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Waste Management Plan for **4 Cross Street, Brookvale, NSW**

Prepared by

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1. Introduction

Loka Consulting Engineers Pty Ltd has been engaged by Harding Architects Pty Ltd to provide a Waste Management Plan for the site at 4 Cross St, Brookvale, NSW located within Northern Beaches Council (refer to Figure 1.1 and Figure 1.2).

A waste management plan and report are required for the proposed development to support the design during demolition, construction and service conditions, along with achieving the objectives to promote sustainable operation of the development. The development achieves the waste management objectives set out in the council codes as well as any statutory requirements. The details which will be addressed include:

- a description of the site and details of the development proposal;
- reuse, recycling and disposal of materials during demolition, construction and service conditions;
- a review of the design features of the proposed waste management system for compliance with relevant codes, standards and regulations; and
- identification of procedures for on-going waste management.

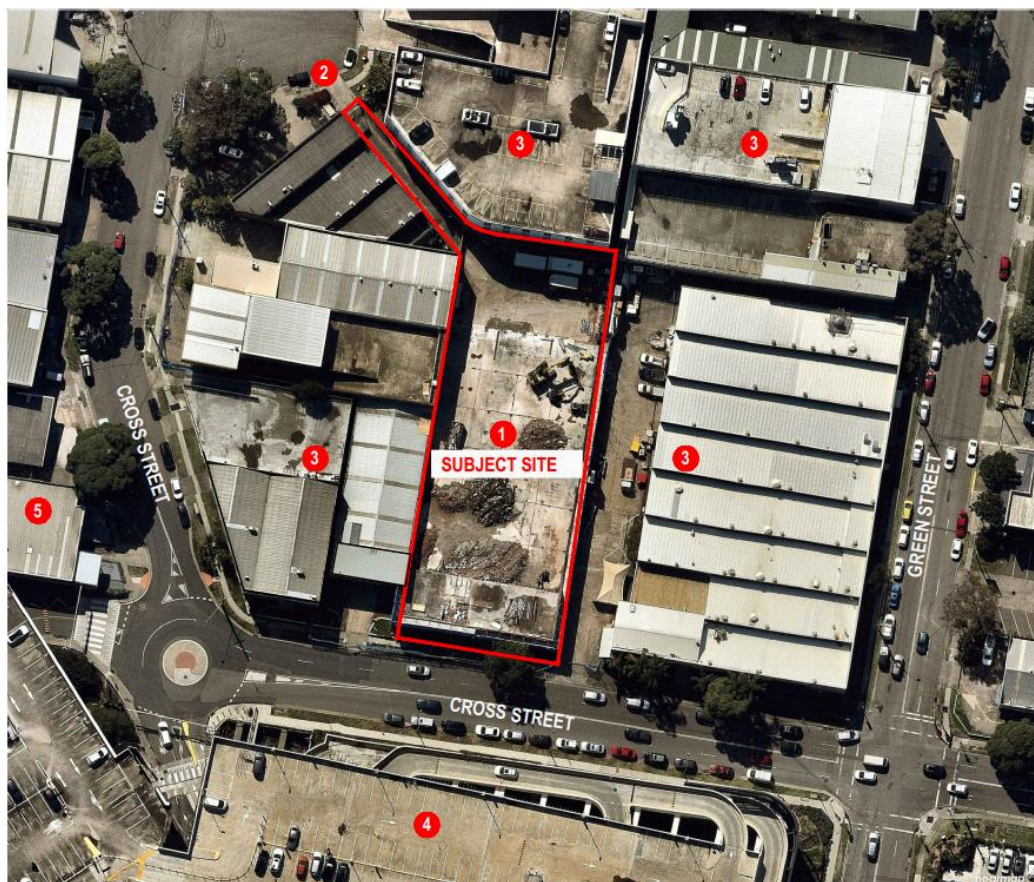


Figure 1.1: Subject site (Source: Architect)



Figure 1.2: Site location (Source: SIX Maps)

2. Property Description

The proposed development will facilitate the demolition of all structures and construction of a 4-storey storage building within a site area of 2450m².

The proposed development is bounded by:

- Lot 100 DP 817162 on the East
- Lot 26-28, 30 DP 200041 on the West
- SP 39226 on the North
- Cross St on the South

3. Project Proposal

Waste storage and transportation will be managed during demolition and construction stages as well as in service conditions. Waste produced from the construction stages will be reused or recycled as appropriate, or disposed using certified waste collection contractors.

The management of waste during service conditions of the development will involve the building manager maintaining Waste Storage and Recycling Area located on site, with the collection of general waste and recycling primarily involving a private waste contractor. It is proposed that a total of **1 x 240L** garbage bin, **1 x 660L** garbage bin and **1 x 240L** recycling bin are provided. The building manager will arrange all the bins on site where they will be collected by the nominated private waste contractor.

4. Demolition

Materials from the demolition stage shall be reused, recycled or disposed in accordance with the provisions outlined in this WMP and the requirements of the Protection of the Environment Operations (Waste) Regulation 2014.

Where possible, waste materials should be managed so most materials will be reused or recycled, with only a small proportion of waste going to landfill.

Prior to any demolition works, a suitably qualified inspector shall conduct inspection of asbestos construction materials (ACMs) on the existing structures to be demolished. The inspector shall certify to council in writing if the asbestos materials are less than 10m². If more than 10m², a licensed asbestos remover shall conduct the asbestos removal and tipping. In the latter case, the name, address and asbestos license number of the remover, as well as the name and address of the licensed landfill where all asbestos will be taken shall be informed to the council. All records covering All records covering the transport and tipping of any asbestos construction materials or any asbestos contaminated materials must be maintained on site for the inspection of a Council officer or other Principal Certifying Authority.

Asbestos-contaminated soils must be wetted down. All asbestos waste must be transported in a part of the vehicle that is covered and leak-proof; and disposed of at a landfill site that can lawfully receive it. The project manager will ensure a unique consignment number is created and report to EPA using WasteLocate if over 100 kilograms or 10 square meters of asbestos is being disposed of. No asbestos waste is disposed to general waste or recycle bin; or reuse, recycle or illegally dumped.

4.1 Managing Materials from Demolition

Table 1 below details the amount of material that is estimated to be produced from the demolition stage, as well as the planned reuse, recycling or disposal plans.

Table 1: Management of demolition materials

Materials on-site		Reuse and recycling		
Type of Material	Estimated volume (m ³) or area (m ²) or weight (t)	On-site How materials will be reused or recycled on-site	Off-site Contractor and recycling outlet	Disposal Contractor and landfill site
Concrete	500m ³	N/A	SUEZ Belrose Crozier Rd, Belrose NSW 2085	Nil to landfill

4.2 Site Operation and Management

The site operation will be managed to reduce waste creation and maximise reuse and recycling by setting waste management requirements in contracts with sub-contractors, on-going checks by supervisors on site and the use of clear signage at designated waste areas.

In addition, the project team leader will:

- Liaise with contractors to identify areas where they can reduce waste and reuse materials in their respective trades
- Meet local, state and federal waste minimisation legislation and environmental standards
- Prevent pollution and damage to the environment
- Protect the safety and health of our employees and the public

Waste will be separated and stored onsite for reuse and recycling through maintaining separate areas for sorted wastes with one area for recyclables and another area for waste going to landfill. Utilising selective deconstruction rather than straight demolition will ensure that good quality material can be reused or recycled.

5. Construction

Materials that are not used in the construction stage shall be reused, recycled or disposed in accordance with the provisions outlined in this WMP and the requirements of the Protection of the Environment Operations (Waste) Regulation 2014.

Where possible, waste materials should be managed so most materials will be reused or recycled, with only a small proportion of waste going to landfill.

5.1 Managing Waste Materials from Construction

Table 2 below details the amount of waste material that is estimated to be produced from the construction stage, as well as the planned reuse, recycling or disposal plans.

Table 2: Management of waste construction materials

Materials on-site		Reuse and recycling		
Type of Material	Estimated volume (m ³) or area (m ²) or weight (t)	On-site How materials will be reused or recycled on-site	Off-site Contractor and recycling outlet	Disposal Contractor and landfill site
Metal	50m ³	N/A	SUEZ Belrose Crozier Rd, Belrose NSW 2085	SUEZ Belrose Crozier Rd, Belrose NSW 2085
Concrete	200m ³	N/A	SUEZ Belrose Crozier Rd, Belrose NSW 2085	Nil to landfill
Bricks/Pavers	50m ³	Clean & reuse for landscaping, bricks in good condition used for internal walls	SUEZ Belrose Crozier Rd, Belrose NSW 2085	Nil to landfill
Plasterboard	50m ³	Break up and use in landscaping	SUEZ Belrose Crozier Rd, Belrose NSW 2085	SUEZ Belrose Crozier Rd, Belrose NSW 2085

5.2 Construction Design and Management

Waste avoidance has been incorporated into the design by incorporating as much detail as possible within the design, and using pre-fabricated materials to ensure a reduction in waste generated on-site. Materials purchased will be checked against previously known quantities required to build similar projects, and adjusted as construction progresses for this particular project. Reduction in waste can also be achieved through the reuse of building materials in good condition from the demolition phase.

6. Management of Waste

6.1 Design Requirements

6.1.1 Waste production and storage per unit

Since the development is proposed to be storage units, waste generated from these storage units will be close to none and only admin/office area will be contributing to waste generation. All storage users are required to remove their own waste and therefore there will be minimal waste removal requirements.

According to EPA Better Practice Guide for Waste Management in Multi-unit Dwellings, waste generation rates for office have been given as follow:

- Waste: 10L/100m²/day;
- Recycling: 10L/100m²/day; and

The waste generated and required number of bins is shown in Table 3.

Table 3: Calculations for waste/recycling storage space required

Service type	Floor are (m ²)	Generated waste (L/week)
General waste	115	$115 \times 10 / 100 \times 7 = 81$
Recycling		$115 \times 10 / 100 \times 7 = 81$

6.1.2 Collection frequency and bins required

To service the generation of waste/recycling expected from the proposed development, the following number of bins and frequency of collection is outlined in the Table 4 below.

Table 4: Waste collection service requirements

Service type	Number of containers	Collection frequency
General waste	1 x 240L + 1 x 660L*	Once per week
Recycling	1 x 240L	Once per week

*an additional 660L bin requested by the client

6.2 Design Detail

6.2.1 Overall waste and recycling storage and servicing within the complex

Waste service will be provided by a private waste contractor.

Waste storage area is proposed on ground floor adjacent the driveway indicated as “number 8” in Figure 6.1 below.

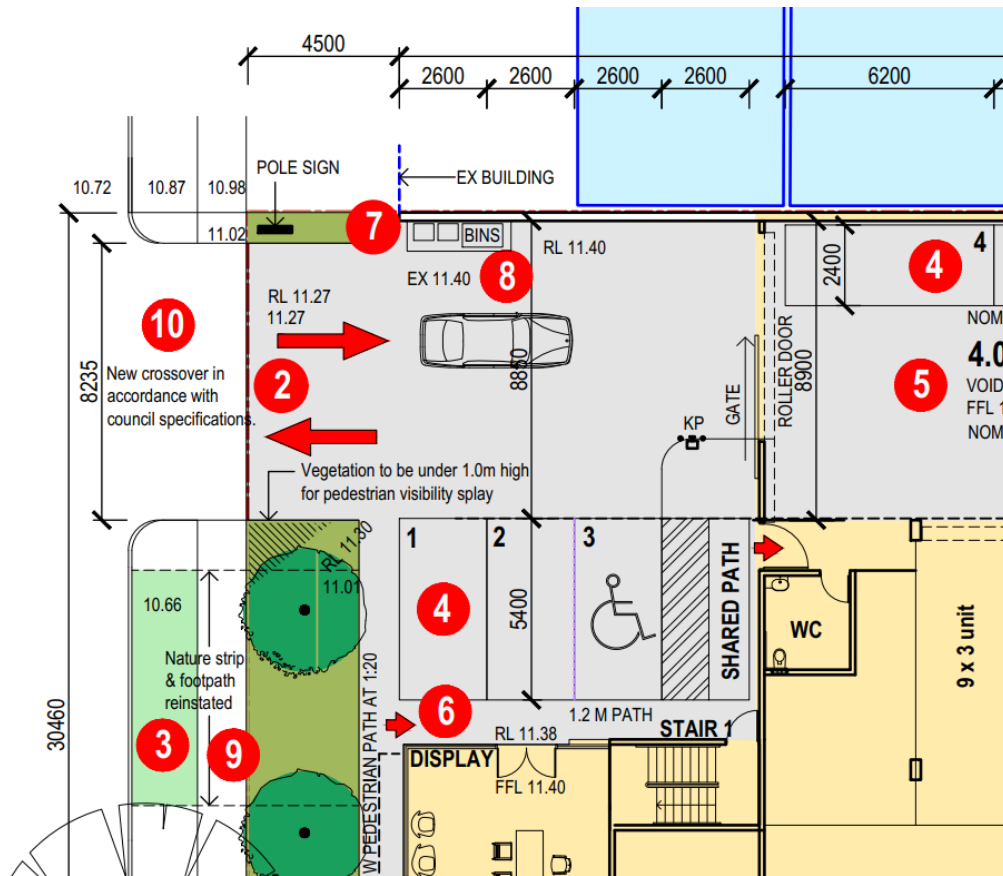


Figure 6.1 Bin storage and loading area

The building manager will take responsibility for arranging the mobile bins as suitable in front of parking 1 to 3 where waste and recycling will be collected by the nominated private waste contractor.

The building manager shall coordinate waste collection time within off-peak hours to minimize traffic impact.

6.3 On-going Waste Management

The on-going management of waste on-site will be stipulated with conditions set out in the conditions presented to occupants before they use the facility. The building manager will arrange the bins for collection and clean the waste area at a regular interval of once a week.

Each room will be supplied with a collection area suitable for one day's storage of waste and recycling.

The occupants must bag their waste before depositing into waste bins; however, recycling must not be bagged.

Signage and written information will be provided, so the occupants are aware of how to use and manage the waste and recycling services.

Appendix A – Signage used in waste storage areas



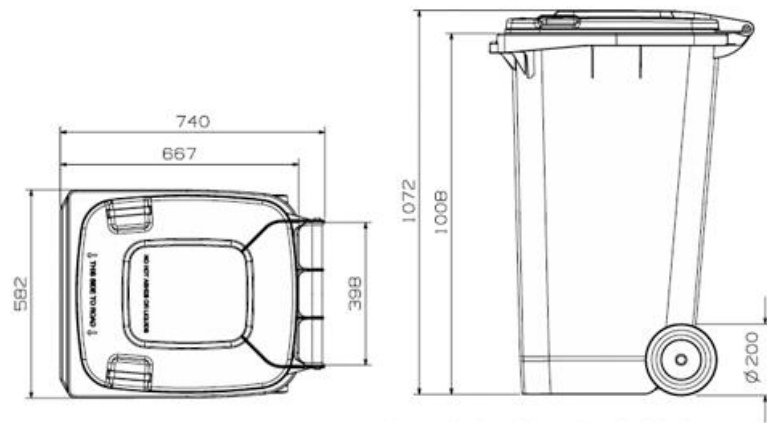
Appendix B – Indicative Bin Sizes

240 LITRE WHEELIE BIN



Australian made for Australian conditions with a 10 year limited warranty.

Weight: 15 Kg



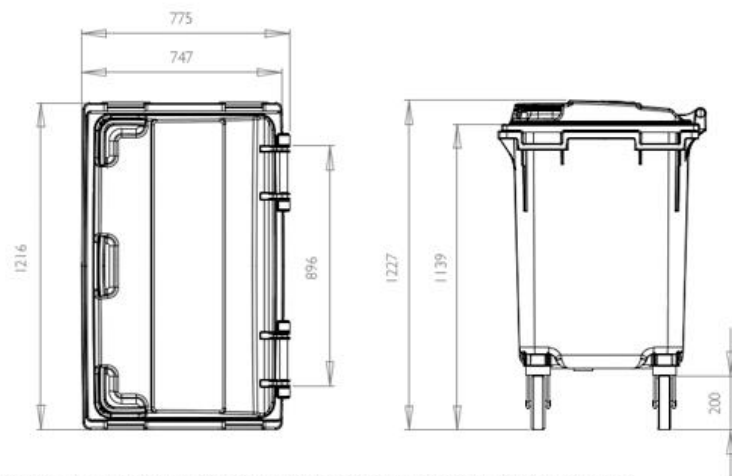
*Dimensions are a guide only and may vary due to manufacturing conditions and/or product design changes.

660 LITRE WHEELIE BIN



Australian made for Australian conditions with a 10 year limited warranty.
This is the largest bin that will fit through a standard 820mm door opening.

Weight: 50 Kg



*Dimensions are a guide only and may vary due to manufacturing conditions and/or product design changes.

Source: Australian Waste Management