DICKENS SOLUTIONS

(REF – 23119)

AMENDED
WASTE MANAGEMENT PLAN
(Class 1 Appeal)

PTI ARCHITECTURE
(RAPISARDA INVESTNENTS PTY LTD)

PROPOSED STUDENT ACCOMMODATION
&
COMMERCIAL DEVELOPMENT
@
183 MACQUARIE STREET
PARRAMATTA

FEBRUARY 2025

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PART 1 – OVERVIEW AND PROPOSAL

1.1 INTRODUCTION

This Waste Management Plan (WMP) is an operational plan that describes in detail the manner in which all waste and other materials demolition and construction stages of the development as well as the going use of the building on the site are to be dealt with.

The aims and objectives of this WMP are to: -

a) Satisfy all State and Local Government regulatory controls regarding waste management and minimisation practices,
b) Promote the use of recyclable materials in the excavation, demolition, construction and on-going operation of the building,
c) Maximise waste reduction, material separation, and resource recovery in all stages of the development,
d) 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,
e) Ensure that the provision of waste and recycling services to the completed building is carried out in an efficient manner, that will not impact negatively on the health, safety and convenience of all stakeholders.

The land on which the development is proposed is located within the Parramatta City LGA.

This WMP is prepared in accordance with: -

- Parramatta City LEP 2011,
- Parramatta DCP 2011 – Part 3.3.7 – Waste Management,
- All Conditions of Consent issued under the approved Development Application,
- The 'Better Practice Guide for Resource Recovery in Residential Developments,
- 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.

The original Waste Management Plan (WMP) WAS prepared for a Development Application to be submitted to Parramatta City Council for the construction of a twelve (12) storey building of mixed residential and commercial components, at 183 Macquarie Street, Parramatta, comprising of:

- Student accommodation containing 66 rooms,
- Two (2) levels of commercial space,
- Common areas,
- One (1) basement level, and,
- Associated infrastructure.

The WMP was dated 15 June 2023 and has been prepared to be submitted to Council as part of the DA Package. The WMP has been developed and documented in accordance with the Architectural Drawings prepared by PTI Architecture – Project P567.

1.2 CLASS 1 LEC APPEAL

A Development Application DA No 837/2022 was submitted to the City of Parramatta Council on 25 October 2022, seeking Consent for the construction of a twelve (12) storey building of mixed use commercial and co-living components, at 183 Macquarie Street, Parramatta, comprising of:

- Student accommodation containing 66 rooms,
- Two (2) levels of commercial space,
- Common areas,
- One (1) basement level, and,
- Associated infrastructure.

As a result of Councils refusal of the DA, the Applicant commenced proceedings in the NSW Land and Environment Court against Councils decision.

Council has provided a Statement of Facts and Contentions (SOF&C's) in relation to a Section 34 Conference that was held on the 11 October 2024 regarding the matter. Included in these are a number of matters concerning waste management. Although there was nothing specifically referencing any waste management issues. Notwithstanding based on advice from the Architect (PTIA Architecture), is understood that Council required changes to waste and recycling collection arrangements for the development. This Waste Management Plan has been amended to address this matter. Refer to Part 5.6.5 on pages 21 and 22.

This is an Amended Waste Management Plan, dated 20 February 2025, and has been prepared to address these issues.

1.3 PROJECT & PROPERTY DESCRIPTION

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

PROJECT DESCRIPTION	**Eleven (11) x storey building of mix use co-living (Student Accommodation Rooms) and commercial components.**
NUMBER OF UNITS	**- 66 Rooms,** **- Managers rooms,** **- Two (2) levels of commercial space,** **- One (1) basement Level,** **- Ancillary infrastructure and facilities, and,** **- Services and landscaping.**
PROPERTY DESCRIPTION	**The development is to be constructed over one (1) existing Torrens Title allotment at Lot A, in DP375159, 183 Macquarie Street, Parramatta.**
STREET ADDRESS	**183 Macquarie Street, Parramatta.**
AREA	**487.3sqm (Approx.)**
LGA	**Parramatta City Council**
ZONING	**Zone B4 – Mixed Use**
PLANNING INSTRUMENTS	**Parramatta Local Environment Plan 2011** **Parramatta DCP 2011**

1.4 APPLICANTS DETAILS

APPLICANT	**Rapisarda Investments Pty Ltd** **C/- PTI Architecture**
ADDRESS	**Level 2, 68 Sophia Street, Surry Hills. NSW. 2010.**
TELEPHONE	**02 9283 0860**
E-MAIL	**peter@ptiarch.com.au**

1.5 PROPOSAL

The proposal involves the construction of a twelve (12) storey building of mixed residential and commercial components, comprising of:

- Student accommodation containing 66 rooms,
- Two (2) levels of commercial space,
- Common areas,
- One (1) basement level, and,
- Associated infrastructure.

Egress to the site is from Macquarie Street onto the northern side of the development.

As the building comprises both residential and commercial components, separate waste management arrangements will be made for each.

All residential waste and recycling bins will be stored in a Residential Bin Room located on the basement of the building as indicated on the Architectural Drawings.

All commercial waste and recycling bins will be stored in a Commercial Bin Room located in the basement as indicated on the Architectural Drawings.

All waste and recycling services for both residential and commercial components will take place from a loading dock provided on the ground floor as indicated on the Architectural Drawings.

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

The land on which the development is proposed is largely vacant.

The project consists of: -

a) The clearing and excavation of the site to construct the basement level of the building for car parking and other services,
b) The construction of the building,
c) The provision of landscaping, driveways, concrete pathways and other elements associated with the development, and,
d) The on-going use of the building.

PART 2 – DEMOLITION

2.1 OVERVIEW

The land on which the development is proposed is largely vacant with a timber paling fence around the perimeter of the site. All details in relation to the clearing and excavation of the site and the removal of all fencing and miscellaneous material from the site is dealt with in Part 3 – CONSTRUCTION of this WMP.

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 7, 8, 9, 10, 11 and 12 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	2,200 cubic metres / 3,740 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	To an approved Agency – excavated materials may need to be assessed to determine the quality of the material to ensure that all excavated material will be acceptable to the designated receival authority.

2. Bricks

Volume / Weight	15 cubic metres / 15 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, Jacks Gully Waste Management Centre, Richardson Road, Narellan (Tel 1300 651 116)

3. Concrete

Volume / Weight	12 cubic metres / 28.8 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	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, Jacks Gully Waste Management Centre, Richardson Road, Narellan (Tel 1300 651 116)

4. Timber

Volume / Weight	40 cubic metres / 16 Tonnes
On Site Reuse	Re-use for formwork and studwork, and for landscaping
Percentage Reused or Recycled	65% - 90%
Off Site Destination	Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 424 646)

5. Plasterboard & Fibro

Volume / Weight	5 cubic metres / 2.5 Tonnes
On Site Reuse	Nil – All material to be disposed of and processed off-site.
Percentage Reused or Recycled	To be determined
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, Jacks Gully Waste Management Centre, Richardson Road, Narellan (Tel 1300 651 116)

6. Metals / Steel / Guttering & Downpipes

Volume / Weight	10 cubic metres / 2.5 Tonnes
On Site Reuse	No
Percentage Reused or Recycled	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) or, Jacobson Metaland, 62-70 Silverwater Road, Silverwater (Tel 02 9748 2487)

7. Tiles

Volume / Weight	10 cubic metres / 7.5 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, Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 424 646)

8. Plastics

Volume / Weight	5 cubic metres / 1 Tonne
On Site Reuse	Nil
Percentage Reused or Recycled	80% - 95%
Off Site Destination	Recycle Works, 45 Parramatta Road, Annandale (Tel 02 9517 2711)

9. Glass, Electrical & Light Fittings, PC items

Volume / Weight	15 cubic metres / 3 Tonne
On Site Reuse	No
Percentage Reused or Recycled	70% - 90%
Off Site Destination	Recycle Works, 45 Parramatta Road, Annandale (Tel 02 9517 2711) or, Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 424 646)

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

Volume	5 cubic metres / 1.6 Tonnes
On Site Reuse	Broken up and used as fill.
Percentage Reused or Recycle	80% - 90%
Off Site Destination	Recycle Works, 45 Parramatta Road, Annandale (Tel 02 9517 2711) or, Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 424 646)

11. Pallets

Volume / Weight	20 cubic metres / 5 Tonne
On Site Reuse	No
Percentage Reused or Recycle	90% - 100%
Off Site Destination	Returned to supplier / to an approved agency, or agencies, for reuse and resale.

12. Residual Waste

Volume / Weight	250 cubic metres / 250 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, Jacks Gully Waste Management Centre, Richardson Road, Narellan (Tel 1300 651 116) or, other authorised facility
Notes on calculation of volume of residual waste	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 facilities and agencies that have been nominated to receive the materials listed above have been identified within the NSW waste industry as being a facility or agency that will accept the materials specified in each respective table. The developer understands that any costs associated with the transportation and receival of these materials will be their responsibility.

The developer is under no obligation to use any nominated facility or agency, but should any alternative arrangements be made, it will be the developers' responsibility to ensure that all materials excess to construction removed from the site are disposed of, or processed, appropriately.

The developer will keep a written record of all documentation associated with the transportation, disposal and processing of all materials associated with the demolition of all structures on site.

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 CHUTE DESIGN REQUIREMENTS

A Garbage Chute System will be incorporated into the building design.

The chute system will be a dual waste and recycling e-diverter chute system, for the reception of both waste and recycling material. The e-diverter system is designed as a one chute solution to manage both waste and recyclables. Each building level is provided with one (1) chute door which is connected to a LED control panel.

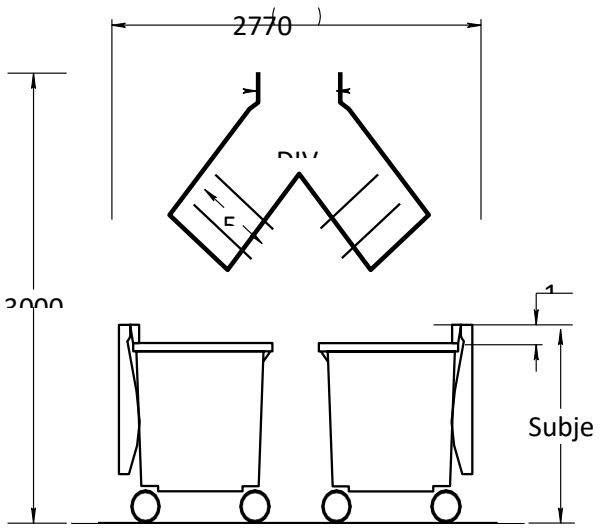
When depositing material into the chute the resident selects either the waste or recycling function on the panel. This moves the mechanism that guides the waste or recycling bins into the correct bin located under the chute outlet point. The resident then deposits the correct material into the chute.

Based on advice from a chute manufacturer it is understood that with this system if residents on other levels select the same disposal function (e.g., waste), they are able to deposit their waste into the chute.

If the recycling product is chosen on another level at the same time, the resident will be required to wait for the diverter to move from the waste function to the recycling function. Based on this advice, the wait time is estimated at three (3) to five (5) seconds.

Waste and Recycling Compartments will be located on each residential floor of the building for residents to deposit their waste (into the waste chute) and recyclables (into the recycling chute).

TYPICAL DIVERTER CHUTE



660-Litre Waste Bin 660-Litre Recycling Bin

4.2 e-DIVERTER CHUTE SYSTEM – WASTE

The Chute Compartment will have approximate internal dimensions of 1.7m x 1.0m, with an area of 1.7sqm, and will provide space for the chute compartment, which will have internal dimensions of 750 mm x 750 mm and will be installed within these confines in a fire rated compartment.

All waste deposited into the Waste Chute will discharge into a 1 x 660-litre bin located under the chute outlet point in the Residential Bin Room in the basement as indicated in the Architectural Drawings.

Based on Council's waste generation rates, it is anticipated that the 66 rooms in the building will generate 2640-litres of waste per week, or 377.14-litres per day. As the capacity of the waste bin under the chute is 660-litres, it shall be inspected at least one (1) time per day.

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

The on-site manager will monitor all activities associated with the use and operation of the chute, the depositing of waste into it, to ensure that there will be no spillage, and that the system operates effectively.

The on-site manager will be responsible for transferring full 660-litre waste bins from under the chute into the waste bin storage area of the Bin Room.

4.3 e-DIVERTER CHUTE SYSTEM – RECYCLING

The Chute Compartment will have approximate internal dimensions of 1.7m x 1.0m, with an area of 1.7sqm, and will provide space for the chute compartment, which will have internal dimensions of 750 mm x 750 mm and will be installed within these confines in a fire rated compartment.

All recycling deposited into the Waste Chute will discharge into a 1 x 660-litre bin located under the chute outlet point in the Residential Bin Room in the basement as indicated in the Architectural Drawings.

Based on Council's recycling generation rates, it is anticipated that the 66 rooms in the building will generate 2640-litres of waste per week, or 377.14-litres per day. As the capacity of the recycling bin under the chute is 660-litres, it shall be inspected at least one (1) time per day.

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

The on-site manager will monitor all activities associated with the use and operation of the chute, the depositing of waste into it, to ensure that there will be no spillage, and that the system operates effectively.

The on-site manager will be responsible for transferring full 660-litre waste bins from under the chute into the waste bin storage area of the Bin Room

4.4 OPERATIONAL REQUIREMENTS

At a minimum, each Chute System 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 Chutes and service openings must be capable of being easily cleaned.
5. Chutes must be ventilated to ensure that air does not flow from the chute through any service opening.
6. The Chute systems must comply with the relative provisions of the Building Code of Australia, and relevant Australian Standards (e.g., AS1530.4-2005).
7. Upon the appointment of the company selected to install the chutes, and completion of the chute design, Council will be provided with a manufacturers specification of all chute systems.
8. The chute discharge points will be restricted to residents by a caged enclosure in order to prevent injury, and will be provided with suitable circulation space, in accordance with the manufacturers’ specification.

The Building Manager or their authorised representative will monitor all activities associated with the use and operation of the chutes and the depositing of waste and recycling material into them and will also be responsible for transferring full 660-litre waste and recycling bins from all bin/chute rooms into the Waste Collection Area/Loading Room Bin Storage Area for storage prior to servicing.

4.5 ON GOING MANAGEMENT & MAINTENANCE OF CHUTE SYSTEM

4.5.1 Generally

The Owners Corporation will be responsible for all issues associated with the on-going management and maintenance of the Garbage 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.

Based on the information provided herein, it is considered having a Building Manager on site, it will enable the entire waste management system to be inspected daily. This

will allow any problems with the functioning of the system to be identified immediately, and any maintenance and, or repairs to be undertaken without delay.

4.5.2 Bin Room Infrastructure

In accordance with Council requirements, the following infrastructure will be incorporated into the design of all bin 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. Rooms will be fully enclosed and roofed with a minimum internal room height in accordance with the BCA 2019.
6. Rooms are to be provided with an adequate supply of water through a centralised mixing valve with hose cock.
7. Incorporation of adequate light and ventilation in accordance with requirements of the BCA 2019.

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 proposal involves the construction of a twelve (12) storey building of mixed residential and commercial components, comprising of:
   a) Student accommodation containing 66 rooms,
   b) Two (2) levels of commercial space,
   c) Common areas,
   d) One (1) basement level, and,
   e) Associated infrastructure.
2. Egress to the site is from Macquarie Street onto the northern side of the development.
3. As the building comprises both residential and commercial components, separate waste management arrangements will be made for each.
4. A Garbage Chute System will be incorporated into the building design.
5. The chute system will be a dual waste and recycling e-diverter chute system, for the reception of both waste and recycling material. The e-diverter system is designed as a one chute solution to manage both waste and recyclables.
6. Each building level is provided with one (1) chute door which is connected to a LED control panel.
7. A Residential Bin Storage Area (RWBA) will be provided for the storage of all waste and recycling bins associated with the student accommodation component of the building.
8. The RBSA is located on the ground floor adjacent to the loading dock on the ground floor of the building as indicated on the Architectural Drawings.
9. For the student accommodation component of the building all waste material will be stored in 3 x 660-litre mobile bins.
10. For the student accommodation component of the building all recycling material will be stored in 3 x 660-litre mobile bins.
11. For the student accommodation component of the building all green waste material will be stored in 2 x 240-litre mobile bins.
12. Waste services will be provided two (2) days per week.
13. Recycling services will be provided two (2) days per week.
14. Green Waste Services will be provided one (1) day per week.
15. All waste, recycling and green waste bins be stored within the confines of the bin area at all times.
16. The number and size of bins have been calculated from information provided in Appendix A8.1 of the Waste Management Guidelines incorporated into the Parramatta DECP 2011 for Co-Living developments which is the category that Student Accommodation is applied.

17. As Co-living are classified as a commercial operation, all waste and recycling services to the building will be provided by a licensed private waste collection contractor.
18. Due the width of the site and associated constraints, all waste and recycling services to the development will be provided from a loading dock located on the ground floor of the building as indicated on the Architectural Drawings.
19. The truck loading zone will be designed to accommodate a rear loading SVR collection vehicle.
20. The Proprietor of the facility shall appoint a Building Manager whose responsibilities will include ensuring all waste management activities are carried out in accordance with this WMP.
21. For the retail / commercial component all waste and recycling generation rates have been calculated from the Better Practice Guide for Resource Recovery in Residential Developments, published by the NSW EPA as they are not covered in the Council's DCP.
22. A Retail Waste Storage Area (RWSA) is provided for the storage of all waste and recycling bins associated with the commercial component of the development.
23. The RWSA is located in the basement of the building as indicated on the Architectural Drawings.
24. All waste and recycling services to the retail component will be provided by a licensed private waste collection contractor and will also be provided from a loading area located on the ground floor as detailed on the Architectural Drawings, Traffic Report and herein.

5.3 WASTE HANDLING & MANAGEMENT

All Co-Living occupants will be responsible for depositing their waste and recycling material into the appropriate bins. All waste is to be placed in the red lidded waste bins. All recyclable material is to be placed in the yellow lidded recycling bins.

Appropriate signage will be erected in the bin area to assist the occupants of the building in placing their waste and recyclables into the appropriate bins.

5.4 RESIDENTIAL 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.

5.5 RESIDENTIAL WASTE & RECYCLING – SERVICE ARRANGEMENTS

The following table (Table 1) specifies the criteria for waste and recycling generation rates, which have been calculated from information provided in Appendix A8.1 of the Waste Management Guidelines incorporated into the Parramatta DECP 2011 for Boarding House developments which is the category that Student Accommodation is applied.

These requirements provide for the following waste and recycling generation rates as specified on Appendix – 76 of the DCP:

- Waste – 2 x 240-litre red lidded mobile waste bins for 12 residents plus 40-litres of space per person over 12,
- Recycling – 2 x 240-litre yellow lidded mobile recycling bins for 12 residents plus 40-litres of space per person over 12, and,
- Green Waste – 2 x 240-litre green waste bins.

Based on the above, the following table (Table 1) prescribes the required waste and recycling generation rates for the development.

TABLE 1 – WASTE & RECYCLING GENERATION RATES – BOARDING HOUSES

DESCRIPTION	WASTE	RECYCLING
Waste Generation Rate 1	2 x 240-litre mobile bins for 12 persons	2 x 240-litre mobile bins for 12 persons
Waste Generation Rate 2	40-litres of space from 13 to 76	40-litres of space from 13 to 76
Space Required / Week	480 + 2560 = 3040	480 + 2560 = 3040
Bin Size	660-litre mobile bins	660-litre mobile bins
Bins Required	2.31	2.31
Bins Provided	3	3
Services Per Week	2	2
Space Provided (Litres)	3,960	3,960
Service Requirements	**3 x 660-Mobile Bins Two (2) Services per Week**	**3 x 660 Mobile Bins Two (2) Services per week**

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 RESIDENTIAL SERVICING ARRANGEMENTS

WASTE	RECYCLING	GREEN WASTE
3 x 660-litre bins Two (2) Services per Week	3 x 660-litre bins Two (2) Services per Week	2 x 240-litre bins One (1) Service per Week)

5.6 PROVISION OF RESIDENTIAL (SA) WASTE & RECYCLING SERVICES

This Part (Part 4.6) applies to all waste management activities associated with the residential (Student Accommodation) component of the development.

5.6.1 Waste and Recycling Collection Service Provider Details

As the development is classified as a commercial operation, all waste and recycling services will be provided by a licensed private waste collection contractor.

5.6.2 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)
660 litre mobile container	1.250	0.850	1.370

5.6.3 Waste & Recycling Requirements

Waste and recycling requirements are provided in the table below.

TABLE 3 – RESIDENTIAL WASTE & RECYCLING SERVICES

SERVICE	NUMBER OF CONTAINERS	COLLECTION FREQUENCY
Waste Service	3 x 660-litre mobile containers	Two (2) Services per Week
Recycling Service	3 x 660-litre mobile containers	Two (2) Services per Week
Green Waste	2 x 240-litre mobile containers	One (1) Service per Week

5.6.4 Location, Design, and Construction of Bin Storage Room

A Residential Bin Storage Room (RBSR) will be provided for the storage of all waste and recycling bins associated with the Student Accommodation component of the building. The bin room is located on the eastern side of the basement as indicated on the Architectural Drawings.

The bin room is a fully enclosed mainly rectangular structure, measuring 4.6m x 4.5m, with an area of approximately 20.7sqm.

Within the confines of the WSA will be storage space for:

- 3 x 660-litre red lidded mobile waste bins,
- 3 x 660-litre yellow lidded mobile recycling bins, and,
- 2 x 240-litre green lidded mobile green waste bins,

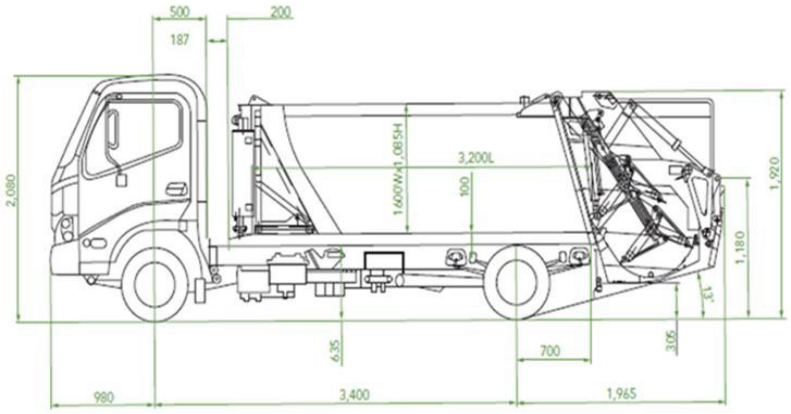
5.6.5 Collection Methodology

All waste, recycling and green waste bins will be collected from a Bin Collection Point room located on the ground floor of the building with access from Macquarie Street as indicated on the Architectural Drawings.

The loading dock will be designed to accommodate a rear loading SRV collection vehicle with the following approximate dimensions:

- Length – 6.4m,
- Width – 2.5m, and,
- Travel and Operational Height – 2.2m.

A detail of a typical SRV is provided on page 21.



All services will be provided by a licensed private waste and collection contractor. On the evening prior to collections, the Building Manager will transfer the bins from the basement residential bin room, via the Service Lift, to the ground floor to the Bins Collection Point for servicing.

Services will be carried out between the hours of 2.00am and 4.00am, when both pedestrian and vehicle movements are minimal. Noise should not be a problem as the ambient background levels are relatively high due to the site's location in the busy Parramatta CBD.

In order to facilitate collection arrangement, it is recommended that the 3 x 660-litre waste bins be serviced between 2.00am and 4.00am on Monday and Thursday of each week, and the 3 x 660-litre recycling bins be serviced between 2.00am and 4.00am on Tuesday and Friday of each week. The 2 x 240-litre mobile recycling bins will be serviced on the Wednesday of each week, also between 2.00m and 4.00am

The Building Manager will return all bins to the basement residential bin room, via the Lift 3, as soon as practicable after collection, but within two (2) hours of servicing.

5.6.7 Servicing Arrangements – Waste Collections

All waste bins will be serviced from the loading bay as detailed in Part 5.6.5 on page 20 and above.

Upon the arrival of the collection vehicle to the site, it will be driven in a forward direction onto the centre of the loading area. The contractor's representative will transport the bins to the vehicle, where they will be loaded onto the lifting device and the contents of each bin, deposited into the body of the collection vehicle. The bins will be returned to the temporary holding area.

The collection of waste bins will be done separately in separate collection vehicles, on different days and outside of business hours so as not to impact of vehicle movements in and out of the site.

Waste bins will be serviced two (2) days per week, on a day to be determined by the proprietor in conjunction with the Contractor.

All 3 x 660-litre mobile waste bins will be serviced on each collection day.

The waste bins will be returned to the basement residential bin room as soon as practicable after they have been serviced. The Building Manager or their authorised representative will return the bins to the basement residential bin room.

5.6.8 Servicing Arrangements – Recycling Collections

All recycling bins will be serviced from the loading area in Part 5.6.5 on page 20 and 21.

Upon the arrival of the collection vehicle to the site, it will be driven in a forward direction onto the centre of the loading dock. The contractor's representative will transport the bins to the vehicle, where they will be loaded onto the lifting device and the contents of each bin, deposited into the body of the collection vehicle. The bins will be returned to the temporary holding area.

The collection of recycling bins will be done separately in separate collection vehicles, on different days and outside of business hours so as not to impact of vehicle movements in and out of the site.

Recycling bins will be serviced two (2) days per week, on a day to be determined by the proprietor in conjunction with the Contractor.

All 3 x 660-litre mobile recycling bins will be serviced on each collection day.

The bins will be returned to the basement residential bin room as soon as practicable after they have been serviced. The Building Manager or their authorised representative will return the bins to the basement residential bin room.

5.6.9 Servicing Arrangements – Green Waste

All green waste bins will be serviced from the loading area as detailed in Part 5.6.5 on pages 20 and 21.

Upon the arrival of the collection vehicle to the site, it will be driven in a forward direction onto the centre of the loading dock. The contractor's representative will transport the bins to the vehicle, where they will be loaded onto the lifting device and the contents of each bin, deposited into the body of the collection vehicle. The bins will be returned to the temporary holding area.

The collection of green waste bins will be done separately in separate collection vehicles, on different days and outside of business hours so as not to impact of vehicle movements in and out of the site.

Green Waste bins will be serviced one (1) day per week, on a day to be determined by the proprietor in conjunction with the Contractor.

The 2 x 240-litre mobile recycling bins will be serviced on each collection day.

The bins will be returned to the basement residential bin room as soon as practicable after they have been serviced. The Building Manager or their authorised representative will return the bins to the basement residential bin room.

5.7 COMMERCIAL WASTE & RECYCLING SERVICES

Five (5) retail / commercial units will be located on the ground floor of the complex. Particulars of each unit are outlined in Table 4.

TABLE 4 – COMMERCIAL/RETAIL UNITS

UNIT	PROPOSED USE	LOCATION	FLOOR AREA (Square Metres)
Commercial 1	Professional Offices	Ground Floor	163
Retail 2	Takeaway Café	Ground Floor	32
Commercial 3	Kiosk	Ground Floor	10
Commercial 4	Professional Offices	Level 1	310
Commercial 5	Professional Offices	Level 2	137

5.7.1 Commercial Waste and Recycling Generation Rates

The Table below (Table 5) details the waste and recycling generation rates for the commercial land uses proposed. These have been calculated from the Better Practice Guide for Resource Recovery in Residential Developments, published by the NSW EPA as they are not covered in the Council's DCP.

TABLE 5 – WASTE & RECYCLING GENERATION RATES FOR COMMERCIAL / RETAIL LAND USES

SERVICE	LAND USE	WASTE & RECYCLING GENERATION RATES
Waste	Takeaway Food Shop	100-litres of waste per 100sqm of floor area per day
Recycling	Takeaway Food Shop	120-litres of waste per 100sqm of floor area per day
Waste	Offices	10-litres of waste per 100sqm of floor area per day
Recycling	Offices	15-litres of waste per 100sqm of floor area per day
Waste	Kiosk / Café	100-litres of waste per 100sqm of floor area per day
Recycling	Kiosk / Café	120-litres of waste per 100sqm of floor area per day

5.7.2 Waste and Recycling Service Requirements

The following Table (Table 6) details the proposed waste service arrangements based on the above activities and the waste generation rates prescribed the Guide in relation to the land use activities proposed to be carried out at the development.

TABLE 6 – WASTE GENERATION RATES

ACTIVITY	FORMULA	CALCULATION	LITRES PER WEEK
Office	10-litres per 100sqm of floor area	10 x 163 / 100 x 6 (days)	97.80
Takeaway Cafe	100-litres per 100sqm of floor area	100 x 32 / 100 x 6 (days)	192.00
Kiosk	100-litres per 100sqm of floor area	100 x 10 / 100 x 6 (days)	60.00
Office	10-litres per 100sqm of floor area	10 x 310 / 100 x 6 (days)	186.00
Office	10-litres per 100sqm of floor area	10 x 137 / 100 x 6 (days)	82.20
Total Litres of Waste Generated per Week			**617.80**
Service Requirements		**1 x 660-litre mobile waste bins One (1) Service per Week**	
Total Litres of Waste Serviced per Week		**660-litres Serviced per Week**	

The following Table (Table 7) details the proposed recycling service arrangements based on the above activities and the waste generation rates prescribed the Guide in relation to the land use activities proposed to be carried out at the development.

TABLE 4 – RECYCLING GENERATION RATES

ACTIVITY	FORMULA	CALCULATION	LITRES PER WEEK
Office	15-litres per 100sqm of floor area	15 x 163 / 100 x 6 (days)	146.70
Takeaway Cafe	120-litres per 100sqm of floor area	120 x 32 / 100 x 6 (days)	288.00
Kiosk	120-litres per 100sqm of floor area	120 x 10 / 100 x 6 (days)	90.00
Office	15-litres per 100sqm of floor area	15 x 310 / 100 x 6 (days)	279.00
Office	15-litres per 100sqm of floor area	15 x 137 / 100 x 6 (days)	123.30
Total Litres of Waste Generated per Week			**927.60**
Service Requirements		**2 x 660-litre mobile recycling bins One (1) Service per Week**	
Total Litres of Waste Serviced per Week		**1,320-litres Serviced per Week**	

5.7.3 Waste Handling and Management

All commercial tenants will be responsible for transferring their waste and recycling material to the retail / commercial bin room.

5.7.4 Waste Storage Facilities

The retail / commercial bin room is located in the buildings' basement as indicated on the Architectural Drawings. It is a partially enclosed rectangular structure measuring 6.0m x 1.8m with an area of approximately 10.80sqm. It will be designed to accommodate a minimum of:

- 1 x 660-litre mobile waste bins, and,
- 2 x 660-litre mobile recycling bins.

5.7.5 Waste Collection

A licensed private waste collection contractor will provide all waste and recycling services to the building, using a collection vehicle, suitable for collection purposes.

All waste and recycling collections will take place from the loading area as detailed in Part 5.6.5 on pages 20 and 21.

In order to facilitate collection arrangement, it is recommended that the 660-litre waste bin be serviced between 2.00am and 4.00am on Monday and Thursday of each week, and the 660-litre recycling bin be serviced between 2.00am and 4.00am on Tuesday and Friday of each week.

The Building Manager will return all bins to the basement commercial waste room, via the Lift 3, as soon as practicable after collection, but within two (2) hours of servicing.

5.8 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 walls and floors of the Waste Storage Areas is to be constructed of smooth faced masonry or concrete, and all walls will be painted with light coloured and washable paint.
2. 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.
3. A floor waste, connected to the Sydney Water drainage system in accordance with that Authority's requirements, will be provided to the WSA's, and the floors will be graded to drain into it.
4. Appropriate washing facilities will be provided to the WSA's, including appropriate plumbing and drainage fixtures and fittings, and the provision of running water.
5. The WSA's is to be washed and cleaned on a regular basis.
6. All mobile bins will be washed and cleaned on a regular basis.
7. All electrical equipment, including the provision of lighting, will be installed in accordance with the relevant Australian Standards.
8. Natural and mechanical ventilation will be required to be installed within all waste storage facilities in accordance with the relative provisions of the Building Code of Australia.
9. Appropriate signage will be erected within each WSA, providing instruction on how to use waste and recycling facilities, including what is and what is not recyclable.
10. 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.

PART 6 – SUMMARY

6.1 SUMMARY

In summarising this proposal, the following information is provided:

1. The number and size of bins have been calculated from information provided by Parramatta City Council, and from Council's DCP.
2. As the use and operation of a Co-Living accommodation is considered a commercial enterprise, all residential waste and recycling services will be provided by a licensed private waste collection contractor.
3. 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.
4. The WMP aims to promote the use of recyclable materials in the demolition, construction and on-going operation of the building.
5. The WMP aims to 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.
6. The WMP aims to ensure that the provision of waste and recycling services to the completed buildings are carried out in an efficient manner, which will promote the principles of health, safety and convenience.

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 Parramatta City Council.