Waste Management Plan

Lot 9501 CNR Hammond Rd & Gaebler Rd, Hammond Park

Rev_1

Project No. 23-1452

Build Plus Group

On behalf of Broad Vision Projects Pty Ltd

29 November 2023

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1 Development details

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

Project name / address	Lot 9501 CNR Hammond Rd & Gaebler Rd, Hammond Park
Client	Broad Vision Projects Pty Ltd
Architect	Meyer Shircore
Project manager	Build Plus Group
Main point of contact	Chris West, Build Plus Group
Planning status	Development Application submission
Overview of development	Mixed use commercial development, including • Convenience store • Fast food restaurants x 3 • Medical centre • Car wash
Architectural plans / area schedule / development information	Architectural plans received from Meyer Shircore Architects on 18 and 19 October 2023 Updated bin store drawings received from Meyer Shircore Architects on 22 November 2023 Swept paths received from Stantec on 5 October 2023
Local Government discussions	Conversations and emails with Lyall Davieson, Waste Manager, City of Cockburn (CoC) regarding council waste management and Waste Management Plan submission requirements, 22 August 2022, October and November 2023. Meeting held 21 November 2023 to finalise bin store requirements.

1.1 Context

For efficient and effective waste management, the collection and centralisation of waste and recyclables have been carefully considered at the design phase for each building. Key factors considered include:

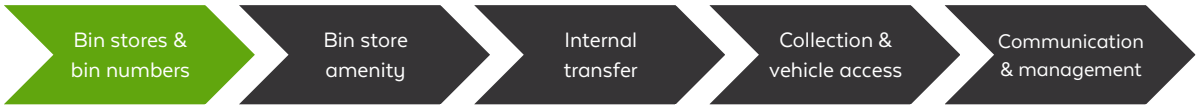
- Local government requirements for determining waste generation rates
- Waste and recycling volumes likely to be generated during building operations
- Number and types of bins required
- Bin stores size, location and amenity (addressing odours and noise)
- Internal transfer and access to bins and storage areas from within the buildings
- Access for vehicles for waste collection
- Safety for all operatives involved in waste management
- Communication and ongoing management of waste and recycling services

1.2 Key components of the Waste Management Plan

This Waste Management Plan (WMP) consists of five core components. It presents detailed information on each of the following components.



2 Bin stores and bin numbers



2.1 Project parameters

The development when operational will include the following buildings:

- Convenience store (7-Eleven) – 192 m^2
- Fast food restaurant 1 (Starbucks) - 245 m^2
- Fast food restaurant 2 (McDonalds) – 450 m^2
- Fast food restaurant 3 (KFC) – 270 m^2
- Medical centre – 640 m^2
- Car wash – 3 car wash bays, 1 dog wash and 2 vacuum bays

2.2 Local Government Guidelines

The following documents have been used in the development of this report:

- City of Cockburn Waste Management Policy LPP 1.14 (updated 2022)
- WALGA Commercial and Industrial Waste Management Plan Guidelines (2018)

2.3 Waste Management Plan approach

The lots will be individually owned and titled. Each building will have its own bin store and there will be no communal/shared bin store. Green waste will be taken offsite by the grounds maintenance contractor.

The architects for each of the fast food restaurants and convenience store will finalise the design of their respective client's building, including the waste storage area. The waste storage area will be based on the requirements provided by their clients.

2.4 Number of bin stores required

One bin store per building (six in total) will be provided as follows:

1. Convenience store (7-Eleven)
2. Fast food restaurant 1 (Starbucks)
3. Fast food restaurant 2 (McDonalds)
4. Fast food restaurant 3 (KFC)
5. Medical centre
6. Car wash

All the bin stores are located on ground level, with easy access to a loading bay (refer to Figure 1). For detailed bin store layouts refer to Figure 2 to Figure 8.

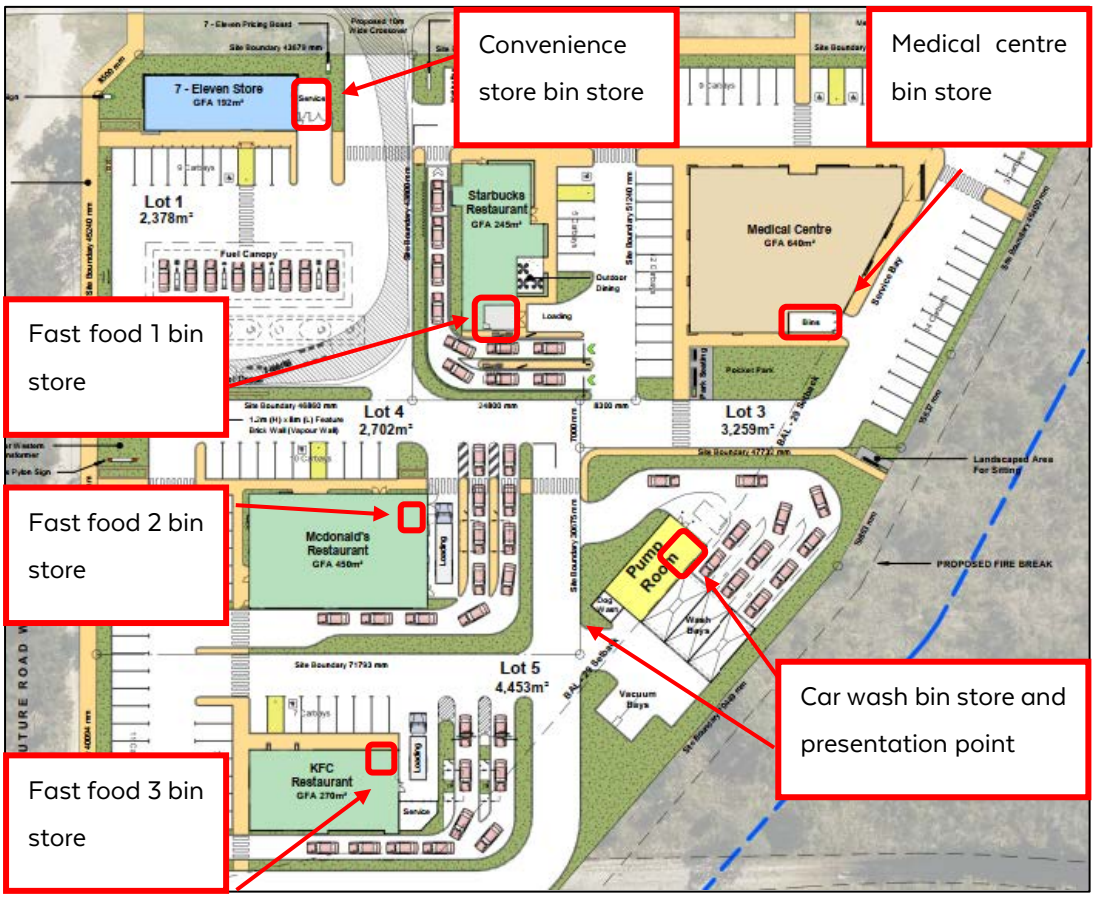


Figure 1: Site plan showing location of the six bin stores

2.5 Waste generation rates

Five sources of information have been used to determine the number of bins to be stored in each bin store, which was then discussed with the City to agree the approach. The information sources included:

- WALGA waste generation rates for cafes, offices, takeaway stores and supermarkets
- Bin numbers and collection frequencies provided at other similar-sized stores in metropolitan Perth for 7-Eleven and McDonalds

- Bin sizes sourced from 'as built' floor plans for Starbucks and KFC
- The City of Cockburn's weekly storage requirements as per their Policy
- The City of Cockburn's rates requirements as per their Policy

After extensive negotiations, it was agreed with the City to apply their relevant waste generation rate to each building as per Table 1.

Table 1: City of Cockburn waste generation rates

Premises type/ building use / waste generating area m^2	Waste rate applied	Waste generation rate	Recycling generation rate
7-Eleven - 192 m^2	CoC convenience store	300 L/ 100m^2/day	150 L/ 100m^2/day
Starbucks - 221 m^2	CoC café	300 L/ 100m^2/day	200 L/ 100m^2/day
KFC - 199 m^2	CoC café	300 L/ 100m^2/day	200 L/ 100m^2/day
McDonalds - 269 m^2	CoC café	300 L/ 100m^2/day	200 L/ 100m^2/day
Medical centre - 633 m^2	CoC office / medical	10 L/ 100m^2/day	10 L/ 100m^2/day

2.6 Number of bins in each bin store

The following sub-sections set out the bins required to be stored in each bin store. Each bin store can hold up to one week's worth of waste and recycling.

2.6.1 Convenience store (7-Eleven)

The number of bins calculated using the CoC convenience store waste generation rate are set out in Table 2. Figure 2 demonstrates that the required number of bins fit comfortably in the bin store and that the collection vehicle is able to park outside the bin store.

Table 2: Convenience store – number of bins collected weekly

Waste stream	Bin size (L)	Number of bins	Collection frequency	Estimated weekly volume
General waste	1100	4	Weekly	4400
Commingled and cardboard recycling	1100	2	Weekly	2200

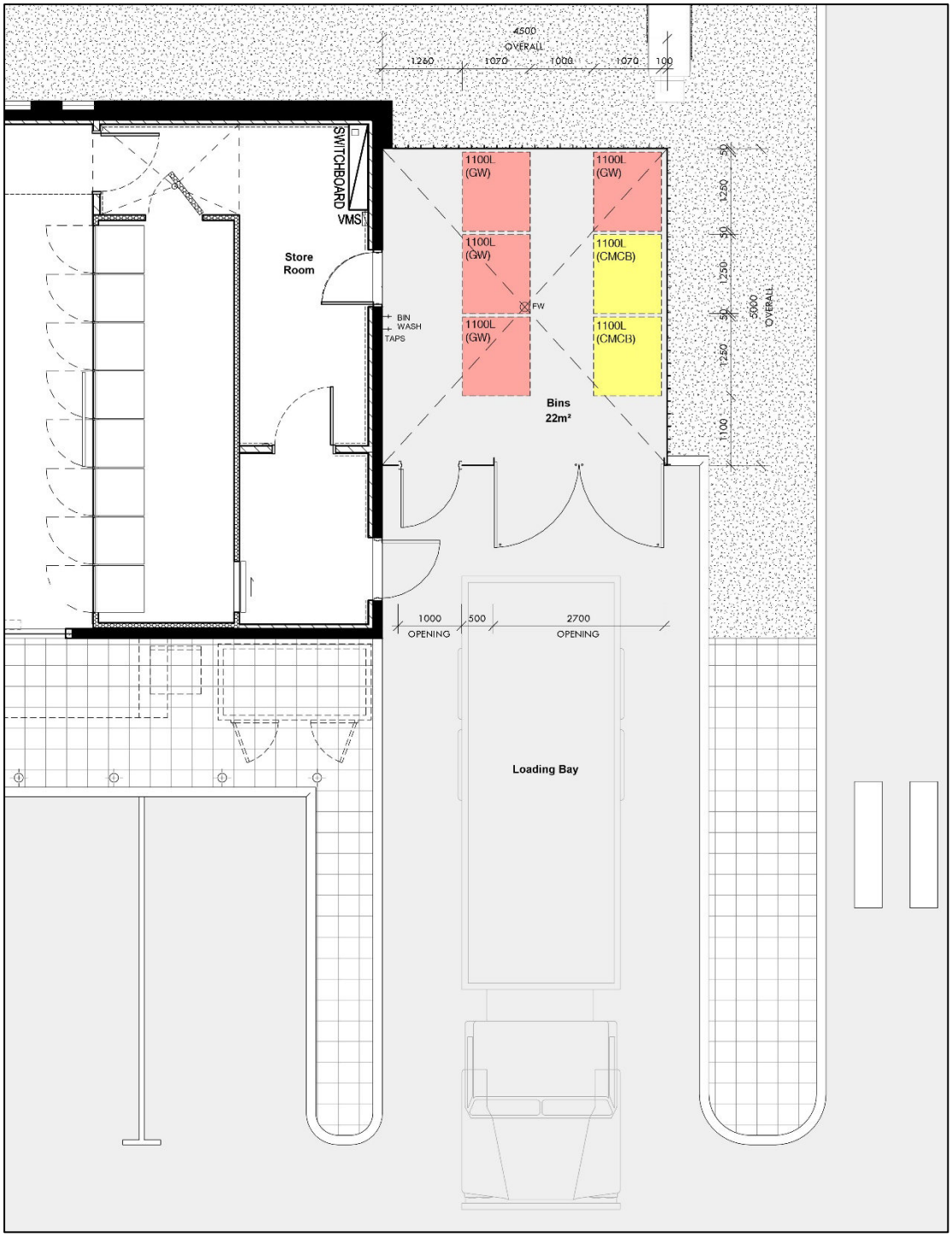


Figure 2: Convenience store (7-Eleven) ground floor plan showing bin store layout and servicing location – weekly collection

2.6.2 Fast food restaurant 1 (Starbucks)

The number of bins calculated using the CoC café waste generation rates, applied to kitchen and customer areas, are set out in Table 3. The bin numbers are based a rear-lift vehicle servicing the bins on a weekly collection frequency. Bin store layout is as per Figure 3. The operator's intent is to reduce bin numbers by having bins collected twice weekly using a private service provider, to minimise any potential

OHS, hygiene and odour issues. There is an additional graded area outside the bin store that can be used as a contingency in the event of missed or weekly collections.

Table 3: Number of bins calculated for the fast food restaurant (Starbucks) bin store

Waste stream	Bin size (L)	Number of bins	Collection frequency	Estimated weekly volume (L)
General waste	1100	4 (inside) 1 (outside)	Weekly	5500
Commingled and cardboard recycling	1100	2 (inside) 1 (outside)	Weekly	3300

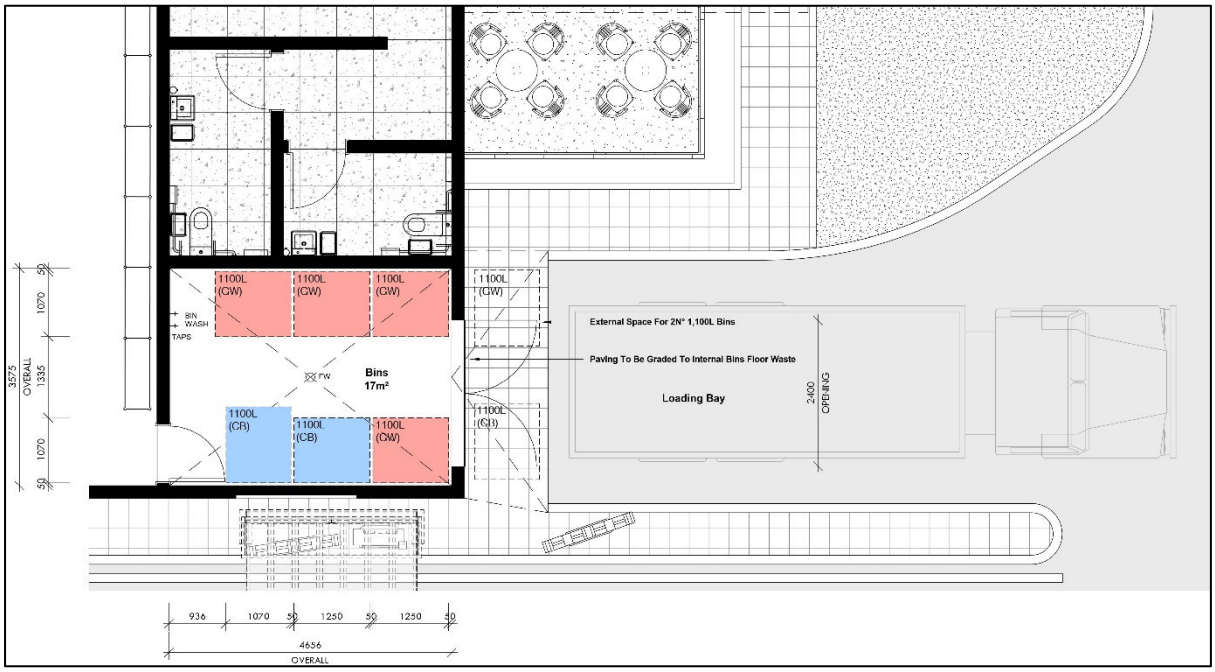


Figure 3: Fast food restaurant (Starbucks) ground floor plan showing bin store layout and servicing location – weekly collections

2.6.3 Fast food restaurant (McDonalds)

The number of bins calculated using the CoC café waste generation rates, applied to kitchen and customer areas, are set out in Table 4. The bin numbers are based on a weekly collection frequency and the use of a rear-lift truck to service the bins. Figure 4 shows the bin store layout that meets the City of Cockburn requirement that the bin store is able to hold a weeks' worth of waste. In this configuration, management and staff will need to manage the bin store and circulate bins in order to access empty bins by rotating full bins to the back of the bin store.

When operational, collection frequencies will be twice weekly to reduce bin numbers and minimise any potential OHS, hygiene and odour issues.

Table 4: Number of bins calculated for the McDonalds bin store

Waste stream	Bin size (L)	Number of bins	Collection frequency	Estimated weekly volume (L)
General waste	1100	6	Weekly	6600
Commingled and cardboard recycling	1100	4	Weekly	4400

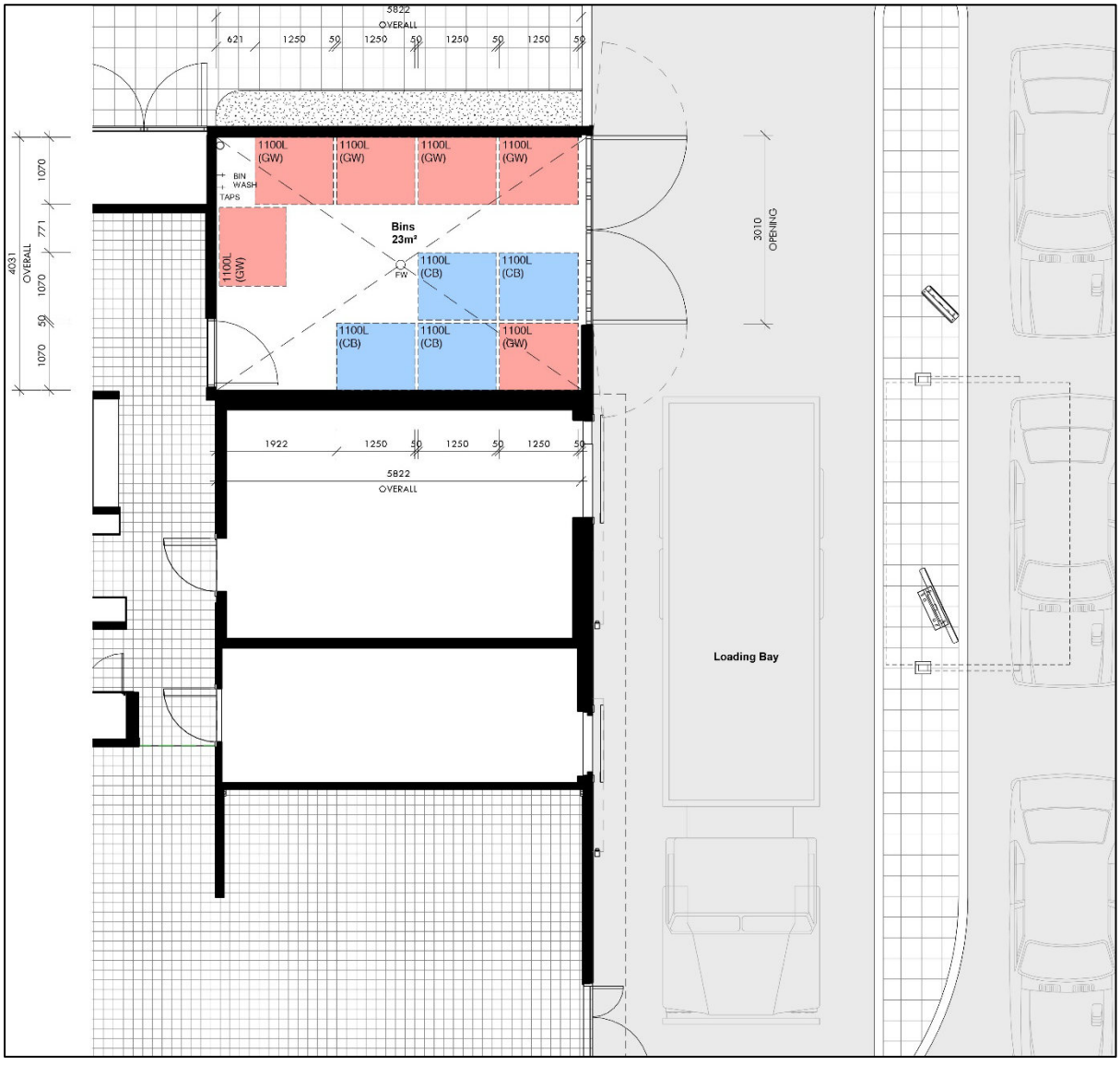


Figure 4: Fast food restaurant (McDonalds) ground floor plan showing bin store layout and servicing location – weekly collections

2.6.4 Fast food restaurant (KFC)

The number of bins calculated using the CoC café waste generation rates, applied to kitchen and customer areas, are set out in Table 5. The bin numbers are based on a weekly collection frequency and the use of a rear-lift truck to service the bins. Figure 5 shows the bin store layout.

When operational, collection frequencies are able to be increased to twice weekly to ensure a clean and hygienic environment and minimise any odour issues.

Table 5: Number of bins calculated for the fast food restaurant (KFC) bin store

Waste stream	Bin size (L)	Number of bins	Collection frequency	Estimated weekly volume (L)
General waste	1100	4	Weekly	4400
Commingled and cardboard recycling	1100	2	Weekly	2200

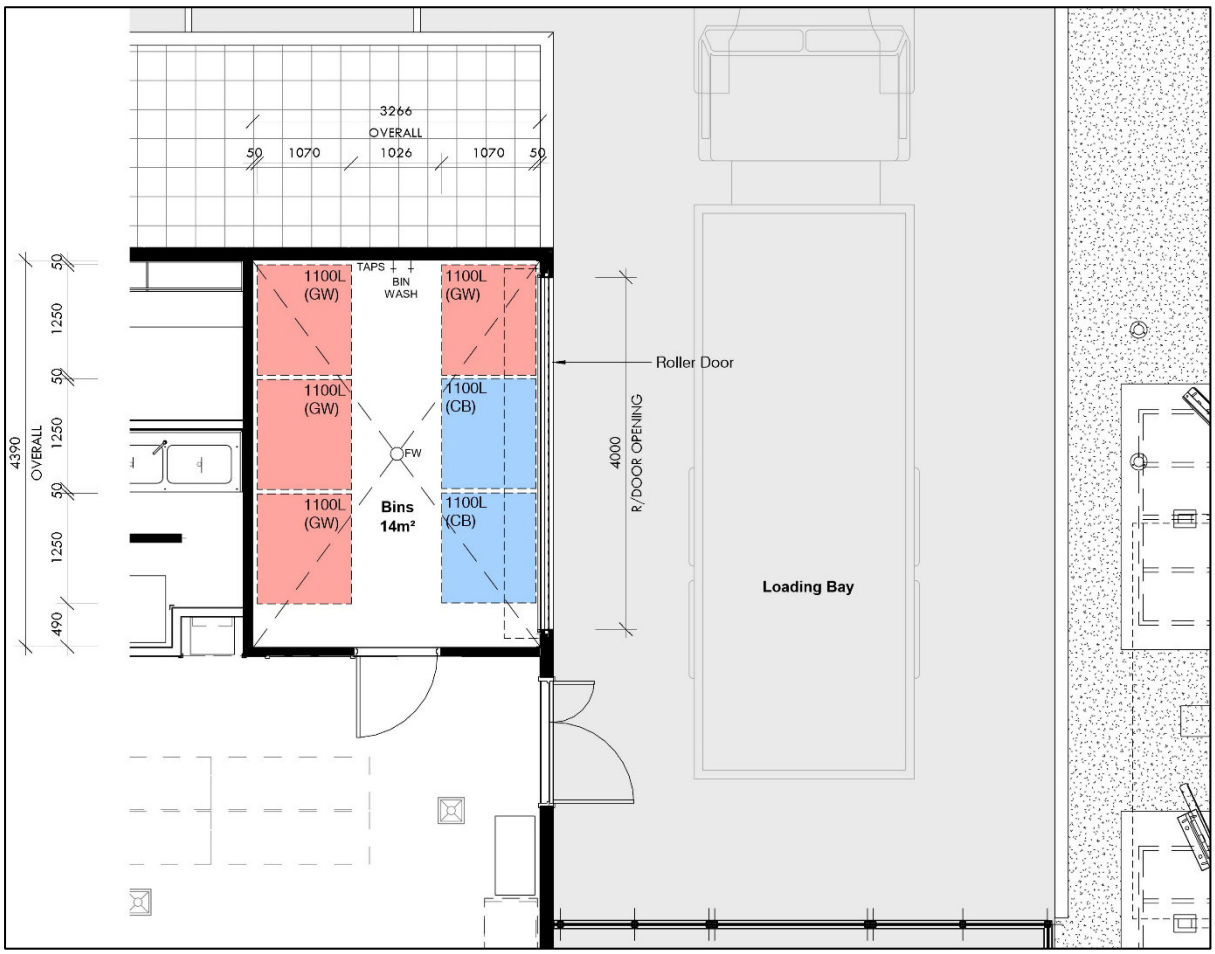


Figure 5: Fast food restaurant (KFC) ground floor plan showing bin store layout and servicing location – weekly collections

2.6.5 Number of bins required – medical centre

Based on the CoC office generation rate, the number of bins to be stored in the medical centre bin store are set out in Table 6. Figure 6 shows the bin store layout.

The medical centre will also produce a small amount of Clinical & Related Waste (CRW, e.g. sharps); these containers will be collected in-situ by the waste service provider and will not require a separate CRW compliant bin store.

Table 6: Number of bins to be stored in the medical centre bin store

Waste stream	Bin size (L)	Number of bins	Collection frequency	Estimated weekly volume (L)
General waste	660	1	Weekly	660
Commingled recycling (including paper and cardboard)	660	1	Fortnightly	330
Confidential documents**	240	1	Weekly	240

**Note: the confidential document bin is likely to be collected directly from their location and not necessarily stored in the bin store

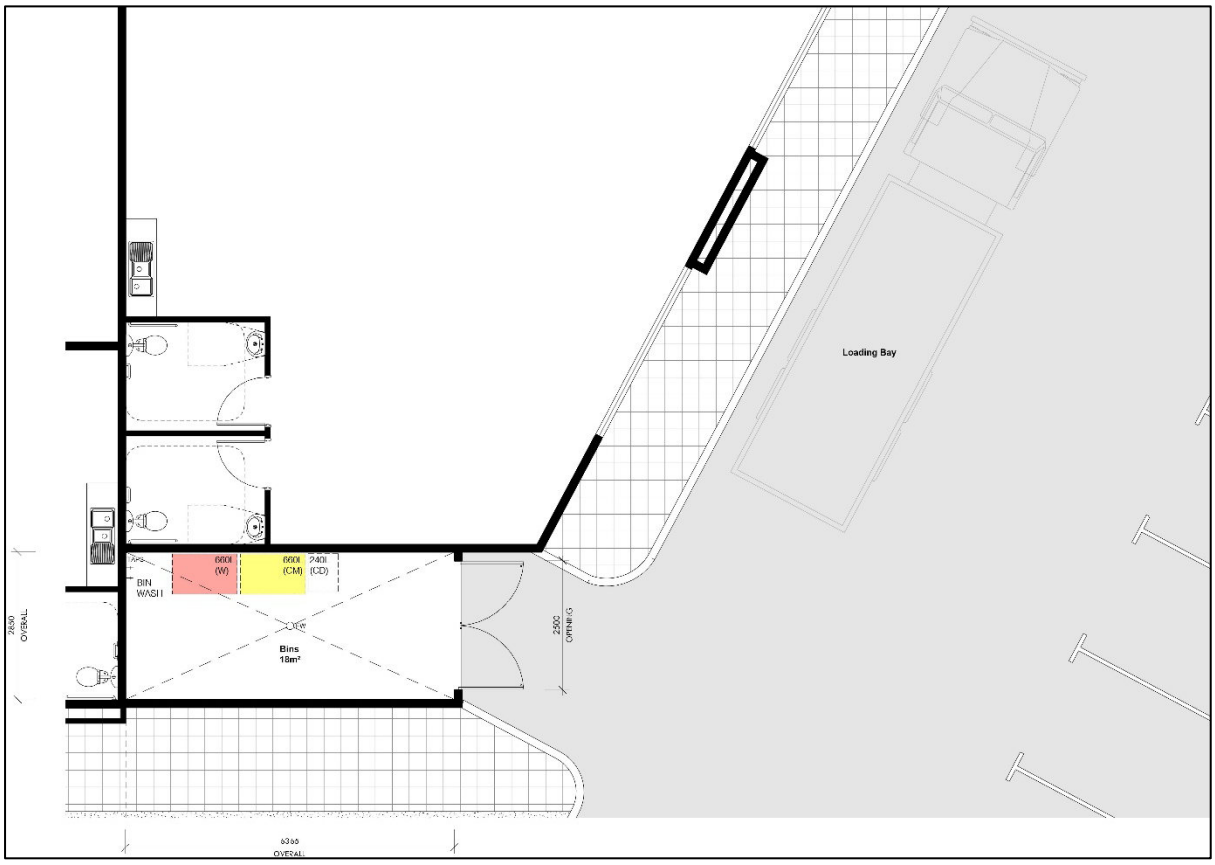


Figure 6: Medical centre ground floor plan showing bin store layout and servicing location

2.6.6 Number of bins required – Car wash

The number of bins to be stored in the car wash tenancy are set out in Table 7. Bin sizes have been increased from 240 L to 660 L bins to allow for any unforeseen waste that may be generated. Figure 7 and Figure 8 shows the bin store layout and dimensions.

Table 7: Number of bins to be stored in the car wash tenancy

Waste stream	Bin size (L)	Number of bins	Collection frequency	Estimated weekly volume (L)
General waste	660	1	Weekly	660
Commingled recycling (including paper and cardboard)	660	1	Weekly	660



Figure 7: Car wash ground floor plan showing bin store layout and servicing location – weekly collections

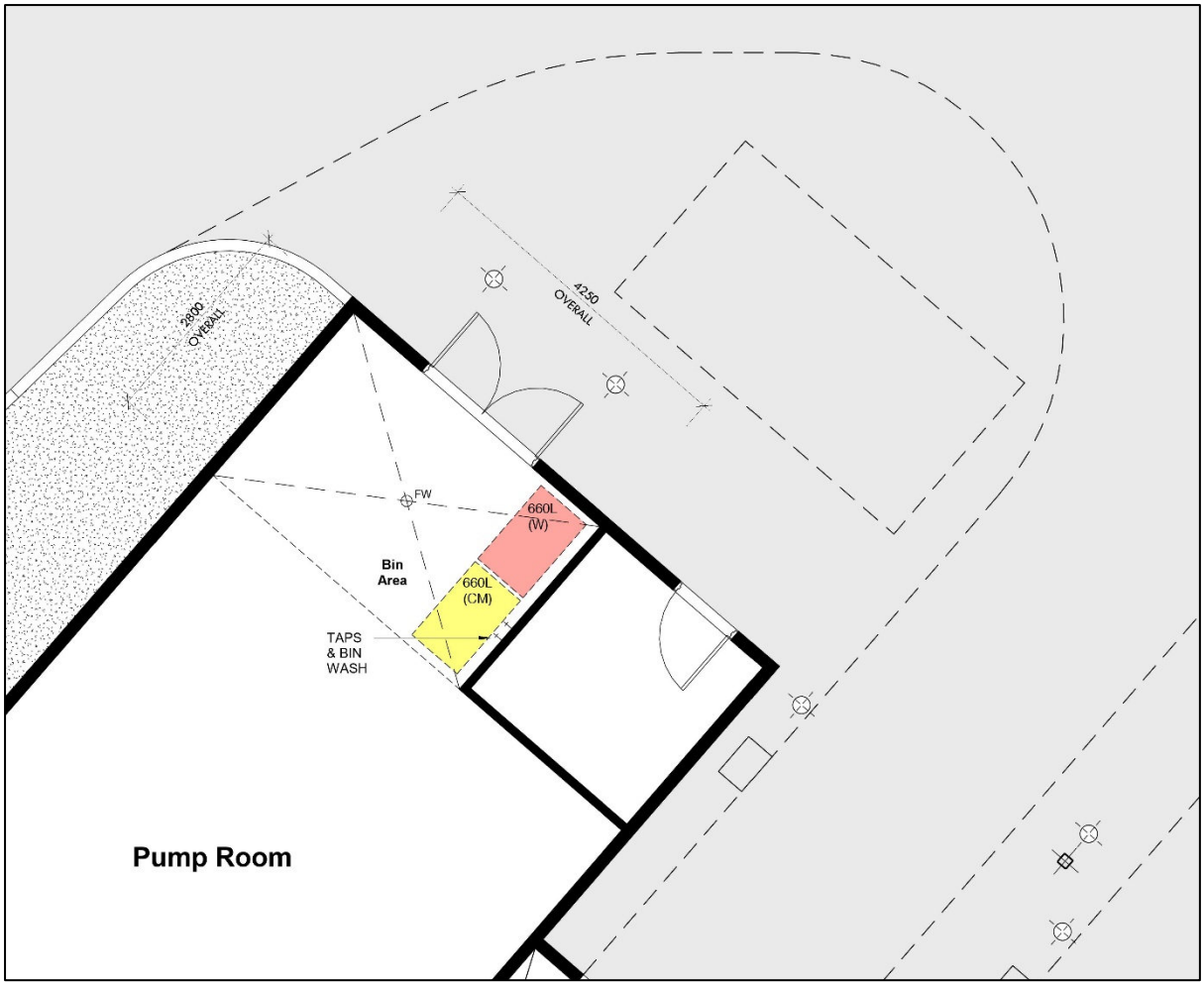
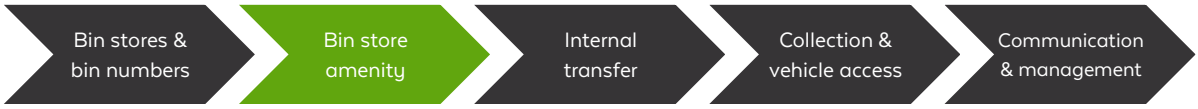


Figure 8: Car wash ground floor plan showing bin store layout and dimensions

3 Bin store amenity



The bin stores have been designed to include the following requirements in Table 8, which will be met by the individual pad-site owners.

Table 8: Bin store amenity requirements

Aesthetics	The bin stores are consistent with the overall aesthetics of the development and each individual pad site.
Fully enclosed	The bin stores are fully enclosed and weatherproof, and only accessible by each building's cleaners, staff and waste service provider.
External bin stores	The medical centre external bin store will be surrounded by 1.8 m high walls/fencing with a self-closing gate. Any external bin store greater than 20 m² is covered to prevent storm water entering the sewer. The medical centre bin store is 18 m².
Spatial requirements	The bin stores allow sufficient space to accommodate, manoeuvre and wash the bins and equipment specified. Bins are stored in single rows (maximum of two rows if there is a full-time caretaker for the building). Space for personnel access way between rows of bins is included. Bin lids open towards access ways.
Bin wash	The bin stores are more than 2 m wide to allow a horizontal bin wash and the effluent grades to sewer. Bin store floor to be graded to the floor waste over the entire bin store floor area. The bin stores have impermeable walls and floors grading to an industrial floor waste (including a charged 'water-trap' connected to sewer/an approved septic system), with a hose cock to enable bins and the enclosure to be washed out. A 100 mm floor waste gully to waste outlet is included. Both hot and cold water is available.
Contingency	All bin stores can accommodate additional bins resulting from missed collections (e.g. on some public holidays) and have been designed to store a minimum of one weeks' worth of waste.

Doors	Doors are ventilated both internally and externally for each bin stores. Self-closing doors are installed to the bin stores to eliminate access to vermin. Doors from the bin stores to the servicing/collection area can be locked open. Doors are designed to fit the largest bin, to enable bins to be easily wheeled into and out of the bin stores.
Security	Security measures are designed to limit access to the bin stores, e.g. PIN code that can be easily changed and reduces loss of key cards etc.
Walls and ceilings	Internal bin store walls are cement rendered (solid and impervious) to enable easy cleaning. Ceilings are finished with a smooth faced, non-absorbent material that can be easily cleaned. Walls and ceilings are 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 stores provides for adequate separate ventilation with a system that complies with Australian Standard 1668 (AS1668). The ventilation outlet is not in the vicinity of windows or intake vents associated with other ventilation systems.
Lighting	Bin stores are provided with artificial lighting, with sensor or switch controls both internal/external to the bin stores. Artificial lighting in laneways/loading bays and access walkways to bin stores will ensure staff safety and decrease antisocial behaviour.
Noise	Noise is minimised through considering the location of the bin stores and collection point, the timing of collections to prevent disruption to occupants or neighbours and the storage of one weeks waste as weekly collections may be required in the future to additionally minimise the noise from collections. Collections to be timed to occur as per CoC noise regulations between the hours of 7am and 7pm Monday to Saturday.
Signage	Visual aids and signage will be provided when the bin stores are operational to ensure that the areas work as intended. Standard signage explaining waste management and what materials are suitable for recycling to be posted/erected in all bin stores

4 Internal transfer



4.1 Transfer of waste from commercial tenancies to bin stores

Staff from the individual buildings will manually transfer waste and recyclables to the respective bin stores as follows:

- 7-Eleven store staff/cleaners will manually transfer internal waste to the bin store via the store room. Waste from the fuel bowser area will be manually transferred to the bin store by staff/cleaners via the external gate.
- Waste generated from fast food restaurant 1 (Starbucks) will be manually transferred by staff/cleaners through the workroom to the bin store.
- Fast food restaurant 2 (McDonalds) will transfer waste from the dining room through the kitchen to the passage area to reach the bin store by staff/cleaners.
- Fast food restaurant 3 (KFC) will transfer internal waste to the bin store via the servery and dry store area by staff/cleaners.
- The car wash, staff/cleaners will collect waste from each auto bay and transfer waste to the bin store via the staff bay. On collection days, or the evening before, staff will transfer full bins to the hardstand area for collection.
- Staff/cleaners at the medical centre will collect waste from each practitioner and transfer waste directly to the bin store.

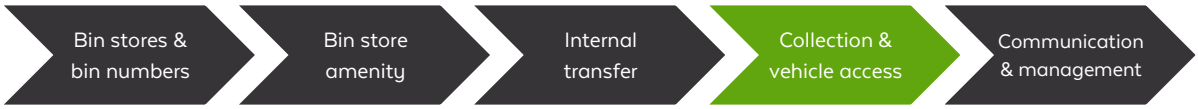
4.2 Bin transfer requirements

All bin transfer routes have been designed to include the following requirements in Table 9. These bin transfer requirements will be met by the individual pad site owners.

Table 9: Bin transfer requirements

Bin transfer requirements	
User access route	Waste transfer routes avoid stairs/steps and steep ramps (grade of slope <1:14) and other potential hazards between points of waste generation, storage and collection. Waste transfer routes are designed to ensure that bins (particularly when full) are not moved over any significant distances.
Manual handling	Manual handling of waste in garbage bags is excluded from the waste management systems wherever possible.
Transfer route width	All doors, corridors and lifts on the transfer route are designed to fit the largest bin.
Access for waste collection vehicles	Waste collection vehicles will safely enter, operate and exit the development with minimal reversing or manoeuvring.
Walkways	Safe access to waste collection vehicles have been provided to reduce the risk of accidents.

5 Collection and vehicle access



A range of private service providers will undertake the general waste and recycling collections from each building. A tanker vehicle will service the grease traps from the restaurants.

On collection days, rear-lift vehicles for general waste and recycling streams and tankers to empty the grease traps, will enter Lot 4 from Gaebler Road. Rear-lift vehicles will drive in a forwards direction through the carpark and reverse into the loading bay of each pad site. The operatives will enter the bin stores to retrieve and service the bins. The operatives will return the empty bins to the bin stores. The vehicles will drive out in a forward motion back through the car park.

Vehicles servicing the medical centre will pull into the designated pull-in bay collection point, service the bins, and pull out of the bay with no reversing. The carwash bins will be collected from the hardstand pad.

All waste service vehicles will leave Lot 4 via the exit on Gaebler Road, as shown in Figure 10.

Swept path analysis for vehicle ingress and egress has been completed by Stantec taking into consideration a 10.1 m long rear-lift waste collection vehicle (see Figure 9 and Figure 10). There are no overhead structures throughout the route that will restrict access of waste and recycling vehicles accessing the ground level.

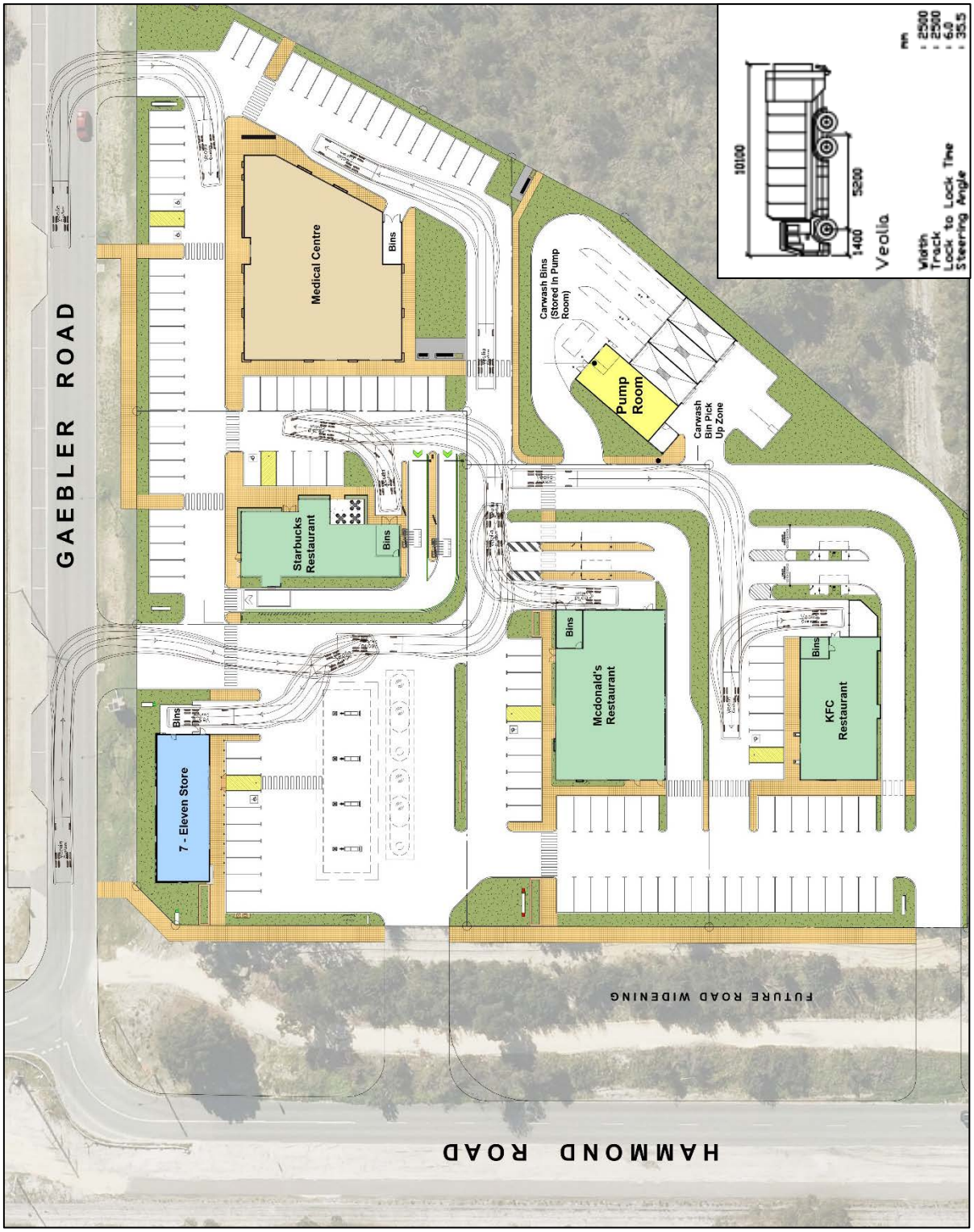
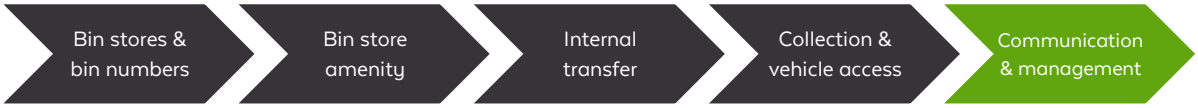


Figure 9: Swept path analysis showing access for waste collection vehicles on entry



Figure 10: Swept path analysis showing access for waste collection vehicles on exit

6 Ongoing communication and management



6.1 Management

Staff from each company will be responsible for overseeing the waste management systems within each building. They will be trained and informed about their responsibility to work closely with the relevant private service provider regarding the schedule for collection and presentation of bins. Each company's staff will be responsible for maintaining their bin store in a clean and tidy condition at all times and ensuring bins are washed regularly.

6.2 Communication

Staff in each building will be made aware of the waste and recycling systems and how they should be used. An Operational Waste Management Plan, including how the plan should be communicated will be developed and implemented during both the initial occupation and ongoing management of the buildings.

Appendix A: Glossary of terms and acronyms

CoC	City of Cockburn
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, 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.
Grease trap	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. Grease trap collection vehicle requirements can be included in the Waste Management Plan where relevant. Encycle are not hydraulics engineers and do not specify or advise on grease trap systems.
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.