

Urbii



Reduce. Reuse. Recycle

1823 Frenchman Bay Road, Albany
Proposed Tourist Accommodation

Waste Management Plan



Prepared for:
Frenchman's Bay Albany Pty Ltd

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1823 Frenchman Bay Road, Albany

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1 Introduction

This Waste Management Plan has been prepared by Urbii on behalf of Frenchman's Bay Albany Pty Ltd with regards to the Proposed Tourist Accommodation, located at 1823 Frenchman Bay Road, Albany.

The subject site is situated on the western side of Frenchman Bay Road, as shown in Figure 1. The site is presently vacant and is covered by vegetation. Surrounding the site is also vegetation, with a public car park, toilets and picnic area located nearby to the north-east of the site.

It is proposed to develop the site into tourist accommodation with a range of configurations including tents, a lodge, two-storey pods and supporting amenities. The development will provide a total of 24 beds for a maximum of 48 guests. Events such as weddings may also be held at the facility. Events will typically include guests at the facility. However, there may be larger events on occasion, with a maximum attendance of 100 patrons.

The key issues that will be addressed in this report include the traffic generation and distribution of the proposed development, access and egress movement patterns, car parking and access to the site for alternative modes of transport.



Figure 1: Subject site



2 Objectives

The objectives of this WMP are adapted from the WALGA *Commercial and Industrial Waste Management Plan Guidelines*:

- Ensure that the long-term waste management needs for the development are met in an efficient and sustainable manner.
- Minimise the impact of waste services and facilities on the streetscape and surrounds, in relation to both the footpath/public realm and the frontage of the development.
- Reduce the impact of waste collection services and facilities on the amenity of the locality particularly in terms of noise and odour.
- Maximise safety for both waste collection staff and the public.
- Minimise traffic and footpath obstruction.

3 Referenced documents

The documents referenced in preparing this WMP may include, but are not limited to:

- City of Melbourne *Guidelines for Waste Management Plans* 2021;
- City of Perth *Waste Guidelines for all Developments* 2019;
- WALGA *Commercial and Industrial Waste Management Plan Guidelines*;
- WALGA *Multiple Dwelling Waste Management Plan Guidelines*;
- WALGA *Subdivision Waste Management Plan Guidelines*; and,
- Waste Authority WA *Waste Avoidance and Resource Recovery Strategy for 2030*.



4 Guiding concepts

Urbii adopts the guiding concepts of the State's Waste Strategy and encourages these concepts to be considered in all developments to the furthest extent feasible.

4.1 Waste hierarchy

The *Waste Avoidance and Resource Recovery Strategy 2030* applies the waste hierarchy (Figure 2), which is a widely accepted decision-making tool. The waste hierarchy ranks waste management options in order of their general environmental desirability. Waste avoidance is the most preferred option in the hierarchy.

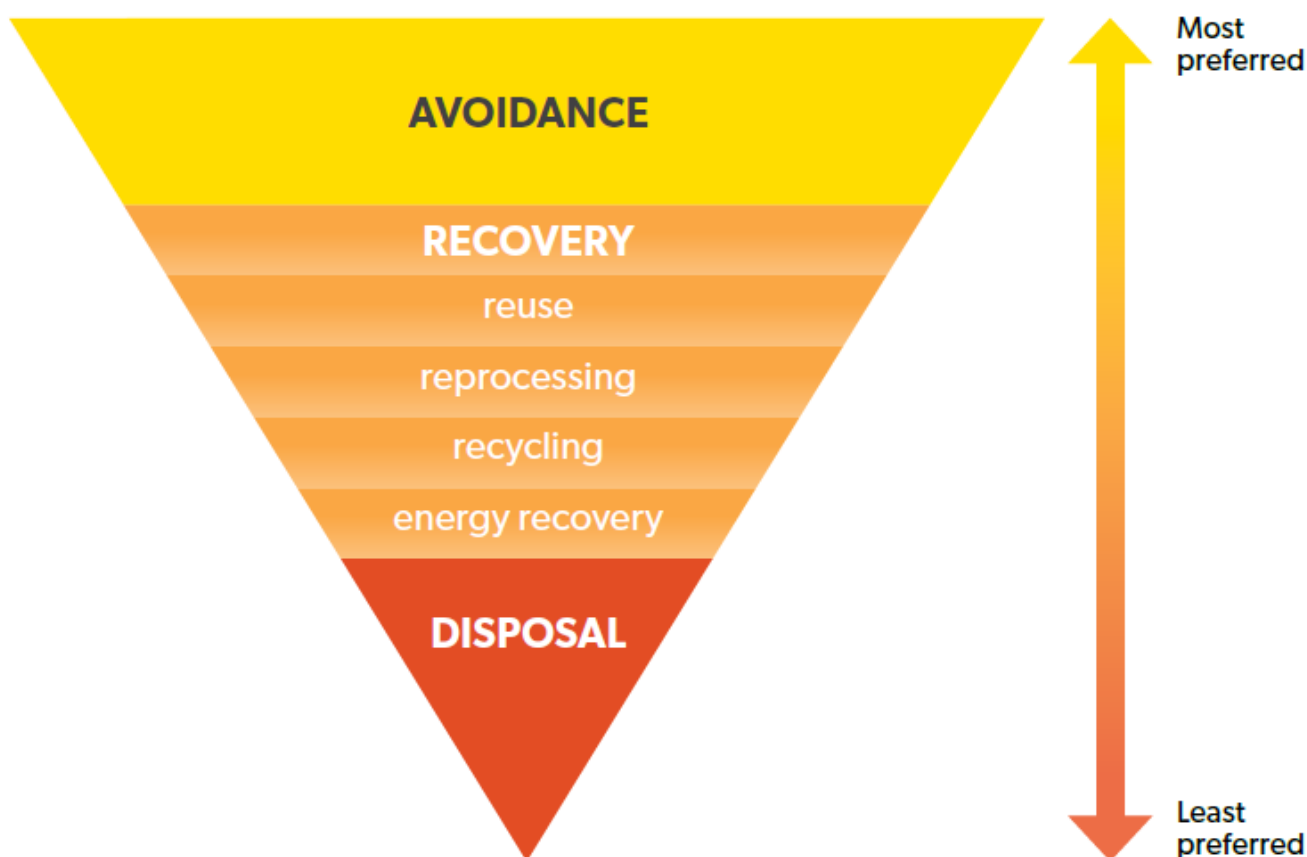


Figure 2: Waste hierarchy

Source: Waste Authority WA *Waste Avoidance and Resource Recovery Strategy for 2030*.

Resource recovery options recover value from materials, thereby offsetting the environmental impacts of extracting and processing raw materials. Energy recovery is the least preferred recovery option. Disposal is the least preferred option. Disposal generally recovers the least value from materials and delivers the least environmental benefit.

4.2 Circular economy

A circular economy (Figure 3) makes use of established sustainability concepts, including life cycle thinking and resource efficiency. A circular economy should consider the flow of both materials and energy. It moves away from the linear 'take, make, use and dispose' model, to one which keeps materials and energy circulating in the economy for as long as possible.

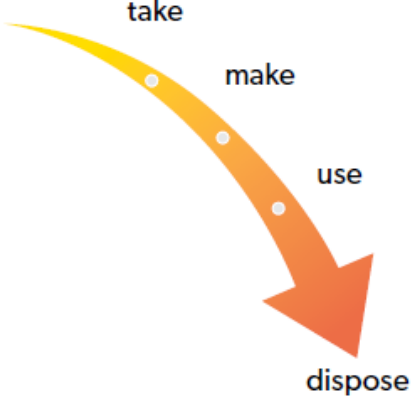

Current approach	Circular economy
	
Linear flow of materials – 'take, make, use and dispose' model.	Circular flow of materials – materials sorted and retained in the economy for as long as possible.
Limited use of renewable materials and energy.	Preference for renewable materials and energy.
Significant volumes of materials disposed of and lost to the economy. Loss of embodied materials, energy and water.	Materials recovered as high up the waste hierarchy as possible. Embodied materials, energy and water retained in the economy. Organic materials re-enter and regenerate the environment safely (for example, as compost).
Materials managed locally and globally.	Preference to manage materials locally to reduce the costs and impacts of transport, and to provide local employment and investment opportunities.
Economic value of materials, employment and investment not fully accounted for.	Economic value of materials, employment and investment accounted for.
Limited focus on life cycle thinking.	Products designed and manufactured to minimise environmental impact through whole of life.

Figure 3: Transitioning to a circular economy



5 Proposed development

The proposal for the subject site is for construction of a tourist accommodation development comprising:

- A lodge;
- 6 x two-storey pods;
- 2 x 'BBR' units;
- 6 x 'Glamping' tents;
- Supporting amenities including a garage, common room, shed and refuge;
- Bin store near the site entrance;
- 34 onsite car parking bays including 2 x ACROD bays and a double garage.

The development will provide a total of 24 beds for a maximum of 48 guests. There may be 4 to 6 staff onsite at any time.

Events such as weddings may also be held at the facility. Events will typically include guests at the facility. However, there may be larger events on occasion, with a maximum attendance of 100 patrons. For larger events exceeding 48 attendees, it is proposed to provide a shuttle bus service to transport guests to and from the site.

Vehicle access to the site is proposed via two crossovers on Frenchman Bay Road.

Waste collection, delivery and other service vehicle activity for the site will be accommodated within the site.

The proposed development plans are included for reference in Appendix A.

6 Waste generation

6.1 Waste generation rates

The waste generation rates for general waste and recyclables are sourced from the WALGA Guidelines. Commercial waste generation rates are detailed in Table 1.

Table 1: Development waste generation rates

Land use	Description	General waste generation rate	Recyclables generation rate
Accommodation	Guesthouse	60L/occupant/week	30L/occupant/week

6.2 Waste generation calculations

The waste generation calculations are detailed in Appendix D. The estimated waste generation for the entire development is:

- General Waste: around 2,880L per week.
- Recyclables: around 1,440L per week.



7 Waste systems

7.1 Internal bin storage areas

Each accommodation room will be supplied with a small bin for waste. Outdoor waste bins will also be distributed throughout the site. Employed cleaners will empty bins regularly and transfer waste to the bin store.

7.2 External bin storage areas

Bin storage areas at this development must be adequate to contain all waste and recycled material generated on the premises for the proposed waste collection frequency.

A bin store is proposed to be provided on ground level next to the main site entrance (Figure 4).



Figure 4: Bin store location

7.2.1 Bin size, quantity and colour

It is proposed to provide the following bins in the centralised bin storage area:

- 6 x 240L General waste (red lid bin).
- 3 x 240L Co-mingled recycling (yellow lid bin).

The number of bins required for the development is detailed in Appendix D.

7.2.2 Bin storage area size

As detailed in Table 2, each 240L bin has a footprint area of 0.43m². A 50mm gap is allowed between the bins to allow easy pull movement.

Storage areas should be out of sight or well screened from the street. Bin storage areas should not detract from the aesthetics of the development and should blend in with surrounding structures and landscaping.

Table 2: Standard Mobile Garbage Bin (MGB) dimensions

Bin capacity	80L	120L	140L	240L	360L
Height (mm)	870	940	1065	1080	1100
Depth (mm)	530	560	540	735	885
Width (mm)	450	485	500	580	600
Approximate footprint (m ²)	0.24	0.27	0.27	0.43	0.53

Source: WALGA



7.2.3 Bin storage area design

Urbii has checked the proposed bin storage location and confirmed that required clearances are provided. A bin storage plan is included in Appendix B.

The following is a list of generic advice offered for consideration at subsequent detailed design stages of the project:

- **Size:** Ensure the size of the area set aside for the management of waste is sufficient to accommodate the number of bins required.
- **Ventilation and odour:** If covered, the design of the bin store will provide for adequate natural ventilation through ventilated doors or an alternative method which will be permanent, unobstructed natural ventilation openings direct to the external air, not less than one-twentieth i.e. 5% of the floor area.
- **Lighting:** Artificial light controlled by switches will be located near the bin store entrance.
- **Noise:** Bins will be collected from the waste collection presentation point near the site entry.
- **Aesthetics:** The bin store should be consistent with the overall aesthetics of the development.
- **Vermin:** Self-closing doors can be considered to eliminate access to vermin.
- **Washing bins and waste storage area:** If there is no space for bin washing outdoors then the internal bin stores will have bin-washing facilities including an adequate supply of hot and cold water mixed through a centralised mixing valve with hose cock and have floor drainage installed. Staff will be responsible for washing bins (or contracting a provider to wash bins) and for maintenance of their bin stores.

8 Waste collection

8.1 Waste vehicle types

Consultation with the project team indicates that the site operator will engage a private waste collection service for the development. The waste truck is expected to be a rear loader with a maximum length of 9.8m.

8.2 Waste collection frequency

The waste calculations and bin store design have assumed a collection frequency schedule of two times per week for general waste and recycling.

8.3 Waste collection method and presentation points

Waste trucks will enter the site in forward gear from Frenchman Bay Road. The truck will then reverse into a hardstand adjacent to the bin store.

Waste collection contractors will wheel bins out of bin stores to be emptied via the rear loader mechanism.

Trucks will then drive out in forward gear and exit the site back to Frenchman Bay Road.

8.4 Vehicle access and maneuvering

The design and checking vehicle for swept paths is a 9.8m rear loader waste truck. The swept path analysis is presented in Appendix C, and confirms that there is satisfactory road and intersection geometry for waste truck access and maneuvering.



9 Additional waste requirements

9.1 Bulk waste

Bulk waste can include old and broken furniture and electronic items/white goods and materials generated. Bulk waste can be stored in the bin store, or other area for a brief time until arrangements can be made for removal.

9.2 E-waste

Storage space for E-waste will be accommodated in designated storage areas. E-waste will be disposed of in a suitable manner, such as bulk drop-off to the tip or using public battery recycling boxes.

9.3 FOGO

The site caretaker will manage garden organic waste. Garden waste can be composted onsite, placed in general waste bins if there is space or can be removed by trailer to be disposed offsite in a suitable location.

9.4 EVENTS

As a general rule of thumb, allowance should be made for a minimum of 1L of waste per person per meal at events.

Most events will be attended by occupants of the resort (48 people). The waste generated by these resort guests will cover events.

For events where non-guests are also attending, there may be up to 100 people in total (additional 52 attendees). An additional 52 attendees will generate:

- 26L of General Waste per meal.
- 26L of Recycling Waste per meal.

The volume of waste generated by events can likely be absorbed within the regularly scheduled waste collection service. The accommodation units are unlikely to be 100% occupied every day of the week, therefore there should be some bin capacity to cater for events which exceed 48 people.

However, should the bin store become full before the next regularly scheduled collection day, then site management will request an additional same-day collection service to empty the bins.

10 Waste management

Each accommodation room will be supplied with a small bin for waste. Employed cleaners will empty bins regularly and transfer waste to the bin stores. Waste will be sorted from general waste and recyclables and placed in the correct bins.

Designated staff will be responsible for:

- Cleaning the bin storage areas and facilities; and,
- Regularly cleaning bins.

The appointed facility manager will be responsible to:

- Appoint a staff member for:
 - arranging pick-up times for the bins by the private contractor, including moving the bins from the bin store to the collection point;
 - arrange for the bins to be cleaned and sanitised; and
 - coordinating the cleaning of the bins and bin storage areas every two (2) to three (3) weeks;
- Deal promptly with any issues or complaints relating to hygiene, noise, odour or other inconvenience; and,
- Provide adequate training for relevant staff regarding waste management.

A copy of the Waste Management Plan will be maintained within the office/administration area of the premises for reference and records.



11 Conclusion

As demonstrated within this Waste Management Plan, the proposed tourist development provides sufficient bin storage and adequate bins to service the site for general waste and recyclables.

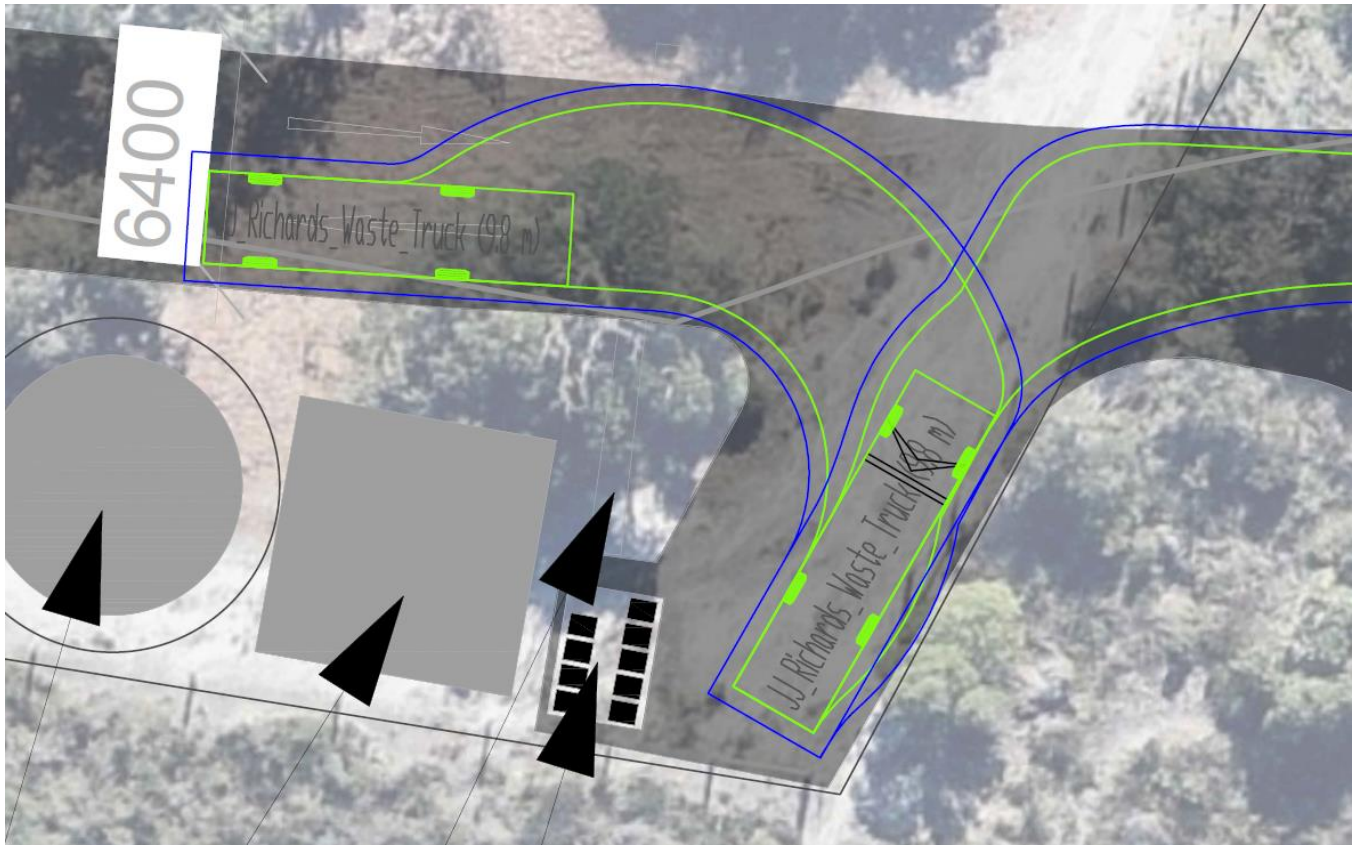
Furthermore, the servicing of the bins by private service can be adequately achieved without having an adverse impact on the site and the local street network.

Appendices

Appendix A: Proposed development plans



Appendix B: Bin storage plan



Appendix C: Swept path analysis

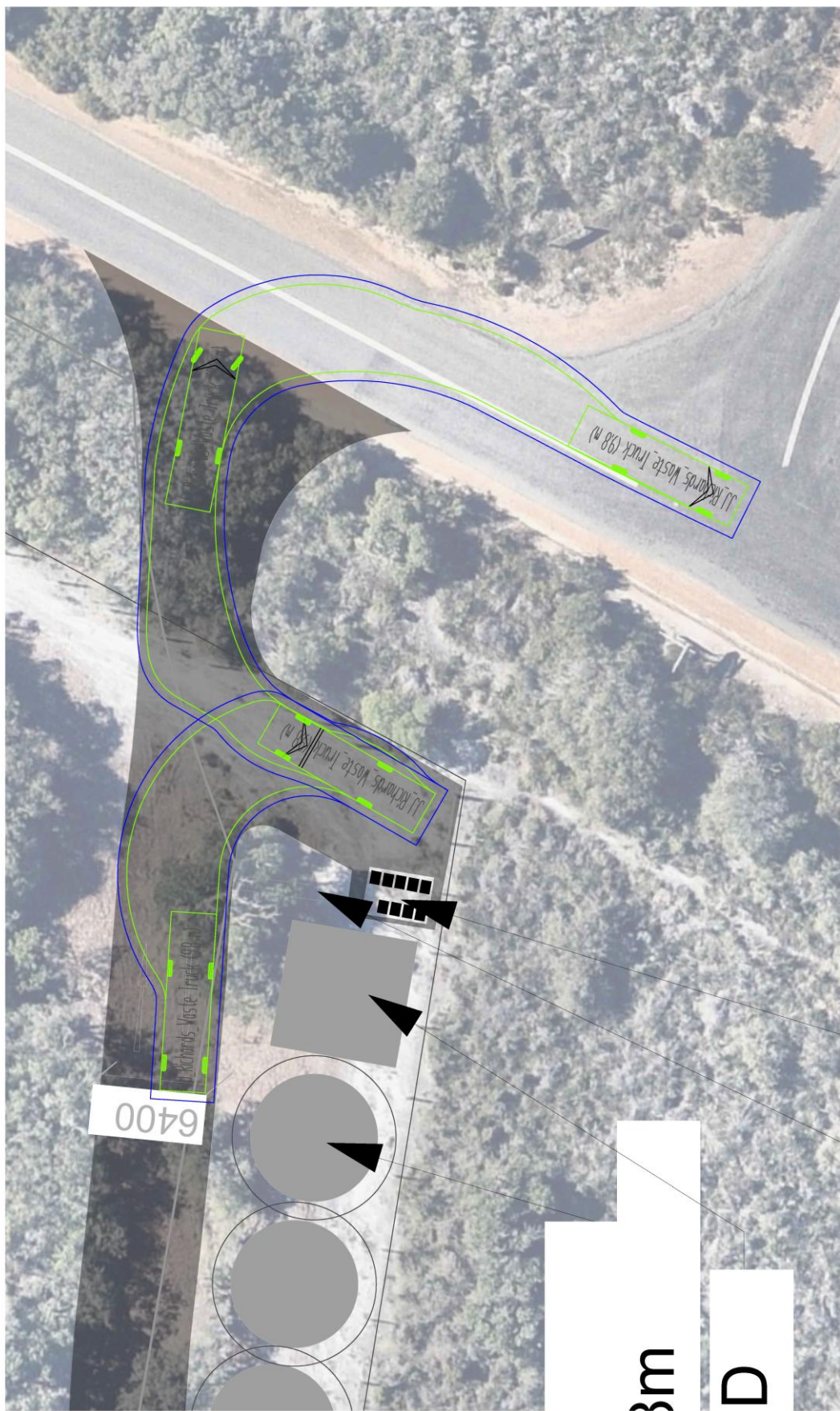
Swept path diagrams are included in this section of the report. Different coloured lines are employed to represent the various envelopes of the vehicle swept path, as described below:

Cyan represents the wheel path of the vehicle

Green represents the vehicle body envelope

Blue represents a 500mm safety buffer line, offset from the vehicle swept path

The swept path diagrams are also provided separately in high-quality, A3 PDF format.



Revision notes:

Rev:	Date:	Notes:
1	01/12/2023	Dark blue line represents a 50mm buffer

Drawn by:
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Client:
Frenchman's Bay Albany Pty Ltd

Project:
U23.056 - Frenchmans Bay, Albany
Proposed Tourist Accommodation

Drawing Title:
Waste truck entry, circulation and exit
8.5m Rigid Waste Truck

Date:
01/12/2023

Scale @ A3:
1:200

Revision:
s01

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Appendix D: Waste calculations

Table 3: Proposed development waste generation, bin provision and collection frequency

Land use	Description	Units	General waste generation rate	Recyclables generation rate	General waste daily generation (L)	Recyclables daily generation (L)
Accommodation	Guesthouse	48	60L/occupant/week	30L/occupant/week	411.4285714	205.7142857
Total					411.4285714	205.7142857

Waste type	Daily generation (L)	Days in operation (per week)	Weekly waste generation (L)	Weekly collection frequency
General waste	411.4285714	7	2880	2
Recyclables	205.7142857	7	1440	2

General Waste Bins

Bin Size (L)	Number of bins	Weekly capacity
240	6	2880
Total weekly capacity (L)		2880

Recycle Waste Bins

Bin Size (L)	Number of bins	Weekly capacity
240	3	1440
Total weekly capacity (L)		1440

