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Waste Management Plan

for the Redevelopment of Compass Centre Bankstown

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1. Introduction

This Waste Management Plan is submitted to the City of Canterbury-Bankstown Council (Council) on behalf of Barings Real Estate Australia (Barings) in support of a development application (DA) for a mixed-use development at the Compass Centre site, located at 83-99 North Terrace, Bankstown (the site).

This DA seeks approval for:

- Site preparation and early works, including demolition of all existing structures, bulk excavation, any required remediation and tree removal.
- Construction and use of a five (5) storey mixed use podium and three towers, comprising:
 - A 19-storey hotel tower in the south-west corner of the site;
 - A 24-storey residential tower in the south-east corner of the site;
 - A 24-storey residential tower in the north-east corner of the site;
 - Ground floor retail activating the ground plane;
 - A gym at the southeastern corner of levels 1 and 2;
 - A metro supermarket at the west of level 1;
 - Provision of common residential amenity spaces at the north of levels 2 to 3;
 - A childcare use at the northeastern corner of the podium rooftop;
 - Ancillary uses associated with the hotel in the hotel tower's podium rooftop;
 - Medical centre uses in the southeast tower's podium rooftop;
 - Provision of a through site link connecting The Mall in the North to North Terrace in the South, as well as additional links from Fetherstone Street and the Appian Way, providing connections to both The Mall and North Terrace; and
 - Car parking on levels 1, 2 and 3 of the podium, which are to be appropriately sleeved through façade activation, active uses, landscaping and active mezzanine floors.
- Construction and use of a two (2) level basement car park accommodating car, bicycle, motorcycle and loading spaces.
- Vehicular access from Fetherstone Street to the West of the site.
- Inclusion of landscaping throughout the site.
- Extension and augmentation of services and utilities to the development as required.

This Waste Management Plan provides guidance on:

- Expected volumes of operational, demolition and construction general waste and recycling
- Suitable bins and equipment for residential and retail general waste and recycling
- Storage area requirements for residential and retail general waste and recycling
- Site and contractor handling and collection practices
- Management systems and responsibilities

2. Site Analysis

The site is located at 83-99 North Terrace, Bankstown within the City of Canterbury Bankstown local government area (LGA). It is located to the north of Bankstown railway station, to the south of Paul Keating Park and forms part of the street block bounded by The Mall (north), The Appian Way (east), North Terrace (south), and Fetherstone Street (west), however does not comprise a street frontage to The Mall, given that its northern boundary interfaces with the former Bankstown City Library site and Phil Engisch Reserve.

It is located within the Bankstown City Centre, surrounded by a mix of civic, retail, office, business and residential uses. It is situated in a location that is highly serviced by public transport, being approximately 60m to the north of Bankstown railway station and the future Bankstown metro station, and within the immediate proximity of the Bankstown bus interchange. It is also situated directly south of Paul Keating Park, Western Sydney University Bankstown Campus, the contemporary Bankstown Library and Knowledge Centre, Bryan Brown Theatre and Function Centre, and immediately west of the Bankstown Central Shopping Centre.

The site's locational context is shown in **Figure 1**. An aerial photograph of the site is also provided at **Figure 2**.

Figure 1: Site Context Map



Figure 2: Site Aerial View



3. Relevant Legislation, Standards & Guidelines

The following City of Canterbury Bankstown requirements have been consulted in the course of preparing this report:

- *Development Control Plan 2023, Chapter 3 General Requirements 3.3 Waste Management*
- *Development Control Plan 2023, Demolition & Construction Guide June 2023*
- *Waste Design for New Developments – Guide C Residential Flat Buildings May 2021*
- *Waste Design for New Developments – Guide E Mixed Use Development May 2021*
- *Waste Design for New Developments – Guide F Commercial & Industrial Development May 2021*
- *Waste Management Plan C – Residential Flat Buildings Occupancy Stage*
- *Waste Management Plan E – Mixed Use Development Occupancy Stage*
- *Waste Management Plan F – Commercial & Industrial Development Occupancy Stage*
- *Waste Management Plan – Demolition and Construction Waste*

In addition, the following NSW legislative requirements have been consulted where relevant:

- *NSW Protection of the Environment Operations Act 1997*
- *NSW Protection of the Environment (General) Operations Act 1998*
- *NSW Waste Avoidance and Resource Recovery Act 2001*
- *NSW Protection of the Environment Operations (Waste) Regulation 2014, Part 11*
- *NSW EPA Better Practice Guide for Resource Recovery in Residential Developments 2019*

This report also addresses the relevant requirements with regard to waste management outlined in the letter from Council dated October 9, 2023.

4. Development Areas & Residential Yield

The data in Table 1 has been used to calculate operational general waste and recycling volumes:

Table 1: Development Areas & Apartment Yield

Tenancy Type	Area (GFA)	Yield
Retail – Specialty, Restaurant & Gym	4,969 m ²	
Retail - Medical Suites	708 m ²	
Retail - Childcare	576 m ²	
Hotel	9,534 m ²	
Apartments		339 Units

In calculating total operational volumes of general waste and recycling, we have taken into account all areas and functions of the development that will produce general waste and recycling as a guide to calculating future volumes of materials.

Residential general waste and recycling volumes have been calculated based on apartment numbers and standard generation rates; for Retail and Hotel areas these were calculated from GFA schedules provided, and an expected occupancy rate of 100% for all tenancies once the development is fully operational.

5. Operational General Waste & Recycling: Retail

5.1 General Waste & Recycling Streams

Table 2 provides details of proposed management systems for the development's retail general waste and recycling, based on standard procedures in place at similar developments.

Table 2: Retail General Waste & Recycling Procedures

Material Streams	Retail Tenancies
General Waste Mixed Recycling (Cardboard, Paper, Glass, Metal, & Plastic Containers)	Retail tenants will bring general waste and recyclables to the Basement 01 Loading Dock at specified times during trading days. All materials will be removed from tenancies by the end of each trading day, with no materials left in internal bins overnight; no intermediate waste storage facilities will be provided on retail levels. The site's private waste contractor will collect all materials on schedules to be established once the development is operational. Initially these will be set at the frequencies shown in Table 3. Collections will take place outside normal business hours to minimise congestion in the loading dock area and hazards to site users. Cleaning staff will maintain organisation and cleanliness of bin rooms and collection areas and conduct regular washing and cleaning of bins and storage rooms. As detailed in Section 8.1, tenancy fitouts will provide sufficient storage space, as per in the City of Canterbury Bankstown's waste management guidelines, for general waste and recyclable material streams within kitchens and/or common areas, depending on the type of tenancy (food and beverage or general retail).
Bulky Waste Items	These materials (whitegoods, equipment, furniture, and other items unsuitable for disposal in the site's general waste bins) will be stored in a dedicated room of around 15 m² located in the Basement 01 Loading Dock. Collections will take place from here on an on-call basis.

All retail general waste and recycling will be stored in and collected from the development's Loading Dock located in Basement 01, as shown in **Appendix A**, and will be managed in accordance with the City of Canterbury Bankstown's requirements.

5.2 General Waste & Recycling Generation Rates

General waste and recycling generation rates for various tenancy types are based on those in the City of Canterbury Bankstown's Waste Management Guidelines shown in **Appendix C**. As the exact tenancy makeup is not known at this stage, our projections are based on the maximum potential daily generation for the development's probable tenancy types and areas, as follows:

General Waste: 10,582.2 litres/day
Recycling (Mixed Cardboard, Paper, & Containers): 9,754.1 litres/day

5.3 General Waste & Recycling Volumes

Table 3 shows recommended bin sizes and collection frequencies for these expected volumes, based on 7 days per week operation for the development's retail tenancies:

Table 3: Operational General Waste & Recycling Volumes & Equipment

Waste/Recycling Stream	Equipment	No.	Collections per Week	Weekly Volume m ³	Footprint m ²
General Waste	1100-litre bins	9	7	10,582.2	21.0
Mixed Recycling	1100-litre bins	9	7	9,754.1	21.0
Total Area Required					42.0 m²

Bin footprints include the required allowance of 15 cm for space between bins for accessibility. Standard rear lift MGB (Mobile Garbage Bin) sizes are shown in Table 4 below.

Table 4: MGB Dimensions

Bin Capacity	Height	Width	Depth	Footprint m ²	
				Standard	+ 15 cm/Bin
140-litre	930	530	610	0.32	0.52
240-litre	1060	580	730	0.42	0.64
660-litre	1250	1370	850	1.16	1.52
1100-litre	1470	1370	1245	1.71	2.12

6. Operational Waste & Recycling: Residential

6.1 General Waste & Recycling Streams

Table 5 provides details of proposed management systems for the development's residential waste, based on standard procedures in place at similar developments.

Table 5: Residential General Waste & Recycling Procedures

Material Streams	Residential Tenancies
General Waste Mixed Recycling (Cardboard, Paper, Glass, Metal, & Plastic Containers)	Residents will dispose of General Waste into a single chute system, with openings contained within chute rooms on each residential floor. Details of the chute system are provided in Appendix E. For items too large to fit in chutes, residents will contact building management to arrange for collection. Mixed Recycling bins will be provided in a cupboard on each residential floor for residents' use. Emptying of these bins in the Basement 01 Loading Dock as described in Section 6.2 will be done by the development's caretaking/maintenance staff. As detailed in Section 8.1, residential apartment fitouts will allow for sufficient storage space for separated recyclables within kitchen cabinetry. As the residential component of the development will consist of two high-rise residential towers, the volume of Garden Organics produced by residents will be small; consequently, no provision has been made for separation and storage of this material stream in the current building design.
Bulky Waste Items	Each residential tower will have a dedicated bulky waste area near the lift outlet in Basement 01 for residents to bring items such as whitegoods, mattresses, furniture, and other items unsuitable for disposal in the general waste bins. Site operational staff will then take these items to either of two 4m² rooms, one for each residential tower, in the Basement 01 Loading Dock, to await collection by Council's service. Collections will take place from an area to be agreed with Council on an on-call/as needed basis.

6.2 General Waste & Recycling Generation Factors

The following generation factors are taken from the City of Canterbury Bankstown's Waste Management Guidelines.

Table 6: Residential General Waste & Recycling Generation Factors & Volumes

Tenancy Type	General Waste	Commingled Recycling
Multi-Unit Residential Developments	140 litres/unit/week	120 litres/unit/week
Apartments: 339	47,460 litres/week	40,680 litres/week

6.3 General Waste & Recycling Volumes

Based on the residential waste generation factors in Table 6, the following bins will be required:

Table 7: Residential Weekly General Waste & Recycling

Waste/Recycling Stream	Bins		Collections/ Week	Footprint m ²
	Size	No.		
General Waste	1100	22	2	51.3
Mixed Recycling	1100	36	1	84.0
Total Area Required				135.3 m²

Bin footprints include the required allowance of 15 cm for space between bins for accessibility.

6.4 Waste & Recycling Handling & Storage

Retail and residential general waste and recycling generated from ongoing operations will be managed by the development's operational staff.

Full 1100L general waste bins will be transferred daily from each chute room to the main storage room in Basement 01 and replaced with empty bins in the chute rooms.

240L recycling bins from residential floors will be transferred to the main storage room and tipped into the 1100L recycling bins, using the bin lifter shown in Appendix D.

All waste storage facilities will be located in the Basement 01 Loading Dock with retail and residential general waste and recycling stored in separate areas. All facilities will conform to the requirements of the City of Canterbury Bankstown's Waste Management Guidelines.

All waste and recycling containers will be clearly differentiated through appropriate signage and colour coding to reflect the materials contained, with each stream located in a designated area within the storage room.

Basement 01 storage areas and signage details are shown in **Appendices A** and **F** respectively.

6.5 Chute Operations & Maintenance

Buildings B and C will each have a single chute for general waste only. There will be no mechanical compaction of general waste.

Chute access points will be located on all residential floors, with the typical location and arrangement shown in Figures 2a and 2b:

Figure 2a: Typical Residential Floor Chute Location - Building B



Figure 2b: Typical Residential Floor Chute Location - Building C



Maintenance staff will be responsible for day-to-day management of all bins in the chute room, including removing full bins from the linear track and placing empty bins under chute outlets. Other tasks will include periodic cleaning of the bins and keeping the room tidy and free of litter.

An odour neutraliser will be installed in the bin room and mechanical exhausts will be installed in each chute access room on residential floors, in addition to the separate exhausts to each chute.

For items too large to fit into chutes, residents will contact building management to arrange for these to be collected and taken to the relevant storage room depending on the type of material.

The development will also implement a maintenance contract for the chutes and associated infrastructure to ensure continued correct functioning of the installed equipment.

Appendix E provides further details of the development's chute and bin system.

7. Operational Waste & Recycling: Hotel & Function Centre

7.1 General Waste & Recycling Streams

Table 8 provides details of proposed management systems for the Hotel and Function Centre's waste streams, based on standard procedures for hotel developments.

Table 8: Hotel General Waste & Recycling Procedures

Material Streams	Hotel & Function Centre
- General Waste - Paper/Cardboard Recycling - Commingled Recycling - Organics Recycling - Cooking Oil Recycling	Hotel staff will collect all materials from hotel guest rooms, back of house, hospitality, event spaces, etc. and bring them to the Basement Level 01 bin storage room via goods lift. The Hotel's private waste contractor will collect all materials on the schedules shown in Table 10. Collections will take place outside standard business hours to avoid vehicle congestion in the loading dock area. Hotel staff will maintain the security and organisation and cleanliness of the bin storage room and the loading dock, and associated signage.
Bulky Waste Items	Bulky hotel waste such as furniture, bedding, appliances, etc. will be stored in a dedicated area within the bulky goods storage room on Basement Level 01. These items will be collected by the Hotel's private waste contractor on an as-needed basis. This will be done at least quarterly to avoid excessive build-up of materials within the room.

7.2 General Waste & Recycling Factors

Includes Function Centre

Table 9: Residential General Waste & Recycling Generation Factors & Volumes

Tenancy Type	General Waste	Recycling	Organics
Hotel GFA: 9,534 m ²	30 litres/100m ² /day	25 litres/100m ² /day	5 litres/100m ² /day
Days Operation	7 days/week	7 days/week	7 days/week
Weekly Generation	20,021 litres/week	16,685 litres/week	3,337 litres/week

7.3 General Waste & Recycling Volumes

Based on the waste generation factors in Table 9, the following bins will be required:

Table 10: Hotel & Function Centre Weekly General Waste & Recycling

Waste/Recycling Stream	Bins		Collections/ Week	Footprint m ²
	Size	No.		
General Waste	1100	4	5	9.3
Mixed Recycling	1100	6	3	14.0
Organics	240	5	3	4.2
Total Area Required Including Circulation Space				35.8 m²

Bin footprints include an allowance of 15 cm for space between bins for accessibility.

8. Tenancy Bins

8.1 Retail

Retail tenancy fitouts will be designed with sufficient dedicated space to accommodate separate bins for general waste and the designated recycling streams:

- Paper/Cardboard Recycling
- Commingled Recycling
- Organics Recycling
- General Waste

Retailers will be responsible for the separation of general waste and recyclables within their tenancy according to the processes and bringing these materials to the Loading Dock for disposal at specified times throughout the trading day.

Retail tenancy fitouts will be designed with sufficient dedicated space to accommodate separate bins for general waste and the designated recycling streams.

8.2 Residential

Apartment fitouts will be designed to accommodate separate bin housings in kitchens for general waste and recycling streams as shown in Figure 3:

Figure 3: Residential Tenancies (30 Litre Bins)



9. Tenant & Contractor Education

The development's Facilities Management team will implement an education program for all tenants to ensure effective materials separation and resource recovery.

Tenancy leases will require compliance with the site's materials separation systems, and an ongoing tenant education program will be implemented for all existing tenancies and new tenancies as they move into the site. Specific clauses will also be written into cleaning contracts requiring monitoring contamination of recycling streams and condition of bins and compactor equipment and providing the property managers with feedback on ongoing performance.

The program will be regularly updated, and tenants will be kept informed of progress, through the site's monitoring and reporting program.

10. Operational Resource Recovery Targets

Specific targets for diverting operational waste from landfill to resource recovery outcomes will form part of the contract between the development and its private waste contractor. The following targets will be set for the development:

Year 1: 50% diversion

Year 2: 55% diversion

Year 3: 60% diversion

To evaluate performance, the development will implement the systems detailed in Section 11.

11. Monitoring, Measurement, & Reporting

Following implementation of the new systems, a monthly reporting system, based on the Better Buildings Partnership (BBP) *Operational Waste Guidelines*, will be instituted. This will ensure the accurate tracking of performance, continued improvement, and cost-effective waste removal.

Performance clauses and KPIs in waste and cleaning contracts will require all parties to actively participate in the resource recovery initiatives and meet regularly to resolve performance issues and identify new improvement opportunities. Waste contractors will be required to report actual volumes and tonnages by stream so that site management can monitor performance and feed this back to stakeholders. Further waste contractor requirements are specified in Section 11.

The development's Operations Manager will be responsible for monitoring progress towards waste diversion targets and for periodically reviewing and updating the waste management plan.

12. Waste Contractor Requirements

The development's private waste and recycling contractor(s) will be required to demonstrate high standards of service and comply with the following requirements:

- Reliable and efficient servicing, and meeting all agreed schedules
- Suitably sized collection vehicles to be able to access the building's loading dock
- Maintaining accurate and comprehensive tracking systems for all materials collected
- Working with the site to achieve continuous improvements in resource recovery rates
- Providing detailed monthly and annual reports on diversion and financial outcomes
- Maintaining current details of processing facilities used, and providing information on request
- Provide an accurate and reliable process for measuring and reporting all materials streams

13. Demolition & Construction Waste Objectives & Targets

This Waste Management Plan will be implemented throughout the project's demolition and construction phases. The project's waste management objectives will include:

- Meeting all waste management standards while ensuring the health and safety of the workers on the project
- Maximising the quantities of materials diverted from landfill by reusing, recycling and reprocessing off-site
- Disposal of no more than 20% of residual waste materials to a licensed landfill in accordance with both regulatory and legal requirements
- The diversion from landfill of 80% of construction waste by weight, to meet the criteria of the NSW State Government's waste legislation, policy settings and regulatory regime

14. Demolition Waste

Table 11 shows estimated quantities of demolition waste to be generated by the demolition of the existing Compass Centre, and management strategies for each type of material. **Appendix B** shows the areas of the existing site to be demolished.

Specific disposal/recycling facilities are not shown, as waste removal contractors have not yet been appointed for the project.

Table 11: Demolition Waste: Expected Materials Streams

Materials on Site				Destination/Treatment		
Type of Material	Estimated m³	Recovered %	Net Recovery m³	Onsite (Reuse/Recycle)	Offsite (Reuse/Recycle)	Disposal (Landfill)
Excavated Soil, Rock	65,400	90%	58,860	No on-site reuse or recycling	Taken to facility for processing for reuse in landscaping works	Residual materials will be sent to landfill
Concrete	8,000	100%	8,000	No on-site reuse or recycling	Collected by contractor and taken to concrete recycling facility	No disposal to landfill
Metal	1,000	100%	1,000	No on-site reuse or recycling	Collected for separation into different metal types for recycling	No disposal to landfill
Plasterboard	1,000	96%	960	No on-site reuse or recycling	Separated onsite and collected by contractor for recycling for use as soil improver with gypsum removed by recycler	Residual materials will be sent to landfill
Floor Coverings	500	98%	490	No on-site reuse or recycling	Collected in designated bin and sent for recycling if of required quality; otherwise sent to landfill	Residual materials will be sent to landfill
Bricks	200	90%	180			
Timber (Treated)	200	0%	0	No on-site reuse or recycling	Material that cannot be recycled will be sent to landfill	
Glass	100	98%	98	No on-site reuse or recycling	Reused if feasible and/or recycled depending on condition	Residual materials will be sent to landfill
Other/ General Waste	200	0%	0	No on-site reuse or recycling	Residual materials will be sent to landfill	
TOTAL MATERIALS	76,600	90.9%	69,588	The demolition phase will produce around 76,600 m³ of waste materials, of which 69,588 m³ or 90.9% can potentially be diverted from landfill.		

15. Construction Waste

Table 12 shows expected volumes, including materials generated from deliveries, such as pallets, pallet wrap, cardboard packaging, and general waste and recyclables disposed of by contractor staff, based on the works to be undertaken. Specific disposal/recycling facilities are not shown, as waste removal contractors have not yet been appointed for the project.

Table 12: Construction Waste: Expected Materials Streams

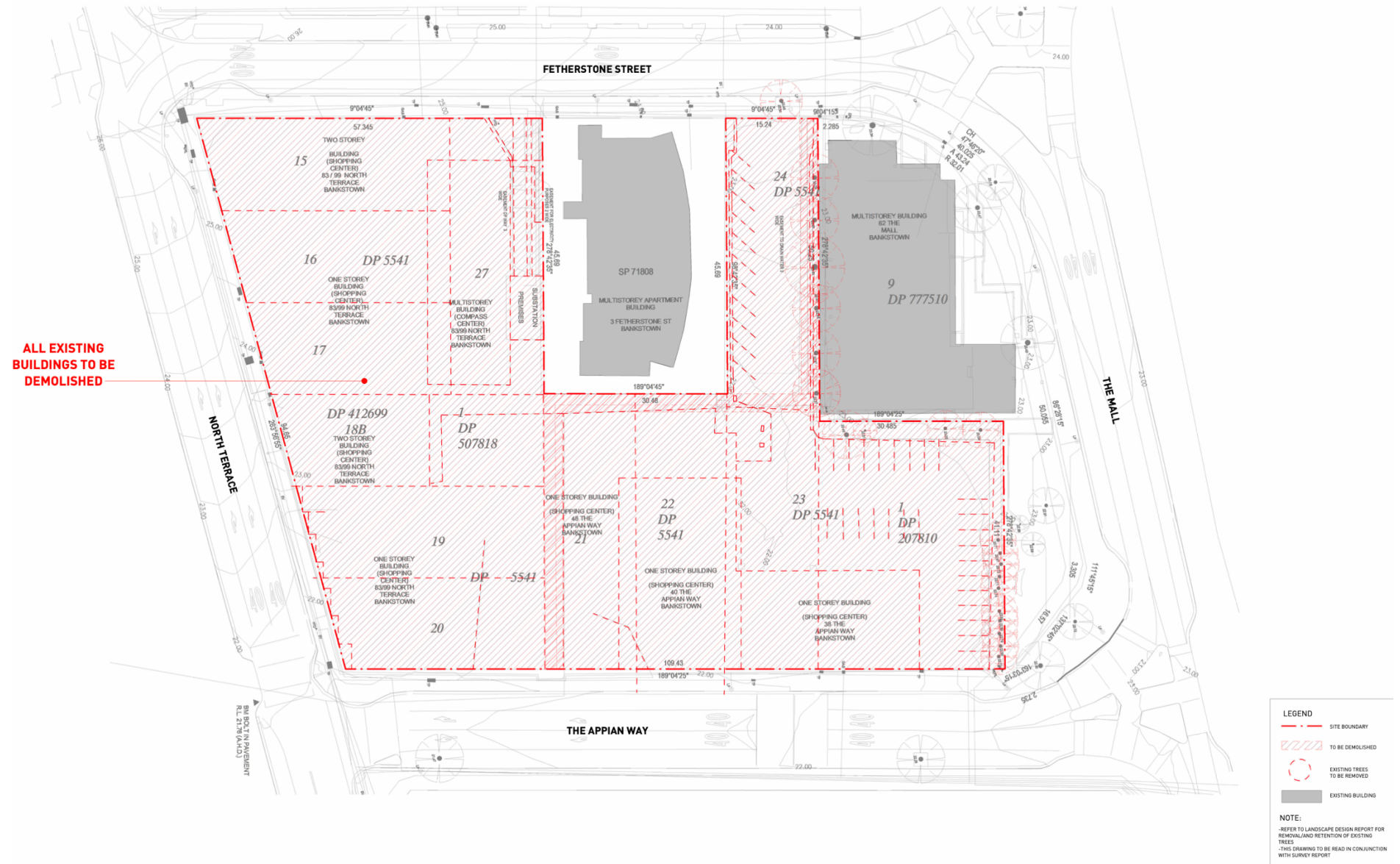
Materials on Site				Destination/Treatment		
Type of Material	Estimated m ³	Recovered %	Net Recovery m ³	Onsite (Reuse/Recycle)	Offsite (Reuse/Recycle)	Disposal (Landfill)
Soft Plastics (e.g. pallet wrapping)	102.2	98%	100	Possible onsite reuse	Collected by contractor and taken to recycling facility	Residual materials will be sent to landfill
Used Pallets	122.6	98%	120	Reuse on site for materials storage		
Paper/ Cardboard Recycling	61.3	98%	60	Reuse cardboard boxes for storage where possible	Separated onsite into dedicated bins and collected by waste contractor for recycling	Residual materials will be sent to landfill
Metal Sheeting, Wiring, etc.	32.7	98%	32	No on-site reuse	Collected by contractor for separation into different metal types for recycling	Residual materials will be sent to landfill
Plasterboard	32.7	96%	31	No on-site reuse	Separated onsite and collected by contractor for recycling for use as soil improver with gypsum removed	Residual materials will be sent to landfill
Floor Coverings	24.5	98%	24	No on-site reuse	Collected in designated bin and sent for recycling if of required quality	Residual materials will be sent to landfill
Recyclable Glass, Metal, & Plastic Containers	8.2	98%	8	No on-site reuse or recycling	Separated onsite into dedicated bins and collected by waste contractor for recycling	Residual materials will be sent to landfill
Timber (Untreated)	40.9	95%	39	Reuse for formwork where possible	Untreated recyclable timber will be collected and recycled at timber yard	Residual materials will be sent to landfill
Timber (Treated)	36.8	0%	0	No on-site reuse or recycling	Residual materials will be sent to landfill	

Materials on Site				Destination/Treatment		
Type of Material	Estimated m³	Recovered %	Net Recovery m³	Onsite (Reuse/Recycle)	Offsite (Reuse/Recycle)	Disposal (Landfill)
Concrete (Excess)	89.9	99%	89	Crushed for use in access road construction	Collected by contractor and taken to concrete recycling facility	No disposal to landfill
Glass (Excess)	40.9	98%	40	No on-site reuse or recycling	Reused if feasible and/or recycled depending on condition	No disposal to landfill
Other/General Waste	81.8	0%	0	No on-site reuse or recycling	Residual materials will be sent to landfill	
TOTAL MATERIALS	674.4	80.6%	543.8	The construction phase will produce around 674.4 m³ of waste materials, of which 543.8 m³ or 80.6% can potentially be diverted from landfill, by being reused on site, or recycled off-site at a dedicated facility.		

The extract below from drawing **B1-GA Plans** dated 22.4.24 shows the Basement 01 Loading Dock storage areas for Residential, Retail, and Hotel general waste and recycling.



Appendix B: Site Demolition Plan



Appendix C: Waste Generation Factors

The following waste generation factors are taken from the City of Canterbury Bankstown's May 2021 *Waste Design for New Developments – Guide F Commercial & Industrial Development*:

Premises Type	Generation Rate (litres per unit per day)		Comments
	Waste	Paper, cardboard and commingled materials	
Accommodation: non-hotel/motel	10	5	Based on the number of guest rooms with other types of facilities calculated separately. Note: function rooms are based on potential bookings and restaurant data
Aged care	5	1	Per resident. Kitchen to be calculated as per restaurant. Need to determine if other services are offered. Note that other waste such as clinical waste will be generated.
Cafes	100	120	Based on per 100 m ² floor space.
Carparks (commercial)	1	1	Based on per 100 m ² floor space.
Childcare	20	5	Per child
Cultural and recreational services: (museums, theatres, cinemas)	5	10	Based on per 100 m ² floor space for patrons (seating areas for theatre/cinema). Calculate cafes separately. Calculate office areas separately.
Dry cleaning	15	5	Per premises (80 m ²)
Food retail: bakeries	240	120	Per premises (80 m ²)
Food retail: butchers	250	50	Per premises (80 m ²). If organics recycling implemented, then 150L may be transferred from waste.
Food retail: seafood	250	50	Per premises (80 m ²). If organics recycling implemented, then 150L may be transferred from waste.
Food retail: greengrocers	540	60	Per premises (80 m ²). A higher rate needs to be considered for larger premises (based on a pro-rata increase for the 80 m ²) premises. If organics recycling implemented, then 300L may be transferred from waste.
Food retail: other	120	80	Per premises (80 m ²)
Food retail: takeaway (with sit-down area)	500	240	Per premises (80 m ²) – day operation only. Note consideration must be given to the number of hours or operation.
Food retail: takeaway (food preparation only)	120	60	Per premises (80 m ²)
Gymnasiums	20	15	Based on per 100 m ² floor space
Hair and beauty	50	40	Per premises (80 m ²)
Hotels/pubs (without meals provided at the bar)	50	50	Based on per 100 m ² floor space. Calculate restaurants separately (including meals served at bar) as well as accommodation (use motel rate).
Licensed clubs (with gaming)	50	50	Based on per 100 m ² floor space. Calculate restaurants separately (including meals served at bar) as well as accommodation (use motel rate).

Premises Type	Generation Rate (litres per unit per day)		Comments
	Waste	Paper, cardboard and commingled materials	
Medical	20	10	Per number of doctors' consulting rooms. Need to determine if other services are offered. Note that other waste such as clinical waste will be generated.
Motels	10	5	Based on the number of guest rooms with other types of facilities calculated separately.
Offices	10	15	Based on per 100 m ² floor space that is used for staff activities (e.g. exclude lobby areas).
Optical	15	25	Per premises (80 m ²)
Restaurants	400	280	Based on per 100 m ² floor space
Retail: chemists	20	45	Per premises
Retail: chain stores (clothing, manchester etc.)	5	20	Based on per 100 m ² floor space. Other facilities such as cafes calculated separately.
Retail: other non-food	50	100	Per premises
Retail: grocery and convenience stores	120	240	Based on per 100 m ² floor space
Retail: homeware and kitchenware shops	20	120	Per premises
Retail: newsagents and stationery shops	30	60	Per premises
Retail: office-based (e.g. travel agents)	30	40	Based on per 100 m ² floor space that is used for staff activities (e.g. exclude lobby areas).
Retail: variety gift stores	20	120	Per premises
Schools: pre-school	10	15	Per student
Schools: primary	15	20	Per student
Schools: secondary	20	15	Per student
School: tertiary	10	10	Per student (full time equivalent). Note that other waste such as chemical waste will be generated. Need to calculate other services (e.g. food halls, student accommodation, childcare, gyms), separately.
Showrooms	10	25	Based on per 100 m ² floor space
Supermarkets	240	300	Based on per 100 m ² floor space. Larger supermarkets may have a number of recycling streams, so advice should be sought as to what systems will be provided.
Wholesale trade	100	50	Based on per 100 m ² floor space

Appendix D: Waste Management Equipment

Bin Tug



Bin Lifter

Height: 2390 mm

Length: 1330 mm

Tipping Height: 1800 mm



Waste Oil Recycling Equipment



Appendix E: Chute Systems



ELEPHANTS
FOOT
recycling solutions

ELEPHANTS FOOT RECYCLING SOLUTIONS
44-46 GIBSON AVE, PADSTOW NSW 2211
E info@elephantsfoot.com.au W elephantsfoot.com.au
Free Call, 1300 4 ELEPHANT (1300 435 374)

1100 LITRE

LINEAR TRACK SYSTEM

PRODUCT INFORMATION

Elephants Foot 1100 Litre bin Linear Track System is a versatile waste handling solution for many types of multi-storey or multi-level developments. The Linear Track System collects waste or recycling being disposed from the floors above through the chute system, discharging the material via a hopper that feeds the bins. Electromechanically driven with automated operation, the system utilises linear motion to automatically change over full bins. Once all the bins are filled, an indicator light will illuminate signifying that the bins are ready for withdrawal and collection. Available with or without compaction unit, our standard 1100 litre bin Linear Track System is available in the standard 2 bin option. Our 3 Bin option is available as a special order.



SPECIFICATIONS

System Control	Electric PLC
Power Supply	415 V AC / 20A / 5 PIN
Motor Size (kW)	1.1
Maximum bin load	440 kg
Noise (dBA)	<85
Bin Size (L)	1100
Cycle time (sec)	60
Bin Quantity options	2 or 3

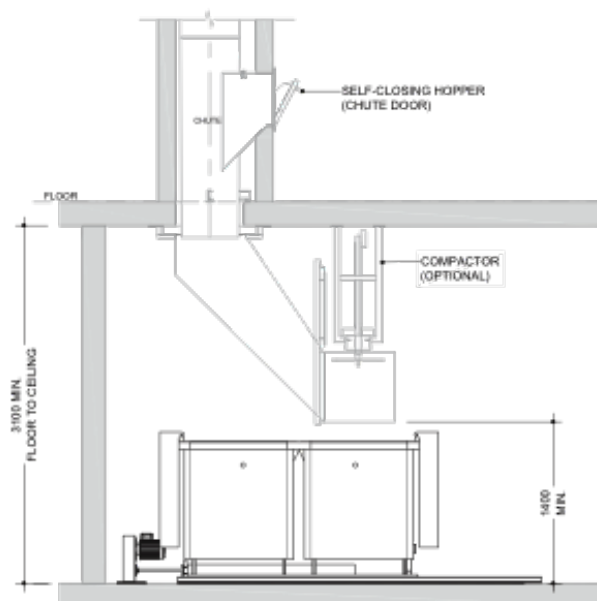
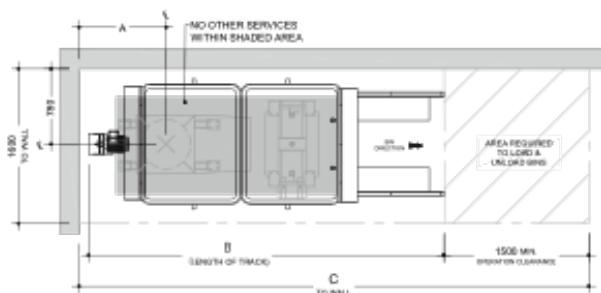
OPTIONAL EXTRAS

- Compaction unit – Please refer to the bin compactor product information sheet for details and specifications
- Enhanced safety add on's – Interlocking barriers, occupancy sensors or safety light curtains (presence sensing light barriers)
- Full bin SMS and email notification
- CMMS and BMS integration
- Extend warranty – Terms and conditions apply

STANDARD FEATURES & BENEFITS

- Simple operation with user friendly controls
- Increased waste servicing efficiency for the development.
- Automatic system control with manual override
- Robust unit construction for long performance life
- Low service and maintain costs
- Rotating flashing beacon (activated during operation)
- Quiet and efficient system operation
- Maximise safety for residents, caretakers and collectors
- Restrained design with minimal moving parts
- Can suit low ceiling clearances
- Floor contact components fully galvanised steel
- Retro fitting options to suit other chutes systems
- Compliant with relevant Building Codes and Standards
- Standard 12 month warranty

LINEAR TRACK SYSTEM



1100 LITRE BIN

1100 LITRE BIN LINEAR TRACK SYSTEM			
No. of Bins	Reference (mm)		
	A	B	C
2	900	3700	5300
3	2100	5940	7550

Notes:

Bins not provided by Elephants Foot

Drawings shown are for general information purposes only and provide minimum equipment special requirements for waste room design.

These drawings are not intended for site specific use or for construction. Each project is unique and will be designed to suit.

Additional equipment options, systems and configurations are available. For design assessment, information and advice, please contact an Elephants Foot design consultant on 1300 435 374

Appendix F: Loading Dock & Tenancy Signage

The signage examples below are for illustration purposes only. Actual signage will be made site-specific with suitable branding.





MIXED RECYCLING



ORGANIC RECYCLING



METALS



GLASS



PAPER



FRUIT



VEGETABLES



FOOD SCRAPS



PLASTIC
CONTAINERS



CARDBOARD



CARTONS



TEA BAGS



COFFEE GROUND



BREAD

