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Waste Management Plan

Prepared for:
25, Liege Avenue, Noble Park, 3174



DESIGNERS | ENGINEERS | TOWN PLANNERS | LAND SURVEYORS
"Facilitate all paperwork before build"

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Executive Summary

This report has been prepared by VSmart Solutions Pty Ltd, and describe the principles, procedures and management of the waste generated by the proposed use and development for childcare centre at No 25 Liege Avenue, Noble Park, VIC 3174 to inform Greater Dandenong city council of the proposed development's waste management & collection strategies.

The table below shows the collection summary of waste streams:

Waste summary.	
No. of bins	
Garbage Waste:	02
Recycling Waste	03
Bin Location	
Appendix 04	

This Plan ensures wastes are reduced, reused and recycled wherever possible. The Waste Management Plan outlines measures to manage and mitigate waste generation and resource consumption during the operation of the development. The Plan includes details on the following:

- The types and quantities of waste generated during operation.
- Procedures to collect and dispose of waste.
- Measures that will be implemented to minimise waste generation associated with the development.
- A program for monitoring the effectiveness of these measures.

To prepare this report, architectural plans received on 15th December 2023 have been used. The following documents and tools have been used to prepare this report:

- The Environment Protection Act 2017 (the Act) and the Environment Protection Regulations 2021 (Regulations)
- Waste and Recycling for Commercial and Industrial Land Use and Development Better Practice Guidance - Sustainability Victoria, April 2023.
- Sustainability Victoria – Better Practice Guide for Waste Management and Recycling in Multi-Unit Developments (2018).

The waste generation of the site was calculated using the Guidelines for Waste Management Plans 2021, which were prepared by the City of Melbourne.

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Project & Site Description

This development is a childcare center development located at No 25 Liege Avenue, Noble Park, VIC 3174. The existing site is shown below in figure.1. The total site area is 622 m² and the proposed development includes the double story building.



Figure No.01

The existing site

Types of childcare center waste

01. Garbage waste (General waste)

Garbage waste encompasses items that are difficult or impossible to recycle, such as specific plastics, glass, metals, and certain packaging materials commonly found in nursery waste disposal.

02. Commingled waste

Recyclable materials like glass jars, aluminum cans, steel cans, and plastic bottles and containers are often mixed together in waste bins found in offices or households. However, it's important to note that items such as note paper, cardboard, and food waste should not be disposed of in these bins.

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Calculation of the waste generation

According to the "Guidelines for Waste Management Plans 2021" issued by the City of Melbourne, the calculation for general waste and commingled waste generation at a childcare center is as follows.

- Garbage Waste: 350L/100 m² floor area/week
- Commingled waste: 350L/100 m² floor area/week

Upon reviewing other Waste Management Plans, it appears that this rate is established on a seven-day-per-week basis, averaging 50 liters per day per 100 square meters, with the floor area derived from the Activity Rooms in the Childcare Centre. Based on these assumptions, the waste generation is estimated at 50 liters per 100 square meters per day. Number of trading days are five.

The calculation of waste generation

Items	Garbage Waste	Commingled Waste
Waste generation rate	50L/ 100 m ² floor area/Day	50L/ 100 m ² floor area/Day
Floor area	143.03 m ²	143.03 m ²
Trading days	05	05
Daily waste	71 Liters (71.515L)	71 Liters (71.515L)
Weekly waste	357 Liters (357.575L)	357 Liters (357.575L)

Other Waste Requirements

- Liquid or Hazardous Waste: Not Applicable
- Medical Waste: Not Applicable
- Food Processing: Not Applicable

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Bin Selection

According to the standards set by the Dandenong City Council commingled wastes bins are collected every two weeks, while garbage bins are collected weekly. As per council regulations, establishments are required to have two separate bins as outlined below.

- Yellow colour bin: Recycling
- Red colour bin: Garbage (general waste)

Garbage bins must be spaced at least 30cm apart from each other.

Type and Number of Bins as follows.

Item	Garbage Waste (General Waste)	Commingled Waste
Collection frequency	weekly	fortnightly
Waste per week	357 Liters	357 Liter
Number of bins	2 x 240 Liters	3 x 240 Liters
Surplus capacity	123 Liters	6 Liters
Total bin requirement	05 x 240 Liters	

Waste management plan.

Waste has the potential to impact various environmental facets, leading to contamination and affecting visual aesthetics and health. Potential waste materials generated on the Project site comprise.

- Litter includes food, drink packaging and nappies.
- Recyclable waste
- Office equipment, paper, cardboard etc.

Relevant Guidelines and Policies

- The Waste Management Plan was developed taking into account the following relevant policies and guidelines:
- Australian Government – National Waste Policy: Less Waste, More Resources (2018).
- Victorian Government – Recycling Victoria: A New Economy (2020).
- Sustainability Victoria – Better Practice Guide for Waste Management and Recycling in Multi-Unit Developments (2018).
- EPA Victoria – Noise Control Guidelines (2021)

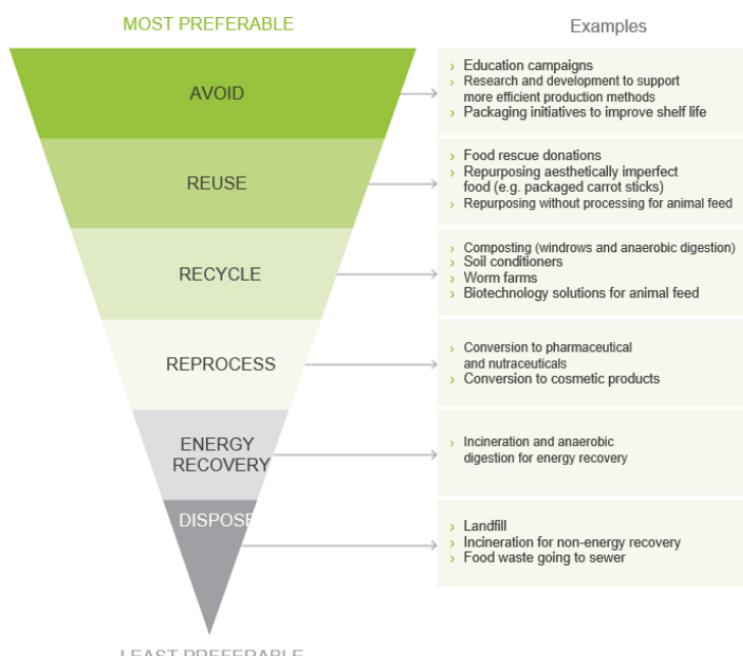
Reducing waste generation

The fundamental principle governing waste legislation is the waste management hierarchy. This hierarchy establishes a preferred order for waste management, with avoidance as the most favored option and disposal as the least preferred. All waste-related policies crafted by governmental entities at every level should adhere to this hierarchy. The waste management hierarchy employed is:

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- a) Avoid – making the waste in the first place – alternative designs & lean procurement systems.
- b) Reduce – via prevention or elimination of waste products;
- c) Reuse – find a secondary use for the waste product; and
- d) Recycle – alternative use for waste product which may include reprocessing of product.
- e) Recovery – divert materials away from landfill that can be processed into feedstock for the waste to energy sector
- f) waste to energy sector
- g) Landfill – control the destination of waste to its' relevant class of landfill site.

The following image illustrates the waste management hierarchy in sequence.



Systems for waste management at the site

All childcare and cleaning personnel, including contractors, will receive comprehensive training on the proper utilization of waste management systems. Cleaners and building management will diligently monitor and report recycling streams to ensure compliance with the protocols set forth by the Greater Dandenong City Council and the designated waste service contractor. Staff will be actively encouraged to enhance the separation of general waste and mixed recyclables to facilitate the appropriate disposal of all materials. Used nappies will be securely sealed in plastic bags before being placed in waste bins. Scented nappy disposal bags may be utilized to control odors, and examples of nappy wrapper systems can be found in Appendix 01. Waste and recyclables from the childcare facility will be collected daily by childcare staff and cleaners and transported to the designated waste storage area. An appointed contractor will oversee waste and recycling collection services, providing the childcare center with increased flexibility regarding collection schedules. Collection frequencies will be determined collaboratively with the waste contractor once appointed. However, operational adjustments to collection schedules may be necessary based on actual waste generation.

A private waste contractor will handle waste collection from Liege Avenue. On waste collection days, childcare center cleaning staff should position each waste bin in the front area of the site for servicing. After the bins have been serviced, cleaning staff will return them to the designated waste storage location (the movement path of waste bins illustrated in Appendix 02). Signage plays a critical role in the waste management system. Examples of signage can be found in Appendix 03, which should be utilized throughout the center and waste storage areas.

Bin locations

Bins will be stored on-site in the bin storage area in front of the external stair. The bin storage area enables 5 x 240L bins to be stored, plus additional space to access and manoeuvre the bins. There should be 30 cm distance between adjacent bins. The approximate dimensions are depicted in the Bin Layout Diagram attached in Appendix 02.

Typical bin sizes as follows:

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Bin Type	80L MGB	120L MGB	140L MGB	240L MGB	360L MGB
Height (mm)	870	940	1065	1080	1100
Depth	530	560	540	735	885
Width	450	485	500	580	600

Source: (Source: Sustainability Victoria's "Waste Management and Recycling in Multi-unit Developments Better Practice Guide")

Guide for Staff

Garbage Waste

- Staff shall place general waste into allocated general waste receptacles (to be provided by the Operator).
- Staff shall take full general waste receptacles to empty them into the general waste collection bins.

- General waste must be placed within tied bags (biodegradable material recommended) prior to being placed into the general waste collection bins.

Commingled Waste

- Staff shall place recycling into allocated recycling receptacles (to be provided by the Operator).
- Staff shall take full recycling receptacles to empty them into the recycling collection bins.
- Bottles, cans, and containers must be rinsed, and lids/packaging separated as per the Australasian Recycling Label instructions (visit: <https://recyclingnearyou.com.au/ar/>) prior to being placed into the recycling collection bins.
- Recycling must not be bagged.

Paper and Cardboard Disposal

- Staff shall place paper and cardboard into dedicated paper and cardboard receptacles (to be provided by the Operator).
- Staff shall take full receptacles to empty them into the paper and cardboard collection bins (commingled waste).
- Bagged paper and cardboard are not permitted.

Staff Education

All staff members will be briefed on the waste collection systems, including usage instructions, acceptable items for each stream, and collection schedules. Building management will oversee these tasks, ensuring that appropriate signage and updated information are provided. Staff will also be encouraged to provide feedback on issues such as contamination of recycling streams or mixing recyclables with general waste. All waste receptacles will be clearly labeled, and additional room signage typically provided by waste contractors will be utilized during the implementation of the waste contract. Examples of signage can be found in Appendix 08.

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It is recommended that all signs should:

- Clearly identify the waste/recycling stream.
- Use correct waste/recycling stream colour coding.
- Identify what can and cannot be disposed of in the receptacle; and
- Include highly visual elements to accommodate for individuals with inadequate English literacy.

Guide for the Operator

The Operator shall be responsible for the following:

- Continuously managing the waste management system, which includes maintaining bins and associated equipment to the satisfaction of all users and relevant authorities, following the manufacturer's specifications.
- Engaging suitable contractor(s) for services, replacements, or upgrades when necessary.
- Overseeing and coordinating the waste collection contractor(s).
- Disseminating information to ensure that all users are knowledgeable about the waste management system.
- Instructing users on the proper disposal methods for e-waste and hard waste.
- Securing bins and labeling/numbering them according to property addresses to deter theft and vandalism.

- Regularly servicing public areas by sweeping and removing litter to prevent stormwater pollution.
- Preventing bins from being overfilled by ensuring lids are closed.
- Ensuring that bins remain on-site and are not removed.

Noise & Odour Management

- The following noise and odor management requirements are applicable:
- All bins must remain within the communal refuse area except during servicing.
- Waste areas must comply with Building Code of Australia (BCA) and AS2107 acoustic standards.
- Mobile Garbage Bins (MGB) should be equipped with rubber wheels for quieter operation.
- Private waste contractors are responsible for adhering to council and Environmental Protection Agency (EPA) guidelines at all times.
- Ventilation systems must comply with Australian Standard AS1668.
- Waste collection services should minimize disturbance to surrounding residents.
- Staff are required to keep bin lids closed at all times to prevent overfilling and assist in odor and vermin control.
- Engaging professional bin cleaning contractors on a regular basis is recommended to manage odors and vermin. Contractors will be responsible for bin washing and maintaining cleanliness in the waste storage area.

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MAXI NAPPY WRAPPER SYSTEM

Hygienic and time saving way of disposing nappies.
The system is easy to use, reduces odour, assists with hygiene control and improves staff working conditions.

- ✓ Unique patented disposal system for all types of disposable nappies
- ✓ Smell free, germ free and hygienic
- ✓ Convenient and maintenance free
- ✓ Anti bacterial agent for built-in protection against germs
- ✓ Fresh citrus fragrance
- ✓ Holds up to 50 medium nappies



Nappy Wrapper bin - Maxi
Code NW854340

NAPPY WRAPPER - HYGIENE PLUS

The Hygiene Plus has an advanced germ seal film with an anti-bacterial barrier which keeps on killing germs even inside the tub. The twist lock technology individually seals each nappy, locking away germs and odours. Holds up to 25 nappies.



Nappy Wrapper bin
Hygiene Plus
Code NW840017

NAPPY WRAPPER REFILL CASSETTES

Replacement cassettes for use with the Nappy Wrapper tub are also available. New improved film for better odour control.

The cassette just drops into the top of the tub and is ready for use in seconds. It fits both the Hygiene Plus and the Maxi Nappy Wrapper bins. Can wrap to 250 nappies per cassette.

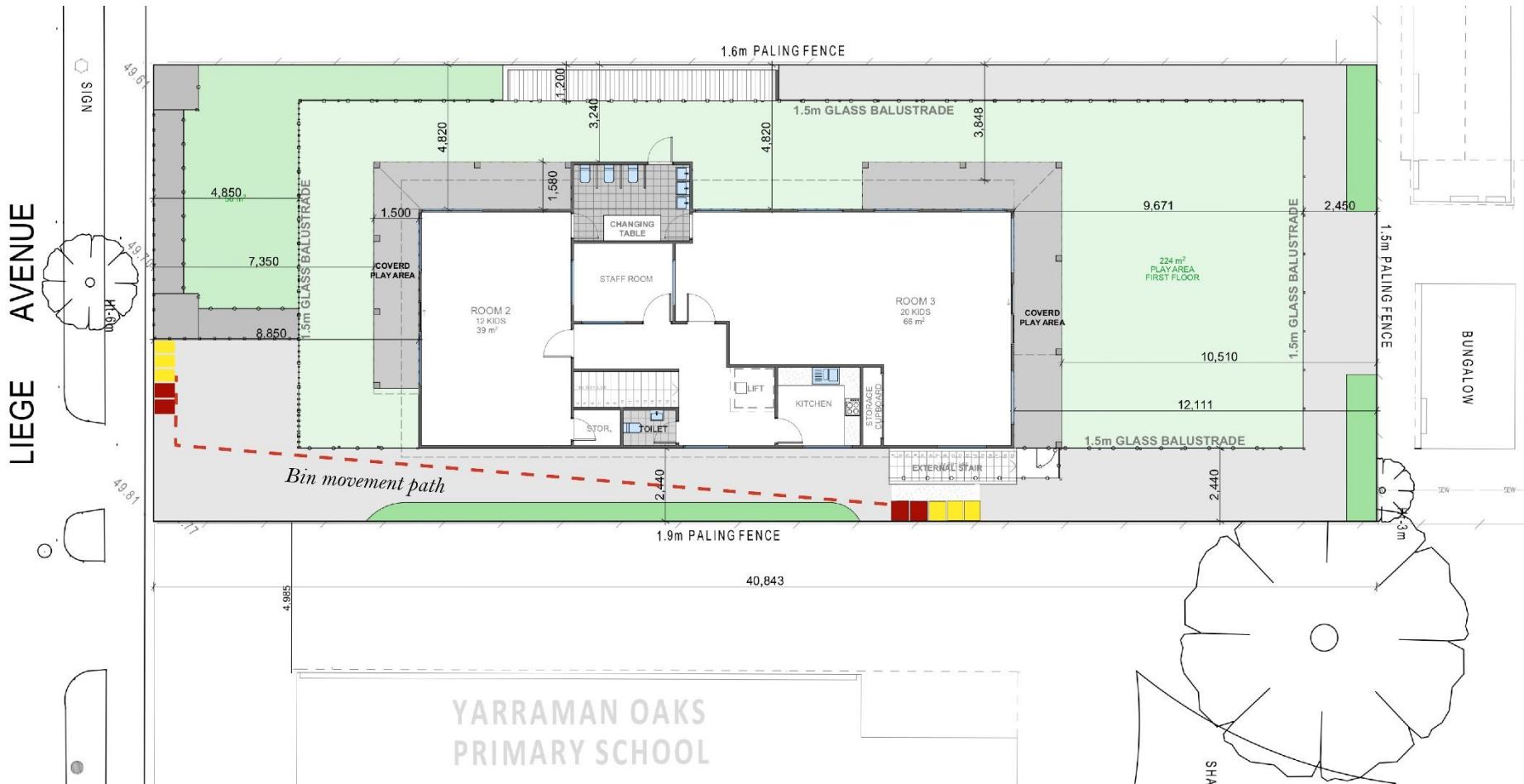


Nappy Wrapper Refill
cassette - 18 per carton
Code NW830317

SUPPLIED BY
ECOMIST[®]
Enhancing your Environment

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Appendix 02: the movement path of waste bins



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Organics

Place these items here

 Fruit & vegetable scraps	 Loose leaf tea	 Egg shells
 Leftover food scraps	 Flowers / plant clippings	 Wood stirrers / chopsticks
 Coffee grinds	 Did you know?	

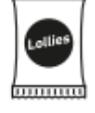
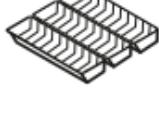
Commingled

Place these items here

 Aluminium cans and packaging	 PET bottles	 Clean paper towel / paper bag / newspaper
 Glass bottles	 Milk cartons	 Food tins / cans (rinsed)
		 Did you know?

Soft Plastic

Place these items here

 Cling wrap	 Green shopping bags	 Confectionery packets
 Cereal box liners	 Plastic shopping bags	 Bread bags
 Biscuit packets	 Plastic sleeves	 Did you know?

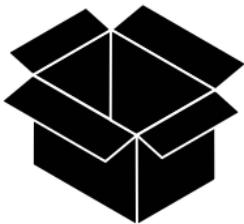
Landfill

Place these items here

 Tea bags	 Coffee cup	 Soiled paper / paper towel / tissues
 Plastic cutlery	 Styrofoam cup	 Waxy paper
 Chip / foil packaging	 Broken glass	 Plastic salad containers / Coffee cup lids

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CARDBOARD



Sustainability Victoria

COMMINGLED RECYCLING



Sustainability Victoria

E-WASTE



Sustainability Victoria

SOFT PLASTICS



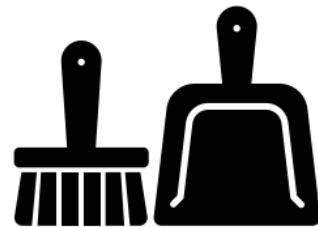
Sustainability Victoria

MOBILE PHONES AND BATTERIES



Sustainability Victoria

GENERAL WASTE (NON-HAZARDOUS)



Sustainability Victoria

FOOD ONLY



BOTTLES, CANS & CARTONS



CLEAN PAPER & CARDBOARD



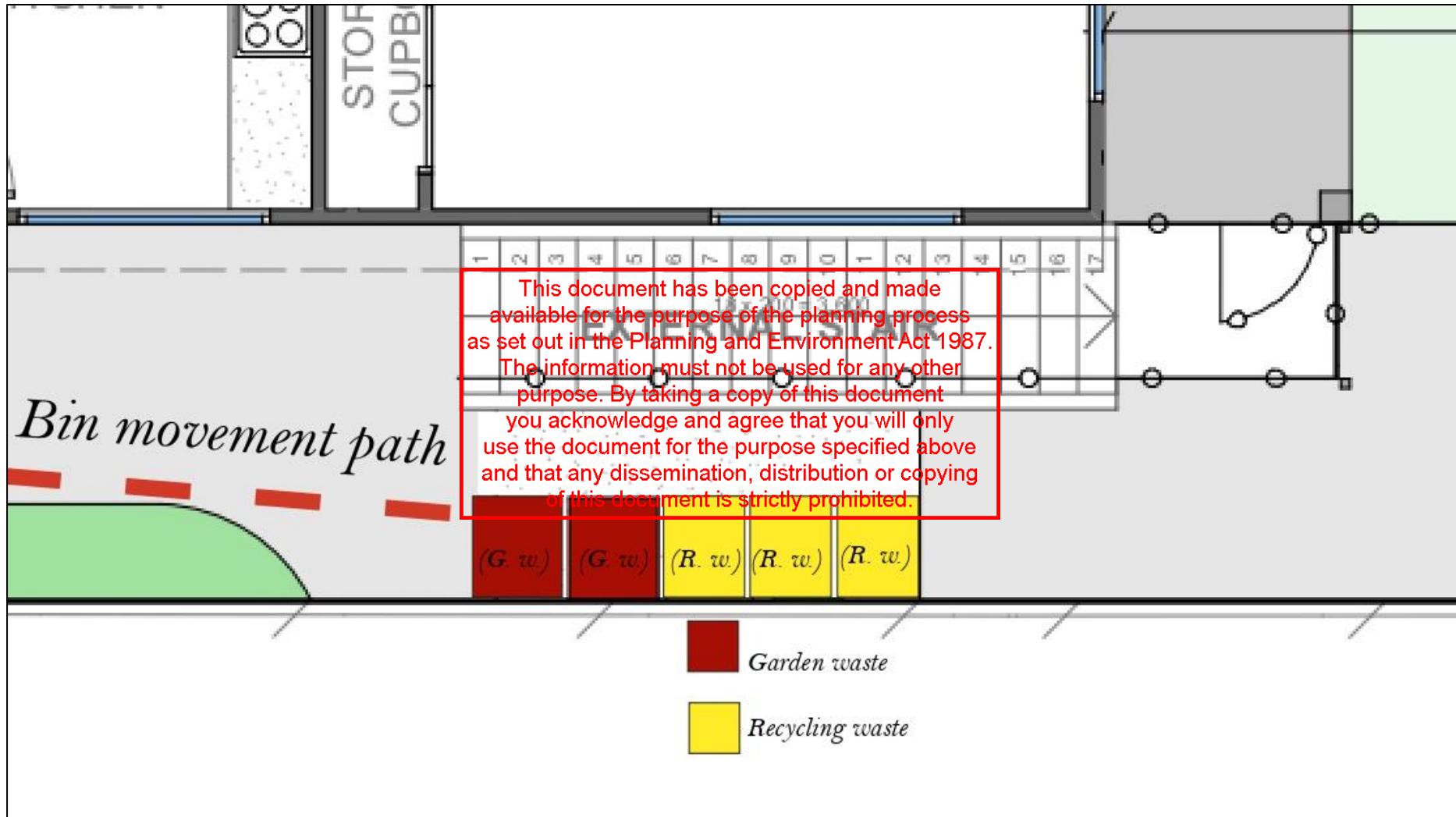
RUBBISH



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Appendix 04: Layout of the bin location



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