

APPENDIX G

Waste Management Plan



1248 Karnup Road Serpentine

Waste Management Plan

28 February
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Glossary of terms and acronyms

Commingled	Common recyclables, mostly packaging, such as glass, plastics, aluminum, steel, liquid paper board (milk cartons). Commingled
Recycling	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 curbside 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 curbside collection of recyclables (similar to an MGB). Generally, have a different color body and /or lid to MGBs.
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	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).
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).

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1 Introduction

This Waste Management Plan (WMP) has been prepared for Bright Tank Brewing Co for the Development Application for the proposed Brewing facility and restaurant in Serpentine. The proposed development will consist of 1400 m² of commercial Brewing Facility with circa 50m² of office space within the brewing facility and a 700 m² eatery and bar facility with a further 400 m² associated outdoor dining.

This WMP has been prepared based on the following information:

- Plans provided by View Through Design, Water Insight, Focus Vision and Coterra Environment.

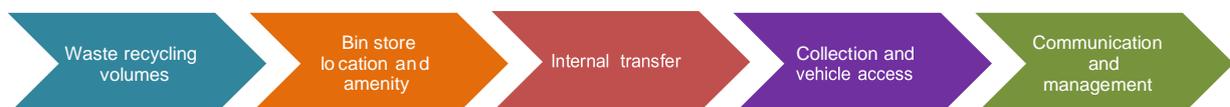
1.1 Context

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 (odors and noise)
- The ongoing management of waste and recycling services

1.2 Key components of the WMP

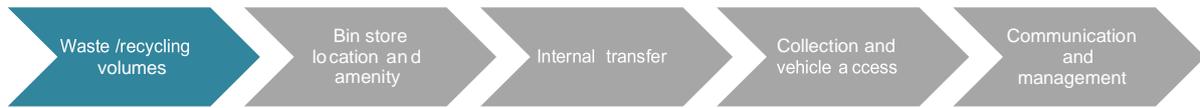
This WMP consists of five core components. The following report will present detailed information on each of the following components.



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2 Estimated waste and recycling volumes



2.1 Local government requirements for waste volumes and bin type

For the restaurant/bar, and manufacturing areas, and the commercial waste, generation rates have been calculated using Bright Tank Brewing Pty Ltd.'s experience and knowledge. Specifically, the generation rates used are presented below. The final column presents Bright Tank Brewing Pty Ltd.'s in-house estimate of the material streams presents in the recycling stream based on our working experience of operational breweries and restaurants.

Premises type	Waste generation rate	Recycling generation rate	Percentage breakdown of recycling stream by material
Restaurant/bar	5 L /1.5m ² /day	1 L /1.5m ² /day	50% cardboard 40% commingled 20% cooking oil 1% soft plastics 100% glass (in addition)
Office	5 L /100m ² /day	5 L /100m ² /day	79% paper 14% cardboard 2% soft plastics 7% commingled

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2.2 Commercial restaurant/ bar

The bin numbers for the commercial restaurant/bar tenancy, based on 1100 m² of restaurant and 50 m² for office areas are shown in table 1.

Table 1: Number of general waste and recycling bins for commercial

	Bin size (L)	Number of bins	Collection frequency	Total Space required (m ²)
General Waste	1500	2	EOD	13
Commingled recycling	1100	1	EOD	13
Cardboard	1100	1	EOD	13
Used cooking oil	200	1	As required	1
	Total	5		

2.3 Brewing waste

The brewing process will take one week and will produce spent grain material. Harvest bins will be utilised to store the spent grain which are fully enclosed containers with lids (see figure 1). Contracts with local farmers, including farmers adjusting the property at the brewery location at 1248 Karnup road. will be in place to take the spent grain. Table 2 summarises the amount of grain generated per week. Further wairst from hops, and yeast trub will also be side streamed and provided

Table 2: Quantity of spent grain per week from the brewing process

	Quantity (kg)	Collection frequency	Storage	Storage location
Spent Grain	4000	Daily	Harvest Bin	Brewery
Yeast & Hops Trub	1000	Weekly	IBC container	Brewery

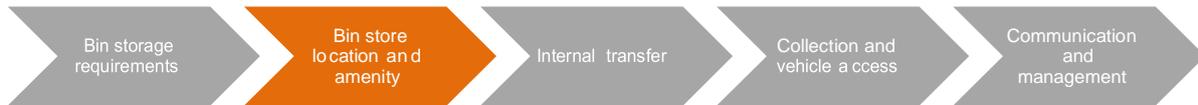


Figure 1: Harvest bin & IBC for spent grain storage

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3 Bin store location and amenity



3.1 Bin store location

The Bin Storage will be located to the rear of the brewery where a specific loading dock will be designed during the design phase of the project allowing for retrieval and dispatch of all goods to be preformed in the one location.



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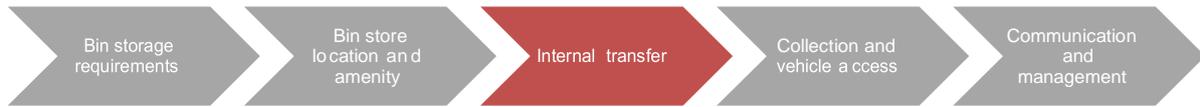
3.2 Bin store amenity

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.
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 <1:14) and avoid stairs or other potential hazards.
	Manual handling of waste in garbage bags is excluded from the waste management systems where possible.
Bin store	
Washing bins and waste storage area:	Impermeable floors grading to an industrial floor waste (including a charged 'water trap' connected to sewer or an approved septic system), with a hose cock to enable bins and / or the enclosure to be washed out. 100 mm floor waste gully to waste outlet. Both hot and cold water will be available.
Ventilation and odor:	The bin Store will be in the in an open area providing adequate ventilation and minimal odor.
Vermin:	Ongoing vermin management across the whole venue will be in place with monthly checks by a nominated contractor.
Noise:	Noise is to be minimised to prevent disruption to occupants or neighbors.
Aesthetics:	The bin store will be consistent with the overall aesthetics of the development.
Signage:	Visual aids and signage will be provided to ensure that the area works as intended.

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4 Internal transfer



Staff from the microbrewery will manually transfer waste and recyclables directly from commercial areas to ground floor bin store. Spent grain will be removed from site immediately after brewing process is completed and will not remain on site for longer than 24 hours. A 2.5t forklift (see figure 4) will be used to shift loads onto a utility vehicle for transport away from site. The harvest bins and IBC alongside forklifts will go through the large sliding door to the brewery, and out via the same route.

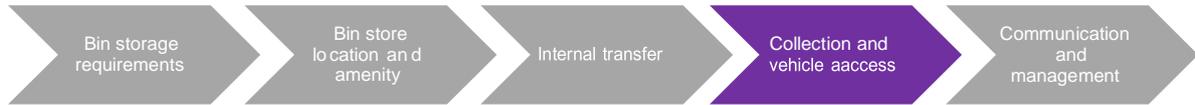


Figure 4: 2.5t Forklift

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6 Collection and vehicle access



A Commercial contractor will service the commercial waste and recycling collections. On collection days rear-lift and front lift vehicles for general waste and recycling will enter up the entry road and around the carpark ring road to the rear of the brewery into the loading bay area. All Bins will be in the correct locations for collection by 6am on collection days. Bins will be situated off to the side of the loading bay ramp in a location allowing for correct turning circles needed for the contractors' trucks to access them. Glass collections will take place as per the recommendations on the acoustic management report.

7 Ongoing communication and management



7.1 Management

The General manager will be responsible for overseeing the waste management systems. The staff member will be responsible for always maintaining the bin store in a clean and tidy condition and ensuring bins are washed regularly.

7.2 Communication

All staff will be made aware of the waste and recycling systems and how they should be used. The business owner will be responsible for the continuing education of staff on correct segregation of waste and recyclables.