



**WM Sustainability
Services**

Operational Waste Management Plan

Simplicity Living

Residential Development

Te Putahi – Ladies Mile



TE PUTAHI LADIES MILE

 **Simplicity**
Living

**BREWER
DAVIDSON**

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Executive Summary

This Operational Waste Management Plan (OWMP) provides comprehensive details on the systems that will be put in place to sustainably manage the operational waste for Te Putahi Ladies Mile residential development located at 12 Lower Shotover Road, Queenstown.

Suitable waste management services have been proposed based on the location, size and scale of the building's operations, with bin count proposals based on waste volumes calculated using the **Auckland Council Multi-Unit Development Space** calculator.

Note: where there is no region-specific Multi-Unit Development Space Calculator applicable, the Auckland City Council Multi-Unit Development Space calculations are used as the standard.

This plan outlines:

- Building details, including site boundaries and expected waste streams.
- The estimated volume of refuse and recycling.
- Details of the recommended services to be provided to meet the estimated volumes.
- Recommended waste area layout and access requirements.
- Relevant roles and responsibilities relating to the delivery and review of this OWMP.
- Additional waste streams and services.

Development specifications:

- 82,021m² site area
- 1,085 residential apartments
- Sixteen communal residential waste areas are distributed across the development to service each apartment block. The table below provides an overview of the waste areas, including the total space required for each (m²) and the corresponding design dimensions (W x L).

Apartment Block Served	Waste Area	Total Area Required (m ²)	Space Allocated (W x L)
38, 39	Waste Area 1	9.43m ²	2.78m x 3.40m
30	Waste Area 2	18.87m ²	3.94m x 4.82m
35, 36, 37	Waste Area 3	15.42m ²	2.90m x 5.32m
34	Waste Area 4	13.73m ²	3.30m x 4.17m
31, 32, 33	Waste Area 5	14.58m ²	3.48m x 4.20m
40	Waste Area 6	9.43m ²	2.48m x 4.00m
29, 28	Waste Area 7	18.87m ²	3.48m x 5.43m
20, 21, 22, 23	Waste Area 8	14.58m ²	2.78m x 5.25m
19, 18	Waste Area 9	18.87m ²	3.52m x 5.60m
27	Waste Area 10	14.58m ²	3.26m x 4.48m
24, 25, 26	Waste Area 11	13.73m ²	3.68m x 3.75m
13, 14, 15, 16, 17	Waste Area 12	18.87m ²	3.08m x 6.14m
2, 3, ½ 4	Waste Area 13	13.73m ²	3.08m x 4.48m
1, ½ 4, 5	Waste Area 14	13.73m ²	2.78m x 4.95m

6, 7, 8	Waste Area 15	13.73m ²	3.08m x 4.48m
9, 10, 11, 12	Waste Area 16	14.58m ²	3.30m x 4.45m

This report has been independently created by WM Sustainability, but we can confirm that WM New Zealand can provide the waste and recycling services outlined within this plan.

Kia pai tō rā / Kind regards,

Rhiannon Wakely

Sustainability Partner - WM New Zealand

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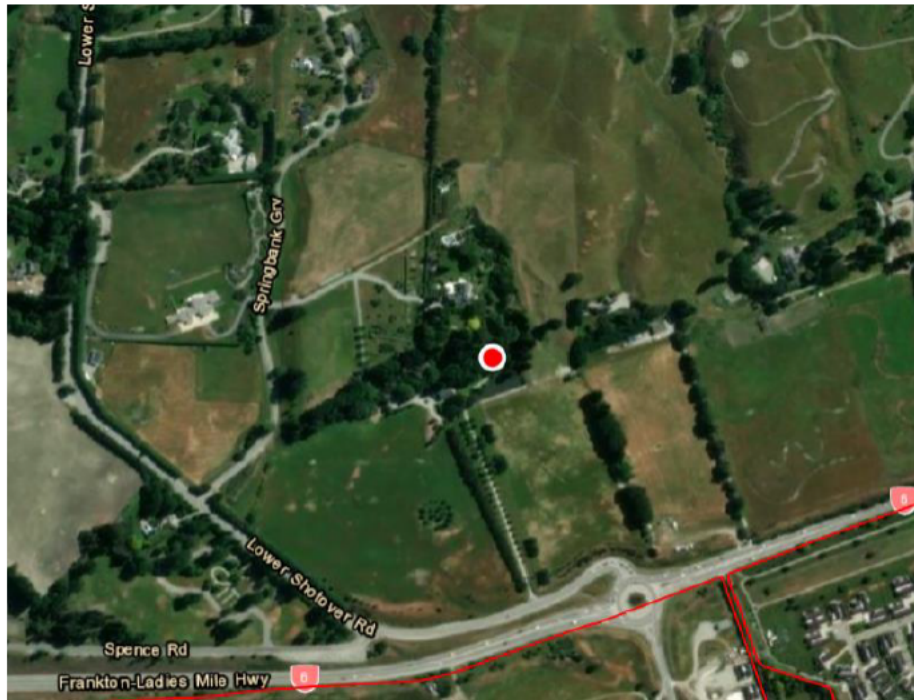
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Site and development details

Development Location

This development will be located at 12 Lower Shotover Road, Queenstown.



Development Details

The development includes:

- A 82,021m² residential development comprising 1,085 units across one-, two-, and three-bedroom apartments. The unit mix is as follows:
 - 489 one-bedroom apartments
 - 524 two-bedroom apartments
 - 72 three-bedroom apartments
- Sixteen communal waste areas for residents to use.
- Provision of 1,105 on-site carparking spaces for residents.
- Site access for residents and service vehicles via Lower Shotover Road.

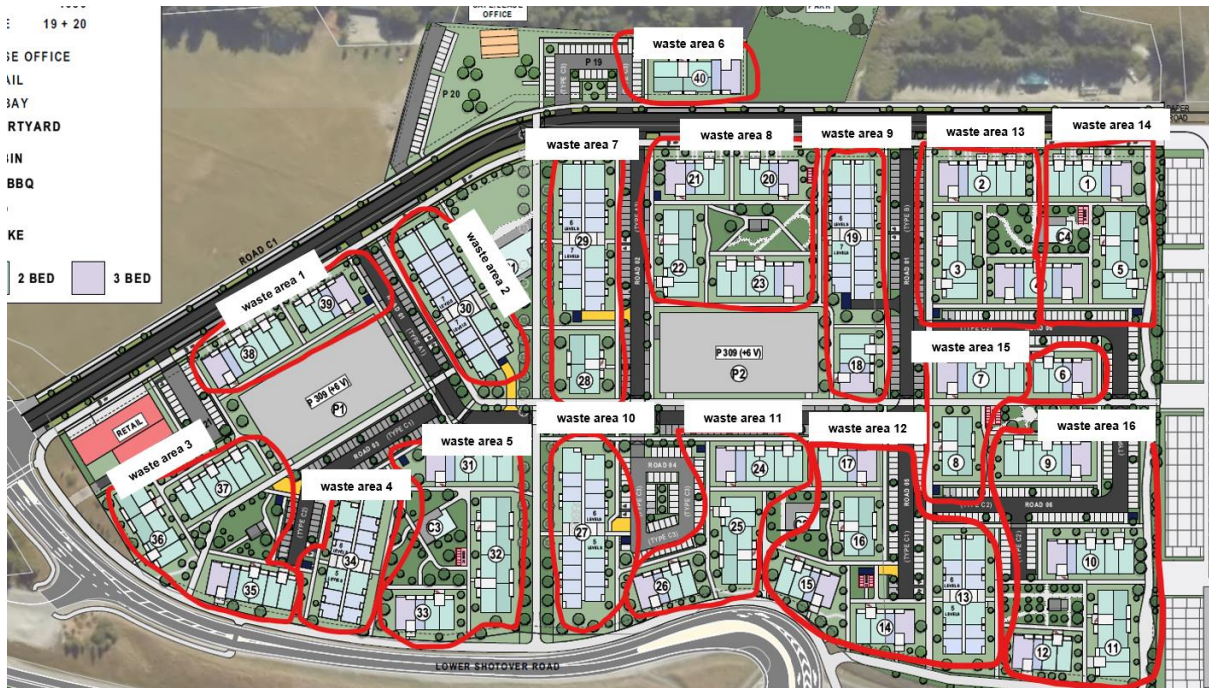
The total maximum occupancy of the development is 3,506 persons, based on an assumption of 2 persons per bed, as detailed below:

Number of Bedrooms	Maximum Occupancy of Unit	Number of Units	Total Maximum Occupancy
1	2	489	978
2	4	524	2,096
3	6	72	432



As shown in the site legend, rubbish bins (waste areas) are identified by the blue shaded areas on the site map above. To estimate waste generation rates for each waste area, residential units have been grouped based on their proximity to a designated waste area. This approach ensures that each apartment block is adequately serviced and has reasonable access to a waste area.

The image below shows how the waste areas have been grouped to the apartment blocks.



The table below provides a breakdown of the number of apartments, grouped by the apartment blocks serviced by each waste area, for the purpose of estimating waste generation. Apartment blocks have been allocated to waste areas based on their proximity.

Apartment Block	Waste Area	Number of Apartments	Total Occupants
38, 39	Waste Area 1	30	120
30	Waste Area 2	119	292
35, 36, 37	Waste Area 3	54	216
34	Waste Area 4	72	186
31, 32, 33	Waste Area 5	54	216
40	Waste Area 6	18	72
29, 28	Waste Area 7	116	306
20, 21, 22, 23	Waste Area 8	60	240
18, 19	Waste Area 9	109	278
27	Waste Area 10	93	230
24, 25, 26	Waste Area 11	48	192
13, 14, 15, 16, 17	Waste Area 12	114	366
2, 3, ½ of 4	Waste Area 13	45	180
1, ½ of 4, 5	Waste Area 14	45	180
6, 7, 8	Waste Area 15	42	168
9, 10, 11, 12	Waste Area 16	66	264
Total		1,085	3,506

The full site plan of this development can be provided upon request.

Separation of Waste Streams

Operational Waste Volume

The tables below display the estimated waste generation rates for each waste area in accordance with the total occupancy of the units assigned to each respective waste area:

Waste Area One			
Total Recycling (litres)		General Waste (litres)	Total (litres)
3,744.00			
Mixed Recycling (litres)	Glass (litres)		
3,444.48	299.52	3,456.00	7,200.00

Waste Area Two			
Total Recycling (litres)		General Waste (litres)	Total (litres)
9,110.40			
Mixed Recycling (litres)	Glass (litres)		
8,381.57	728.83	8,409.60	17,520.00

Waste Area Three			
Total Recycling (litres)		General Waste (litres)	Total (litres)
6,739.20			
Mixed Recycling (litres)	Glass (litres)		
6,200.06	539.14	6,220.80	12,960.00

Waste Area Four			
Total Recycling (litres)		General Waste (litres)	Total (litres)
5,803.20			
Mixed Recycling (litres)	Glass (litres)		
5,338.94	464.23	5,356.80	11,160.00

Waste Area Five			
Total Recycling (litres)		General Waste (litres)	Total (litres)
6,739.20			
Mixed Recycling (litres)	Glass (litres)		
6,200.06	539.14	6,220.80	12,960.00

Waste Area Six			
Total Recycling (litres)		General Waste (litres)	Total (litres)
2,246.40			
Mixed Recycling (litres)	Glass (litres)		
2,066.69	179.71	2,073.60	4,320.00

Waste Area Seven			
Total Recycling (litres)		General Waste (litres)	Total (litres)
9,547.20			
Mixed Recycling (litres)	Glass (litres)		
8,783.42	763.78	8,812.80	18,360.00

Waste Area Eight			
Total Recycling (litres)		General Waste (litres)	Total (litres)
7,488.00			
Mixed Recycling (litres)	Glass (litres)		
6,888.96	599.04	6,912.00	14,400.00

Waste Area Nine			
Total Recycling (litres)		General Waste (litres)	Total (litres)
8,673.60			
Mixed Recycling (litres)	Glass (litres)		
7,979.71	693.89	8,006.40	16,680.00

Waste Area Ten			
Total Recycling (litres)		General Waste (litres)	Total (litres)
7,176.00			
Mixed Recycling (litres)	Glass (litres)		
6,601.92	574.08	6,624.00	13,800.00

Waste Area Eleven			
Total Recycling (litres)		General Waste (litres)	Total (litres)
5,990.40			
Mixed Recycling (litres)	Glass (litres)		
5,511.17	479.23	5,529.60	11,520.00

Waste Area Twelve			
Total Recycling (litres)		General Waste (litres)	Total (litres)
11,419.20			
Mixed Recycling (litres)	Glass (litres)		
10,505.66	913.54	10,540.80	21,960.00

Waste Area Thirteen			
Total Recycling (litres)		General Waste (litres)	Total (litres)
5,366.40			
Mixed Recycling (litres)	Glass (litres)		
4,937.09	429.31	4,953.60	10,800.00

Waste Area Fourteen			
Total Recycling (litres)		General Waste (litres)	Total (litres)
5,366.40			
Mixed Recycling (litres)	Glass (litres)		
4,937.09	429.31	4,953.60	10,800.00

Waste Area Fifteen			
Total Recycling (litres)		General Waste (litres)	Total (litres)
5,241.60			
Mixed Recycling (litres)	Glass (litres)		
4,822.27	419.33	4,838.40	10,800.00

Waste Area Sixteen			
Total Recycling (litres)		General Waste (litres)	Total (litres)
8,236.80			
Mixed Recycling (litres)	Glass (litres)		
7,577.86	658.94	7,603.20	15,840.00

The waste calculations in the above tables have been made using the **Auckland Council Multi-Unit Development Space Calculator**.

Recommended Bins

Based on the expected waste and recycling streams above, the recommended services for the development are as follows:

Waste Area One:

Waste Stream	Bin Size	Bin Type	Quantity	Collection Frequency	Total Capacity Per Week (Litres)
General Waste	660L	Wheelie Bin (MGB)	2	3 x Weekly	3960
Mixed Recycling	660L	Wheelie Bin (MGB)	2	3 x Weekly	3960
Glass	240L	Wheelie Bin (MGB)	1	2 x Weekly	480
Total Capacity Per Week (Litres)					8400

Waste Area Two:

Waste Stream	Bin Size	Bin Type	Quantity	Collection Frequency	Total Capacity Per Week (Litres)
General Waste	660L	Wheelie Bin (MGB)	4	4 x Weekly	10560
Mixed Recycling	660L	Wheelie Bin (MGB)	4	4 x Weekly	10560
Glass	240L	Wheelie Bin (MGB)	2	2 x Weekly	960
Total Capacity Per Week (Litres)					22080

Waste Area Three:

Waste Stream	Bin Size	Bin Type	Quantity	Collection Frequency	Total Capacity Per Week (Litres)
General Waste	660L	Wheelie Bin (MGB)	3	4 x Weekly	7920
Mixed Recycling	660L	Wheelie Bin (MGB)	3	4 x Weekly	7920
Glass	240L	Wheelie Bin (MGB)	3	1 x Weekly	720
Total Capacity Per Week (Litres)					16560

Waste Area Four:

Waste Stream	Bin Size	Bin Type	Quantity	Collection Frequency	Total Capacity Per
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					Week (Litres)
General Waste	660L	Wheelie Bin (MGB)	3	3 x Weekly	5940
Mixed Recycling	660L	Wheelie Bin (MGB)	3	3 x Weekly	5940
Glass	240L	Wheelie Bin (MGB)	1	2 x Weekly	480
Total Capacity Per Week (Litres)					12360

Waste Area Five:

Waste Stream	Bin Size	Bin Type	Quantity	Collection Frequency	Total Capacity Per Week (Litres)
General Waste	660L	Wheelie Bin (MGB)	3	4 x Weekly	7920
Mixed Recycling	660L	Wheelie Bin (MGB)	3	4 x Weekly	7920
Glass	240L	Wheelie Bin (MGB)	2	2 x Weekly	960
Total Capacity Per Week (Litres)					16800

Waste Area Six:

Waste Stream	Bin Size	Bin Type	Quantity	Collection Frequency	Total Capacity Per Week (Litres)
General Waste	660L	Wheelie Bin (MGB)	2	2 x Weekly	2640
Mixed Recycling	660L	Wheelie Bin (MGB)	2	2 x Weekly	2640
Glass	240L	Wheelie Bin (MGB)	1	1 x Weekly	240
Total Capacity Per Week (Litres)					5,520

Waste Area Seven:

Waste Stream	Bin Size	Bin Type	Quantity	Collection Frequency	Total Capacity Per Week (Litres)
General Waste	660L	Wheelie Bin (MGB)	4	4 x Weekly	10560
Mixed Recycling	660L	Wheelie Bin (MGB)	4	4 x Weekly	10560
Glass	240L	Wheelie Bin (MGB)	2	2 x Weekly	960
Total Capacity Per Week (Litres)					22080

Waste Area Eight:

Waste Stream	Bin Size	Bin Type	Quantity	Collection Frequency	Total Capacity Per Week (Litres)
General Waste	660L	Wheelie Bin (MGB)	3	4 x Weekly	7,920
Mixed Recycling	660L	Wheelie Bin (MGB)	3	4 x Weekly	7,920
Glass	240L	Wheelie Bin (MGB)	2	2 x Weekly	960
Total Capacity Per Week (Litres)					16800

Waste Area Nine:

Waste Stream	Bin Size	Bin Type	Quantity	Collection Frequency	Total Capacity Per Week (Litres)
General Waste	660L	Wheelie Bin (MGB)	4	4 x Weekly	10560
Mixed Recycling	660L	Wheelie Bin (MGB)	4	4 x Weekly	10560
Glass	240L	Wheelie Bin (MGB)	2	2 x Weekly	960
Total Capacity Per Week (Litres)					22080

Waste Area Ten:

Waste Stream	Bin Size	Bin Type	Quantity	Collection Frequency	Total Capacity Per Week (Litres)
General Waste	660L	Wheelie Bin (MGB)	3	4 x Weekly	7,920
Mixed Recycling	660L	Wheelie Bin (MGB)	3	4 x Weekly	7,920
Glass	240L	Wheelie Bin (MGB)	2	2 x Weekly	960
Total Capacity Per Week (Litres)					16800

Waste Area Eleven:

Waste Stream	Bin Size	Bin Type	Quantity	Collection Frequency	Total Capacity Per Week (Litres)
General Waste	660L	Wheelie Bin (MGB)	3	3 x Weekly	5940
Mixed Recycling	660L	Wheelie Bin (MGB)	3	3 x Weekly	5940
Glass	240L	Wheelie Bin (MGB)	1	2 x Weekly	480
Total Capacity Per Week (Litres)					12360

Waste Area Twelve

Waste Stream	Bin Size	Bin Type	Quantity	Collection Frequency	Total Capacity Per Week (Litres)
General Waste	660L	Wheelie Bin (MGB)	4	4 x Weekly	10560
Mixed Recycling	660L	Wheelie Bin (MGB)	4	4 x Weekly	10560
Glass	240L	Wheelie Bin (MGB)	2	2 x Weekly	960
Total Capacity Per Week (Litres)					22080

Waste Area Thirteen:

Waste Stream	Bin Size	Bin Type	Quantity	Collection Frequency	Total Capacity Per Week (Litres)
General Waste	660L	Wheelie Bin (MGB)	3	3 x Weekly	5940
Mixed Recycling	660L	Wheelie Bin (MGB)	3	3 x Weekly	5940
Glass	240L	Wheelie Bin (MGB)	1	2 x Weekly	480

Total Capacity Per Week (Litres)	12360
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Waste Area Fourteen:

Waste Stream	Bin Size	Bin Type	Quantity	Collection Frequency	Total Capacity Per Week (Litres)
General Waste	660L	Wheelie Bin (MGB)	3	3 x Weekly	5940
Mixed Recycling	660L	Wheelie Bin (MGB)	3	3 x Weekly	5940
Glass	240L	Wheelie Bin (MGB)	1	2 x Weekly	480
Total Capacity Per Week (Litres)					12360

Waste Area Fifteen:

Waste Stream	Bin Size	Bin Type	Quantity	Collection Frequency	Total Capacity Per Week (Litres)
General Waste	660L	Wheelie Bin (MGB)	3	3 x Weekly	5940
Mixed Recycling	660L	Wheelie Bin (MGB)	3	3 x Weekly	5940
Glass	240L	Wheelie Bin (MGB)	1	2 x Weekly	480
Total Capacity Per Week (Litres)					12360

Waste Area Sixteen:

Waste Stream	Bin Size	Bin Type	Quantity	Collection Frequency	Total Capacity Per Week (Litres)
General Waste	660L	Wheelie Bin (MGB)	3	4 x Weekly	7920
Mixed Recycling	660L	Wheelie Bin (MGB)	3	4 x Weekly	7920
Glass	240L	Wheelie Bin (MGB)	2	2 x Weekly	960
Total Capacity Per Week (Litres)					16800

Note:

- The above table refers to the waste and recycling bins that will be emptied by the waste service provider(s). This excludes internal bins, such as any temporary storage bins within each unit.
- Mixed Recycling within the region includes:
 - Plastic 1,2 and 5 bottles and containers
 - Aluminium and steel tins and cans
 - Paper & Cardboard
- Mixed Glass (green, brown, clear) will be collected as single stream materials.
- A Food Waste collection service is not currently available in Queenstown. Should a service become available in the future, an additional bin will be required, with the bin size and collection frequency to be confirmed at that time.

The recommended services above will be reviewed by the Property Management once the development is operational and will be amended accordingly.

Bin Specifications

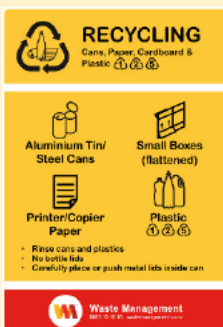
Bin Size	Bin Type	Width	Depth	Footprint
240L	Wheelie Bin (MGB)	580mm	730mm	0.42m ²
660L	Wheelie Bin (MGB)	1,370mm	784mm	1.07m ²



Acceptance Criteria

The below labels showcase the acceptance criteria for the relevant recovery services.

- **Mixed Recycling:** Plastic 1,2 and 5 bottles and containers + aluminium cans and steel tins, paper + printer/copier paper + newsprint + thin board + magazines + envelopes + soft shell books. Corrugated cardboard boxes and packaging.
- **Glass:** Mixed glass (clear, green, brown) bottles & jars.
- **Food Waste:** A commercial food waste collection service is currently not available in Queenstown. However, it can potentially be arranged through Waste to Wilderness, which converts organic waste into compost. For service arrangements, liaise with the local Queenstown WM sales specialists. The acceptance criteria is to be confirmed by the service provider.
- **General Waste:** Non-recyclable materials that do not meet the acceptance criteria of any of the above.

Mixed Recycling	Glass	General Waste
		

Waste Storage Area

Communal Waste Area Sizing

The development includes sixteen designated waste and recycling storage areas, each appropriately sized to accommodate the bins required for managing the waste generated by residents.

Waste Area One:

Bin Size	Bin Type	Footprint	Count	Total
240L	Wheelie Bin (MGB)	0.42m ²	1	0.423m ²
660L	Wheelie Bin (MGB)	1.07m ²	4	4.30m ²
Total footprint of bins				4.72m ²
Space for access and manoeuvrability				4.72m ²

Waste Storage Area (2,780mm x 3,400mm)	9.44m²
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Waste Area Two:

Bin Size	Bin Type	Footprint	Count	Total
240L	Wheelie Bin (MGB)	0.42m ²	2	0.846m ²
660L	Wheelie Bin (MGB)	1.07m ²	8	8.59m ²
Total footprint of bins				9.43m ²
Space for access and manoeuvrability				9.56m ²
Waste Storage Area (3,940mm x 4,820mm)				18.99m²

Waste Area Three:

Bin Size	Bin Type	Footprint	Count	Total
240L	Wheelie Bin (MGB)	0.42m ²	3	1.269m ²
660L	Wheelie Bin (MGB)	1.07m ²	6	6.44m ²
Total footprint of bins				7.71m ²
Space for access and manoeuvrability				7.71m ²
Waste Storage Area (2,900mm x 5,320mm)				15.42m²

Waste Area Four:

Bin Size	Bin Type	Footprint	Count	Total
240L	Wheelie Bin (MGB)	0.42m ²	2	0.423m ²
660L	Wheelie Bin (MGB)	1.07m ²	6	6.44m ²
Total footprint of bins				6.86m ²
Space for access and manoeuvrability				6.86m ²
Waste Storage Area (3,300mm x 4,170mm)				13.73m²

Waste Area Five:

Bin Size	Bin Type	Footprint	Count	Total
240L	Wheelie Bin (MGB)	0.42m ²	1	0.846m ²
660L	Wheelie Bin (MGB)	1.07m ²	6	6.44m ²
Total footprint of bins				7.29m ²
Space for access and manoeuvrability				7.29m ²
Waste Storage Area (3,480mm x 4,200mm)				14.58m²

Waste Area Six:

Bin Size	Bin Type	Footprint	Count	Total
240L	Wheelie Bin (MGB)	0.42m ²	1	0.423m ²
660L	Wheelie Bin (MGB)	1.07m ²	4	4.29m ²
Total footprint of bins				4.71m ²
Space for access and manoeuvrability				4.71m ²
Waste Storage Area (2,480mm x 4,000mm)				9.43m²

Waste Area Seven:

Bin Size	Bin Type	Footprint	Count	Total
240L	Wheelie Bin (MGB)	0.42m ²	2	0.846m ²
660L	Wheelie Bin (MGB)	1.07m ²	8	8.59m ²
Total footprint of bins				9.43m ²
Space for access and manoeuvrability				9.43m ²
Waste Storage Area (3,480mm x 5,430mm)				18.87m²

Waste Area Eight:

Bin Size	Bin Type	Footprint	Count	Total
240L	Wheelie Bin (MGB)	0.42m ²	2	0.846m ²
660L	Wheelie Bin (MGB)	1.07m ²	6	6.44m ²
Total footprint of bins				7.29m ²
Space for access and manoeuvrability				7.29m ²
Waste Storage Area (2,780mm x 5,250mm)				14.58m²

Waste Area Nine:

Bin Size	Bin Type	Footprint	Count	Total
240L	Wheelie Bin (MGB)	0.42m ²	2	0.846m ²
660L	Wheelie Bin (MGB)	1.07m ²	8	8.59m ²
Total footprint of bins				9.43m ²
Space for access and manoeuvrability				9.43m ²
Waste Storage Area (3,520mm x 5,600mm)				18.87m²

Waste Area Ten:

Bin Size	Bin Type	Footprint	Count	Total
240L	Wheelie Bin (MGB)	0.42m ²	2	1.26m ²
660L	Wheelie Bin (MGB)	1.07m ²	6	6.44m ²
Total footprint of bins				7.29m ²
Space for access and manoeuvrability				7.29m ²
Waste Storage Area (3,260mm x 4,480mm)				14.58m²

Waste Area Eleven:

Bin Size	Bin Type	Footprint	Count	Total
240L	Wheelie Bin (MGB)	0.42m ²	1	0.423m ²
660L	Wheelie Bin (MGB)	1.07m ²	6	6.44m ²
Total footprint of bins				6.86m ²
Space for access and manoeuvrability				6.86m ²
Waste Storage Area (3,680mm x 3,750mm)				13.73m²

Waste Area Twelve:

Bin Size	Bin Type	Footprint	Count	Total
240L	Wheelie Bin (MGB)	0.42m ²	2	0.846m ²
660L	Wheelie Bin (MGB)	1.07m ²	10	10.74m ²
Total footprint of bins				11.58m ²
Space for access and manoeuvrability				11.58m ²
Waste Storage Area (3,080mm x 6,140mm)				23.17m²

Waste Area Thirteen:

Bin Size	Bin Type	Footprint	Count	Total
240L	Wheelie Bin (MGB)	0.42m ²	2	0.846m ²
660L	Wheelie Bin (MGB)	1.07m ²	8	8.59m ²
Total footprint of bins				9.43m ²
Space for access and manoeuvrability				9.43m ²
Waste Storage Area (3,080mm x 4,480mm)				18.87m²

Waste Area Fourteen:

Bin Size	Bin Type	Footprint	Count	Total
240L	Wheelie Bin (MGB)	0.42m ²	1	0.423m ²
660L	Wheelie Bin (MGB)	1.07m ²	6	6.44m ²
Total footprint of bins				6.86m ²
Space for access and manoeuvrability				6.86m ²
Waste Storage Area (2,780mm x 4,950mm)				13.73m²

Waste Area Fifteen:

Bin Size	Bin Type	Footprint	Count	Total
240L	Wheelie Bin (MGB)	0.42m ²	1	0.423m ²
660L	Wheelie Bin (MGB)	1.07m ²	6	6.44m ²
Total footprint of bins				6.86m ²
Space for access and manoeuvrability				6.86m ²
Waste Storage Area (3,080mm x 4,480mm)				13.73m²

Waste Area Sixteen:

Bin Size	Bin Type	Footprint	Count	Total
240L	Wheelie Bin (MGB)	0.42m ²	2	0.846m ²
660L	Wheelie Bin (MGB)	1.07m ²	6	6.44m ²
Total footprint of bins				7.29m ²
Space for access and manoeuvrability				7.29m ²
Waste Storage Area (3,080mm x 4,480mm)				14.58m²

Access to Waste Storage Area

Transfer of Waste

Residents are responsible for placing their waste and recyclables in the correct bins within the communal waste areas. The sixteen waste areas are centrally positioned between units throughout the development and are accessible to all residents via a shared footpath. Residents of the apartments are required to carry their private bins to the communal waste area on, or before, collection day.

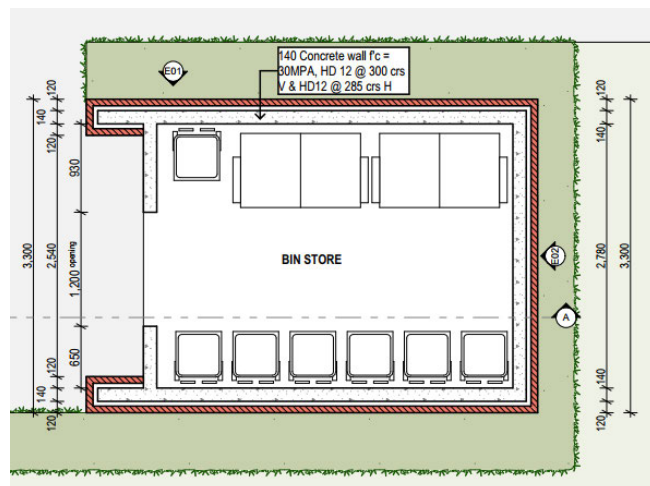
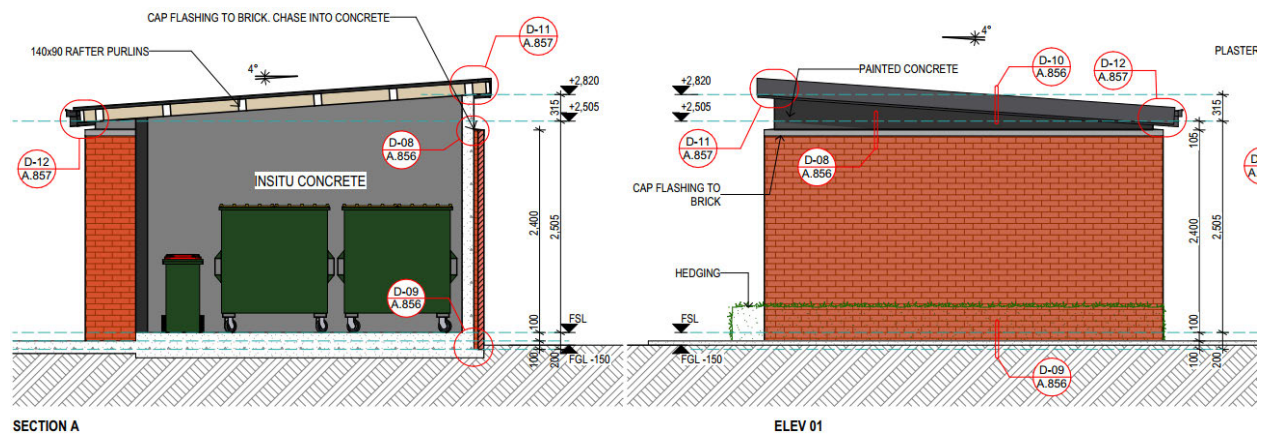
The collection truck driver will be expected to wheel the refuse bins to the collection vehicle from the waste areas, empty the bins, then return them to their positions. The waste service provider(s) will work with property management of the development to adjust servicing frequencies if the initial plan is unsuitable.

Waste Area Design

The communal waste areas within the residential development will be designed to be secure, enclosed, and accessible for residents. These areas will be constructed to minimise potential issues such as odour, litter, and vermin.

Each waste area will be enclosed by brick walls and covered with a roof to provide shelter, with a designated opening to allow access. Motion-activated lighting will also be installed to support safe waste disposal at all times.

The below images display the proposed design of the waste areas:



Vehicle Specifications

Based on the proposed waste and recycling bins, the following vehicle will be required to service the development:

Vehicle Type	Bins Collected	Dimensions
Rear Loader 	Wheelie Bins (MGB): 80L, 140L, 240L, 660L	Driving Height: 2,690 mm Loading Height 3,088 mm Width: 2,270 mm Length: 8,166 mm Max Service Length: 10,073 mm Turning Circle Radius: 8,500 mm Turning Circle: D = 17,000 mm

Vehicle Tracking

Waste collection for the development will be managed on-site by the waste service provider. The proposed servicing vehicle is a Rear End Loader (REL), which will access the site via Lower Shotover Road. The REL will temporarily park adjacent to the communal waste areas during servicing and will exit the site in a forward direction upon completion.

Vehicle tracking demonstrates that the REL can safely manoeuvre within the site, maintaining a minimum clearance of 0.3 metres from any parked vehicles throughout its movement.



The full Vehicle Tracking Assessment can be provided upon request.

Roles and Responsibilities

The actions relating to waste and the responsible persons are outlined below:

Supply of waste and recycling bins	Property Management to engage with waste service provider(s)
Supply of accurate and up to date signage	Property Management to engage waste service provider(s)
Transfer of waste from internal bins to waste storage area	Residents and Commercial Leaseholder
Placing waste and recycling correctly into respective internal bins	Residents and Commercial Leaseholder
Maintaining cleanliness of waste area	Property Management
Collection of waste and recycling	Waste service provider(s)

Bins, Signage and General Cleanliness

Property Management will be responsible for engaging with the waste service provider(s) to ensure the bins are an appropriate size, are emptied at appropriate frequencies, signage is up to date and labels are correct. Property Management will be responsible for the general cleanliness of the waste storage area.

It is the responsibility of the waste service provider(s) local account manager to ensure correct signage is provided for all bins on-site. Property Management will engage the waste service provider(s) should any of the bins become too dirty and/or damaged. These bins will then require cleaning or replacement, with this service being performed by the waste service provider(s).

Noise Management

It is the responsibility of Property Management to utilise the bins (especially those with lids) during appropriate hours of the day. Collection days and times will be arranged with the waste service provider(s), with noise implications playing a role in the decision-making process.

Health and Safety

Safety is critical to the health and wellbeing of people, business, and communities, so safety will be an everyday discipline. The waste service provider(s) will be continually improving the way services are delivered, including innovations in safety tools and methods to keep all residents safe whilst undertaking services on-site.

Bin Hygiene

All bin cleaning will occur off-site and will be performed by the waste service provider(s). This cleaning will take place in a wash bay with adequate drainage, regular sump collections and applicable trade waste permitting. A regular Site Assessment will be undertaken to assess the state of the bins and if they require a cleaning service.

This process will reduce odour and the risk of vermin on-site.

Site Maintenance

Property Management will be required to maintain the property to ensure all security and/or Health and Safety risks continue to be considered during daily operations. A 12 monthly maintenance plan is suggested to be put in place, with the maintenance of the waste area to be included in this plan.

Fleet Safety Tools

ERoad Technology – as an example, all of WM New Zealand's vehicles have this technology installed. This provides both driver and fleet operations teams with instantaneous scoring of driver performance against a national database. Trucks have ERoad installed as a personal safety system, allowing data to be collected on the driver's braking habits, speeds, and acceleration. This data is then used to address unsafe driving if required, keeping both drivers and the public safe. ERoad also has a GPS tracking system built into it, allowing users to view truck locations in real time.

Lytix DriveCam – Another safety tool utilised by WM New Zealand is the DriveCam programme from Lytx. This is an in-vehicle video-based risk management technology which helps fleet owners identify the root-cause of risky behaviours that lead to collisions. Predictive analytics data is used to show specifically who and what are the riskiest behaviours occurring in a fleet. This information is used by fleet owners to coach drivers to prevent collisions from happening in the future.

Health and Safety Statement - WM New Zealand

As a Person Conducting a Business or Undertaking (PCBU), WM New Zealand is committed to the safety, health and wellbeing of our customers, our communities, and our WM New Zealand personnel. We believe that all workplace-related incidents, injuries, and illnesses are preventable, and we aspire to achieve our aim of "Zero Harm" by making health and safety the priority in all our business activities. Waste and environmental services is a hazardous industry with real risks, so safety is an everyday discipline for us, and nothing less than the best practice will do. Attaining the highest standards in health and safety is paramount to the success and sustainability of our business.

OWMP Review

This OWMP is to be reviewed by Property Management before the development becomes fully operational, to ensure all the requirements and recommendations are implemented.

All relevant stakeholders will work alongside the waste service provider(s) to ensure that adequate infrastructure and up-to-date signage is provided.

This initial OWMP review, and the frequency of future reviews, will be confirmed by Property Management.

Future reviews will also include investigating if additional recurring or once-off services are required.



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