



waste less, achieve more

Mullaloo Childcare Centre

Waste Management Plan

4 May 2021

Rev_3

Dale Alcock

A decorative graphic at the bottom of the page consisting of a solid green area with a wavy, undulating top edge, transitioning from a darker green on the left to a lighter green on the right.



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Glossary of terms and acronyms

Cart	Wheeled, open top bin often used for bulky items such as cardboard
Commingled recycling	Common recyclables, mostly packaging; such as glass, plastics, aluminium, steel, liquid paper board (milk cartons). Commingled recycling may include paper but often, and particularly in offices, paper and cardboard are collected separately.
General Waste	Material that is intended for disposal to landfill (or in some States, incineration), normally what remains after the recyclables have been collected separately.
MGB	Mobile Garbage Bin – A wheeled bin with a lid often used for kerbside collection of waste or recyclables. (Often called a ‘wheelie bin’).
MRB	Mobile Recycling Bin – A wheeled bin (“wheelie” bin) with a lid often used for kerbside collection of recyclables (similar to an MGB). Generally have a different colour body and/or lid to MGBs.
Organic waste	Separated food and/or ‘green’ material (e.g. grass clippings or vegetation prunings).
Recyclable	Material that can be collected separately from the general waste and sent for recycling. The precise definition will vary, depending upon location (i.e. systems exist for the recycling of some materials in some areas and not in others).
Recycling	Where a material or product undergoes a form of processing to produce a feedstock suitable for the manufacture of new products.
Reuse	The transfer of a product to another user, with no major dismantling or processing required. The term “reuse” can also be applied in circumstances where an otherwise disposable item is replaced by a more durable item hence avoiding the creation of waste (e.g. using a ceramic coffee mug in place of disposable cups).

1 Introduction

This Waste Management Plan (WMP) has been prepared for Dale Alcock for the Development Application for the proposed childcare centre at 25 Koorana Road, Mullaloo, Perth.

The proposed development will consist of 730 m² of childcare centre including play spaces, kitchens and sleeping rooms. The carpark area will be developed in two stages.

This WMP has been prepared based on the following information:

- Architectural plans and area schedule from Taylor Robinson Chaney Broderick received
- WALGA Commercial and Industrial Waste Management Plan Guidelines (2016)
- City of Sydney Guidelines for Waste Management in New Development (2019) waste generation rate for child care centre

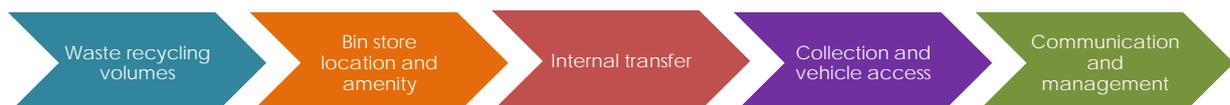
1.1 Context

For efficient and effective waste management, the collection and centralisation of waste and recyclables should be carefully considered at the building design phase. Key factors to consider at the design phase include:

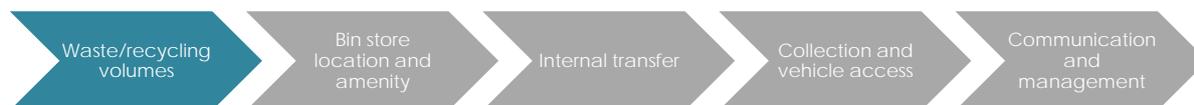
- The volumes of waste and recyclables likely to be generated during building operation
- Size of bin storage area
- Safety for all operatives involved in waste management
- Access to bins and storage areas from within the building
- Access for trucks for waste collection
- Local council requirements
- Amenity (odours and noise)
- The ongoing management of waste and recycling services

1.2 Key components of the WMP

This WMP consists of five core components. The following report will present detailed information on each of the following components.



2 Estimated waste and recycling volumes



2.1 Local government requirements for waste volumes and bin type

The WALGA Commercial and Industrial Waste Management Plan Guidelines (2016) have guided the approach to waste and recycling management in the proposed development. There are no WALGA generation rates for a childcare centre. The most recent generation rates available in Australia are from the City of Sydney Guidelines for Waste Management in New Development (2019) waste generation rate for child care centres with kitchens:

Waste generation	Recycling generation	Food waste generation
50 L/100 m ² /day	50 L/100 m ² /day (including both commingled recycling and cardboard)	15 L/100 m ² /day

An allowance for used cooking oil has been added in addition to the above rates.

2.2 Number and type of bins required for development

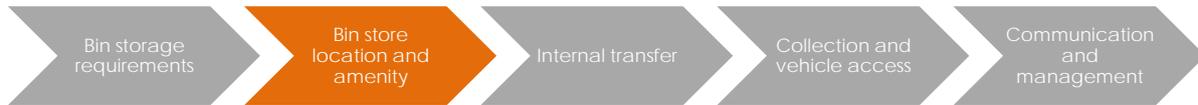
The number and quantity of bins and their respective collection frequencies have been calculated from the City of Sydney waste generation rates set out in Section 2.1. The bin storage requirements based on a total floor area footprint of 730 m² are set out in table 1.

The bin storage area has extra space in order to future proof it. There is sufficient room for food waste segregation and collection should it be required in the future.

Table 1: Number of bins to be stored in the bin store

	Bin size (L)	Number of bins	Collection frequency
General Waste	660	2	2-3 times per week
Commingled recycling	1100	1	Weekly
Cardboard	1100	1	Weekly
Used cooking oil	200	1 unit	As required

3 Bin store location and amenity



3.1 Bin store location and layout

The childcare will have one main bin store to store all waste and recycling from the centre. As the carpark of the centre is to be developed over 2 stages the bin store will be slightly moved over that time. The bin store will be located adjacent to the car park outside the childcare centre. The location of the temporary bin store in stage 1 is seen in Figure 1. The cross hatched area adjacent to the bin store is a no parking area to allow easy access for staff transferring waste and recycling. The location of the permanent bin store at the completion of the carpark works can be seen in Figure 2. The size, amenities and layout of the bin store will remain the same across both stages. The bin store layout is shown in Figure 3.

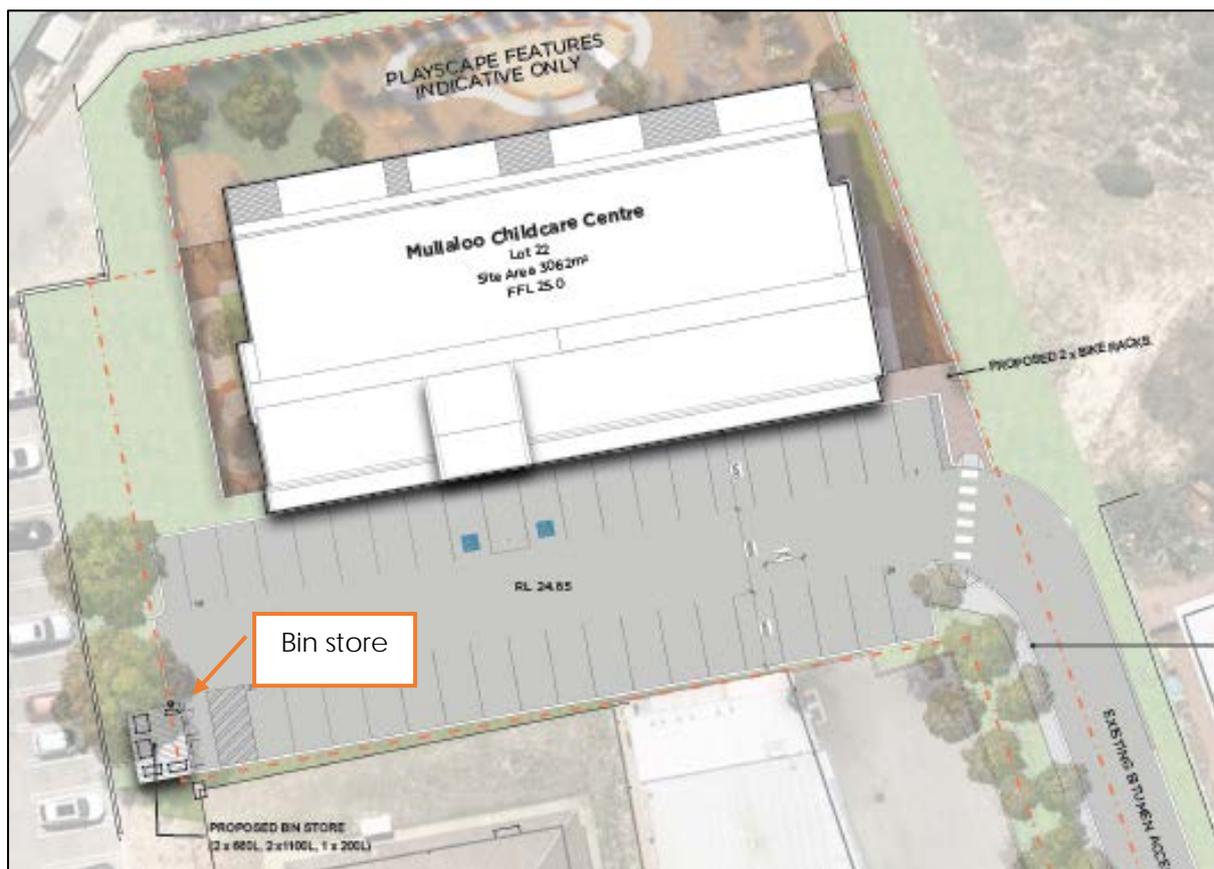


Figure 1: Stage 2 site plan showing the bin store

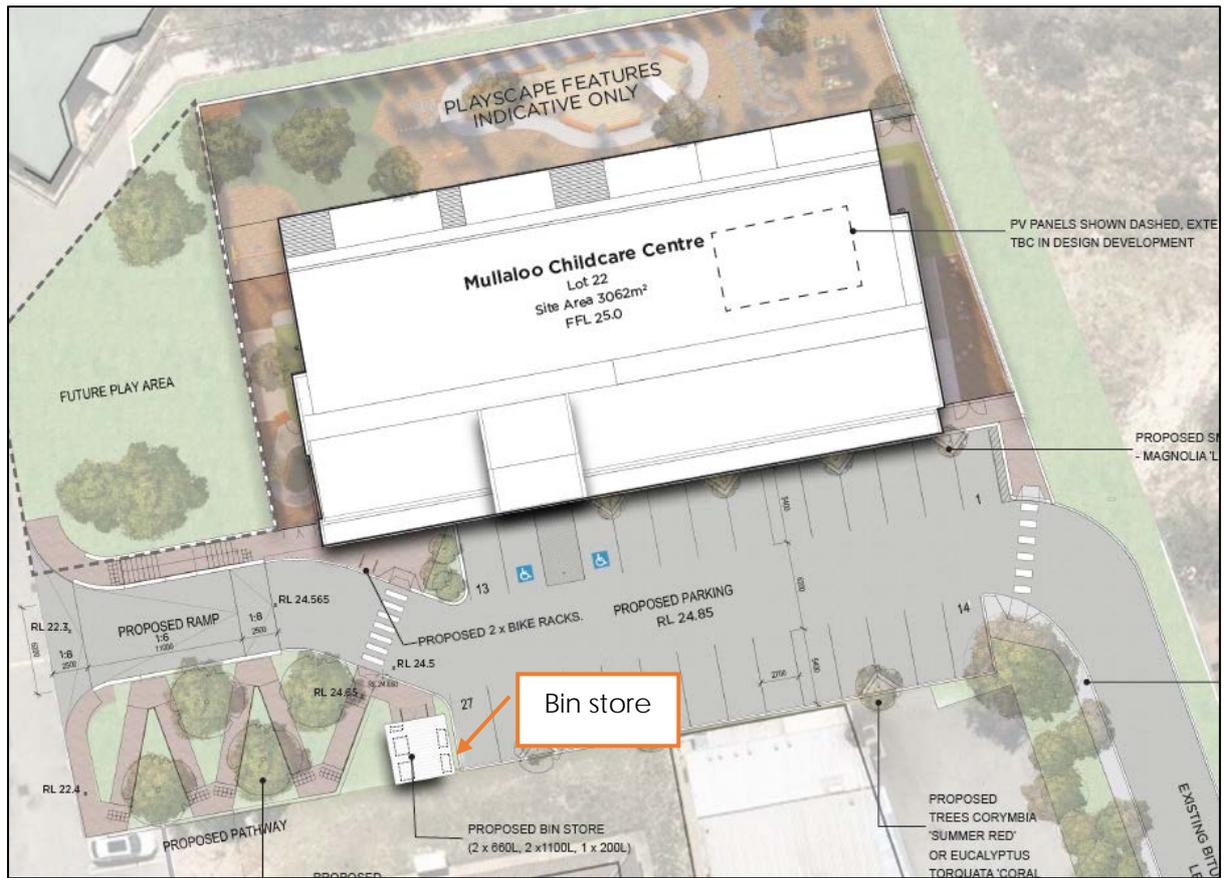


Figure 2: Stage 2 site plan showing the bin store

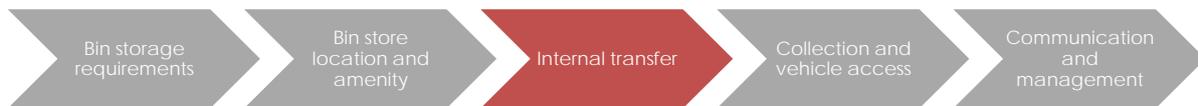


Figure 3: Layout of the bin store

3.2 Bin store amenity

Bin Transfer	
Aisle door and lift width:	All doors, corridors and lifts on the transfer route are designed for the largest bin to fit through. The doors on the bin store will open toward the centre to allow for ease of access for staff.
General health and safety:	Waste systems are designed to ensure that bins (particularly when full) are not required to be moved over any significant distances, up/down steep ramps (grade of slope <1:20) and definitely avoid stairs or other potential hazards. The path to the bin store is a universal access path.
	Manual handling of heavy waste in garbage bags is excluded from the waste management systems where possible. Trolleys will be available if required.
Bin store	
Washing bins and waste storage area:	Impermeable floors grading to an industrial floor waste connected to sewer, with a hose cock to enable bins and /or the enclosure to be washed out. 100 mm floor waste gully to waste outlet.
Bin store construction:	Bin store will be constructed from 1500 mm powder-coated palisade fencing with no roof.
Noise:	Noise is to be minimised by managing collection times to prevent disruption to occupants or neighbours.
Signage:	Visual aids and signage will be provided to ensure that the area works as intended.

4 Internal transfer



Cleaners and staff from the centre will manually transfer waste and recyclables to the bin store. The transfer of waste from the centre will likely occur through the day to maintain hygiene. Waste bags will therefore not be heavy. Trolleys will be available for use when transferring waste if required. All paths to the bin store and routes within the building are universal access pathways so are free from steps and hazards to minimise the risks from manual handling of waste.

5 Collection and vehicle access



Private service providers will undertake the waste and recycling collections.

On collection days rear-lift vehicles for general waste and recycling will enter the car park via access roads off Koorana Road. As per the Uloth traffic Impact Statement (3/11/2021), the vehicles will enter the car park in a forwards motion and reverse a short distance back to stop outside the bin store. Operatives will enter the store to retrieve and service the bins. The operatives will replace the empty bins into the bin store.

After servicing the vehicle will pull forwards back along the access roads and exit into Koorana Road.

Collections will take place out of business hours mainly on a Saturday (between 8.00 am and 6.00 pm) or after close of business during the week between 6.30 pm and 7.00 pm to minimise noise nuisance to neighbours and also avoid conflict with children and parents at the childcare centre as the carpark will be empty at this time of day (this will only be for additional general waste collections). Staff parking will be located away from the bin store to ensure staff cars are not blocking truck access.

As the carpark area will be developed in two stages the bin store will have slightly different access for collection in stages 1 (Figure 4) and stage 2 (figure 5). Swept path analysis for vehicle ingress and egress has been completed by Ultoh taking into consideration the specifications of a standard 10 m long rear lift waste collection vehicle (see Figure 4).

Although the proposed Stage 2 plan provides a through connection to the adjacent shopping centre carpark, it is important to note that the resulting ramp gradient will be too steep to satisfy the maximum gradient requirements for a Medium Rigid Vehicle (as specified in Australian Standard AS 2890.2). The rubbish truck will therefore need to also turn around within the car park under Stage 2, with the resulting swept path as shown in the attached Figure 5.

Signs will be erected at the top and base of the ramp warning of the gradient and that there is no access for medium rigid vehicles.

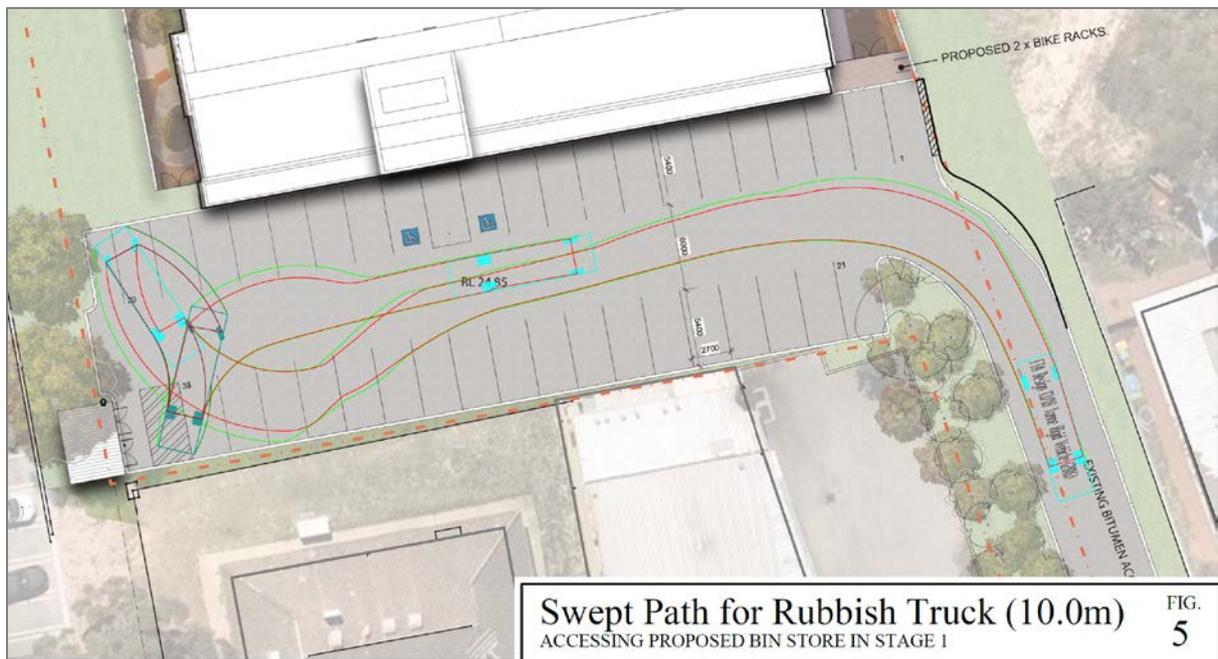


Figure 4: Stage 1 swept path analysis showing access for waste collection vehicles

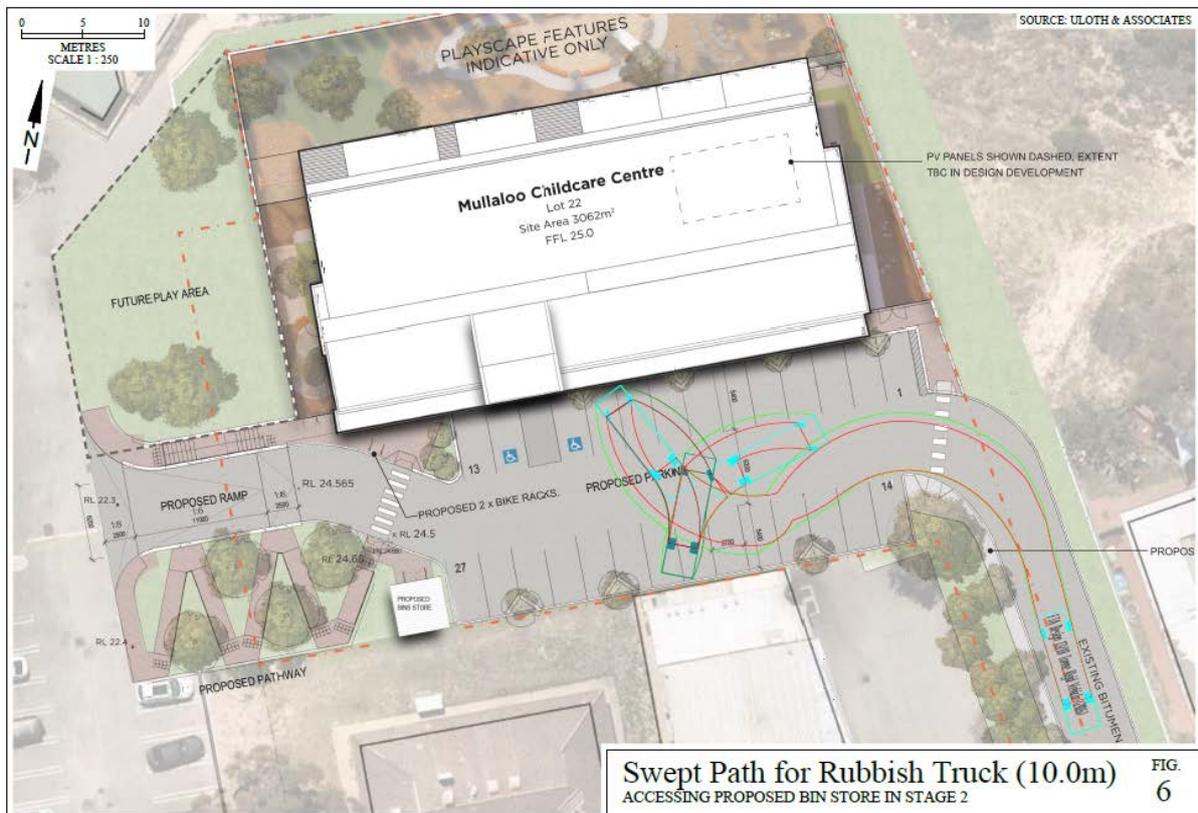


Figure 5: Stage 2 swept path analysis showing access for waste vehicles remains for stage 2

6 Ongoing communication and management



6.1 Management

The childcare operator will be responsible for overseeing the waste management systems. The centre manager will be trained and informed about their responsibility to work closely with the private service provider regarding the schedule for collection and presentation of bins. The cleaning staff will be responsible for maintaining the bin store in a clean and tidy condition at all times and ensuring bins are washed regularly.

Waste and recycling will be removed from internal bins often to maintain hygiene so the bags are not heavy or awkward to transfer. Staff can use trolleys if necessary. The path they will use to transfer waste is a universal access path so we don't see any issues with this strategy.

The centre will be open from 6:30am until 6:30pm and we will organise waste collection to occur on a Saturday between 8am – 6pm and between 6:30pm and 7pm on weekdays to avoid traffic in the carpark and to also abide by council operational collection requirements.

6.2 Communication

All staff will be made aware through a body corporate document (or equivalent) of the waste and recycling systems and how they should be used.

Centre management will be responsible for the continuing education of staff on correct segregation of waste and recyclables.