

DICKENS SOLUTIONS

AMENDED WASTE MANAGEMENT PLAN

URBAN PROPERTY GROUP (DKO ARCHITECTS)

PROPOSED MIXED USE RESIDENTIAL & COMMERCIAL DEVELOPMENT

@ 614-632 HIGH STREET PENRITH

MARCH 2021

DISCLOSURE STATEMENT

The information contained in this document has been produced by Dickens Solutions Pty Ltd and is solely for the use of (The Client) for the purpose for which it has been prepared. In preparing this document, Dickens Solutions Pty Ltd undertakes no duty to, nor accepts any responsibility to, any third party that may rely upon this document.

This document and the information contained in the document shall not be copied or reproduced without the consent of Dickens Solutions Pty Ltd, and, or the Client.

Dickens Solutions Pty Ltd
(ABN 41 603 040 446)
1214 Botany Road, Botany NSW 2019
Telephone (Mb) 0400 388 996

Website: www.dickenssolutions.com.au E-mail: garry@dickenssolutions.com.au

TABLE OF CONTENTS

PART	SUBJECT	PAGE
PART 1 – OVERVIEW & PROPOSAL		
1.1	Executive Summary	3
1.2	History	4
1.3	Introduction	6
1.4	Description of Property	6
1.5	Applicants Details	6
1.6	Proposal	7
PART 2 – DEMOLITION		
2.1	Demolition – Generally	8
PART 3 – CONSTRUCTION		
3.1	Construction – Generally	9
3.2	Construction – Recycling, Reuse and Disposal Details	9
3.3	Construction – On Site Storage of Materials	14
3.4	Construction – Excavated Material	14
PART 4 – GARBAGE CHUTE SYSTEM		
4.1	Design Requirements	15
4.2	Use and Operation of Chute System	16
4.3	Linear Track System	17
4.4	On Going Use, Maintenance & Management	17
4.5	Serviced Apartments	18
PART 5 – ON GOING USE		
5.1	Objectives	19
5.2	Assumptions	19
5.3	Waste Handling & Management	20
5.4	Residential Waste & Recycling – Service Requirements	20
5.5	Residential Waste & Recycling – Service Arrangements	21
5.6	Provision of Residential Waste & Recycling Services	22
5.7	Commercial Waste & Recycling Services	26
5.8	Green Waste	29
5.9	Bulk Waste	29
5.10	On Going Operation, Use & Management of Facilities	30
PART 6 – SUMMARY		
6.1	Summary	32

PART 1 – OVERVIEW AND PROPOSAL

1.1 EXECUTIVE SUMMARY

This Waste Management Plan (WMP) describes in detail the manner in which all waste and other materials resulting from the demolition, construction and on-going use of the building on the site are to be dealt with.

The aims and objectives of this WMP are to: -

1. Satisfy all State and Local Government regulatory controls regarding waste management and minimisation practices;
2. Promote the use of recyclable materials in the excavation, demolition, construction and on-going operation of the building;
3. Maximise waste reduction, material separation, and resource recovery in all stages of the development;
4. Ensure the design of waste and recycling storage facilities are of an adequate size, appropriate for the intended use of the building, hygienic with safe and manoeuvrable access; and,
5. Ensure that the provision of waste and recycling services to the completed buildings are carried out in an efficient manner, which will not impact negatively on the health, safety and convenience of all stakeholders.

This WMP is prepared in accordance with: -

- Penrith LEP 2010;
- Penrith DCP 2014 – Part C – Waste Management;
- All conditions of consent issued under the approved Development Application;
- The 'Better Practice Guide for Waste Management in Multi Unit Dwellings and Mixed Use Developments; and,
- The objective of ensuring that all waste management facilities and collection services will provide an outcome that will be effective and efficient, as well as promote the principles of health, safety and convenience.

This Waste Management Plan has been prepared for a Development Application to be submitted to Penrith City Council, for the construction of a part 7 and part 43 storey building of mixed residential and commercial components at 614-632 High Street, Penrith, comprising:

- One (1) x seven (7) storey building (Tower A);
- One (1) x 46 storey building (Tower B)
- 272 x 1, 2 and 3 bedroom units in Tower B;
- 41 X 1 and 2 bedroom serviced apartments in Tower B;
- Four (4) x retail units and one (1) café on the ground floor;
- Five (5) above ground levels for parking;
- Commercial space for undetermined occupancies on Podium Levels 4, 5 and 6;
- Communal open space areas; and,
- Associated infrastructure, services and facilities.

The original WMP for this was dated 12 September 2020.

1.2 HISTORY

On 28 September 2020, Council provided correspondence to the Applicant in the form of a RFI (Request for Further Information). Among the issues identified for clarification were a number related to waste management.

These issues are detailed below in **BOLD TYPE TEXT** with specific responses following each item.

The Waste Management Plan is to be amended to address the following:

ITEM 1 – DEMOLITION WORKS GENERALLY

Part 2 of the plan states that there are no demolition works, and that the excavation of the site is addressed in Part 3. However, Part 3 then states that the site will be excavated for the construction of basement levels. There is a demolition component to the proposal, as there is hardstand present on the site, as well as disused display suites or site offices, as documented in the Geotech report. Further, there is no basement construction proposed, though the Geotech report does indicate that an excavation depth of 0.5 metres to 1 metre may be required. These sections are to be amended to accurately reflect the works proposed.

RESPONSE – Refer to Table 10, Part 3.2 on page 13.

All materials involved in the excavation of the site and the construction of the building will be dealt with under Part 3.

ITEM 2 – ON SITE USE OF MATERIALS

In addition, Part 3 Section 3.2.7 Roof Tiles / Tiles advises that this material will be broken up and used as fill, as does Section 3.2.10 Fixtures & Fittings (Door Fittings, Other Fixtures, etc.). It is not considered appropriate for these materials to be reused on site in this manner - the Plan is to be amended accordingly.

RESPONSE – Refer to Part 3.1 to 3.4 on pages 9 to 14.

The Waste Management Plan has been amended to indicate that all of the above materials will be removed and processed off-site.

ITEM 3 – LOCATION OF BULKY WASTE STORAGE AREA

The residential bulky waste storage area, can be swapped with the location of the residential bin storage and waste collection area as the residential bin storage room will be the more odour generating and most frequently access for collection.

RESPONSE – The Bulky Waste Storage Area has been relocated as indicated on the Architectural Drawings. The WMP has been updated accordingly. Refer to Part 5.9 on page 29.

ITEM 4 – SERVICE PASSAGES

Dimensions of service passages are to be noted and shall comply with the requirements for minimum widths as set out in Council's waste guideline documents for mixed use developments.

RESPONSE – Refer to Item 14, Part 5.10, on page 31. The dimensions of all service passages will comply with the requirements for minimum widths as set out in Council's Waste Management Guideline for Mixed Use Developments.

ITEM 5 – CHUTE SYSTEMS

The development is to be designed to accommodate a linear or circular carousel system at the base of the dual chutes. The development is of a scale as to require such infrastructure. All dual chute access points on all residential levels are to be inset into cupboards and are to be accessible.

RESPONSE – Refer to Part 4 pages 15 to 18.

As indicated in Part 4, pages 15 to 18, dual waste and recycling chutes are provided, with all material deposited from the respective chute outlet points into waste and recycling bins located on respective linear track systems.

ITEM 6 – ACCESS TO CHUTES

Access to the chutes is to be removed from car parking podium levels. Separated dual chute are to be provided for the serviced apartments component of the development. Council does not collect commercial waste and thus it is to be separated from the residential waste, this will require a reconfiguration of the care areas and ground floor layout to allow for the additional chutes and bin storage areas.

RESPONSE – As detailed on the Amended Architectural Drawings, access to the chutes has been removed from all car parking podium levels.

ITEM 7 – ACCESS TO COMMERCIAL WSA

Currently the cafe fronting Union Lane does not have direct access to the ground floor commercial/retail bin rooms and staff will be required to access the area via the vehicle entry points, this is unsafe particularly as the closest access point will be the truck driveway. Consideration of a separated pedestrian access point is to be considered.

RESPONSE – Both the Architectural Drawings and the Waste Management Plan has been amended to provide for convenient access to and from all commercial units.

This is an Amended Waste Management Plan and is dated 23 March 2021 and has been revised to address all of the issues raised in Council's Waste RFI.

1.3 PROJECT DESCRIPTION

This Waste Management Plan (WMP) has been specifically designed for the development described below: -

DESCRIPTION	Part 7 and Part 46 Storey Building of Mixed Commercial and Residential Land Uses
NUMBER OF UNITS	<ul style="list-style-type: none">- 272 x 1, 2 and 3 bedroom units;- 41 x 1 and 2 bedroom serviced apartments;- Five (5) retail units and one (1) commercial unit on the Ground Floor level;- Five (5) above ground Car Parking levels;- Commercial tenancies on Podium Levels 4, 5, 6;- Communal open space; and,- Associated infrastructure, facilities and services.
LOCATION	614-632 High Street, Penrith
LGA	Penrith City Council

1.4 DESCRIPTION OF PROPERTY

PROPERTY DESCRIPTION	The development is to be constructed over four (4) existing Torrens Title lot at: <ul style="list-style-type: none">- Lot 3, DP 242506, High Street, Penrith;- Lot 13, DP 717196, High Street, Penrith- Lot 12, DP 717196, High Street, Penrith; and,- Lot 36, DP 73121, High Street, Penrith.
STREET ADDRESS	614-632 High Street, Penrith
AREA	4,715 square metres
ZONING	Zone B4 – Mixed Use
PLANNING INSTRUMENTS	Penrith LEP 2010 Penrith DCP 2014

The site is located in the western part of the Penrith CBD, on the southern side of High Street, Penrith. It is situated on a vacant block of land, opposite the Joan Sutherland Performing Arts Centre and a short distance south-west of the Westfields shopping complex with the Penrith Railway station a short distance further north.

The immediate surrounding development consists primarily of retail and commercial land uses to the north and north-east, with a mix of newer medium and high-density mixed-use developments within this precinct.

To the south and south-west of the site there is a mix of medium and low-density dwellings.

1.4 APPLICANTS DETAILS

APPLICANT	Urban Property Group (DKO Architects)
ADDRESS	PO Box 2223, Burwood. NSW. 2134.
TELEPHONE	02 9745 2014
E-MAIL	z.ali@urbanpropertygroup.com.au

1.5 PROPOSAL

The proposal involves the construction of a part 7 and part 43 storey building of mixed residential and commercial components at 614-632 High Street, Penrith, comprising:

- One (1) x seven (7) storey building (Tower A);
- One (1) x 46 storey building (Tower B);
- 272 x 1, 2 and 3 bedroom units in Tower B;
- 41 x 1 and 2 bedroom serviced apartments in Tower B;
- Four (4) x retail units and one (1) café on the ground floor;
- Five (5) above ground levels for parking;
- Commercial space for undetermined occupancies on Podium Levels 4, 5 and 6;
- Communal open space areas; and,
- Associated infrastructure, services and facilities.

Upon its completion, the development will occupy the entire site.

Egress from the development will be onto Union Lane on the southern (rear) side of the development.

As the proposed development incorporates both residential and commercial component, separate arrangements will be made for each component.

A 'Garbage Chute System' will be incorporated into the building. The chute system will consist of dual chutes, one each for waste and recycling. Waste storage facilities for the residential component of the building, in the form of a Bin Storage/Chute Room, is located in Basement 1 as indicated on the Basement 1 Floor Plan.

Waste and Recycling Chute compartments will be provided on each residential level of the building. The chutes will deposit waste into 1100-litre mobile waste and recycling bins located in the Bin/Chute Room in the basement.

Penrith City Council's waste collection contractor will provide all residential waste and recycling services to the development.

Commercial waste and recycling facilities are located on the ground floor of the complex as indicated on the Ground Floor Plan.

A licensed private waste and recycling collection contractor will provide all residential waste and recycling services to the development.

The project consists of: -

1. The clearing and levelling of the site;
2. The removal of all materials in accordance with this WMP;
3. The excavation of the site;
4. The construction of the buildings;
5. The provision of landscaping, driveways, concrete pathways and other elements associated with the development; and,
6. The on-going use of the building.

Council requires the provision of all waste and recycling services to the development, will take place from within the site. This Waste Management Plan has been developed on that basis.

PART 2 – DEMOLITION

2.1 DEMOLITION

2.1.1 Generally

The land is vacant. As such there is no demolition component to this WMP. All materials involved in the excavation of the site and the construction of the building will be dealt with under Part 3.

PART 3 – CONSTRUCTION

3.1 CONSTRUCTION – GENERALLY

Upon completion of all demolition works, construction of the building will commence with the excavation of the site for the basement levels of the building. All materials sourced from these activities will be disposed of in accordance with the information provided in Part 3.2 on pages 9, 10, 11, 12, 13 and 14 of this WMP.

Additionally, all materials used in the construction of the building that are not required to be incorporated into it, shall be recycled, reused or disposed of in accordance with these provisions, and the requirements of the Protection of the Environment Operations Act (1997). It will be the developer's overall responsibility to ensure compliance in this regard.

Mobile Bins of an appropriate size will be located on site for the collection of food scraps, beverage containers, and other waste generated on site by workers.

3.2 CONSTRUCTION – RECYCLING, REUSE & DISPOSAL DETAILS

The following details prescribe the manner in which all material surplus to the construction of the building will be dealt with.

The following details prescribe the manner in which all materials surplus to the construction of the building will be dealt with, and includes: -

- a) An estimate of the types and volumes of waste and recyclables to be generated;
- b) A site plan showing sorting and storage areas for construction waste and vehicle access to these areas (see Part 3.3 of this Plan);
- c) How excavated and other materials surplus to construction will be reused or recycled and where residual wastes will be disposed (see below); and,
- d) The total percentage of demolition waste that will be reused or recycled.

1. Excavated Materials

Volume / Weight	56,5800 cubic metres / 96,186 Tonnes
On Site Reuse	Yes. Keep and reuse topsoil for landscaping. Shore on site. Use some for support of retaining walls (Excavated Materials are only to be used if the material is not contaminated or has been remediated in accordance with any requirements specified by any Environmental Consultancy engaged to carry out any contamination assessment of excavated material).
Percentage Reused or Recycled	To be determined (see above comments)
Off Site Destination	Suez Eastern Creel Resource Recovery Park, Wallgrove Road, Eastern Creek. Tel 8887 6112 or, Blacktown Waste Services, 920 Richmond Road, Marsden Park. Tel 9835 4544 or, Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 424 646).

2. Bricks

Volume / Weight	10 cubic metres / 13 Tonnes
On Site Reuse	Clean and remove lime mortar from bricks. Re-use in new footings. Broken bricks for internal walls. Crush and reuse as drainage backfill. Crushed and used as aggregate.
Percentage Reused or Recycle	75% - 90%
Off Site Destination	Suez Eastern Creel Resource Recovery Park, Wallgrove Road, Eastern Creek. Tel 8887 6112 or, Blacktown Waste Services, 920 Richmond Road, Marsden Park. Tel 9835 4544 or, Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 424 646); or, Brandown, Lot 9 Elizabeth Drive, Kemps Creek (Tel 02 9826 1256)

3. Concrete

Volume / Weight	15 cubic metres / 36 Tonnes
On Site Reuse	Existing driveway to be retained during construction. Crushed and used as aggregate, drainage backfill.
Percentage Reused or Recycled	60% - 75%
Off Site Destination	Brandown, Lot 9 Elizabeth Drive, Kemps Creek (Tel 02 9826 1256) or, Suez Eastern Creel Resource Recovery Park, Wallgrove Road, Eastern Creek. Tel 8887 6112 or, Blacktown Waste Services, 920 Richmond Road, Marsden Park. Tel 9835 4544 or, Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 424 646).

4. Timber

Volume / Weight	15 cubic metres / 6 Tonnes
On Site Reuse	Re-use for formwork and studwork, and for landscaping
Percentage Reused or Recycled	65% - 90%
Off Site Destination	Suez Eastern Creel Resource Recovery Park, Wallgrove Road, Eastern Creek. Tel 8887 6112 or, Blacktown Waste Services, 920 Richmond Road, Marsden Park. Tel 9835 4544 or, Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 424 646); or, Hallinan's Recycling Centre, 37 Lee Holm Road, St. Marys (Tel 02 9833 0883)

5. Plasterboard & Fibro

Volume / Weight	12 cubic metres / 4 Tonnes
On Site Reuse	Nil – all to be disposed off-site
Percentage Reused or Recycled	To be determined – depended on quantities of asbestos
Off Site Destination	Suez Eastern Creel Resource Recovery Park, Wallgrove Road, Eastern Creek. Tel 8887 6112 or, Blacktown Waste Services, 920 Richmond Road, Marsden Park. Tel 9835 4544 or, Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 424 646); or, Enviroguard, Cnr Mamre and Erskine Roads, Erskine Park (Tel 02 9834 3411).

6. Metals / Steel / Guttering & Downpipes

Volume / Weight	15 cubic metres / 3.75 Tonnes
On Site Reuse	No
Percentage Reused	60 – 90%
Off Site Destination	Sydney Wide Scrap Metal, 4/18 Alfred Street, Chipping Norton (Tel 9738 9771) or, Boral Recycling, 3 Thackeray Street, Camelia (Tel 9529 4424) or, Hallinan's Recycling Centre, 37 Lee Holm Road, St. Marys (Tel 02 9833 0883)

7. Roof Tiles / Tiles

Volume / Weight	20 cubic metres / 15 Tonnes
On Site Reuse	Broken up and used as fill.
Percentage Reused or Recycled	80% - 90%
Off Site Destination	Obsolete Tiles, 3 South Street, Rydalmere. (Tel 02 9684 6333) or, Hallinan's Recycling Centre, 37 Lee Holm Road, St. Marys (Tel 02 9833 0883)

8. Plastics

Volume / Weight	15 cubic metres / 3 Tonne
On Site Reuse	Nil
Percentage Reused or Recycled	80% - 95%
Off Site Destination	Recycle Works, 45 Parramatta Road, Annandale (Tel 02 9517 2711) Suez Eastern Creel Resource Recovery Park, Wallgrove Road, Eastern Creek. Tel 8887 6112 or, Blacktown Waste Services, 920 Richmond Road, Marsden Park. Tel 9835 4544 or, Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 424 646).

9. Glass, Electrical & Light Fittings, PC items

Volume / Weight	12 cubic metres / 3 Tonne
On Site Reuse	No
Percentage Reused or Recycled	70% - 90%
Off Site Destination	Suez Eastern Creel Resource Recovery Park, Wallgrove Road, Eastern Creek. Tel 8887 6112 or, Blacktown Waste Services, 920 Richmond Road, Marsden Park. Tel 9835 4544 or, Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 424 646). or, To an approved agency, or agencies.

10. Fixture & Fittings (Doors Fittings, Other Fixtures, etc.)

Volume	25 cubic metres / 8 Tonnes
On Site Reuse	All materials will be removed and processed off-site.
Percentage Reused or Recycle	80% - 90%
Off Site Destination	Recycle Works, 45 Parramatta Road, Annandale (Tel 02 9517 2711) Suez Eastern Creel Resource Recovery Park, Wallgrove Road, Eastern Creek. Tel 8887 6112 or, Blacktown Waste Services, 920 Richmond Road, Marsden Park. Tel 9835 4544 or, Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 424 646).

11. Pallets

Volume / Weight	25 cubic metres / 8 Tonne
On Site Reuse	No
Percentage Reused or Recycle	90% - 100%
Off Site Destination	To the original supplier or an approved agency, or agencies, for reuse and resale.

12. Residual Waste

Volume / Weight	9,000 cubic metres / 9,000 Tonnes
On Site Reuse	No
Off Site Destination	Suez Eastern Creel Resource Recovery Park, Wallgrove Road, Eastern Creek. Tel 8887 6112 or, Blacktown Waste Services, 920 Richmond Road, Marsden Park. Tel 9835 4544 or, Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 424 646), or, other authorised facility
Notes on calculation of volume of residual waste	<ol style="list-style-type: none"> 1. In calculating the amount of residual waste produced from the demolition of all buildings on site, it is estimated that approximately 10% of it, will be residual waste. 2. As all of the materials vary in weight per volume, a figure of 1 cubic metre of material is equal to 1 tonne in weight has been used.

It is noted that the quantities of materials detailed in this section (Part 3.2) are estimates only, based on current industry standards and quantity analysis, and may vary due to the prevailing nature of construction constraints, weather conditions, and any other unforeseeable activities associated with the construction of the buildings, which are beyond the control of the developer, including but not being limited to theft, accidents, and other acts of misadventure.

Notwithstanding any of the above, the developer will provide Council with all details in relation to any major variations in this regard.

The developer will keep a record of all documentation associated with the transportation, disposal and processing of all materials surplus to the construction of the building.

Should any of the facilities nominated above, for any reason be unable to receive the respective materials, the developer will be responsible for making alternative arrangements that will ensure all demolished materials removed from the site are disposed of, or processed, appropriately.

Additionally, during the construction of the building, every effort will be made to reduce and minimise the amount of building materials excess to construction.

3.3 CONSTRUCTION – ON SITE STORAGE OF MATERIALS

During the construction of the buildings, an area will be set aside on the site as a compound for the on-site storage of materials prior to their removal from the site. This compound will provide for: -

- Material sorting;
- Segregation of materials that may be hazardous and which will be required to be disposed of;
- Recovery equipment, such as concrete crushers, chippers, and skip bins;
- Material storage; and,
- Access for transport equipment.

Appropriate vehicular access will be provided on and off site, and to the compound, to enable the efficient removal of reusable, recyclables, and waste materials.

Prior to the commencement of construction works, the developer will provide Council with a 'Site Plan for the On-Site Storage of Materials at Construction'. This plan will show in detail the location of each area within the compound, set aside for the segregated storage of all materials involved in the demolition of all buildings on the site.

3.4 CONSTRUCTION – EXCAVATED MATERIAL

All excavated material removed from the site, as a result of any activities associated with the construction of the building, must be classified in accordance with the Department of Environment, Climate Change and Water NSW Waste Classification Guidelines prior to removal, transportation and disposal to an approved waste management facility.

All relevant details must be reported to the PCA.

PART 4 – GARBAGE CHUTE SYSTEM

4.1 DESIGN REQUIREMENTS

A linear Garbage Chute System, for the reception of both waste and recycling material emanating from the occupation and use of all residential units, will be incorporated into the building design.

As there are no residential units in Tower A, there will be one (1) dual chute system provided in Tower B.

Each Garbage Chute System will contain two (2) separate chutes: -

- one for the reception and transfer of waste; and,
- one for the reception and transfer of recyclables.

All waste deposited into the waste chutes for all cores, will discharge into 1100 mobile bins placed onto a two (2) bin mechanically operated linear track system in the Bin Room in the north-eastern of the ground floor as indicated on the Ground Floor Plan.

All recyclable material deposited into the recycling chutes for all cores, will discharge into 1100 mobile bins placed onto a two (2) bin mechanically operated linear track system.

Both chutes are positioned so that the waste and recycling chutes are located next to each other.

Each chute will be located adjacent to one another in a 'Waste and Recycling Chute Compartment', which are located on each residential floor level of Tower B.

At a minimum the Garbage and Recycling Chute Systems will be designed to meet the following requirements: -

1. Chutes and service openings must be constructed of metal or other smooth faced, durable, fire resistant and impervious material of non-corrosive nature.
2. Chutes will be cylindrical in section with a minimal internal diameter of 500 mm. The diameter around each chute will be a minimum width of 750 mm to allow for infrastructure fittings, such as fixing brackets and noise insulation.
3. Chutes will be vertical without bends or "off-sets" (except for the chute outlets) and not be reduced in diameter.
4. The waste chute will terminate in the Bin Room located in the north-eastern corner of the ground floor and discharge all waste into an 1100-litre receptacle placed onto the 2 Bin Linear track system.
5. The recycling chute will terminate in the Bin Room located in the north-eastern corner of the ground floor and discharge all recyclable material into an 1100-litre receptacle placed onto the 2 Bin Linear track system.
6. The Chute and service openings must be capable of being easily cleaned.
7. Chutes must be ventilated to ensure that air does not flow from the chute through any service opening.
8. The Garbage Chute systems must comply with the relative provisions of the Building Code of Australia, and relevant Australian Standards (e.g., AS1530.4-2005).
9. All Linear Bin Systems will be designed, manufactured and installed in accordance with relevant Australian Standards and to manufacturers specifications.

4.2 USE & OPERATION OF GARBAGE CHUTE – RESIDENTIAL UNITS

In Tower B a 'Waste and Recycling Chute Compartment' is provided to each residential floor level of the building. Each chute compartment is located on the main lobby of each floor next to the lifts on the northern side of the lift lobby.

The two (2) chutes will be installed in a fire rated chute compartment. Each chute will be fire separated in accordance with the relative provisions of the BCA.

4.2.1 – Waste Chute

Residents will deposit waste material into the chute inlet hopper, labelled 'Waste Chute – Reception of Garbage Only'. Waste from the chute outlet will fall directly into an 1100 litre mobile waste bin located in the Garbage Chute Outlet Compartment in the Bin Room in the north-eastern corner of the ground floor.

The 1100 bin will be placed onto a two (2) bin mechanically operated linear track system, which will be programmed to move the bins so that when one bin is full, an empty one will automatically be placed under the chute outlet.

Representatives of the Owners Corporation will monitor all activities associated with the use and operation of the Chute, the depositing of waste into it, and the operation of the 2 Bin Linear track system, in order to ensure that there will be no spillage as a result of these activities, and that the system operates effectively.

Representatives of the Owners Corporation will be responsible for transferring full 1100-litre waste bins from under the chute, into the waste bin storage area of the Bin Room, where they will be stored prior to servicing (See Ground Floor Plan).

The Garbage Chute Outlet Compartment will be inspected daily in order to ensure that receptacles will be removed when full.

Full bins will be removed from the Chute compartment and replaced immediately with an empty one.

4.2.2 – Recycling Chute

Residents will deposit waste material into the chute inlet hopper, labelled 'Recycling Chute – Reception of Recycling Material Only'. Recycling material from the chute outlet will fall directly into an 1100 litre mobile waste bin located in the Recycling Chute Outlet Compartment in the Bin Room in the north-eastern corner of the ground floor.

The 1100 bin will be placed onto a two (2) bin mechanically operated linear track system, which will be programmed to move the bins so that when one bin is full, an empty one will automatically be placed under the chute outlet.

Representatives of the Owners Corporation will monitor all activities associated with the use and operation of the Chute, the depositing of waste into it, and the operation of the 2 Bin Linear track system, in order to ensure that there will be no spillage as a result of these activities, and that the system operates effectively.

Representatives of the Owners Corporation will be responsible for transferring full 1100-litre recycling bins from under the chute, into the recycling bin storage area of the Bin Room, where they will be stored prior to servicing (See Ground Floor Plan).

The Recycling Chute Outlet Compartment will be inspected daily in order to ensure that receptacles will be removed when full.

Full bins will be removed from the Chute compartment and replaced immediately with an empty one.

4.3 LINEAR BIN TRACK SYSTEM

The 2 Bin Linear Track System is to be designed, manufactured and installed strictly in accordance with applicable Australian Standards and to manufacturers specifications. The system is to be monitored and serviced on a regular basis.

Any breakdowns or system malfunctions are to be attended to and addressed immediately. In the event of any system breakdown, the Owners Corporation shall make immediate alternative arrangements to ensure that there is no disruption to the provision of scheduled waste and recycling services, and that any spillage from the bins is removed and cleaned up immediately.

As required by the provisions of Section 3.5.2 of Council's 'Residential Flat Building Waste Management Guideline', sufficient space is provided around the tracks (900mm on the sides and 1.8m at the end) to allow for maintenance of the system and the movement of bins on and off the tracks.

4.4 ON GOING MANAGEMENT & MAINTENANCE OF CHUTE SYSTEM

4.4.1 Generally

The Owners Corporation will be responsible for all issues associated with the on-going management and maintenance of the Waste and Recycling Chute Systems and all activities associated with it.

These activities will include, but not be limited, to the following: -

1. Displaying signage indicating appropriate use of all waste management systems, including what is and what is not recyclable.
2. Educating residents in the correct use of the chute, and the need to keep bulky items out of the chute systems.
3. Providing regular maintenance, including cleaning and unblocking chutes.
4. Regular inspection of the Garbage Chute Compartments, the Garbage Chute Outlet Compartments, and the Bin Rooms to ensure that all waste and recyclables are managed appropriately.
5. Educating residents in the correct use of each chute, to ensure that waste material is not deposited into the recycling chute, and that recycling material is not placed into the waste chute.

4.4.2 Chute Room Infrastructure

In accordance with Council requirements, the following infrastructure will be incorporated into the design of all chute rooms: -

1. Suitable door access for the service of bins;
2. Where roller doors are provided, an additional service door will be provided inclusive of an Abloy key system;
3. All floors will be finished with a non-slip and smooth and even surface covered at all intersections;
4. The floor will be graded to a central drainage point connected to the sewer;
5. The room will be fully enclosed and roofed with a minimum internal room height in accordance with the BCA 2016
6. The room is to be provided with an adequate supply of water through a centralised mixing valve with hose cock; and.
7. Incorporation of adequate light and ventilation to meet the requirements of the BCA 2016.

4.5 WASTE MANAGEMENT TRANSPORTATION SYSTEM – SERVICED APARTMENTS

4.5.1 Waste Management

For the 41 x serviced apartments, when room cleaning activities are being undertaken, hotel employees will transfer all waste material from in-room receptacles into a 1100-litre waste bin. Full waste bins for the serviced apartments will be transferred the Commercial Waste Room (CWR) where they will be stored prior to servicing.

Servicing and replacement of waste bins will take place on a regular basis to avoid hygiene, spillage and dumping problems.

All waste handling activities (including the transfer of recycling bins) will be undertaken by a person employed by the proprietors to do so.

4.5.2 Recycling Management

For the 41 x serviced apartments, when room cleaning activities are being undertaken, hotel employees will transfer all recycling material from in-room receptacles into a 1100-litre recycling bin. Full recycling bins for the serviced apartments will be transferred the Commercial Waste Room (CWR) where they will be stored prior to servicing.

Servicing and replacement of recycling bins will take place on a regular basis to avoid hygiene, spillage and dumping problems.

All waste handling activities (including the transfer of recycling bins) will be undertaken by a person employed by the proprietors to do so.

PART 5 – ON GOING USE OF BUILDING

5.1 OBJECTIVES

1. To ensure that the storage, amenity and management of waste is sufficient to meet the needs of the development.
2. To ensure that all waste management activities are carried out effectively and efficiently, and in a manner that promotes the principles of health, safety and, convenience.
3. To promote waste minimisation practices.

5.2 ASSUMPTIONS

In preparing this proposal, the following assumptions have been made: -

1. The development comprises of a part 7 storey and part 43 storey building, consisting of two (2) towers, of mixed use residential and commercial land uses and is to be constructed .
2. Tower A is a seven (2) storey building consisting wholly of commercial land uses and parking which is common to both towers. There are no residential units in Tower A.
3. Tower B is a 43 x storey building containing a mix of 313 residential units and serviced apartments, retail and commercial areas and parking common to both towers.
4. The residential component comprises of 272 residential units and 41 serviced apartments.
5. As there are both residential and commercial components within the building, separate waste storage facilities will be provided for each component.
6. A Garbage Chute System will be incorporated into the building design for the residential component for Tower B only.
7. The chutes will be dual chutes for the reception of both waste and recyclables.
8. Waste and Recycling Chute Compartments will be provided to all residential levels of Tower B, for the use of residents to deposit both waste (into the garbage chute) and recyclable material (into the recycling chute).
9. All waste and recycling material deposited into the chutes will discharge into separate waste and recycling bins located on a linear track system in the respective bin rooms on the Ground Floor of the building.
10. The waste chute will terminate in the Chute Room on the eastern side of the ground floor and discharge all waste directly into an 1100-litre receptacle placed onto the 3 Bin Linear track system.
11. The recycling chute will terminate in the Chute Room on the eastern side of the ground floor and discharge all recyclable material directly into an 1100-litre receptacle placed onto the 3 Bin Linear track system.
12. Full waste bins will be transferred from each of the linear track waste bin system into the waste bin storage area of the Bin Room, where they will be stored prior to collection.
13. Full recycling bins will be transferred from each of the linear track recycling bin system into the recycling bin storage area of the Bin Room, where they will be stored prior to collection.
14. The Bin Room is located on the ground floor of the building as indicated in the Architectural Drawings.
15. For the residential units all waste will be stored in 18 x 1100-litre mobile bins.

16. For the residential units, all recycling will be stored in 18 x 1100-litre mobile bins.
17. All waste services will be provided weekly.
18. All recycling services will be provided weekly.
19. The number and size of bins have been calculated from information provided by Penrith City Council, by Council staff and from information Penrith City Council's Residential Flat Building Developments Waste Management Guidelines Part 3.4 'Waste Generation Rate Calculations for 1100-litre Bin Allocation – Page 13'.
20. An on-site waste collection area (Loading Bay) located adjacent to the Bin Room and driveway into the building in the north-western corner of the ground floor, will be provided to facilitate all collection activities.
21. All waste and recycling collections will take place from the dedicated loading bay located adjacent to the waste collection area.
22. Penrith City Council will provide all waste and recycling services to the development.
23. All waste and recycling services for both the residential and commercial
24. Commercial and retail units will be located on the ground floor, and Podium Levels 4, 5 and 6.
25. Commercial waste and recycling services will be provided to the development in accordance with Council's DCP as specified in this WMP.
26. All commercial waste and recycling bins, including the waste and recycling bins allocated to the serviced apartments, will be stored within the confines of a Commercial Waste Storage Area located adjacent in the north-western corner of the ground floor of the building as indicated in the Architectural Drawings.
27. A licensed private waste collection contractor will provide all commercial waste and recycling services to the complex.
28. The Owners Corporation will appoint a Building Manager/Caretaker whose responsibilities will include managing all activities associated with the provision of all waste and recycling services to the building.

5.3 RESIDENTIAL WASTE HANDLING & MANAGEMENT

A cabinet will be located within each residential unit so that a receptacle, or receptacles, may be stored or housed in a convenient and practical location within the unit, for the reception of waste and recyclable material.

All waste and recyclables should be appropriately bagged or wrapped prior to being deposited into the designated garbage chute or recycling bin.

5.4 WASTE & RECYCLING – SERVICE REQUIREMENTS

All waste and recycling materials will be stored in approved receptacles of an appropriate size as specified in this WMP. The lids of the bins shall be closed at all times to reduce litter, stormwater pollution, odour and vermin.

The Council in general requires that colour coded receptacle lids that distinguish each service component are to be provided: -

- Waste Service – Red Lidded receptacle;
- Recycling Service – Yellow Lidded receptacle; and,
- Green Waste – Green Lidded receptacle.

No formal green waste service will be provided to the building. All green waste will be disposed of privately by a contractor to be appointed by the Owners Corporation.

It will be the responsibility of the Owners Corporation to ensure that all green waste is removed from the complex in an appropriate manner.

5.5 WASTE & RECYCLING – SERVICE ARRANGEMENTS

The following table (Table 1) specifies the criteria for waste and recycling generation rates (as specified by Penrith City Council) based on: -

- Waste – 18 dwellings (units) or 61.2-litres of bin space per unit per week; and,
- Recycling – 18 dwellings (units) or 61.2-litres of bin space per unit per week.

All waste and recycling generation rates were obtained from discussions with and advice from Council staff, and from information contained in Penrith City Council's Residential Flat Building Developments Waste Management Guidelines Part 3.4 'Waste Generation Rate Calculations for 1100-litre Bin Allocation – Page 13'.

Tower B is a 43 x storey building containing a mix of 313 residential units and serviced apartments, retail and commercial areas and parking common to both towers. The residential component comprises of 272 residential units and 41 serviced apartments. The table below provides waste and recycling requirements for the 272 residential units.

In accordance with Council requirements, the serviced apartments are deemed to be part of the commercial area and accordingly, are dealt with in Part 5.7.

TABLE 1 – RESIDENTIAL WASTE & RECYCLING GENERATION RATES

SERVICE TYPE	UNITS	BIN SPACE PER UNIT	TOTAL SPACE REQUIRED	BINS SIZE	SERVICES PER WEEK	BINS REQUIRED	BINS PROVIDED
Waste	272	61.2	16,646.40	1100	1	15,14	16
Recycling	272	61.2	16,646.40	1100	1	15.14	16

The following table (Table 2) specifies the proposed bin servicing requirements for the building and is based on the above waste and recycling generation rates: -

TABLE 2 – PROPOSED SERVICING ARRANGEMENTS

WASTE	RECYCLING
16 x 1100-litre bins / Weekly	16 x 1100-litre bins / Weekly

5.6 PROVISION OF WASTE & RECYCLING SERVICES

5.6.1 Waste and Recycling Collection Service Provider Details

Penrith City Council's waste and recycling contractors will provide all waste and recycling services to the building.

5.6.2 Bin Assignment Arrangements & Details of Mobile Containers

In relation to the size and design of the waste and recycling mobile bins, the following technical information is provided: -

CONTAINER TYPE	HEIGHT (metres)	DEPTH (metres)	WIDTH (metres)
1100 litre mobile container	1.470	1.070	1.240

In order to satisfy Council's requirements in terms of the assignment of bins to the development, the following arrangements will be made: -

1. Waste Bins – in addition to the 16 x 1100 litre mobile waste bins required by Council as part of their service requirements, the Owners Corporation will provide an additional number of 1100 litre mobile waste bins in order to ensure that a bin is provided at all times below the Waste Garbage Chute Outlet, and,
2. Recycling Bins – in addition to the 16 x 1100-litre mobile recycling waste bins required by Council as part of their service requirements, the Owners Corporation will provide an additional number of 1100 litre mobile waste bins in order to ensure that a bin is provided at all times below the Recycling Chute Outlet.

5.6.3 Waste & Recycling Requirements

Waste and recycling requirements are provided in the table below.

SERVICE	NUMBER OF CONTAINERS	COLLECTION FREQUENCY
Waste Service	16 x 1100- litre mobile containers	Weekly
Recycling Service	16 x 1100-litre mobile containers	Weekly

5.6.4 Location, Design, and Construction of Waste Storage and Collection Areas

Details of all storage and collection areas are provided below.

5.6.4.1 Chute Compartments

Waste and Recycling Chute Compartments are provided on all residential floor levels of Tower B. The compartments are located off the main lobby next to the lifts. Each compartment will have dimensions of 1.8m x 1.0m, with a floor area of 1.8sqm, and will provide space for: -

- Garbage Chute compartment, which will have internal dimensions of 750 mm x 750 mm. The Garbage Chute will be installed within these confines in a fire rated compartment; and,
- Recycling Chute compartment, which will have internal dimensions of 750 mm x 750 mm. The Garbage Chute will be installed within these confines in a fire rated compartment.

Residents will deposit waste into the garbage chute and recyclable material into the recycling chute.

5.6.4.2 Chute Room

The Chute Room is located in a separate part of the Residential Bin Room as indicated in the Architectural Drawings. Within its confines is a Chute Outlet Compartment for the reception of all waste and recycling material derived from the dual chute system in this core of the building.

Each chute is installed on a two (2) bin mechanically operated linear track laid side-by-side. The track system for each chute has been design so that there is a minimum clearance of 900mm on each side and a minimum of 1.8m at the longitudinal end of the room, so that there is sufficient area to allow for bin and track maintenance and the movement of bins in and out of the room.

Within the confines of the room will be areas for: -

- The waste and recycling chute outlets;
- 1 x 1100-litre 2 bin linear track waste bin system;
- 1 x 1100-litre 2 bin linear track recycling bin system;
- Spare 1100-litre waste and recycling bins; and,
- Appropriate infrastructure.

As required by the provisions of Section 3.5.2 of Council's 'Residential Flat Building Waste Management Guideline', sufficient space is provided around the tracks (900mm on the sides and 1.8m at the end) to allow for maintenance of the system and the movement of bins on and off the tracks.

5.6.4.3 Residential Bin Room

The Residential Bin Room in the north-eastern corner of the ground floor as indicated in the Architectural drawings. It is a large structure with a floor area of approximately 100sqm (excluding the Chute Area). Within its confines will be storage space for:

- 16 x 1100-litre mobile waste bins (for servicing); and
- 16 x 1100-litre mobile recycling bins (for servicing).

5.6.4.4 Waste Collection Area / Loading Bay

The Waste Storage and Collection is located adjacent to the entry of the Residential Bin Room. It has been designed to provide access for Council's waste collection vehicle.

All collection and servicing activities will take place wholly within the confines of the collection area from a designated collection point, where all waste and recycling bins will be removed from the adjacent storage area and presented for servicing.

5.6.4.5 Bin Room Infrastructure

In accordance with Council requirements, the following infrastructure will be incorporated into the design of all chute and bin rooms, and waste storage and collection areas: -

1. Suitable door access for the service of bins;
2. Where roller doors are provided, an additional service door will be provided inclusive of an Abloy key system;
3. All floors will be finished with a non-slip and smooth and even surface covered at all intersections;
4. The floor will be graded to a central drainage point connected to the sewer;

5. The room will be fully enclosed and roofed with a minimum internal room height in accordance with the BCA 2016
6. The room is to be provided with an adequate supply of water through a centralised mixing valve with hose cock; and.
7. Incorporation of adequate light and ventilation to meet the requirements of the BCA 2016.

5.6.5 Servicing Arrangements – Residential Waste Collections

All waste services will be provided by Penrith City Council's waste collection contractor, using a rear loading collection vehicle, that will enable all collections to be carried out effectively and efficiently, and in a manner, that will aim not impact negatively on the principles of health, safety or convenience.

In accordance with Penrith Council's requirements for 'on-site collections' for large residential flat buildings of this type, Council's waste collection contractor will collect the bins directly from the Loading Bay adjacent to the waste collection area and empty the bins into the collection vehicle.

Collections will take place from a designated collection point as indicated on the Architectural Drawings.

In order to assist and facilitate this process, the Building Manager / Caretaker will be responsible for presenting waste bins for servicing and returning them to the designated bin rooms and waste storage areas after collection.

According to Council's collection schedule, waste services are provided to this area weekly, on a day to be determined by the Council.

Waste bins will be presented for collection at a suitably arranged time, as specified by the Council. The waste bins will be returned to the storage area as soon as practicable after they have been serviced.

All 16 x 1100 litre mobile waste bins will be presented for servicing on each collection day.

5.6.6 Servicing Arrangements – Recycling Collections

All recycling services will be provided by Penrith City Council's recycling collection contractor, using a rear loading collection vehicle, that will enable all collections to be carried out effectively and efficiently, and in a manner, that will aim not impact negatively on the principles of health, safety or convenience.

In accordance with Penrith Council's requirements for 'on-site collections' for large residential flat buildings of this type, Council's recycling collection contractor will collect the bins directly from loading bay adjacent to the waste collection area and empty the bins into the collection vehicle.

Collections will take place from a designated collection point as indicated on the Architectural Drawings.

In order to assist and facilitate this process, the Building Manager / Caretaker will be responsible for presenting recycling bins for servicing and returning them to the designated bin rooms and waste storage areas after collection.

According to Council's collection schedule, recycling services are provided to this area weekly, Thursday of the week. Recycling bins will be presented for collection at a suitably arranged time, as specified by the Council. The recycling bins will be returned to the storage area as soon as practicable after they have been serviced.

All 16 x 1100-litre mobile waste bins will be presented for servicing on each collection day.

5.7 COMMERCIAL WASTE & RECYCLING SERVICES

5.7.1 Details of Commercial Land Uses

The commercial component of the building will comprise of:

- Four (4) retail units on the Ground Floor level under and across both Towers;
- One (1) café on the Ground Floor Level in Tower B;
- Commercial space of 402 square metres on Podium Level 4 of Tower A;
- Commercial space of 355 square metres on Podium Level 5 of Tower A;
- Three commercial areas with a combined floor area of 365 square metres on Podium Level 6 of Tower A;
- 41 x serviced apartments; and,
- Associated infrastructure, ancillary facilities and services.

Details of the commercial units are provided in the table below.

TABLE 3 – COMMERCIAL UNITS

TENANCY	PROPOSED USE	LOCATION	FLOOR AREA (Square Metres)
Retail 1	(Retail) To be Determined	Ground Floor	99
Retail 2	(Retail) To be Determined	Ground Floor	99
Retail 3	(Retail) To be Determined	Ground Floor	214
Retail 4	(Retail) To be Determined	Ground Floor	191
Café	Food Premises	Ground Floor	114
Commercial P4	(Offices) To be Determined	Podium 4	500
Commercial P5	(Offices) To be Determined	Podium 5	440
Commercial P6	(Offices) To be Determined	Podium 6	440
Serviced Apartments	Serviced Apartments	See Drawings	

5.7.2 Waste & Recycling Generation Rates

There will be 14 separate land use activities (units/tenancies) overall. The Table below (Table 4) details the waste and recycling generation rates for the commercial land uses proposed. These rates have been obtained from Councils Waste Management Guidelines for Commercial, Industrial and Mixed Use Developments Part 3.3 'Model Waste Generation Rates (pages 5 and 6).

TABLE 4 – WASTE & RECYCLING GENERATION RATES FOR COMMERCIAL LAND USE ACTIVITIES

SERVICE	LAND USE	WASTE & RECYCLING GENERATION RATES
Waste	Convenience Store	300 litres of waste per 100m2 of floor area per day
Recycling	Convenience Store	150 litres of waste per 100m2 of floor area per day
Waste	Retail (No Food)	50 litres of waste per 100m2 of floor area per day
Recycling	Retail (No Food)	50 litres of recyclables per 100m2 of floor area per day
Waste	Delicatessen	80 litres of waste per 100m2 floor area per day
Recycling	Delicatessen	50 litres of recyclables per 100m2 floor area per day
Waste	Restaurant	660 litres of waste per 100m2 of floor area per day
Recycling	Restaurant	200 litres of recyclables per 100m2 of floor area per day
Waste	Café	300 litres of waste per 100m2 of floor area per day
Recycling	Café	200 litres of recyclables per 100m2 of floor area per day
Waste	Hairdresser	60 litres of waste per 100m2 of floor area per day
Recycling	Hairdresser	50 litres of waste per 100m2 of floor area per day
Waste	Office	10 litres of waste per 100m2 of floor area per day
Recycling	Office	10 litres of recyclables per 100m2 of floor area per day
Waste	Apartments	61.2 litres of space per unit per week
Recycling	Apartments	61.2 litres of space per unit per week

5.7.3 Commercial Waste Service Requirements

The following table (Table 5) specifies the criteria for waste generation rates (as specified in Part 5.7.2.

TABLE 5 – COMMERCIAL WASTE GENERATION RATES & SERVICE REQUIREMENTS

DESCRIPTION	RESTAURANT Retail 1	CAFÉ	RETAIL (NO FOOD) Shops 2 / 3 / 4 (TBD)
Number of Shops	1	1	3
Proposed Use	Restaurant	Café	Specialty Shops
Waste Generation Rate	660L/100sqm/ Floor Area/Day	300L/100qm/Floor Area/Day	50L/100sqm Floor Area/Day
Total Floor Area	99sqm	119sqm	504sqm
Waste Generation/Week	99 / 100 x 660 x 7	119 / 100 x 300 x 7	504 / 100 x 50 x 7
Space Required / Week	5,573.80	2,499.00	1,764.00
DESCRIPTION	OFFICES – P4	OFFICES – P5 & P6	SERVICED APARTMENTS
Number of Units	TBD	TBD	41
Proposed Use	Office / Commercial	Office / Commercial	Apartments
Waste Generation Rate	10L/100sqm Floor Area/Day	10L/100sqm Floor Area/Day	61.2 / room / Week
Total Floor Area	500sqm	880sqm	N / A
Waste Generation/Week	500 / 100 x 10 x 5	880 / 100 x 10 x 5	61.2 x 41
Space Required / Week	250.00	4400.00	2,509.20
TOTAL SPACE REQUIRED ALL UNITS	16,996-Litres of Space to be serviced per Week		
SERVICE REQUIREMENTS	4 x 1100-Litre Mobile Waste Bins – Serviced 4 Days per Week (17,600.00-Litres of Space Serviced per Week)		

It is considered that the most efficient, economic and practical method of providing waste services to all units would be to have one (1) service provider doing all services. However, due to the waste generation rates apportioned to each unit based on their size and operating hours, a 'pro-rata' commercial arrangement would need to be agreed upon by relevant parties. If this arrangement is accepted all commercial waste services will be provided to the commercial units in accordance with the prescriptive requirements of Table 5, above.

All commercial waste services will be provided by a licensed private waste contractor.

Commercial arrangements for the provision of all waste services are to take place generally, in accordance with the abovementioned provisions.

If the Owners Corporation chooses to enter into individual arrangements with each tenant, where different service providers are used for each or some of the units in unison, all waste services would need to be provided in an appropriate number of waste bins and at such frequencies to meet the above waste generation rates.

Alternate bins sizes and, or collection frequencies, may be employed to achieve these rates. However, appropriate records are to be maintained to ensure that all service requirements are achieved.

All commercial waste services are to be undertaken in a manner that will not adversely impact on the principles of health, safety or convenience.

A Service Agreement will be entered into between the Owners Corporation and the appointed Contractor describing the manner in which all commercial waste services will be provided. A copy of this agreement will be provided to the Council.

5.7.4 Commercial Recycling Service Requirements

The following table (Table 6) specifies the criteria for recycling generation rates (as specified in Part 5.7.2.

TABLE 6 – COMMERCIAL RECYCLING GENERATION RATES & SERVICE REQUIREMENTS

DESCRIPTION	RESTAURANT Retail 1	CAFÉ	RETAIL (NO FOOD) Shops 2 / 3 / 4 (TBD)
Number of Shops	1	1	3
Proposed Use	Restaurant	Café	Specialty Shops
Recycling Generation Rate	200L/100sqm/ Floor Area/Day	200L/100qm/Floor Area/Day	50L/100sqm Floor Area/Day
Total Floor Area	99sqm	119sqm	504sqm
Waste Generation/Week	99 / 100 x 200 x 7	119 / 100 x 200 x 7	504 / 100 x 50 x 7
Space Required / Week	1,386.00	1,666.00	1,764.00
DESCRIPTION	OFFICES – P4	OFFICES – P5 & P6	SERVICED APARTMENTS
Number of Units	TBD	TBD	11
Proposed Use	Office / Commercial	Office / Commercial	Apartments
Recycling Generation Rate	10L/100sqm Floor Area/Day	10L/100sqm Floor Area/Day	61.2L / Room / Week
Total Floor Area	500sqm	880sqm	N A
Waste Generation/Week	500 / 100 x 10 x 5	880 / 100 x 10 x 5	61.2 x 11 x 7
Space Required / Week	250.00	440.00	2,509.20
TOTAL SPACE REQUIRED ALL UNITS	8,015.20-Litres of Space to be serviced per Week		
SERVICE REQUIREMENTS	2 x 1100-Litre Mobile Waste Bins – Serviced 4 Days per Week (8,800-Litres of Space Serviced per Week)		

It is considered that the most efficient, economic and practical method of providing recycling services to all units would be to have one (1) service provider doing all services. However, due to the recycling generation rates apportioned to each unit based on their size and operating hours, a 'pro-rata' commercial arrangement would need to be agreed upon by relevant parties. If this arrangement is accepted all commercial waste services will be provided to the commercial units in accordance with the prescriptive requirements of Table 6, above.

All commercial recycling services will be provided by a licensed private waste contractor.

Commercial arrangements for the provision of all recycling services are to take place generally, in accordance with the abovementioned provisions.

If the Owners Corporation chooses to enter into individual arrangements with each tenant, where different service providers are used for each or some of the units in unison, all recycling services would need to be provided in an appropriate number of waste bins and at such frequencies to meet the recycling generation rates specified above.

Alternate bins sizes and, or collection frequencies, may be employed to achieve these rates. However, appropriate records are to be maintained to ensure that all service requirements are achieved.

All commercial recycling services are to be undertaken in a manner that will not adversely impact on the principles of health, safety or convenience.

A Service Agreement will be entered into between the Owners Corporation and the appointed Contractor describing the manner in which all commercial recycling services will be provided. A copy of this agreement will be provided to the Council.

5.7.5 Storage of Commercial Waste and Recycling Bins

A Commercial (Retail) Waste Storage Area (WSA), is provided for the storage of all waste and recycling bins associated with the use and occupation of all commercial and retail units within the complex.

The Commercial WSA is located in towards the centre of the ground floor of the complex adjacent to the Loading Bay. It is a mainly rectangular structure measuring 5.0m x 4.0m with a floor area of approximately 20sqm.

The Owners Corporation will be responsible for ensuring that all commercial waste and recycling services are undertaken in an efficient manner that will promote the principles of health, safety and convenience and not impact negatively on the amenity of the complex and its surrounds.

5.7.6 Provision of Commercial Waste and Recycling Services

All commercial waste and recycling services will be provided by a licensed private waste and recycling collection contractor, using a rear loading collection vehicle, that will enable all collections to be carried out effectively and efficiently, and in a manner that will aim not impact negatively on the principles of health, safety or convenience.

All commercial waste and recycling services are to take place from the Loading Bay adjacent to the Residential Bin Room.

All services are to be undertaken in an efficient manner that will promote the principles of health, safety and convenience and not impact negatively on the amenity of the complex and its surrounds.

In order to assist and facilitate this process, the Building Manager / Caretaker will be responsible for presenting commercial waste and recycling bins for servicing and returning them to the designated bin rooms and waste storage areas after collection.

All commercial waste and recycling bins will be returned to the WSA immediately after they have been serviced.

5.8 GREEN WASTE

No formal green waste service will be provided.

It will be the responsibility of the Owners Corporation to ensure that any green waste generated from the on-going use of the site, will be disposed of appropriately.

5.9 BULKY WASTE STORAGE

Secure storage spaces are required to be provided for each residential unit in accordance with the provisions of Council's DCP 2014.

This space may be used to store bulky waste items that can be disposed of as part of any Council Clean Up services to be provided to this complex.

Consistent with these requirements, a secured Bulky Waste Storage Area has been provided for residents to place unwanted materials awaiting collection and removal.

This area is located adjacent to the RWSA as indicated on the Architectural Drawings. It is a fully enclosed structure measuring 8.0m x 6.0m, with an area of approximately 48.0square metres (Council's requirement for 308 units is 47.39sqm).

All residents of the building will be provided with unrestricted 24-hour access to this facility.

The Owners Corporation will monitor this area regularly to ensure that all materials stored within its confines are done so in a manner that will not adversely impact on the health, safety and convenience. Regular maintenance of this area will be carried out.

The Owners Corporation will also be responsible for arranging 'Clean Ups' with the Council, to ensure the efficient and regular removal at these materials.

It will be the responsibility of the occupants of individual residential units, to dispose of this material, appropriately.

In accordance with Council requirements, the following infrastructure will be incorporated into the design of all chute and bin rooms, and waste storage and collection areas: -

1. Suitable door access for the service of bins;
2. Where roller doors are provided, an additional service door will be provided inclusive of an Abloy key system;
3. All floors will be finished with a non-slip and smooth and even surface covered at all intersections;
4. The floor will be graded to a central drainage point connected to the sewer;
5. The room will be fully enclosed and roofed with a minimum internal room height in accordance with the BCA 2016
6. The room is to be provided with an adequate supply of water through a centralised mixing valve with hose cock; and.
7. Incorporation of adequate light and ventilation to meet the requirements of the BCA 2016.

5.10 ON GOING OPERATION, USE & MAINTENANCE OF WASTE MANAGEMENT FACILITIES

All waste management facilities will be maintained in a clean and hygienic condition that will promote the principles of health, safety and convenience.

In order to achieve these objectives, the following facilities and devices will be required: -

1. The Chute and Linear Tack Systems will be appropriately maintained in accordance with relevant manufacturers specifications and regular maintenance programs will be undertaken to ensure the efficient operation of all systems at all times.
2. The walls and floors of all Bin Rooms, Waste Storage and Collection Areas (WSA's) are to be constructed of smooth faced masonry or concrete, and all walls will be painted with light coloured and washable paint.
3. The junction between all floors and walls will be coved and sealed up to 100mm above the floor level, in order to eliminate the build-up of dirt and grime.

4. A floor waste, connected to the Sydney Water drainage system in accordance with that Authority's requirements, will be provided to all WSA's, and the floors will be graded to drain into it.
5. Appropriate washing facilities will be provided to all WSA's, including appropriate plumbing and drainage fixtures and fittings, and the provision of running water.
6. The WSA's will be washed and cleaned on a regular basis.
7. All mobile bins will be washed and cleaned on a regular basis.
8. All electrical equipment, including the provision of lighting, will be installed in accordance with the relevant Australian Standards.
9. Natural and mechanical ventilation will be required to be installed within each WSA in accordance with the relative provisions of the Building Code of Australia.
10. Appropriate signage will be displayed in both basements clearly identifying waste and recycling bins and the waste storage areas.
11. Appropriate signage will be erected within each WSA providing instruction to residents on how to use waste and recycling facilities, including what is and what is not recyclable.
12. The Building Manager / Caretaker will be responsible for the supervision and management of all waste activities and facilities.
13. The Owners Corporation will be responsible for ensuring that all waste and recyclable matter and materials are placed and stored within the appropriate containers provided.
14. The dimensions of all service passages will comply with the requirements for minimum widths as set out in Council's Waste Management Guideline for Mixed Use Developments.

PART 6 – SUMMARY

6.1 SUMMARY

In summarising this proposal, the following information is provided:

1. Penrith City Council have insisted that all activities associated with the installation of waste management facilities and the provision of waste management services are to take place in accordance with the requirements of their waste management guidelines for residential flat buildings.
2. This Waste Management Plan has been developed and documented in accordance with the Council's directions.
3. The number and size of bins have been calculated from information provided by Penrith City Council, by Council staff and from information Penrith City Council's Residential Flat Building Developments Waste Management Guidelines Part 3.4 'Waste Generation Rate Calculations for 1100-litre Bin Allocation – Page 13'.
4. All residential waste and recycling services will be provided by Council's respective waste and recycling collection contractors.
5. Commercial and retail components are provided on the ground floor of both towers, and on Podiums 4, 5 and 6 of Tower A.
6. Separate arrangements will be made for all waste management activities associated with the use of the commercial and retail areas as indicated herein.
7. The Owners Corporation will be responsible for ensuring that all on-going waste management activities are carried out in accordance with the provisions of this Waste Management Plan.

This is a unique development with a unique set of arrangements for its waste management activities.

The measures set out in this WMP aim to demonstrate that all such activities will be carried out effectively and efficiently, in a healthy, safe and convenient manner, to acceptable community standards, and to the requirements of Penrith City Council.