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Waste Management Plan

52 Golf Road, Oakleigh South

Reference: SH107607_V5

Date: 3 June 2020

Assessment of:

Proposed Multi-dwellings Development

52 Golf Road, Oakleigh South, VIC 3167

Report commissioned by:

Golf Road Project Development Pty Ltd

Responsible authority:

Monash City Council

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Contents

Waste Management Plan	1
Document Control	3
Executive Summary	4
1. Introduction	6
1.1 Purpose of this Report and council requirements.....	6
1.2 Included in this Report.....	6
1.3 Basis of Assessment.....	6
2. Development Summary	7
3. Waste Generation	7
4. Waste System Summary and responsibility.....	8
5. Bin Storage and collection Frequency.....	10
6. In dwelling Bin Storage:	10
7. Bin Storage/ Signage/ Location of Bins.....	11
8. Limitations.....	13
Appendix A –	14



Document Control

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Applicable:

This document is applicable only for the proposed residential development at 52 Golf Road, Oakleigh South and the following beneficiaries:

- Foundry Projects/Plus architecture/ Property developer
- Consultants engaged by the developer for the traffic and other services
- Planning Permit Authority /Council's internal waste services team

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Executive Summary

Sustainability House was engaged by Golf Road Project Development Pty Ltd to provide a Waste Management Plan (WMP) for a proposed multi-dwellings development in Oakleigh South.

The development is within the jurisdiction of the Monash City Council. As per planning requirements, Waste Management Plan needs to be prepared to the satisfaction of the council planning scheme-clause 19.03.-5S. The WMP is required to assess the development's approach to waste management and collection with respect to the local council law and other statutory requirements.

For this development, both garbage and commingled recycling bins will be stored within the dwellings Garages. The Garages will be adequately ventilated in accordance with the council waste management guidelines or AS1668. Vents natural ventilation or mechanical ventilation exhaust fans will be provided in each townhouse to meet the ventilation requirements.

On collection days, the private Waste collection contractor will enter the premises from the entry point and will collect the waste from the kerbside and will exit from the exit point. There is sufficient space to allow the waste contractor to safely manoeuvre a Medium rigid vehicle (4.5mH x 2.5mW x 8.8mL) within the development without the need for unsafe turns.

The waste from the townhouses (which has entry from the Beryl Avenue) will be collected by Council waste collection contractor. Both the Garbage and Recycling waste will be collected as per the council collection policy for these town houses.

The Private Waste collection contractor will collect garbage waste and recycling waste on a weekly basis, from the Townhouses within the development. Individual residents will transfer the garbage and commingled recycling bins to the kerbside for weekly collection by the Private and Council waste contractor. Collections will be conducted in line with Council and EPA requirements, on Fridays as per Council schedule, no earlier than 6am. Given the enclosed nature of the development and the impact of noise from collection vehicles, and on residential vehicle access, collections will occur outside the peak commuter period, and no earlier than 7am. The regular collection day for this development is Friday as nominated by the City of Monash.

The development includes a communal garden with composting facilities that will be sized to accommodate the food and garden organic (FOGO) waste from all 90 dwellings. A compost bin will be provided for the residence. This facility will be managed by the owners' corporation with the input of the local community. An E-waste bins will be provided in the communal garden area for E-waste management and safe disposal.



Glossary

Operator: the building manager or owner's corporation (including staff or contractors) who will manage site operations

Users: Residents/ Tenants who will be bin users



1. Introduction

1.1 Purpose of this Report and council requirements

SUHO was engaged by Golf Road Project Development Pty Ltd to provide a Waste Management Plan (WMP) for a proposed multi-dwellings development in Oakleigh South.

This Waste Management Plan (WMP) has been prepared based on the following:

- City of Monash – Waste and resource recovery. Clause 19.03–5S (last updated 28/10/2018)
- Best practice guide Sustainability Victoria 2019
- City of Melbourne’s Guidelines for Preparing a Waste Management Plan (2017)
- City of Monash – Waste Transfer and Recycling Station guide.

Where information is unavailable for this specific classification of project, City of Melbourne’s Guidelines for Preparing a Waste Management Plan was used.

1.2 Included in this Report

This WMP includes the following details:

- Development Summary and Land Use
- Waste Generation
- Waste Streams
- Bin Quantity and Size
- Collection Service and Frequency
- Signage
- Scaled Waste Management Drawings

1.3 Basis of Assessment

This assessment has been based on the following documents:

- Drawings and Site plans dated 28/01/2020
- Discussions and correspondence with the client. The rates are now revised as per the number of Townhouse

The detail drawing of the individual townhouse i.e. from drawing number 4.04 –4.14 indicate the location of the Garbage and recycling bin in the garage. Please refer to the drawings submitted along with this report. This report further elaborates access form the garbage bin location (within the garage) to the kerb side.



2. Development Summary

The development consist of 90 proposed 2, 3, 4 bedroom Townhouses

Townhouse Type	No. of Bedrooms	Qty
TH01 (including type 1a)	4	16
TH02 (including type 2a + 2b)	4	15
TH02c	3	2
TH03 (including type 3a)	4	4
TH03b	3	4
TH04	3	18
TH05	4	2
TH06	4	5
TH07	2	20
Total		86

3. Waste Generation

The following waste generation rates have been determined based on the rates outlined in the City of Melbourne and Sustainability Victoria Waste and Recycling Generation Rates Calculator.

For an individual dwelling weekly generation of Recyclable waste is 120L and Garbage is 120L. Out of the total garbage collection *40% is food waste and *60% is non – organic waste. For the calculation purpose, we will assume 120L of garbage with additional 50L of food and organic garden waste (FOGO) per Townhouse.

The following waste generation ***rates have been used:

Residential [L/week]	Garbage [L/week]	Commingled Recycling [L/Weekly]	Food & Garden Organic (FOGO) [L/week]
Individual dwelling	120	120	50

Based on the above waste generation rates, the following total waste volume can be anticipated:

Dwelling Type	Garbage in L	Commingled Recycling in L	Food & Garden Organics (FOGO)
**Total 86 dwellings	10320	10320	4300

Notes:

*Sustainability Victoria conducted the Victorian State-wide Garbage Bin Audit – Food Waste 2016, to analyse the number of items in a garbage bin, including food waste. The audit found that approximately 40% of the garbage bin is made up of food waste.

**The total number of Townhouses within the development is 90 in number. Out of which 10 Townhouses both waste streams will be collected by the council waste contractor. For the above calculation purpose, we have considered a worst case scenario where all the townhouse within the development is collected by a Private waste collection contractor.

***Waste volumes here are an estimate only; operator/users should review actual waste volumes and make adjustments as required



4. Waste System Summary and responsibility

The waste management system is summarised as follows:

Residents

- Individual dwellings to manage their own garbage, commingled recycling and will transfer the bins to the kerbside for weekly collection by the Private and Council waste contractor.
- Smaller bins may be used within their dwelling at the discretion of the individual residents.
- Individual dwellings to manage their own garbage, commingled recycling and will transfer the bins to the kerbside for weekly collection by the Private contractor. For dwellings that present to a public road, there is potential for Council collection to occur.
- Private collections will be conducted in line with Council and EPA requirements, on Fridays as per Council schedule, no earlier than 6am. Given the enclosed nature of the development and the impact of noise from collection vehicles, and on residential vehicle access, collections will occur outside the peak commuter period, and no earlier than 7am. The regular collection day for this development is Friday as nominated by the City of Monash.
- Individual residents to transfer the FOGO bins to the composting facilities at the communal garden. FOGO bins are to be emptied by the resident and bins returned to their dwelling.
- Hard waste can be kept at the kerbside (1m x 2m) on the collection day or can be kept near the communal bin storage area and collection arrangement should be made prior to the collection day.
- A natural ventilation vents or mechanically ventilation exhaust fans will be provided in each townhouse garage to meet the ventilation requirements for bin storage
- Restrictions on kerbside bin presentation is applicable for this project as per the City of Monash Local Law No.3 Clause 149. It described requiring bins to be brought in from the street following collection (Thursday night) on the same day of collection (Friday)
- Occupier to remove any waste from a road or any Council land which has spilled from the receptacle supplied to the land which he or she occupies except waste that has apparently been spilled during the process of collection.
- Property owners will make sure that no car are parked around the bins on collection day.
- Waste from townhouses which are accessible within the proposed development will be collected by Private waste collectors. The waste from the townhouses (which have entry from Beryl Avenue and Bakers Road) may be collected by Council's waste collection contractor.

Owners' Corporation Responsibilities

- Section 173 Agreement should be finalised prior to commencement of Private/Council waste collection services. Interim private services should be provided if Section 173 agreement has not been finalised prior to any occupancy.
- The owners' corporation will ensure that the communal garden and composting facilities are tidy and well maintained for vermin and odour control.
- It is expected that the residential community will contribute to the ongoing maintenance of the communal garden and associated composting facilities.
- The owners' corporation will ensure that the communal e-Waste bin area is tidy and well maintained, and will arrange for collection and sorting as required.
- Details of the time and collection will be provided to tenants so that they are able to exit and enter with caution



Ventilation/Vermin-Prevention

- Bin storage in the garage in each townhouse to be ventilated in accordance with AS1668 or relevant ventilation requirements.
- Communal garden and composting facility should be well maintained and kept tidy as described above

Collection Arrangements and Access to Waste Facilities (for private collection):

- Private contractor to conduct on-site collection with Medium rigid vehicle (4.5mH x 2.5mW x 8.8mL). For Swept path analysis refer to Traffix Report.
- Contractor to collect the bins from the kerb side and should keep it back on the kerb side after collecting the waste
- Waste collection days and times to be staged appropriately.

Waste Stream Summary

Waste from townhouses which are accessible within the proposed development will be collected by Private waste collectors. The waste from the townhouses (which has entry from the Beryl Avenue) will be collected by Council waste collection contractor

Garbage

All garbage to be stored in individual private bins for Council / Private collection.

Commingled Recycling

All commingled recycling to be stored in individual private bins for Council / Private collection. Recyclable items include paper, cardboard, PET, glass, aluminium, steel, and HDPE containers.

Food & Garden Organics (FOGO):

Food and garden organic waste to be disposed of at the community composting facility as required by the users.

City of Monash provide various composting options and information are available on the below mentioned website. Option include Bokashi bin, Share waste option etc.

<https://www.monash.vic.gov.au/Services/Environment/Living-Sustainably-in-Monash/Recycling-and-Waste>

<https://www.sustainability.vic.gov.au/You-and-Your-Home/Waste-and-recycling/Food-and-garden-waste/Compost>

Hard Waste

Hard waste collection will be managed by the City of Monash. Hard waste to be stored within individual dwellings and during collection periods, hard waste will be placed on the kerbside by individual residents in accordance with local council guidelines.

A 1m x 2m space is available for hard waste collection in kerbside as indicated in the drawings below.

Electronic Waste

E-waste, including batteries, print cartridges and mobile phones, to be stored in communal bins and be collected on an 'at-call' basis.



Owner can drop the E-waste to The Monash Waste Transfer and Recycling Station which is located at 380 Ferntree Gully Road, Notting Hill and open 7 days a week from 7.30am to 4pm. Or it can be disposed using Council's annual hard waste collection.

Other Waste Streams: The disposal of other waste including paints and chemicals shall be the responsibility of each dwelling. Waste can be disposed at recycled centres of the at Monash Waste Transfer and Recycling Station.

5. Bin Storage and collection Frequency

The following tables outline the bin schedules including details of collection, required volume for the effective management of waste removal. Subject to preference and site constraints, bin sizes and quantities may be changed. Recyclables may be either commingled or split into separate bins. They can be collected fortnightly when bigger bins are provided.

Table 5.1- Collection Frequency [collections/week/* Council recycling collection will occur fortnightly]

Waste Stream	Frequency
Garbage	Weekly
*Commingled Recycling	*Weekly
Food and Garden Organics	N/A (managed within development)
Hard Waste	Annually (or at-call user pays)
E-waste	At-call

Note: Council services are insufficient for this project because of the accessibility and the limitation of the access of the heavy rigid vehicle within the development. A private contractor will be engaged to conduct collections. There is sufficient space to allow the private waste contractor to safely manoeuvre a Medium rigid vehicle (4.5mH x 2.5mW x 8.8mL) within the development without the need for unsafe turns. For a detail Swept path analysis refer to Traffix Group report

The operator will choose the waste collection provider, negotiate & pay for these services.

6. In dwelling Bin Storage:

- The detail drawing of the individual townhouse i.e. from drawing number 4.04 -4.14 indicate the location of the Garbage and recycling bin in the garage
- Bins have been located at the back end of the garage and ventilation in each townhouse will be provided as discussed above
- Bin accessibility route would be facilitated by the provision of ramp wherever major level difference is present within the townhouses
- Below is a sample Townhouse accessibility to the kerb side storage of bin



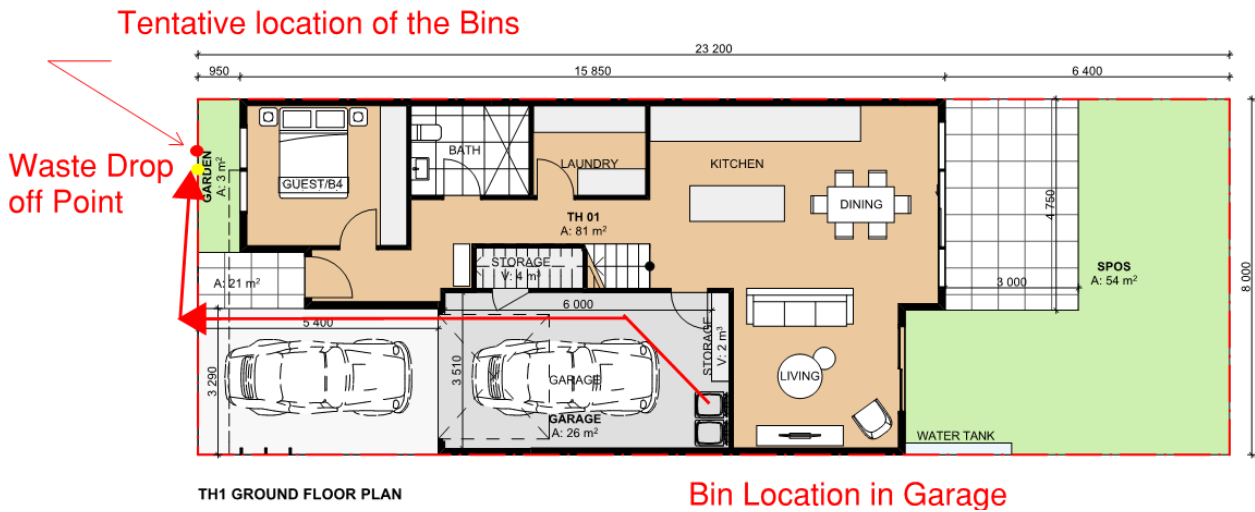


Image 6.1 – Accessibility of the bins to kerb side for private collection

Actions towards Victorian Government’s ‘Statewide Waste and Resource Recovery Infrastructure Plan’ (SWRRIP)

As per SWRRIP 2018, one of the aims is extracting the materials that can be recovered thus reducing the waste that goes to the landfill. This aim can be achieved at the development and a local government level.

To comply with this requirement of SWRRIP, all the dwellings and the residents will:

- Separate household commingled recyclables and organics for recovery which is strictly as per the waste collector requirements.
- Generate recoverable material streams and residual waste.
- Improve operations and systems related to sorting waste at the development level.

7. Bin Storage/ Signage/ Location of Bins

- The town planning drawings provided show there is sufficient space for garbage and commingled recycling bins for each dwelling on the kerbside. The streetscape has allowed for a minimum of 2 lineal metres for each dwelling (i.e. 1 metre per bin).
- Communal FOGO composting facilities will be clearly signposted to ensure all residents are aware of these facilities. The following identifies the where these facilities will be located.



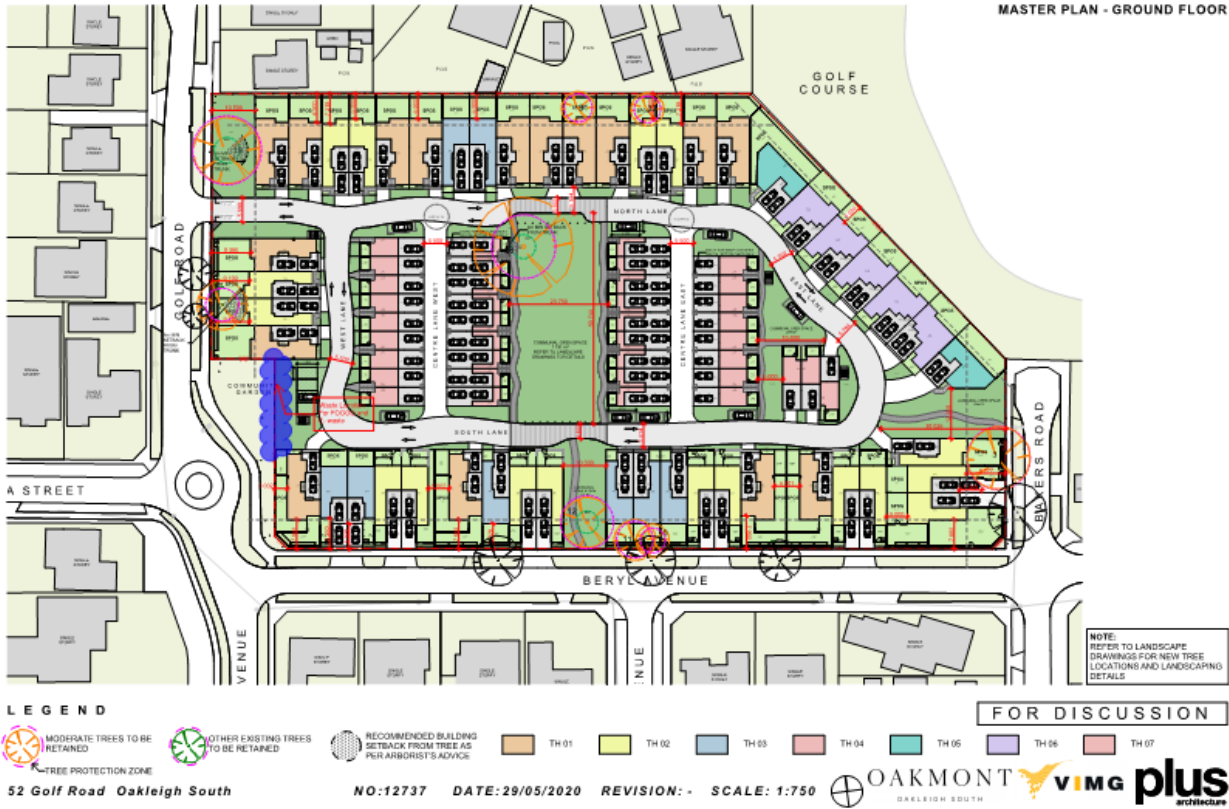


Image 7.1 –Location of communal FOGO composting and e-waste bin facilities



Image 7.2 –Example signage which can be provided to the Townhouse owner

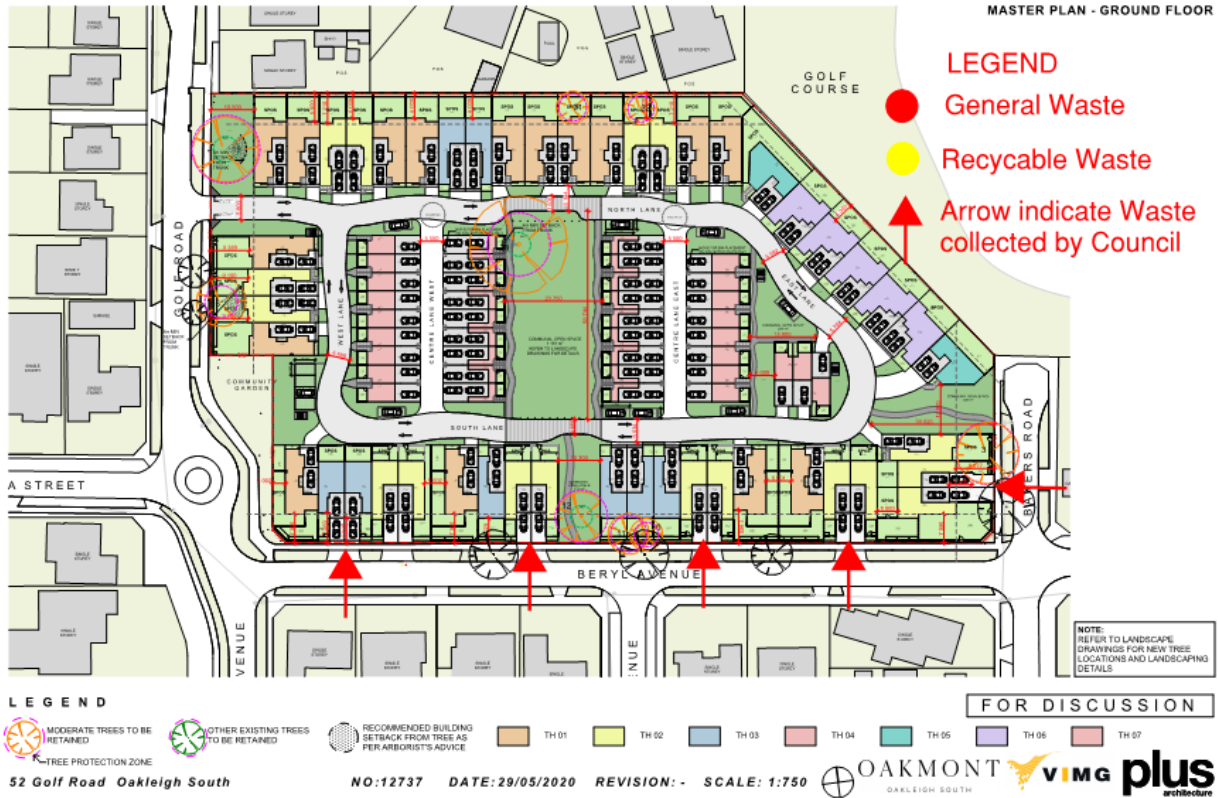


Image 7.3 –Kerb side bin location/ Hard waste collection

8. Limitations

The purpose of this report is to document a Waste Management Plan, as part of a Town Planning Application. It has the following limitations:

- It relates only to operational waste (excludes demolition/construction stages)
- It is based on drawings provided
- Figures presented are estimates only; the actual amount of waste may vary depending on occupancy rates, waste generation intensity and the operator's approach to waste management.
- This report is not to be used for the purposes of estimating operational costs or to document operational or safety procedures.



Appendix A –

*Typical Waste Generation Rates

Table 1 Weekly residential waste generation rates

Dwelling size	Garbage	Recycling
Individual dwelling	120L	120L or 240L

*Extract form City of Melbourne's Guidelines for Preparing a Waste Management Plan (2017)

**Standard Bin Details

The following table summarises the typical bin dimensions and area required (excluding area for access).

Bin Capacity	Width	Depth	Height	Area
120L	0.5m	0.6m	1.0m	0.3m ²
240L	0.6m	0.8m	1.1m	0.5m ²
360L	0.7m	0.9m	1.1m	0.7m ²
660L	1.4m	0.7m	1.2m	1.0m ²
1100L	1.4m	1.3m	1.5m	1.9m ²

** Average Gross Weight is based on domestic studies which vary subject to location and type of waste. Weight will be greater for compacted/wet waste.

***Bin Colours

Provider	Bin	Lid	Body
Council	Garbage	Red	Black
Council	Commingled Recycling	Yellow	Black
Private Contractor*	Garbage	Red/Burgundy	Dark Green/Black
Private Contractor*	Commingled Recycling	Yellow	Dark Green/Black
Private Contractor*	Paper/Cardboard	Blue	Dark Green/Black

*** Based on ANZECC Colour Coding suggestion for private bins. Private contractor bins must be labelled & may use alternative colours.

Swept path analysis

It is proposed that the provide waste contractor will use Medium rigid vehicle (4.5mH x 2.5mW x 8.8mL) within the development to safely manoeuvre within the development

For a detail Swept path analysis refer to Traffix Group report

