

Waste Management Plan

Wallcliffe House, Margaret River

Project No. 21-1264-1

The Landsmith Collection





Encycle Consulting Pty Ltd

ABN 41 129 141 484

PO Box 6044

East Perth WA 6892

t: +61 8 9444 7668

www.encycle.com.au

JCampbell@encycle.com.au

Revision	Drafted by	Reviewed by	Date issued
Rev_0	K Oliver	J Campbell	17 September 2023
Rev_1		J Campbell	22 September 2023
Rev_2	D Haslam/ M McManus	J Campbell	5 October 2023
Rev_3		J Campbell	6 October 2023
Rev_4	D Haslam	J Campbell	9 October 2023
Rev_5	A Donnelly	J Campbell	8 November 2023

Copyright

All intellectual property rights and copyright associated with Encycle Consulting services and publications shall remain vested in and the property of Encycle Consulting. Advice and material contained within this document may be used exclusively by the Company named as the recipient of this work solely for use as specified in this document. Reproduction, publication or distribution of this work without prior written permission from Encycle Consulting is strictly prohibited.

Disclaimer

While steps have been taken to ensure the accuracy of this document, Encycle Consulting cannot accept responsibility or be held liable to any person for any loss or damage arising out of or in connection with this information being accurate, incomplete or misleading.

Table of contents

1	Development details	1
1.1	Context	1
1.2	Waste strategy overview and key components of the Waste Management Plan	2
2	Estimated waste generation and storage.....	3
2.1	Project parameters.....	3
2.2	Local Government Guidelines	3
2.3	Waste generation.....	4
2.4	Waste storage – hotel operational approach	5
2.4.1	Number of bins	6
2.4.2	Garden organics storage area.....	7
2.5	Waste storage –direct collection by private service provider	7
2.5.1	Number of bins	8
3	Bin store amenity	11
4	Internal transfer.....	13
4.1	Transfer of waste to Operations Barn bin store	13
4.2	Transfer of waste to the contingent bin store.....	13
5	Collection and vehicle access	14
5.1	Proposed service regime – hotel operational approach	14
5.2	Contingent servicing regime	15
6	Ongoing communication and management	17
6.1	Management	17
6.2	Communication	17
	Appendix A: Glossary of terms and acronyms.....	18
	Appendix B: Site Plan	20

1 Development details

This Waste Management Plan (WMP) has been prepared for the following project:

Project name / address	Wallcliffe House - 752 Wallcliffe Road, Margaret River
Client	The Landsmith Collection - Wallcliffe House Pty Ltd
Planning status	DA submission
Overview of development	Development of the iconic Wallcliffe House property in Margaret River to create a boutique 25-key luxury hotel, including a restaurant, wellness facilities and extensive formal and informal gardens.
Sustainability objectives	The project will design and implement various practices to reduce environmental impact, including waste minimisation and effective resource recovery through reuse, recycling and composting.
Architectural plans / area schedule / development information	Architectural plans, received from MJA on 15 September 2023 Area schedule, received from MJA on 28 August 2023
Local Government discussions	An overview of the project and proposed waste strategy was provided to the Shire of Augusta Margaret River's Manager Waste and Major Projects on 15 September 2023 via a Teams meeting.

1.1 Context

For efficient and effective waste management, the collection and centralisation of waste, recyclables and food organics have been carefully considered at the design phase.

Key factors considered at the design phase include:

- Local government requirements for determining waste generation rates
- Waste minimisation strategies (refer Section 2.3)
- Waste, recycling and food organics volumes likely to be generated during operation
- Number and types of bins required
- Bin store/s size, location and amenity (odours and noise)
- Internal transfer and access to bins and storage areas from within the building
- Access for vehicles for waste collection
- Safety for all operatives involved in waste management

1.2 Waste strategy overview and key components of the Waste Management Plan

This Waste Management Plan (WMP) consists of five core components. The document presents the preferred approach for managing waste at Wallcliffe House, which is to firstly minimise the amount of waste generated on site, segregate recyclables and food organics at source and transfer waste in bins using a private vehicle, which takes waste to an off-site facility operated by The Landsmith Collection.

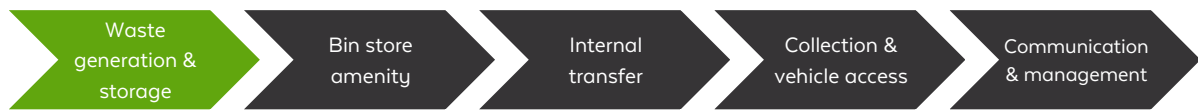
The purpose of managing waste and vendor deliveries away from the hotel is to minimise the number of vehicle movements coming from and going to the site, resulting in an elevated and less disrupted guest experience.

A contingent waste strategy has also been incorporated into this report, to demonstrate that waste and bins can be serviced directly by a private service provider should that need arise.

The WMP presents detailed information on each of the following components:



2 Estimated waste generation and storage



2.1 Project parameters

The property when operational will include the following areas (a site plan is provided in Appendix B):

Hotel facilities

- Security Gate House - office
- Wallcliffe House - food and beverage facilities to include a bar, commercial kitchen and dining room
- The Dairy Providore - flexible space for food and beverage activities
- Spa - treatment rooms, yoga studio, pools and a gym
- Operations barn to include offices, staff kitchen, amenities, storage and loading area
- Estate management workshop

Accommodation - 25 keys

- River Wing - 12 keys
- Cliff Wing - 6 keys
- Cottages - 7 keys

2.2 Local Government Guidelines

The following documents have been considered in the development of the WMP:

- Shire of Augusta-Margaret River Health Local Law 1999
- WALGA Commercial and Industrial Waste Management Plan Guidelines (2018)

2.3 Waste generation

The property will have a total of 25 keys and accommodate up to 62 guests. The facilities will only be accessible to guests who are staying at the property. Suppliers will deliver products to an off-site facility (location yet to be confirmed) where bulk items will be stripped of plastic and paper and re-packed into reusable containers. They will then either be stored or dispatched straight away to Wallcliffe House. A Landsmith-operated vehicle will deliver products from the off-site facility to Wallcliffe House daily, using reusable containers and crates. This concept supports a significant reduction in the quantity of packaging waste produced at Wallcliffe House.

In addition, a range of other initiatives will be implemented that will minimise the quantity of waste produced at the off-site facility and Wallcliffe House, and include, at a minimum:

- An eWater¹ reticulated system for cleaning. This system reduces both chemical and individual container use. eWater systems are custom designed to meet the individual needs of each facility, however broadly the design will include centralised tanks that supply a network of taps and wash stations.
- Where possible, avoidance of single use plastic in hotel rooms, for example no products containing plastic microbeads, bulk-dispensing of personal care products and no plastic-wrapped amenities.
- Substantial reduction of plastic and packaging (compared to typical hotel practices), in hotel rooms, function areas and the kitchen/restaurant. This includes cleaning products, expanded polystyrene products and packaging (with potential exemptions for white and brown goods), single-use plastic containers, single-use plastic bowls, cups, plates, and plastic bags.
- All food and beverages will be served using reusable crockery, cups, glassware, and cutlery (avoiding the use of single use packaging).
- Steel kegs will be used for beer.
- A chilled, sparkling, or still water tap and refillable bottles will be made available in every guest room (i.e. no single-use plastic water bottles will be provided).

WALGA waste generation rates for hotels and associated facilities have been adjusted to take into consideration the above (minimum) waste minimisation initiatives to estimate the quantity of waste, recyclables and organic waste.

¹ <https://www.ewater.com/>

2.4 Waste storage – hotel operational approach

Under this preferred approach, two waste storage areas are provided to service the property at the following locations:

- i. Operations Barn – a dedicated bin store for waste, recycling and food organics
- ii. Estate Management Area – a green waste storage area for garden waste

The location of the bin store and green waste storage area is shown in Figure 1.

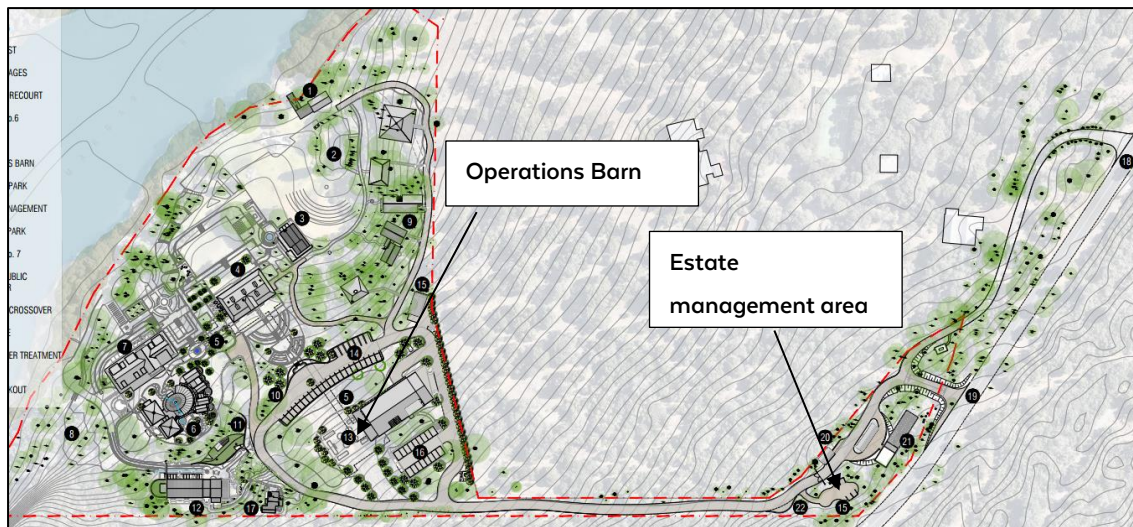


Figure 1: Site plan showing location of the Operations Barn bin store and green waste storage area

2.4.1 Number of bins

The number of bins to be stored in the bin store at the Operations Barn are set out in Table 1. Note, bins for each stream include a spare, so that there is always a bin available on-site (while the full ones are taken off-site).

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

Waste stream	Bin size (L)	Number of bins	Collection frequency	Colour code*
General waste (excluding food waste)	240	7	Daily	W
Commingled recycling (excluding CDS)	240	2	Daily	CM
CDS recycling (includes wine bottles)	240	5	Daily	CDS
Used cooking oil	Receptacle type to be determined	1	As required	CO
Organic waste (food)	120	4	Daily	FO
Electronic waste (e-waste)	240	1	As required	E
Bulky waste and <i>ad hoc</i> recyclables	Provide approximately 2-3 m ² space for the temporary storage of bulky and returnable items			B

Figures 2 and 3 show the location and layout of the bin store in the Operations Barn.

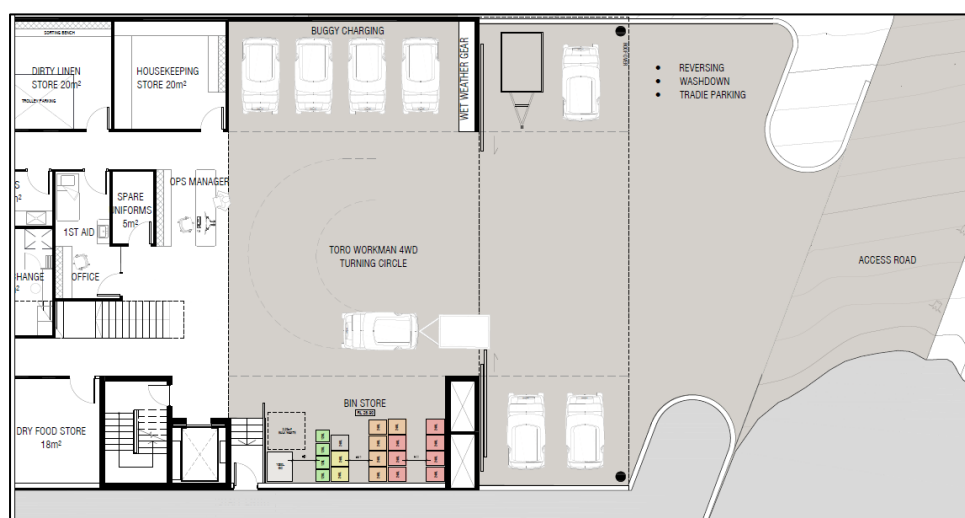


Figure 2: Location of bin storage area within the Operations Barn

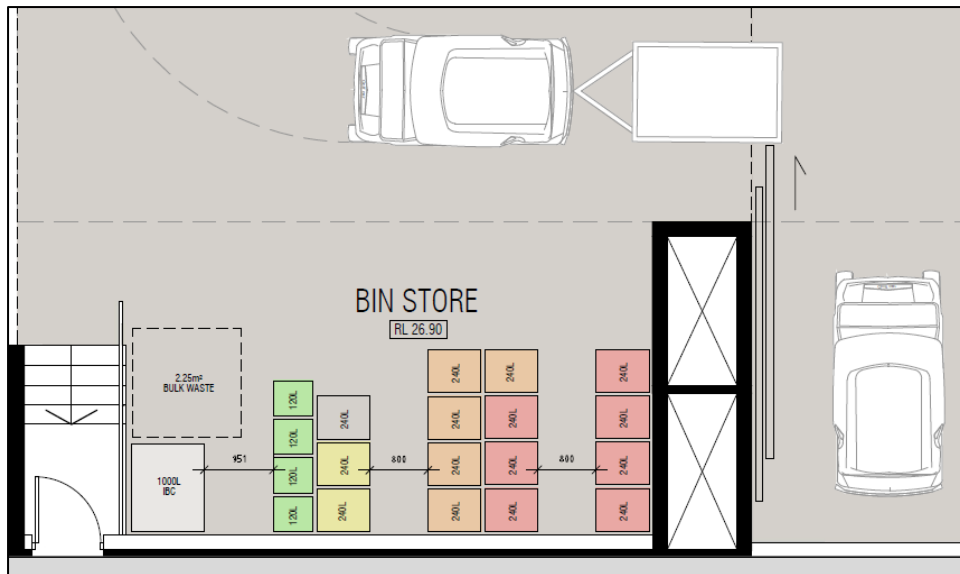


Figure 3: Layout of the bin store in the Operations barn

2.4.2 Garden organics storage area

Garden organic waste will be stored on site in concrete bays located at the estate management area. When a certain quantity of waste is produced, a front-end backhoe machine will load the green waste onto an internal vehicle and transport to another site for use as mulch.

2.5 Waste storage -direct collection by private service provider

In the contingency scenario where waste is to be serviced directly from the site by a private service provider, another bin store will be located at the entrance to the property, as shown in Figure 4.

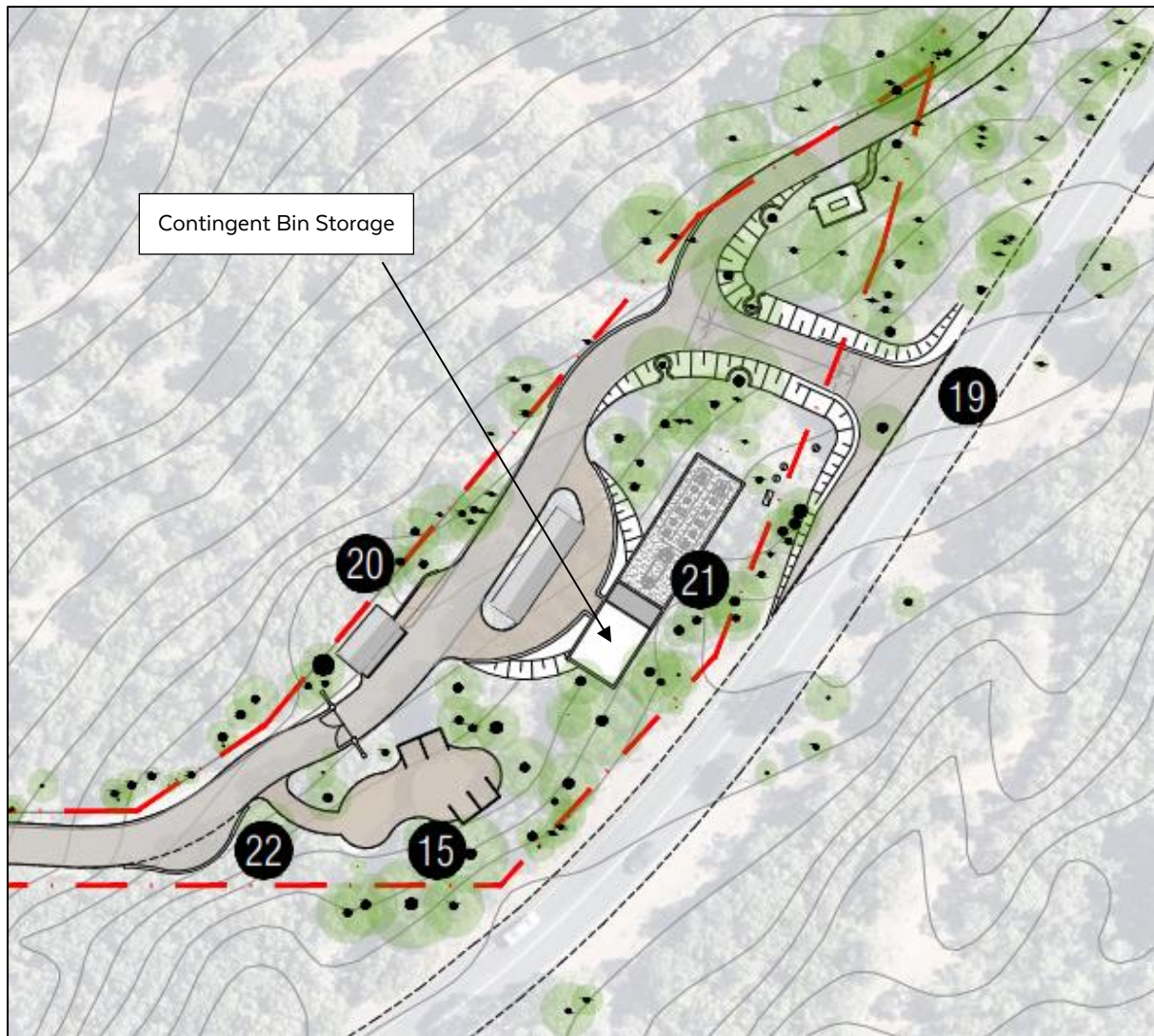


Figure 4: Location of the contingent bin store at site entrance

2.5.1 Number of bins

The number of bins to be stored in the contingent bin store at the site entrance are set out in Table 2. Note the collection frequency is based on collection frequencies currently available by private waste service providers in the south-west region.

Table 2: Number of bins to be stored in the contingent bin store

Waste stream	Bin size (L)	Number of bins	Collection frequency	Colour code*
General waste (excluding food waste)	1100	5	Twice-weekly	W
Commingled recycling (excluding CDS, including paper and cardboard)	1100	2	Twice-weekly	CM
CDS recycling	240	23	Weekly	CDS
Used cooking oil	1000 L IBC (1.5 m ²)	1	As required	CO
Soft plastics recycling	660	1	As required	SP
Organic waste (food)	120	13	Twice-weekly	FO
Electronic waste (e-waste)	1m ² lockable cage	1	As required	E
Bulk general waste	Approximately 8 to 10 m ² space for the storage and collection of additional waste and recycling streams such as broken furniture and equipment, printer toners, fluorescent lights and the temporary storage of bulky and returnable items such as pallets, crates and other reusable containers provided by suppliers etc.			B

Figures 5 and 6 show the location and layout of the bin store at the site entrance.

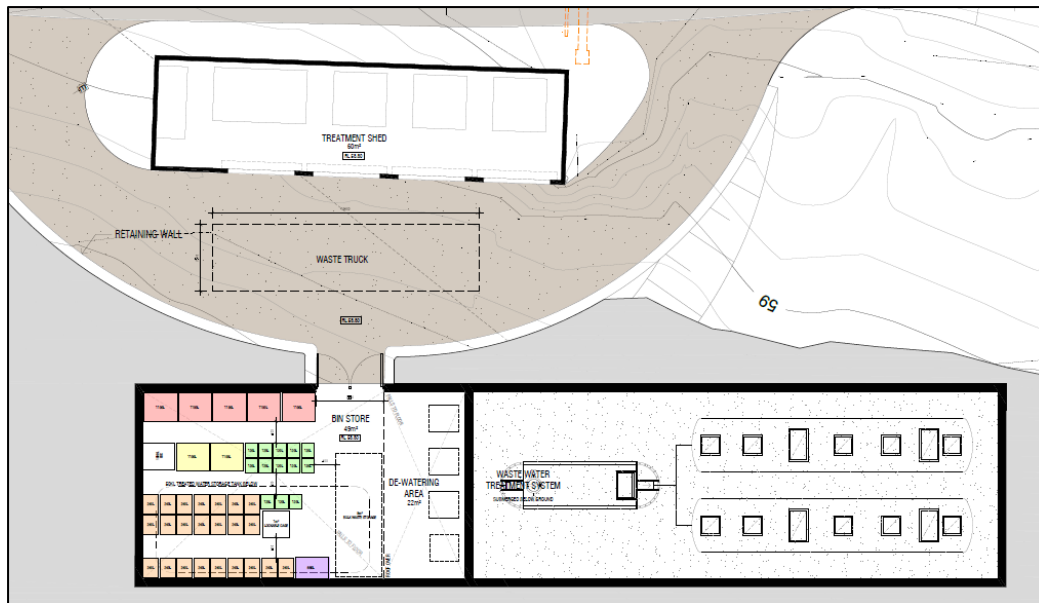


Figure 5: Location of the contingent bin store at site entry

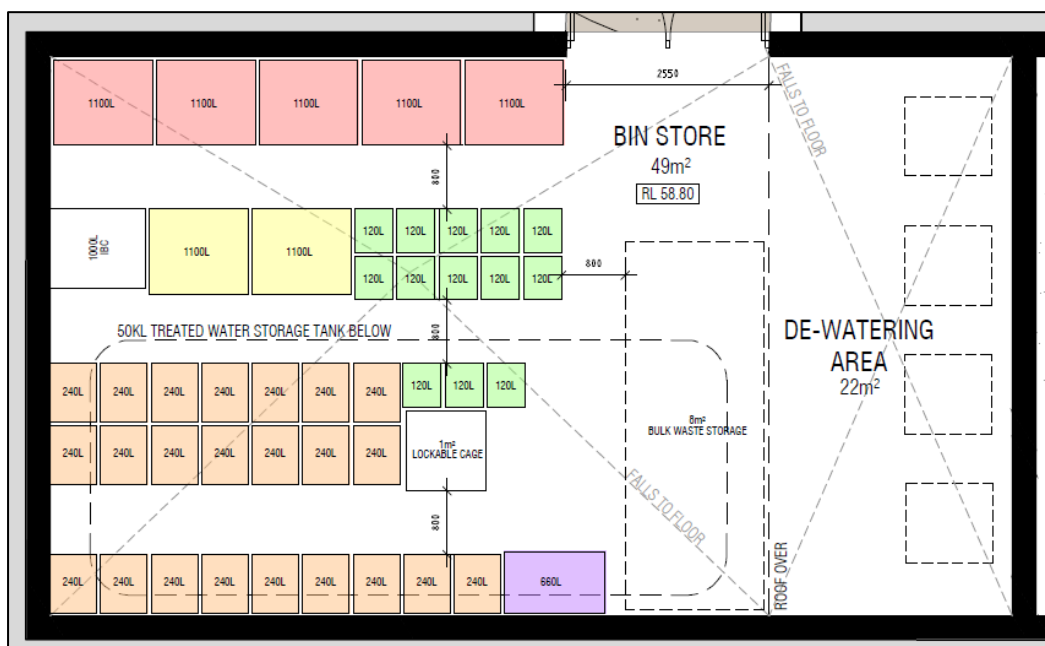
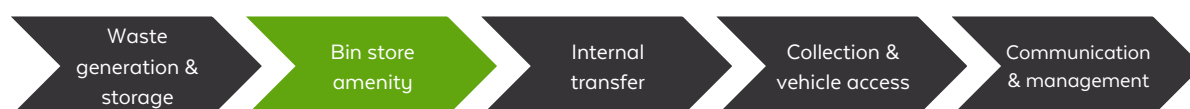


Figure 6: Layout of the contingent bin store at site entry

3 Bin store amenity



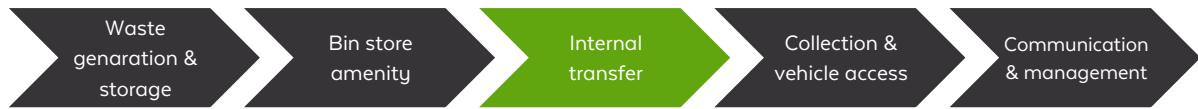
The bin store at the Operations Barn and the contingent bin store have been designed to include the following requirements in Table 3.

Table 3: Bin store amenity

Aesthetics	The bin store is consistent with the overall aesthetics of the development and is not visible from the road or the driveway.
Fully enclosed	The bin store will be fully enclosed, ventilated, secure and weatherproof, and only accessible by hotel staff.
Spatial requirements	The bin store allows for sufficient circulation space to accommodate, manoeuvre the bins and equipment specified. Bins are stored in single rows with an access way between the rows of bins.
Bin wash	The bin store has solid walls and floors, with level grading to an industrial floor waste (including a charged 'water-trap' connected to the site sewer system), with a hose cock to enable bins and/or the enclosure to be washed out. A floor waste gully connected to waste outlet is included. A water supply will be provided for use.
Doors	Doors are ventilated both internally and externally. Self-closing doors are installed to the bin store to control access by vermin. Doors from the bin store to the collection area will be locked open. Doors are designed to fit the largest bin, to enable bins to be easily wheeled into and out of the bin store.
Walls and ceilings	Internal bin store walls are solid and impervious to enable easy cleaning. Ceilings will be finished with a smooth faced, non-absorbent material that can be easily cleaned. Floors, walls and ceilings will be finished or painted in a light colour.
Floors	Floors are constructed in concrete in accordance with AS 2870. Floors are evenly graded to an approved liquid refuse disposal system. Slab thickness is a minimum of 100 mm, impervious and with a brush finish treatment.
Ventilation and odour	The design of the bin store provides for adequate separate ventilation with a system that complies with Australian Standard 1668 (AS 1668). The ventilation outlet is not in the vicinity of windows or intake vents associated with other ventilation systems.

Lighting	The bin store will have lighting and be controlled by a movement sensor.
Noise	Noise will be minimised due to the location of the bin store and collection point; the timing of collections will be managed to prevent disruption to guests and neighbours.
Signage	Visual aids and signage will be provided when the bin store is operational to ensure that the area works as intended.
Cooking oils	Used cooking oil storage will be banded where required.

4 Internal transfer



4.1 Transfer of waste to Operations Barn bin store

Waste will be collected from throughout the hotel and transferred to the bin store in the *Operations Barn*, where it will be stored in bins for daily collection by staff and transferred to the off-site facility. A private waste service provider will service the bins at the off-site facility.

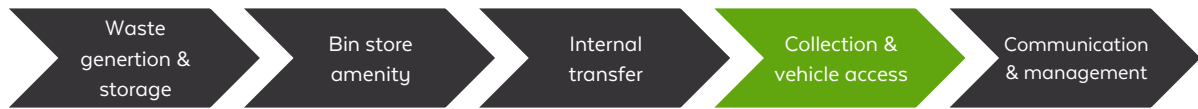
On site, Wallcliffe House and the River Wing will be serviced by a back of house operations tunnel. The tunnel travels underground from Wallcliffe House up to the *Operations Barn*, enabling goods such as linen and waste to be transferred up and down the hill via a cable car with ascending and descending counterbalancing.

The bin store in the *Operations Barn* will be accessed by staff with trolleys utilising the tunnel.

4.2 Transfer of waste to the contingent bin store

In a contingency scenario, an internal vehicle will be used to transfer full bins from the *Operations Barn* (as per Section 4.1) to the bin store at the entrance to the site, where they will be serviced directly by a private service provider. Empty bins will be washed and returned to the *Operations Barn* bin store area.

5 Collection and vehicle access



5.1 Proposed service regime – hotel operational approach

To minimise the number of vehicles accessing the site, Wallcliffe House operational personnel will collect the bins in the *Operations Barn* bin store using an internal vehicle with a trailer. The trailer will have a tail lift that will lift the full bins onto the trailer. Each day, empty bins will be brought to the bin store and full bins removed. The full bins will be taken to the off-site facility where they will be consolidated into larger bins (i.e. front-lift skips) using a bin lifter. The skips at the off-site facility will be serviced by a private service provider. The swept path for the internal vehicle accessing the bins in the Operations Barn is shown in Figure 7.

A Grease Guardian unit (or similar) will be installed in all kitchens, to reduce the frequency in which the grease trap requires servicing. Used cooking oil will also be taken to the off-site facility in a suitable receptacle and consolidated prior to being collected for recycling. A tanker vehicle will require access to service the grease trap which will be located close to The Dairy.

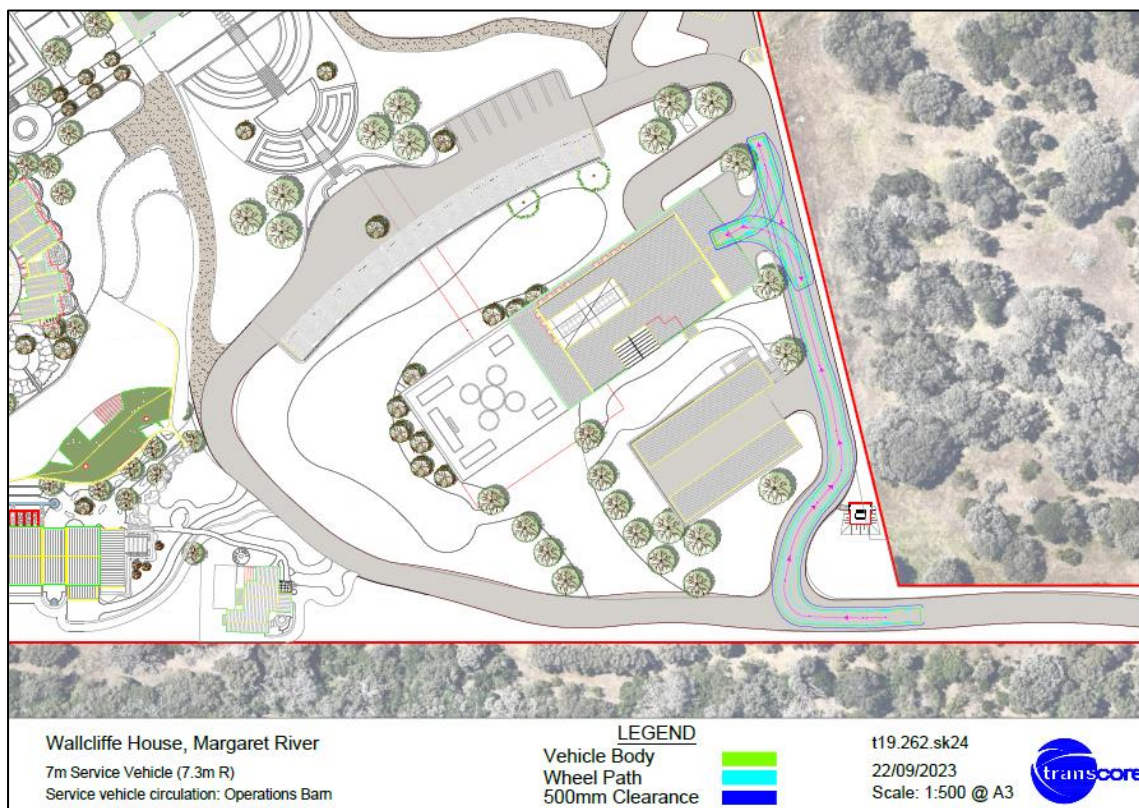


Figure 7: Swept path analysis showing access for internal vehicle servicing the Operational Barn bin store

5.2 Contingent servicing regime

On collection days, rear-lift vehicles for general waste, commingled recycling and food organics bins, a tanker to empty the grease trap and a tanker for used cooking oil, will enter the site from Wallcliffe Road. The vehicles will drive in a forward direction and stop outside the bin store located adjacent to the Gate House at the entrance to the site. Hotel staff will enter the bin store to retrieve and service the relevant bins. Staff would return the empty bins to the bin store.

Swept path analysis for vehicle ingress and egress has been completed by Transcore taking into consideration the specifications of a 10 m long waste collection vehicle (see

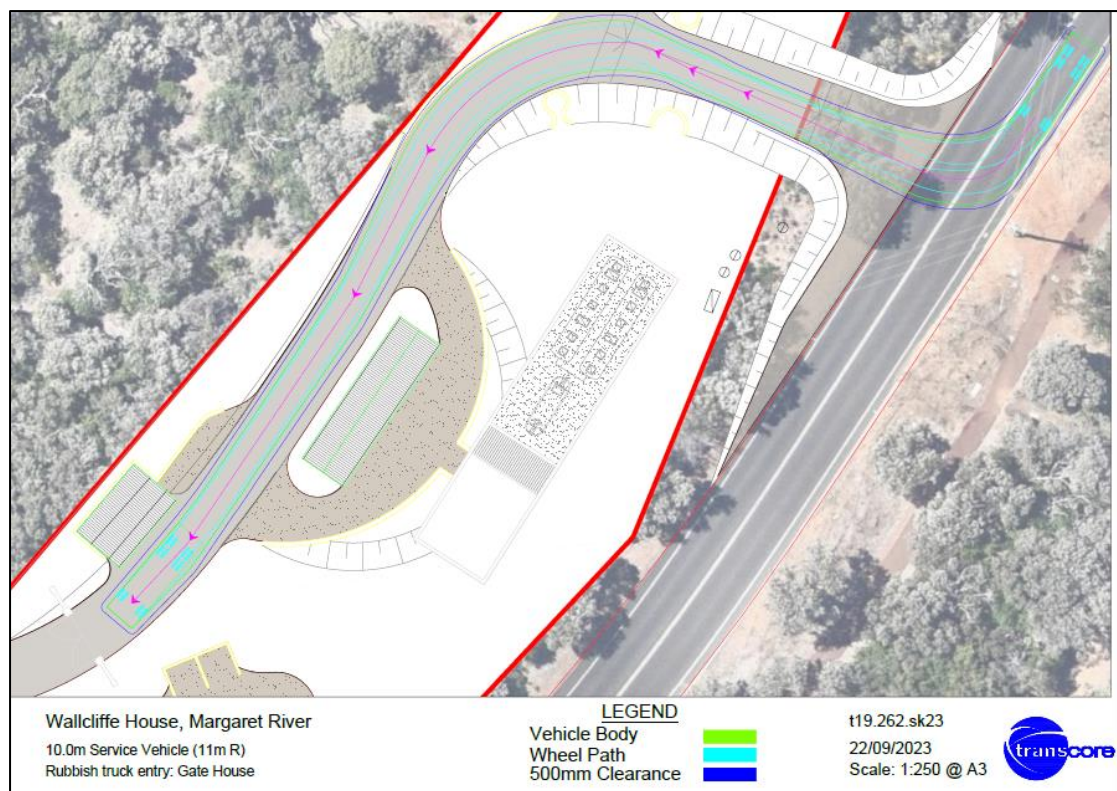


Figure8 and 9).

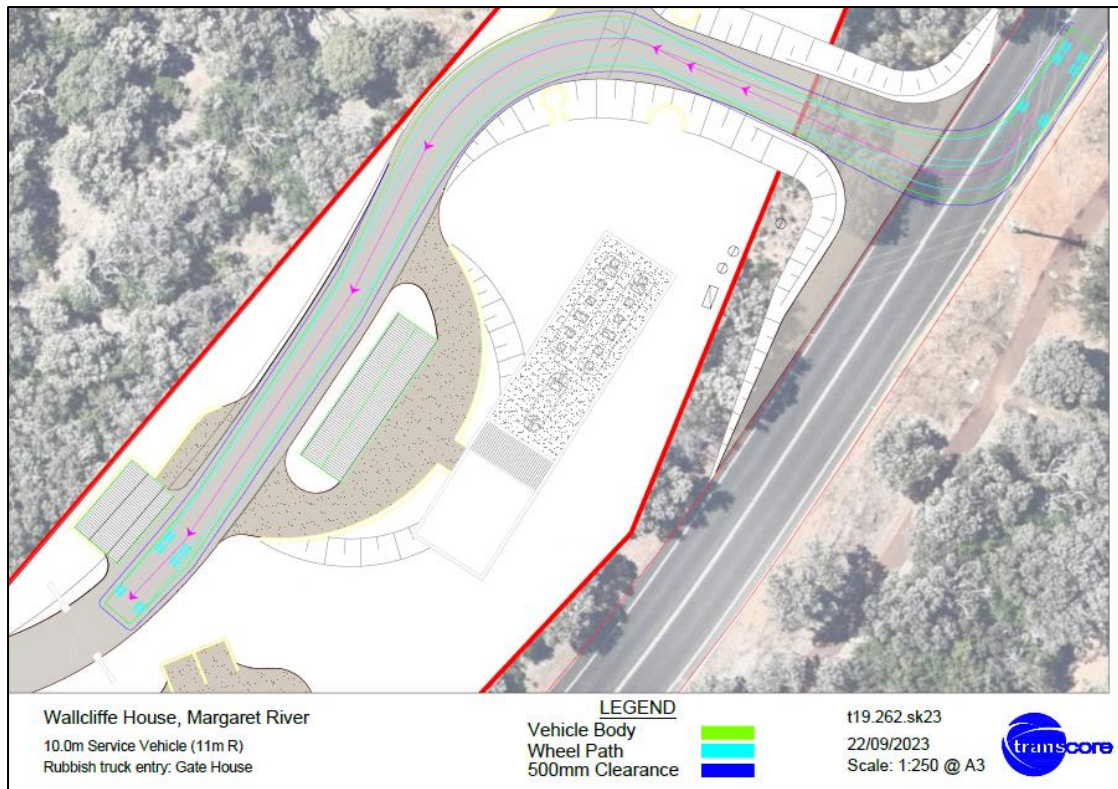


Figure 8: Swept path analysis showing site entry access for 10 m long private waste collection vehicles

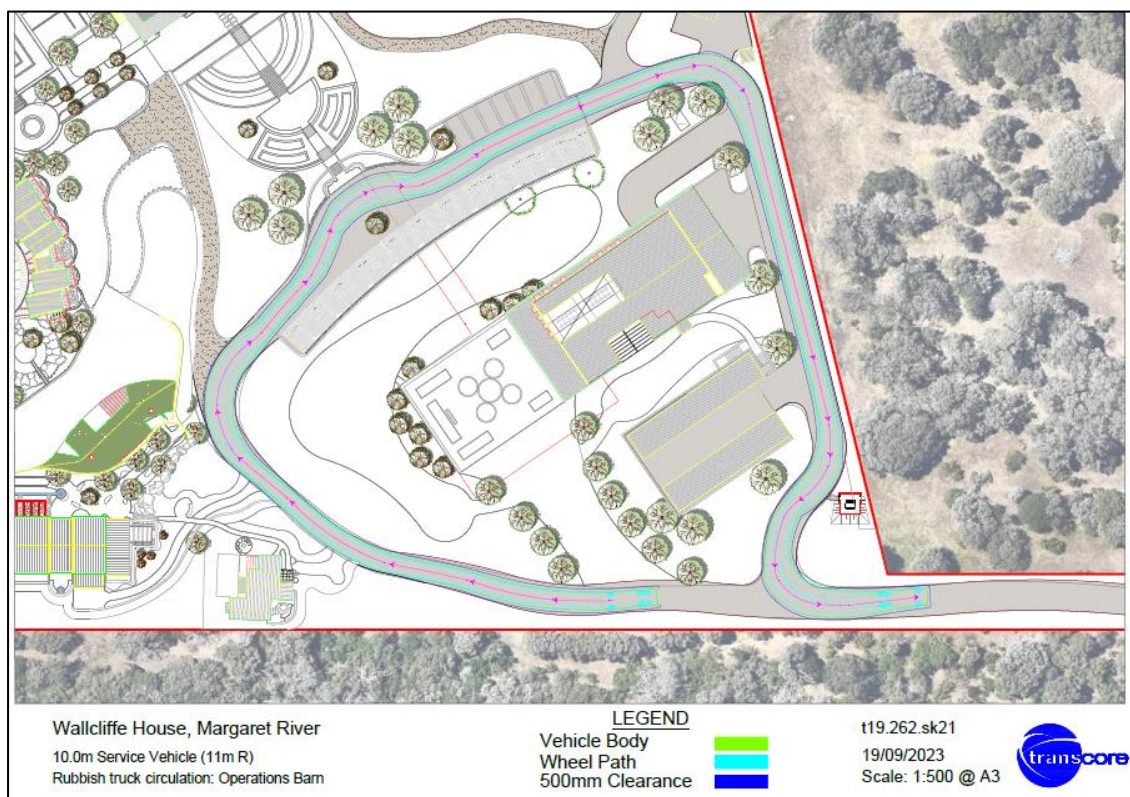
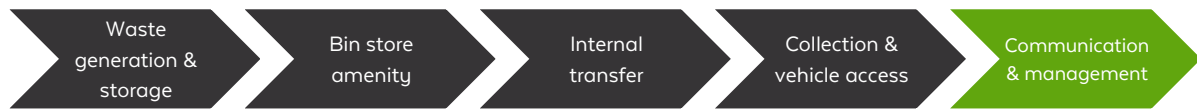


Figure 9: Swept path analysis for 10 m long private waste collection vehicles

6 Ongoing communication and management



6.1 Management

The Hotel staff will be responsible for overseeing the waste management systems. Relevant staff members will be trained and informed about their responsibility to ensure the correct segregation of the various streams during the process of transferring the bins to the off-site facility. Bins will be tipped into larger bins of the same stream using a bin lifter.

The bins will be washed at the off-site facility prior to being transferred back to Wallcliffe House the following day. Staff will be responsible for maintaining the *Operations Barn* bin store in a clean and tidy condition at all times and ensuring smaller, internal bins used in back of house areas (such as in kitchens and bar areas) are cleaned and washed out regularly.

6.2 Communication

All staff will be made aware of the waste, recycling and food organics systems and how each should be used. A hotel 'Operational Waste Management Plan' will be developed, along with a 'Standard Operating Procedure' that will be communicated to all staff for implementation during both the initial occupation and ongoing management of the hotel. Ongoing education on the correct segregation of waste, recyclables and food organics will be part of the day to day operations.

Appendix A: Glossary of terms and acronyms

Bulky waste storage	An area designed to store any unwanted bulky waste items from residential, retail, commercial or industrial developments.
Collection point	The permitted area on a footpath, roadway or private property (where applicable) that waste, recyclables and bulky waste are loaded into collection vehicles.
Commingled recycling	Common recyclables, mostly packaging; such as glass, plastics, aluminium, steel, liquid paper board (milk cartons). Commingled recycling may include paper but often, paper and cardboard are collected separately.
Container Deposit Scheme (CDS)	Also known as Containers for Change: In Western Australia 'eligible containers' (usually for soft and alcoholic drinks) have a 10-cent deposit which can be refunded when the container is redeemed at a refund facility.
E-waste	Discarded electronic appliances such as mobile phones, computers, and televisions.
Food organics	Waste food in commercial kitchen/food service settings, generated from preparation (peelings etc.), storage (out of date) or service (leftovers) that can be separated from the general waste stream for a more beneficial use.
Garden organics	Separated 'green' material (e.g., grass clippings and vegetation).
General waste	Material that is intended for disposal to landfill. Normally what remains after the recyclables have been collected separately.
Grease trap and Grease Guardian	Collection of solid greases and oils in a tanker system to remove this material from water discharged to sewer from commercial kitchens or food processing facilities. The grease trap collection vehicle requirements can be included in the Waste Management Plan where relevant. Grease Guardian is a highly efficient indoor grease trap that separates grease and oil from wastewater in commercial kitchens.
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	Replacing a 'disposable' or single-use item with one which can be used again (without needing to be processed or dismantled i.e., 'recycled') e.g., using a washable ceramic coffee mug or travel cup in place of disposable cups.

Waste avoidance	Changing a service or process so that a waste that was previously generated can be eliminated from the system. An example would be changing from printed forms/tickets/invoices etc. to an online system that does not need any paper.
------------------------	--

Appendix B: Site Plan

