Assist in the achievement of the objectives of the <i>Protection of the Environment Operations Act 1997</i>
<p>Waste Avoidance and Resource Recovery Strategy 2014 (WARR Strategy)</p>	<p>The WARR Strategy aims to reduce the environmental impact of waste and improve the well-being of the NSW environment, community and economy across the following key areas:</p> <p>Principles</p> <ul style="list-style-type: none"> ▪ Avoid and reduce waste generation – reducing the amount of material entering the waste management or recycling systems by using products and materials more efficiently and avoiding unnecessary product use ▪ Increase recycling – increasing the amount of material that is recycled within the productive economy ▪ Divert more waste from landfill – increasing the amount of material in the waste stream that is diverted from landfill to alternative uses, such as recycling and energy recovery ▪ Manage problem wastes better – separating and managing materials in the waste stream that hinder effective recycling ▪ Reduce litter – reducing the presence of litter in the environment ▪ Reduce illegal dumping – reducing the incidence of illegal dumping in the community

Instrument	Relevant provisions
	<p>Targets</p> <p>Key to delivering the WARR Strategy in the key results areas are the following targets:</p> <ul style="list-style-type: none"> ▪ By 2021-22, reduce the rate of waste generation per capita ▪ By 2021-22, increase recycling rates for: <ul style="list-style-type: none"> ▪ municipal solid waste from 52% (in 2010-11) to 70% ▪ commercial and industrial waste from 57% (in 2010-11) to 70% ▪ construction and demolition waste from 75% (in 2010-11) to 80% ▪ By 2021-22, increase the waste diverted from landfill from 63% (in 2010-11) to 75% ▪ By 2021-22, establish or upgrade 86 drop-off facilities or services for management of household problem wastes state-wide ▪ By 2016-17, reduce the number of litter items by 40% compared with 2011-12 levels and then continue to reduce litter items to 2021-22 ▪ By 2016-17: <ul style="list-style-type: none"> ▪ Reduce the incidence of illegal dumping of waste detected in Sydney and the Illawarra, Hunter and Central Coast regions by 30% compared with 2010-11 ▪ Establish baseline data to allow target-setting in other parts of the state
<p><i>Protection of the Environment Operations Act 1997</i></p>	<p>The <i>Protection of the Environment Operations Act 1997</i> (POEO Act) defines ‘waste’ for regulatory purposes and establishes management and licensing requirements along with offence provisions to deliver environmentally appropriate outcomes. The POEO Act includes protection of the environment policies (PEPs), which are used to establish environmental standards, goals, protocols. They provide both the framework for Government decisions that affect the environment and the means of adopting Australia-wide environment protection measures set by the National Environment Protection Council.</p> <p>The POEO Act contains a list of activities that require an environmental protection licence and provides a single licensing arrangement to replace the different licences and approvals under existing separate Acts relating to air pollution, water pollution, noise pollution and waste management. License holders are required to prepare and implement pollution incident response management plans and environmental audits. They also have a duty notify the regulating authority of pollution incidents.</p> <p>Scheduled and non-scheduled activities are regulated under the POEO Act, where the EPA is the appropriate regulatory authority. Under this legislation clean-up notices, prevention notices and fees can be issued. The Act has a three tier regime of offences relating to disposal of waste and corresponding penalties. Acts that render harm to the environment and acts of wilful negligence carry the most serious penalties.</p>
<p><i>Protection of the Environment Operations (Waste) Regulation 2014 (Proximity Principle)</i></p>	<p>The proximity principle restricts the distance waste can be transported by motor vehicle if generated in NSW. Waste cannot be transported more than 150km from the place of generation except where there are no lawful waste disposal facilities within 150km or if the disposal facility is located in another state and the border is within 150km of where the waste was generated.</p>

3 WASTE GENERATION

3.1 Construction

Waste generating activities during the construction phase are listed in Table 3, with the types of waste these activities are likely to generate being listed in Table 4.

Table 3: Waste generating activities during construction

Phase 1 - Site preparation, bulk earthworks and utilities infrastructure	Phase 2 - Construction and fit-out of: Stage 1 Warehousing (approx. 40,000m ²); Stage 2 Warehousing (approx. 44,000m ²); Stage 3 warehousing (approx. 23,000m ²)	Phase 3 - Miscellaneous structural construction and finishing works
<p>Site Preparation</p> <ul style="list-style-type: none"> Vegetation clearance Demolition of hail mesh structures Demolition of existing infrastructure Removal of pavements Removal of redundant services Bulk earth works <p>Early works</p> <ul style="list-style-type: none"> Surplus materials and offcuts from construction compound fencing and hoardings Bales and silt fences form installation of temporary sediment and erosion control measures Surplus materials and offcuts from installation of temporary site offices and amenities Excavation of fill when installing drainage and other utilities 	<p>Construction</p> <ul style="list-style-type: none"> Excavation associated with foundation work Surplus material and offcuts from: <ul style="list-style-type: none"> Foundation work and floor slab installation Erection of framework and structural walls Installation of roofing and wall coverings Internal fit out of building Connection to new utilities Landscaping Preparation of warehouse access road and car-parking areas Forming of new kerbs, gutters, medians and other structures Construction of asphalt and concrete pavements 	<p>Post Construction</p> <ul style="list-style-type: none"> Decommissioning/demobilisation of construction sites Landscaping Removal of construction ancillary facility

Table 4: Waste generated during construction

Waste Type	Classification	Estimated Quantity	Reuse/recycling	Disposal
<i>Demolition</i>				
Vegetation	General Solid Waste (non-putrescible)	Area of vegetation to be removed is yet to be determined, but could be up to 40,000 m ²	Transferred off-site for re-processing / recycling / reuse	Any element unable to be reused or recycled will require disposal at an

Minto Warehouse and Logistics Hub

Waste Type	Classification	Estimated Quantity	Reuse/recycling	Disposal
				appropriately licensed facility
Concrete / asphalt pavement	General Solid Waste (non-putrescible)	Area of pavement to be removed is yet to be determined, but could be up to 260,000 m ²	Either re-processed on site or transferred off-site for re-processing	Any element unable to be reused or recycled will require disposal at an appropriately licensed facility
Existing structures - Hail mesh structure	General Solid Waste (non-putrescible)	Hail mesh approx. 150,000 m ² plus support structure	Assume sold and reused	Any element unable to be reused or recycled will require disposal at an appropriately licensed facility
Existing structures - Existing building	General Solid Waste (non-putrescible)	Building footprint approx. 7,300 m ²	Transferred off-site for re-processing / recycling / reuse	Any element unable to be reused or recycled will require disposal at an appropriately licensed facility
Existing structures - Wash bays	General Solid Waste (non-putrescible)	Building footprint approx. 850 m ²	Transferred off-site for re-processing / recycling / reuse	Any element unable to be reused or recycled will require disposal at an appropriately licensed facility
Existing services - Stormwater	General Solid Waste (non-putrescible)	Infrastructure to be removed is yet to be determined, but could include culverts, pipes, fittings, geotextiles, pits and grates	Transferred off-site for re-processing / recycling / reuse	Any element unable to be reused or recycled will require disposal at an appropriately licensed facility
Existing services - Water - Sewer - Gas - Electricity - Telecommunications	General Solid Waste (non-putrescible)	Removal of existing infrastructure will be dependent upon the likelihood of upgrade	Transferred off-site for re-processing / recycling / reuse	Any element unable to be reused or recycled will require disposal at an appropriately licensed facility

Waste Type	Classification	Estimated Quantity	Reuse/recycling	Disposal
<i>Construction</i>				
VENM and ENM	General Solid Waste (non-putrescible)	Quantities yet to be determined	On-site re-use and / or taken off-site for recycling / reuse / re-processing, where relevant.	Any element unable to be reused or recycled will require disposal at an appropriately licensed facility
Contaminated soil	To be determined	Quantities yet to be determined, if any	N/A	Treatment and disposal
Concrete	General Solid Waste (non-putrescible)	Volume of concrete required at site is yet to be determined, however a quantity of concrete wasted will be minimised through construction management processes	Either re-processed on site or transferred off-site for re-processing	Any element unable to be reused or recycled will require disposal at an appropriately licensed facility disposal
Asphalt	General Solid Waste (non-putrescible)	Volume of concrete required at site is yet to be determined, however a quantity of asphalt wasted will be minimised through construction management processes	Either re-used / re-processed on site or transferred off-site for reuse / re-processing	Any element unable to be reused or recycled will require disposal at an appropriately licensed facility
Timber and formwork (used and offcuts)	General Solid Waste (non-putrescible)	In-situ concrete yet to be determined, however a quantity of timber and formwork will be wasted. Waste generated will be minimised through construction management processes.	Either re-used on site or transferred off-site for reuse / re-processing	Any element unable to be reused or recycled will require disposal at an appropriately licensed facility
Bricks / pavers / tiles	General Solid Waste (non-putrescible)	Quantities of bricks / pavers / tiles yet to be determines, however it is assumed that a proportion will be wasted, through breakage and off-cuts. Waste generated will be minimised through construction	Transferred off-site for re-processing	Any element unable to be reused or recycled will require disposal at an appropriately licensed facility

Minto Warehouse and Logistics Hub

Waste Type	Classification	Estimated Quantity	Reuse/recycling	Disposal
		management processes.		
Sedimentation controls	General Solid Waste (non-putrescible)	Controls are likely to include hay bales and silt fences	Transferred off-site for re-processing	Any element unable to be reused or recycled will require disposal at an appropriately licensed facility
Packaging	General Solid Waste (non-putrescible)	Construction management processes will minimise the quantity of packaging waste produced	Packaging waste will be recycled wherever possible	Any element unable to be reused or recycled will require disposal at an appropriately licensed facility
General construction waste (non-putrescible)	General Solid Waste (non-putrescible)	Construction management processes will minimise the quantity of general construction waste produced	Transferred off-site for re-processing and recycling, wherever possible	Any element unable to be reused or recycled will require disposal at an appropriately licensed facility
Putrescible office and lunchroom waste	General Solid Waste (putrescible)	The project is expected to create 300 construction jobs, however the amount of waste produced by on-site workers will be dependent on phase of construction, how many workers are on site and facilities provided for workers.	N/A	Any element unable to be reused or recycled will require disposal at an appropriately licensed facility
Non-putrescible office and lunchroom waste	General Solid Waste (non-putrescible)	The project is expected to create 300 construction jobs, however the amount of waste produced by on-site workers will be dependent on phase of construction, how many workers are on site and facilities provided for workers.	All paper / cardboard and commingled recyclables will be transferred off-site for recycling	Any element unable to be reused or recycled will require disposal at an appropriately licensed facility

4 POTENTIAL IMPACTS

The impacts of the Proposal include construction and operational impacts. Construction impacts relate to the waste streams which could be generated by the demolition and construction processes and operational impacts relate to the management of waste streams that could be produced at the Proposal site when the facility is operational. This Section outlines potential impacts associated with treating, storing, using and disposing of any waste and waste products. These have been separated into impacts associated with treating, storing and using materials on-site, and recycling and disposal, which occurs off-site.

4.1 Construction

Table 6 provides a list of impacts associated with potential waste management activities. These are indicative only and subject to requirements set out in the Construction Environmental Management Plan (CEMP) to be issued prior to commencement of construction.

Table 7: Potential impacts associated with on-site and off-site waste management during construction

On-site Waste Management	Off-site Waste Management
<p>Treatment and/or Reprocessing</p> <ul style="list-style-type: none"> Vegetation will be either re-processed on-site or transferred off-site for reprocessing. Should this occur on-site, it will have an impact on noise sensitive receivers. Concrete and asphalt will be reprocessed on-site or transferred off-site for reprocessing. Should this occur, it would potentially generate dust and have an impact on noise sensitive receivers. 	<p>Recycling</p> <ul style="list-style-type: none"> Noise associated with recycling activities (particularly with construction and demolition (C&D) waste) Dust caused by recycling activities (particularly with C&D waste) Odour associated with putrescible waste processing Greenhouse gas emitted from recycling activities
<p>Storage</p> <ul style="list-style-type: none"> VENM / ENM will be stored on-site for re-use or prior to removal from site. Should concrete and asphalt be re-processed and re-used for on-site applications, it will be stockpiled on-site. Potential impacts associated with concrete stockpiling include health and safety hazards, dust and impact on visual amenity. Timber, plasterboard, bricks / pavers / tiles, sediment controls, surplus building materials and other C&D wastes will be temporarily stockpiled on site prior to re-use, re-processing and / or off-site disposal. This could result in health and safety issues, dust and could impact visual amenity. If waste is stored incorrectly, it may result in airborne litter and stormwater pollution. 	<p>Disposal</p> <ul style="list-style-type: none"> Greenhouse gas associated with disposal of putrescible waste Dust Consumption of landfill airspace Disposal of potentially valuable natural resources Health and safety risks associated with hazardous waste disposal
<p>Re-use</p> <ul style="list-style-type: none"> The Contractor may re-use some waste materials on-site. This is not expected to have an impact as it will essentially replace virgin materials. 	

5 MITIGATION MEASURES

This Section outlines mitigation measures to address the impacts of waste management during the construction and operational phases as described in Section 4. It also outlines the principles which will ensure the Proposal's consistency with the aims, objectives and guidance in the NSW Waste Avoidance and Resource Recovery Strategy 2014-2021 (see Section 2), such as decreasing waste generation and increasing recycling.

5.1 Construction

Measures to mitigate the effect of the construction waste streams would be incorporated into the CEMP (to be issued prior to commencement of construction), including the following:

- Characterisation of construction waste streams
- Management of any identified hazardous waste streams
- Procedures to manage construction waste streams, including handling, storage, classification, quantification, identification and tracking
- Mitigation measures for avoidance and minimisation of waste materials
- Procedures and targets for reuse and recycling of waste materials.

Best-practice waste management principles would be incorporated into the CEMP, such as:

- All waste and recyclable streams shall be stored separately on site
- All storage areas / containers for each waste and recycling stream shall be kept on the site at all times and shall be indicated on the site plans/drawings as part of the CEMP
- Convenient and safe vehicular access to waste and recycling material storage areas shall be provided
- The removal, handling and disposal of asbestos or other hazardous materials shall be carried out in accordance with WorkCover NSW, Office of Environment and Heritage and other regulatory authority guidelines and requirements
- Appropriate signage will be used in the waste storage area to ensure correct separation of recyclables
- Stockpiles will be maintained in accordance with the erosion and sedimentation control plan
- Waste to be stored so as to avoid airborne litter, vermin and stormwater pollution
- Re-processing, recycling and/or removal of waste materials for disposal should be scheduled to limit stockpiling and associated impacts.
- Putrescible materials need to be removed from site as soon as possible to avoid odour impacts. Non-putrescible materials should be reprocessed or removed from site on an 'as-needs' basis to limit logistical, health and safety and dust impacts. Hazardous waste materials, should they arise, must be immediately removed to limit environmental and health and safety risks.
- Waste materials should only be transported to their next destination using a licensed contractor
- Waste materials should only be transported to an appropriately licensed facility for recycling or disposal
- Records to be maintained on all waste exiting the construction site.

Waste avoidance principles that could be incorporated into the CEMP include:

- Avoidance and reuse of material would have priority over recycling
- Recycling would have priority over disposal
- If possible concrete components would be crushed and re-used on-site, with the remainder sent to a recycling facility

- Waste generation would be minimised by ordering the correct quantity of materials
- Selection of materials which maximise recycled content, while having low embodied water and energy use
- Selection of materials which maximise durability and lifespan.
- Selection of reputable waste removal contractors who will guarantee that recyclable material will be recycled and will provide any relevant certificates
- Vegetation removed shall be either preserved for use in the new development, or mulched for inclusion in landscaping activities. The remainder will be sent to a composting facility.
- Excavated earth will be used for infill and landscaping where feasible, the remainder will be sent to a recycling facility
- Asphalt will be re-used by transferring it to a batching plant or using it as a base layer for access roads
- Coordinate and sequence trades people to minimise waste
- Pre-fabricate materials where possible
- Use modular construction to reduce the need for excess waste, where possible or feasible
- Reuse formwork
- Separate off-cuts to facilitate reuse, re-sale or efficient recycling
- Select landscaping which reduces green waste
- Engage with the supply chain to supply products and materials that use minimal packaging
- Set up schemes with suppliers to take back packaging materials.

5.2 Operations

~~Measures to mitigate the effect of waste arising during operation of the facility would be incorporated into the Proposal's environmental policy for operations, within the OEMP. This policy would include measures to encourage recycling behaviour and increase the diversion of waste into recycling streams. These would include requirements such as:~~

- ~~• Addressing waste management requirements and goals in staff inductions~~
- ~~• Providing staff access to documentation outlining the facility's waste management requirements~~
- ~~• Locating recycling bins in kitchen areas beside general waste bins to prevent contamination of recycling~~
- ~~• Positioning paper recycling bins close to printer/photocopying equipment~~
- ~~• Minimising general waste bins at desks but providing adequate container and paper recycling to encourage sorting of recyclables~~
- ~~• Providing adequate bin storage for the expected quantity of waste.~~

~~Waste arising from maintenance would be dealt in part by the asset management strategy and the overarching environmental policy which adheres to the waste hierarchy. Where feasible from a safety and cost perspective, assets would be refurbished; if a replacement is required the maintenance contractor would be responsible for ensuring any waste is recycled; if this is not possible arrangements for disposal at an appropriately licenced facility would be made.~~

~~Disposal of containers would be provided in the area around the diesel re-fuelling station to dispose of used spills kits. These containers will be taken for disposal at an appropriately licenced facility.~~

~~The following mitigation and quality control measures would be incorporated into the OEMP:~~

- ~~• Appropriate areas shall be provided for the storage of waste and recyclable material~~

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