



Waste Management Plan Operational

78 Lockwood Road Data Centre
(SSD-82211208)

October 2025

Project

Waste Management Plan (Operational)
78 Lockwood Road Data Centre (SSD-82211208)

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Document Control			
No.	Version	Date	Author(s)
1	First Draft	24 June 2025	Patrick Arnold – Director
2	Final	22 June 2025	Patrick Arnold – Director
3	Final – minor update	11 August 2025	Patrick Arnold – Director
4	Test of Adequacy update	30 October 2025	Patrick Arnold – Director

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1 Introduction

This **Operational Waste Management Plan** report has been prepared by **NULOOP** on behalf of STACK Infrastructure to accompany a State Significant Development Application (SSDA) for a proposed data centre development at 78 Lockwood Road Data Centre (the site).

The site is located in the Penrith Local Government Area (LGA) and is approximately 40km west of the Sydney Central Business District (CBD), 20km west of the Parramatta CBD, and 10km north-east of the future Western Sydney International Airport.

The site is an irregular shaped 7.7-hectare lot bounded to the north by Lenore Drive and to the east by an E2 Environmental Conservation corridor that follows Ropes Creek. The site relies upon access from a cul-de-sac at the eastern end of Lockwood Road at the site's southern boundary. An aerial photograph is provided at Figure 1.

Figure 1: Aerial Photograph of Site



Source: Urbis GIS, 2025

The project comprises the construction of a data centre development including the following key components:

- Site preparation and bulk earthworks.
- Construction of a three-storey data centre development, with a maximum height of 26.5 metres and a combined total gross floor area (GFA) of approximately 55,651 sqm including technical data halls, office and administrative areas, and ancillary circulation space.

- At grade car park undercroft (34 parking spaces) within the building footprint and overflow parking (44 parking spaces) comprising 78 parking spaces.
- Landscaping and associated public domain works.
- 170 generators for backup power.
- Extension and augmentation of physical infrastructure and utilities, as required including new on-site substation towards the north of the lot and water storage tanks integrated within the building footprint.

1.1 SEARs relevant to this report

This report has been prepared in response to the requirements contained within the Secretary's Environmental Assessment Requirements (SEARs) dated 11 April 2025 issued for the SSDA (SSD-82211208). Specifically, this report has been prepared to respond to the SEARS requirement issued below.

Table 1. SEARs for Waste Management	
Issue and Assessment Requirements	Response
Identify, quantify, and classify the likely waste streams to be generated during construction and operation.	Refer to Section 2 Waste Generation Estimates Construction aspects have been addressed in a separate Construction & Demolition Waste Management Plan document.
Provide the measures to be implemented to manage, reuse, recycle and safely dispose of waste.	Refer to: <ul style="list-style-type: none"> · Section 3 Waste Management Systems · Section 4 Waste & Recycling Storage Areas
Identify appropriate servicing arrangements for the site.	Refer to: <ul style="list-style-type: none"> · Section 5 Collections · Section 6 Internal Management Protocols

2 Waste Generation Estimates

The proposed development at **78 Lockwood Road Data Centre** is a data centre and as such the key waste generation areas will be in the office and administration areas.

Table 1 below details the **waste generating areas** of the development for each building. These areas will form the basis of the waste generation estimates and subsequent equipment/management recommendations. These figures do not represent the total NLA of the new development – only the areas that will actually contribute to waste generation.

Table 2 Waste generation areas by location and usage

Level	Building A (m ²)	Building B (m ²)	Usage/assumptions
Level 1	940	940	Standard office and administration areas including print rooms and kitchenette
Level 2	940	940	
Rooftop	850	850	
TOTAL	2,730	2,730	

Generation rates have been adopted based on the commercial waste generation rates (on average) enclosed in the EPA NSW Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities (2012). These rates are considered appropriate for an Industrial development located within the Penrith City Council defined in Council's [Guidelines for Waste Management](#).

Table 3 Waste generation rates by usage

Usage	General Waste (L/100m ² /week)	Mixed Recycling (L/100m ² /week)
Office and administration	56	42

Waste generation rates are shown in Table 4. Calculations are based on a 7 day per week operation for the proposed data management facility.

Table 4 Waste generation rates by usage

Building	General Waste (L/week)	Mixed Recycling (L/week)
Building A	1,529	1,147
Building B	1,529	1,147
TOTAL	3,058	2,293

Based on the information provided and benchmark data from similar developments, the primary waste streams expected to be generated in the ongoing operation of the development would be:

- General waste
- Mixed recycling (includes paper & cardboard)
- Secure paper recycling will be managed on the office floors at the discretion of the tenants' requirements.
- Additional smaller waste streams may include toner cartridge, lighting and battery recycling.

3 Waste Management systems

3.1 Core systems

The tables below detail the recommended systems and collection frequencies required to manage the estimated waste volumes shown in the previous section. Equipment selection and numbers have been based on operations of similar sites.

The waste management systems exceed Council generation estimates as estimated in Section 2.

Table 5 Recommended equipment and collection frequency – Building A

Waste Stream	Bin Type	No of Bins/units	Clearance Frequency per week	Capacity (L)	Estimated volume/ week	Footprint per bin m ²	Total bin Footprint m ²
General Waste	MGB 660L -	3	1	1,980	1,529	0.93	2.79
Mixed Recycling	MGB 660L -	2	1	1,320	1,147	0.93	1.86
Total bin footprint							4.65
Recommended Room Size – including circulation space							6.975
Bin room size							15.75

Table 6 Recommended equipment and collection frequency – Building B

Waste Stream	Bin Type	No of Bins/units	Clearance Frequency per week	Capacity (L)	Estimated volume/ week	Footprint per bin m ²	Total bin Footprint m ²
General Waste	MGB 660L -	3	1	1,980	1,529	0.93	2.79
Mixed Recycling	MGB 660L -	2	1	1,320	1,147	0.93	1.86
Total bin footprint							4.65
Recommended Room Size – including circulation space							6.975
Bin room size							15.75

3.2 Other waste/ recycling

The following waste streams are unlikely to be generated regularly but can be collected on call as needed:

- E-waste - collected by facilities management staff and consolidated for collection by specialty e-waste contractor for recycler (usually provided by the appointed waste contractor on an on-call basis).
- Bulky waste – it will be the duty of tenants to inform facilities management staff of any bulky waste that will be required to be removed from site, including material generated during defit/refurbishments.

Contractor/delivery waste – Waste generated onsite by contractors/deliveries must be taken back unless prior consent has been negotiated with facilities management.

4 Waste and Recycling Storage Areas

4.1 Waste Storage Area Locations

The waste and recycling storage rooms are located adjacent to the loading dock in on the lower ground floor of each building.

The waste rooms meet the following requirements:

- The waste storage rooms provide ample storage space for the recommended systems detailed in section 5.
- Open straight onto the loading bay, allowing bins to be moved straight to the collection vehicle with minimal manual handling
- Bin travel path to the main waste room is accessible without the use of stairs. There is a central lift from waste generating floors to bring material to the ground floor. The loading dock has a dock leveller/scissor lift that allows access to the waste room.
- Doorways in waste room exceed 1.5 metres width via the roller door.
- Ample space for bulky waste storage.
- The room can be accessed by an MRV (rear-lift) waste truck (refer to section 7 for specifications).

The figure below highlights the waste rooms for each building.

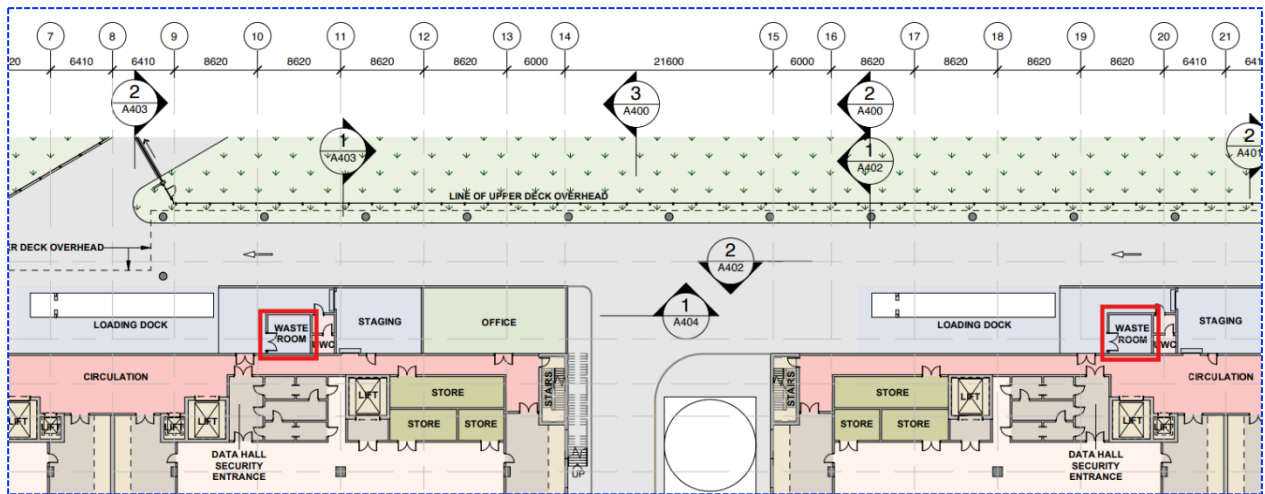


Figure 2 Waste storage area locations on lower ground floor – SDA-DR-A200 – Genton

4.2 Waste Storage Area Design Requirements

The main waste and recycling storage room will have the following features:

- Ventilation: The bin storage rooms will be ventilated to external air or mechanically exhausted in accordance with AS 1668.2-2002
- Vermin Prevention:
 - The bin storage rooms will feature tightly fitted doors
 - Opening will be vermin proof
 - Cleaners are to ensure that bin lids are closed when unattended
- Doors: The room will be fitted with a close fitting self-closing door that is openable from inside the room without the use of a key. The doors will be finished with a smooth faced impervious material that is capable of being easily cleaned
 - *A27 - An approved roller shutter door may be permitted under special circumstances. When permitted a sign must be erected in a conspicuous position drawing attention to the fact the door must be kept closed at all times when not in use.*
- Noise: Waste collection timings and schedule should be performed in accordance with EPA NSW Protection of the Environment Operations [Noise Control] Regulation 2017.
- Waste contractors should also abide by the following regulations to ensure minimal noise impacts to the neighbouring properties
- Floor: Structural concrete slab with smooth epoxy topping finish with coved wall and floor junctions. Graded drains to approved sewer connections – fitted with an in-floor dry basket arrestor approved by Sydney Water Corporation
- Walls: Brick work/concrete block or similar finished in a light coloured, washable paint
- Ceiling: Structural concrete slab over
- Lighting: Base building lighting with switches inside and outside waste room (sensors may also be used)
- Water Supply: cold tap and hose connection
- Signage: clear signage identifying the various streams and appropriate use will be prominently displayed

The ongoing maintenance and up-keep of the waste storage room will be the responsibility of cleaning/building management staff. They will be tasked with ensuring bins are stored neatly and are cleaned as required.

5 Collections

Section 5 provides the suggested collection frequency for all waste and recycling streams for each building. Section 6 details the waste storage area location where the waste contractor will service the building.

5.1 Waste collection vehicle

Waste truck specifications will vary slightly between contractors however as a guide, all streams and bins recommended in this report would typically be collected by a medium-rigid rear lift waste truck.

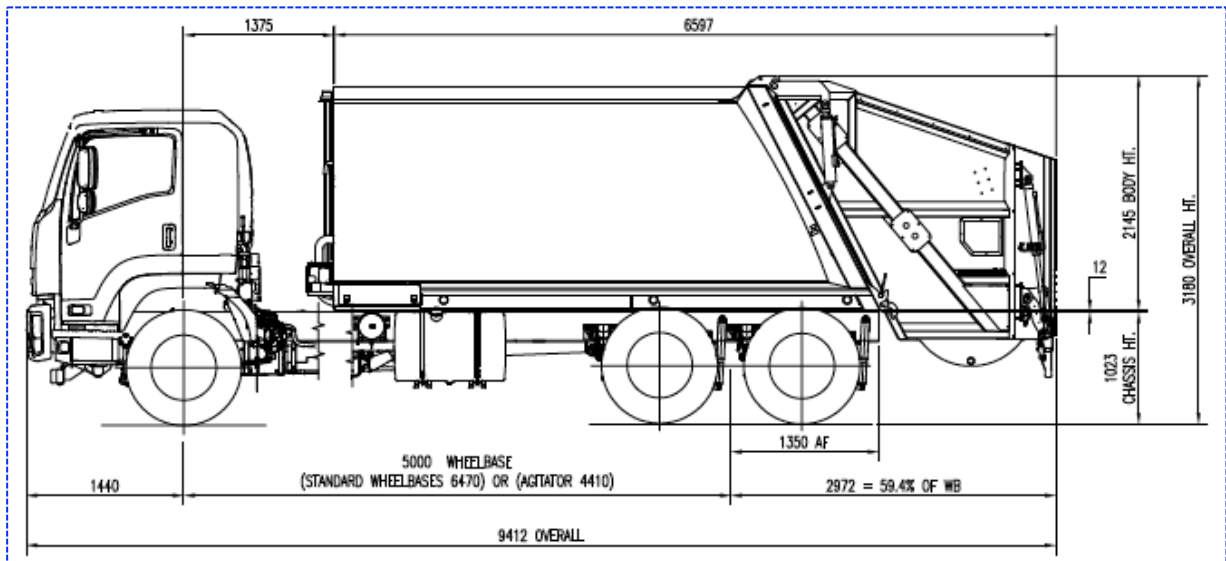


Figure 3 Medium rigid rear-lift commercial waste truck specifications

5.2 Collection access

The following requirements that relate to collection vehicles servicing the site have been met.

- Compliance with Australian Standard AS 2890.2 Parking Facilities: Off-Street Commercial Vehicle Facilities.
- Height to the structural members and upper floor ceiling provided in the collection vehicle manoeuvring and service area allow for typical collection vehicle travel/operational height requirements.
- Adequate provision of space clear of structural members or vehicle parking spaces to allow a three-point turn¹ by collection vehicles.
- The floor is industrial-type strength pavement and designed for a maximum wheel loading of seven tonnes per axle to accommodate collection vehicles.

Bins are to be collected by the waste contractor immediately adjacent the waste room from the loading dock. Refer to the traffic management report for further detail indicating how MRV's will access and exit the loading dock areas.

¹ MRV manoeuvring template has been provided in Appendix 2

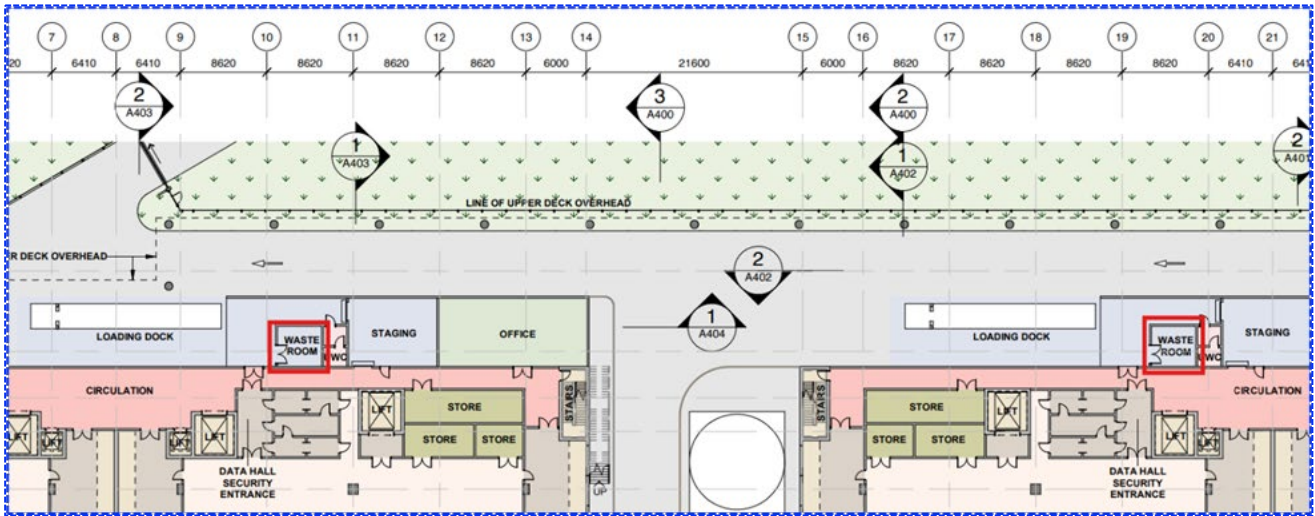


Figure 4 Waste storage area locations – SSSA-DR-A200 – Genton

6 Internal Management Protocols

The details provided in this section outline a high-level management of material generated inside the development.

- Key responsibilities have been outlined in section 8.1, and
- Best practice segregation systems, signage and colour coding has been outlined in sections 8.2 & 8.3.

6.1 Responsibilities

Table 7 Stakeholders and responsibilities

Stakeholder	Responsibilities / Management Protocol
Facility Manager	<ul style="list-style-type: none"> • The facility manager would be responsible for overseeing operational waste management within the development. Responsibilities would include: <ul style="list-style-type: none"> • Training of tenants, staff, cleaners and contractors to utilise waste management systems appropriately. • Ensure adequate provision of bin receptacles with adequate colour coding and signage.
Tenants in office & administration areas	<ul style="list-style-type: none"> • A centralised “bin-hub” will be utilised on each floor to eliminate personal desk bins thus reducing contamination rates and cleaner costs. Section 8.1 provide examples of bin-hub configurations on the floor and integrated into cabinetry. • Tenants will be responsible for separating their waste and recyclables into the correct bin provided on their floor. • Tenants will manage the disposal of secure paper through dedicated secure 240L bins on their office floors which be collected by the tenant-managed secure paper contractor.
Cleaners	<ul style="list-style-type: none"> • Cleaners will be responsible for regular collection of the material in the bin-hubs located on each office floor. They will transfer all material to the waste storage area adjacent to the dock via the goods lift after the close of business each night as part of their daily cleaning activities. All materials will be decanted into the larger bins provided within the waste storage area. • Cleaners will monitor any non-secure paper bins on tenant floor and when full, they will transfer to the waste storage area for collection. They will then be returned once emptied to be available for use during normal business hours. • Cleaners will monitor for any ongoing contamination of the recycling stream and report this back to the Facility Manager.

6.2 Segregation Systems

The following provides examples of segregation systems that could be adopted. Appendix 3 provides a full list of waste management suppliers.

Bin hubs - waste/ recycling "multisort" bins (60L or 90L)



Bin hub "multisort" bins integrated into cabinetry



Recycling wall hub – modular system



Battery recycling tube



Source: <https://www.sourceseparationsystems.com.au/>

6.3 Signage & Colour Coding

Signage and colour-coding can greatly increase recovery rates and reduce contamination. This should be consistent in tenant areas and in the waste room.

CitySwitch provides the following resources to support office-based businesses.

- Signage²
- Waste guide for offices³



Figure 5 Stream appropriate signage



Figure 6 Stream appropriate signage above bin hub

² [How to reduce waste: the dos and don'ts of signs \(cityswitch.net.au\)](https://www.cityswitch.net.au)

³ [Waste guide for offices: Shifting to a circular economy \(datocms-assets.com\)](https://www.datocms-assets.com)

Appendix 1 – Bin Dimensions

The following bin dimensions are industry standard bin sizes; however, sizing may vary by manufacturer.

120-litre MGB

Dimensions - Weights - Standards

- Nominal volume: 120 litres
- Net weight: approx 9.3 kg
- Max load: 48 kg
- Permitted total weight: 60 kg

■ A 930 mm	■ D 545 mm	■ G 480 mm
■ B 870 mm	■ E 480 mm	
■ C 480 mm	■ F 335 mm	

Measurements to be used as a guide only - variations will occur

240 -litre MGB

Dimensions - Weights - Standards

- Nominal volume: 240 litres
- Net weight: approx 13 kg
- Max load: 96 kg
- Permitted total weight: 110 kg

■ A 1060 mm	■ D 730 mm	■ G 550 mm
■ B 990mm	■ E 585 mm	
■ C 660 mm	■ F 400 mm	

Measurements to be used as a guide only - variations will occur

660-litre MGB

Dimensions - Weights - Standards

- Nominal volume: 660 litres
- Net weight: 43 kg
- Max. load: 265 kg
- Permitted total weight: 310 kg

Measurements to be used as a guide only - variations will occur

1100 -litre MGB

Dimensions - Weights - Standards

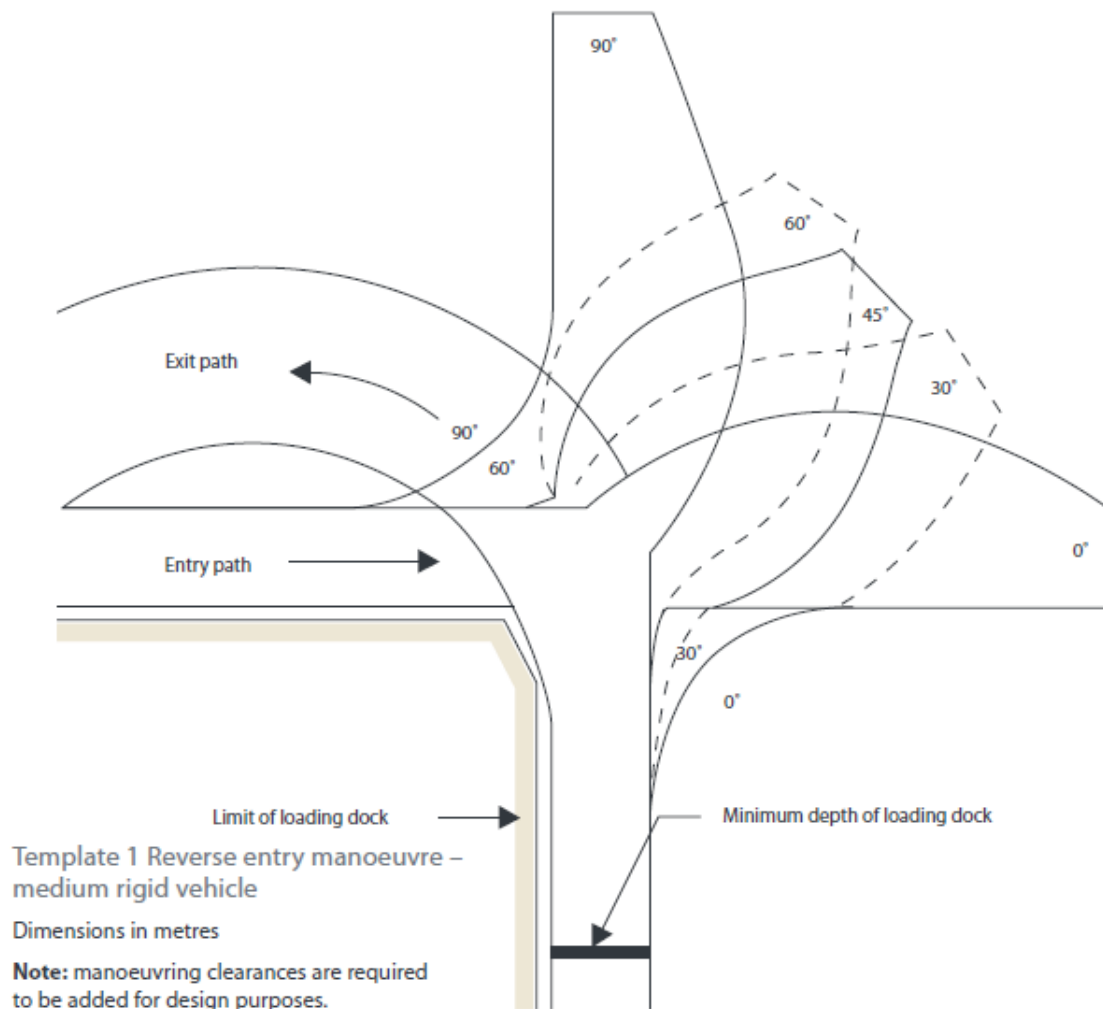
- Nominal volume: 1100 litres
- Net weight: approx. 65 kg
- Max. load: 440 kg
- Permitted total weight: 510 kg

Measurements to be used as a guide only - variations will occur

Appendix 2 – Medium Rigid Vehicle manoeuvring

The following MRV specifications and turning circle template is from [EPA NSW Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities \(2012\)](#).

Vehicle class	Overall length (m)	Design width (m)	Deign turning radius (m)	Swept circle (m)	Clearance (travel) height (m)
Medium rigid vehicle	8.80	2.5	10.0	21.6	4.5



Appendix 3 – Supplier List

Bin Equipment

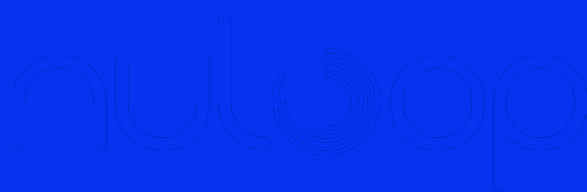
- Sulo MGB Australia [wheelie bin] - 1300 364 388
- Method Recycling [bin stations] – 0499 980 455
- Source Separation System [bin stations] - 1300 739 913

Waste Collection

- Bingo – 1300 424 646
- Cleanaway - 13 13 39
- JJ Richards - 1300 971 325
- Veolia Environmental Services - 132 955
- Wanless - 1300 926 537
- Wasteflex [broker] - 1300 927 833

Speciality Waste Collection

- Shred X [Secure paper & document destruction] – 1300 156 954
- Iron Mountain [Secure paper & document destruction] – 1300 156 954
- Terracycle [Specialty recovery items] – 1800 983 324



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