DICKENS SOLUTIONS

AMENDED
WASTE MANAGEMENT PLAN

CONVERTIA PTY LTD
(ALPHA ENGINEERING PTY LTD)

PROPOSED MIXED USE RESIDENTIAL & COMMERCIAL DEVELOPMENT @ 11-13 ALBERT ROAD & 2-6 PILGRIM AVENUE STRATHFIELD

JUNE 2021

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PART 1 – OVERVIEW AND PROPOSAL

1.1 INTRODUCTION

This Waste Management Plan (WMP) describes in detail the manner in which all waste and other materials resulting from the on-going use of the building on the site are to be dealt with. This WMP does not include details on the demolition and construction stages of the development, which it is understood were the subject of a previous Waste Management Plan submitted by another external party.

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. Maximise waste reduction, material separation, and resource recovery in all stages of the development,
3. 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,
4. 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: -

- Strathfield LEP 2012,
- Strathfield DCP 2015 – Part H Waste Minimisation and Management Plan,
- 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 submitted to Strathfield Council for the construction of a part five (5), part eleven (11) and part (15) storey building of mixed commercial and residential components at 11-13 Albert Road and 2-6 Pilgrim Avenue, Strathfield, comprising of:

- 172 x 1, 2 and 3 bed room units,
- Three (3) Ground Floor Commercial Units with a combined floor area of 270sqm,
- Four (4) basement levels, and,
- Associated infrastructure, ancillary facilities and services.

This WMP is dated 1 December 2020.

1.2 HISTORY

The original WMP for this project was dated 1 December 2020 and was submitted to Council as part of the DA Package.

As a result of the initial assessment of the DA, on 27 January 2021, 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. In this regard Council advised that the WMP was not supported, further information required. Further that an insufficiently detailed waste management plan has been provided as part of the application documents.

The waste management plan must comply with Council's waste management requirements as specified in their RFI. This includes the following points. These issues are detailed below in **BOLD TYPE TEXT** with specific responses following each item.

The new scheme provides for:

- 168 x 1, 2 and 3 bed room units,
- Two (2) Ground Floor Commercial Units with a combined floor area of 202sqm,

ITEM 1 – RESIDENTIAL WASTE GENERATION & BIN REQUIREMENTS

Domestic waste generation expected for 172 dwellings is of 20,640-litres of general waste per week and 10,320-litres of recycling per week. Therefore, the development is to comply with Council's waste collection frequency as follows:

- **General Waste: 32 X 660L red bins (collected weekly) – Current Waste Management Plan and Floorplan indicates 31 X 660L bins,**
- **Recycling: 86 X 240L yellow bins or 32 X 660L yellow bins (collected fortnightly) – Current Waste Management Plan and Floorplan indicates 43 X 240L bins,**
- **Garden / Vegetation Waste: to be organized with licensed private waste collection contractor,**
- **Household Bulky Waste: Council collects household bulky waste. Development needs to provide a minimum 68.8m² bulky goods storage area (rate of 4m² per 10 units). Current Floorplan indicates a 37m² room.**

RESPONSE – Refer to relevant parts of the WMP.

In accordance with Council requirements, the Waste Management Plan has been revised to provide for the following:

- Residential Waste – 32 x 660-litre red lidded mobile waste bins, serviced one (1) day per week,
- Residential Recycling – 86 x 240-litre yellow lidded mobile recycling bins, serviced one (1) day per fortnight,
- Green Waste – to disposed of with a licensed private waste collection contractor,
- Household Bulky Waste – Provision of a bulky waste storage area with a floor area of 70.0sqm.

ITEM 2 – COMMERCIAL WASTE GENERATION & BIN REQUIREMENTS

For mixed use developments separate bin storage areas must be provided (and indicated on the Architectural Drawings) for commercial premises that can only be accessed by their intended users, totally separated from residential waste and recycling collection. Written evidence that onsite waste collection can be arranged by private licensed contractor must be provided for commercial waste and recycling collections, as well as a specific Waste Management Plan for commercial waste.

RESPONSE – Refer to Part 5.9.5 on page 37

As detailed in Part 5.9.5 on page 37, a separate 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 Basement 1 adjacent to Bin/Chute Room 1. It is a fully enclosed square structure, measuring 3.5m x 2.0m with an area of 7.00sqm, and will provide space for:

- 1 x 1100-litre waste bin, and,
- 2 x 240-litre recycling bins.

ITEM 3 – ON SITE WASTE COLLECTION

The development proposed at-grade shared waste collection/loading dock area. Swept paths have been provided for 8.8m MRV utilising this proposed loading dock. Council Waste Collection Policy requires 10m rear loader to service this type of development. Accordingly, the swept paths should demonstrate compliance with the following requirements:

- **10m rear loader accessible – turning circle 18m kerb to kerb,**
- **Length of standing area 10m,**
- **3.6m height clearance, and**
- **Gradient of ramps maximum 1 in 5.**

RESPONSE – Refer to Part 5.6.5.5 on page 32-33.

Council has permitted all waste and recycling services to be provided by a rear loading MRV collection vehicle with a length of 8.8m.

ITEM 4 – WASTE AREAS

The domestic waste bin holding area must have the capacity to accommodate (in total) 32 x 660L red bins and 86 x 240L yellow bins (or 32 x 660L yellow bins) and sufficient room to access and manoeuvre the bins. Waste room must be built to comply with Part H of Council's DCP and EPA's "Better practice guide for resource recovery in residential developments".

Bin areas must be enclosed and covered to protect from weather, odour and disease vectors (such as rodents, insects and pests). Bin areas must include an appropriately sized communal repair hub and bin wash areas, with accessible power and facilities for cleaning and draining bins. Drainage system is subject to authorization by Sydney Water. Areas must also be enclosed and out of sight from adjacent dwelling units, surrounding buildings and the street.

Development design must include measures to minimise noise associated with the use and servicing of the waste management facilities and chutes.
Residential units shall be insulated from noise if adjacent to or above: waste and recycling storage facilities, chute and compaction systems or waste and recycling collection and vehicle access points.

Waste bin areas design must incorporate ventilation for enclosed waste storage areas that complies with the relevant codes and standards.

Bin storage areas must include access routes sufficiently lit to allow their use after dark, and not be located in a high pedestrian traffic area.

RESPONSE – Refer to Part 5.6.5.3, 5.6.5.4 and 5.6.5.5 on page 32

All residential waste areas have been designed to accommodate 32 x 660-litre red waste bins and 86 x 240-litre yellow lidded recycling bins as detailed in Part. Additionally there is sufficient room to access and manoeuvre the bins. All waste areas will be constructed to comply with Part H of Council's DCP and EPA's "Better practice guide for resource recovery in residential developments".

ITEM 5 – WASTE COLLECTION

Access to waste discharge rooms should be provided to the building manager/waste caretaker only. Under no circumstances should access be provided to any residents.

Transfer bin route to collection point must have a minimum of 2.5m wide and made of a hard surface, be free of steps and excessive gradients. Travel distance and transfer grade suitable for the bin size and capacity.

Transfer of waste and all bin movements require minimal manual handling; the operator must assess manual handling risks and provide any relevant documentation to building management.

Where the bin-carting route from the storage area to the collection point exceeds 5m distance for 660L waste bins or a large number of bins need to be moved around the site, a dock leveller, bin lift or a tow tug device must be used (according to EPA's "Better practice guide for resource recovery in residential developments").

RESPONSE – Refer to Relevant parts of WMP.

Access to all Waste Rooms (excluding the Bulky Waste Area) will be restricted to the Building Manager or their authorised representative. Resident access to these rooms is not permitted (Part 4.5.4 on page 27).

All bin routes from the respective waste rooms to the collection points have been provided with a minimum width of 2.5m, and are constructed of impervious 'hard' surfaces and are free of steps and excessive gradients. All travel distances and transfer of bin sizes and capacity are considered acceptable (Part 5.10 – Item 12 – page 38).

As the transfer of waste and all bin movements involve manual handling, all operational, work health and safety task will undergo risk assessments and

documentation will be provided to support these assessment and their results (Part 5.10 – Item 13 – page 38).

Where the bin-carting route from the storage areas to the collection point exceeds the acceptable maximum permitted distances for 660-litre or a large number of bins need to be moved around the site, a Mobile Bin Towing Device will be provided (according to EPA's "Better practice guide for resource recovery in residential developments") (Part 5.10 – Item 14 – page 38).

ITEM 6 – WASTE CHUTE SYSTEM

Room where the chute dispenses into must have restricted access for residents. Bin storage and serving rooms allocated on each habitable floor must be designed to comply with BCA and be fire-rated.

Chutes and compaction equipment must be designed in accordance with the requirements of the BCA.

RESPONSE – Refer to Part 4 on pages 24-27.

ITEM 7 – WASTE EDUCATION & SIGNAGE

All waste rooms and common areas must have signs providing information on proper waste management, litter prevention, clean up collection and better recycling.

RESPONSE – Refer to Part 5.10, Item 11 on page 38.

ITEM 8 – AMENDED WMP & ARCHITECTURAL DRAWINGS

The Applicant is required to submit an amend Waste Management Plan (WMP) and Architectural Drawings that demonstrate compliance with:

- **Waste storage and collection areas with capacity to accommodate (in total) 32 x 660L red bins and 86 x 240L yellow bins (or 32 x 660L yellow bins).**
- **Bin presentation area for collection with capacity to 32 x 660L red bins and 86 x 240L yellow bins (or 32 x 660L yellow bins).**
- **Provide a minimum 68.8m² bulky goods storage area (rate of 4m² per 10 units).**
- **Swept paths provided for 10m rear loader, with swept paths demonstrating compliance with the following requirements:**
- **10m rear loader accessible – turning circle 18m kerb to kerb**
- **Length of standing area 10m**
- **3.6m height clearance**
- **Gradient of ramps maximum 1 in 5**

RESPONSE – Refer to WMP and Amended Architectural Drawings.

Both the Architectural Drawings and the Waste Management Plan have been amended to reflect compliance with all of the above requirements. It is however noted that Council has permitted the swept path design for the collection vehicle at a length of 8.8m.

This is an Amended WMP (Revision 1) and is dated 18 June 2021. The WMP has been revised to address all of the Waste Management issues in Council's RFI.

1.3 PROJECT & PROPERTY DESCRIPTION

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

PROJECT DESCRIPTION	**Eleven (13) Storey Building of Mixed Commercial and Residential Land Uses**
NUMBER OF UNITS	**- 168 x 1, 2 and 3 bed room units,** **- Two (2) Ground Floor Commercial Units,** **- Four (4) basement levels; and,** **- Associated infrastructure, facilities and services.**
PROPERTY DESCRIPTION	**The development is to be constructed over five (5) existing Torrens Title lot at:** **- Lot A, DP 100558, 11 Albert Road,** **- Lot B, DP 100558, 13 Albert Road,** **- SP 8785, No 2 Pilgrim Avenue,** **- Lot 9, DP 15917, 4 Pilgrim Avenue, and,** **- Lot 8, DP 15917, 6 Pilgrim Avenue, S'field.**
STREET ADDRESS	**11-13 Albert Road and 2-6 Pilgrim Avenue, Strathfield.**
AREA	**2,867.13sqm**
LGA	**Strathfield Council**
ZONING	**Zone B4 – Mixed Use**
PLANNING INSTRUMENTS	**Strathfield LEP 2012** **Strathfield DCP 2015**

The site is located over five (5) existing lots on the south-western corner of Albert Street and Pilgrim Avenue, Strathfield with frontages to both roads. It is situated in the western side of the Strathfield DBD at its northern extremity. The Strathfield Railway Station and the main Sydney suburban western railway line is located adjacent to the site, with the M1 Motorway and Parramatta Road a short distance further west.

The immediate surrounding development consists primarily of retail and commercial land uses, 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.

Currently on the site fronting Albert Street are two (2) x two (2) storey residential flat buildings – one on each site. At No 2 Pilgrim Avenue is a two (2) storey residential flat building, with brick and tile dwellings on No 4 and 6 Pilgrim Avenue.

1.4 APPLICANTS DETAILS

APPLICANT	**Convertia Pty Ltd** **C/- Alpha Engineering Pty Ltd**
ADDRESS	**4.03, 16 Railway Parade, Burwood. NSW. 2134.**
TELEPHONE	**02 9745 5202**
E-MAIL	**jean@alphaengineering.com.au**

1.5 PROPOSAL

The proposal involves the of a construction of an eleven (11) storey building of mixed commercial and residential components at 11-13 Albert Road and 2-6 Pilgrim Avenue, Strathfield, comprising of:

- 168 x 1, 2 and 3 bed room units,
- Two (2) Ground Floor Commercial Units with a combined floor area of 270sqm,
- Four (4) basement levels, and,
- Associated infrastructure, ancillary facilities and services.

The building will be constructed of two (2) cores:

- Chute 1 – South Core (Albert Road) – containing 84 x 1 , 2 bed and 3 bed room residential units from Levels 1 to 10 and two (2) ground floor commercial units comprising of 202sqm, and,
- Chute 2 – North Core (Pilgrim Avenue) – containing 84 x 1 and 2 bed room residential units from the Ground Floor to Level 10.

Upon its completion, the development will occupy the entire site. Egress from the development will be onto Pilgrim Avenue on the northern 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. There will be two (2) chutes in all, one in each core of the building. The chutes will be for the reception of waste material only.

Two (2) bin chute rooms will be located in on the Ground Floor of the building. Waste from the chutes will be deposited into 1 x 660-litre mobile bin located under the chute in each respective bin room.

Service rooms in the form of waste and recycling compartments are also located on all residential levels of the building, for each core. These compartments will contain space for the chute and 2 x 240-litre recycling bins.

All residential waste and recycling services will be provided from a dedicated waste collection area (loading bay) on the Ground Floor as indicated on the Architectural Drawings.

Strathfield 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 commercial waste and recycling services to the development.

Current structures on the site are:

- No 11 Albert Road – a two (2) storey brick residential flat building (Ranferlie Court) with a concrete driveway (shared with No 13), brick and timber fencing,
- No 13 Albert Road – a two (2) storey brick residential flat building (Rehola Court) with a concrete driveway (shared with No 11), brick and timber fencing,

- No 2 Pilgrim Avenue – a two (2) storey brick residential flat building with a concrete driveway, a number of trees and brick, timber and wire mesh fencing,
- No 4 Pilgrim Avenue – a single storey brick and tile dwelling detached garage, concrete driveway, and brick, wire mesh and metal fencing, some trees and shrubs, and,
- No 6 Pilgrim Avenue – a single storey brick and tile dwelling attached garage, concrete driveway, brick, wire mesh and metal fencing some trees and shrubs,

The project consists of: -

1. The demolition of all existing dwelling and structures on the site,
2. The removal of all demolished materials in accordance with this WMP,
3. The excavation of the site to construct the four (4) basement levels for car parking and other services,
4. The construction of the building,
5. The provision of landscaping, driveways, concrete pathways, and other elements associated with the development, and,
6. The on-going use of the building.

This Waste Management Plan has been developed not only to address all of the issues in it correspondence to the Applicant, but also to ensure that all waste management storage and collection requirements will be undertaken in a practical and efficient manner, with minimal impact on the principles of health, safety and convenience. This WMP does not address any activities associated with the demolition and construction components of the development.

PART 2 – DEMOLITION

2.1 DEMOLITION – GENERALLY

It is recognised that Sydney has an ever-increasing waste problem, and this practice is not sustainable. In alignment with current NSW waste management legislation, this WMP aims, where possible, to promote waste avoidance, reuse and the recycling of material, particularly during the course of demolition and construction works.

Part 2.2 on Pages 11, 12, 13, 14, 15, 16 and 17 of this WMP describes the manner in which waste is to be managed during the course of the demolition of the existing structures.

The processes outlined in Part 2.2 are to be read in conjunction with, and comply, with the Development Consent issued in respect of the proposal. It will be the developer's overall responsibility to ensure compliance in this regard.

All material moved offsite shall be transported in accordance with the requirements of the Protection of the Environment Operations Act (1997).

Approved receptacles 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.

2.2 MANAGEMENT OF HAZARDOUS MATERIALS

Due to the age and construction of the existing buildings on the site, there is reasonable potential for hazardous building materials to be present in the buildings to be demolished. Accordingly, the generation, storage, treatment and the disposal of hazardous waste (including asbestos) will be conducted in accordance with relevant waste legislation administered by the NSW EPA and any applicable WH&S legislation administered by Work Cover NSW.

All friable and non-friable asbestos-containing material shall be handled and disposed of off-site at an EPA licensed waste facility by an EPA licensed contractor in accordance with the requirements of the Protection of the Environment Operations (Waste) Regulation 2014 and the Waste Classifications Guidelines – Part 1 'Classifying Waste (EPA 2014) and any other instrument as amended.

All friable hazardous waste arising from the demolition process shall be removed and disposed of in accordance with the requirements of Work Cover NSW and the EPA, and with the provisions of:

a) Work Health and Safety Act 2011,
b) NSW Protection of the Environment Operations Act 1997 (NSW), and,
c) NSW Department of Environment and Climate Change Environmental Guidelines; Assessment, Classification and Management of Liquide and Non-Liquid Wastes.

2.3 DEMOLITION – RECYCLING, REUSE & DISPOSAL DETAILS

The following details prescribe the manner in which all material involved in the demolition 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 demolition waste and vehicle access to these areas (see Part 2.3 of this Plan);
c) How excavation and demolition waste materials will be reused, and, 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.

It is noted that the quantities of materials detailed in this part (Part 2.2) are estimates only, based on current industry standards and quantity analysis, and may vary due to the prevailing nature of site constraints, weather conditions, and any other unforeseeable activities associated with the demolition works, which are beyond the control of the developer, including but not being limited to theft, accidents, and, or, 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.

1. Excavated Materials & Overburden

Volume / Weight	335 cubic metres / 570 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 Creek 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 another approved Facility.

2. Green Waste

Volume / Weight	50 cubic metres / 7.5 Tonnes
On Site Reuse	To be separated. Chipped and stored on site for re-use in landscaping.
Percentage Reused or Recycled	90%
Off Site Destination	Suez Eastern Creek 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. Bricks

Volume / Weight	225 cubic metres / 225 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 Recycled	75% - 90%
Off Site Destination	Suez Eastern Creek 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. Concrete

Volume / Weight	1,000 cubic metres / 2,400 Tonnes
On Site Reuse	Crushed and used as aggregate, drainage backfill.
Percentage Reused or Recycled	75% - 90%
Off Site Destination	Suez Eastern Creek 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)

5. Timber

Volume / Weight	150 cubic metres / 60 Tonnes
On Site Reuse	Re-use for formwork and studwork, landscaping, shoring.
Percentage Reused or Recycled	65% - 90%
Off Site Destination	Artistic Popular Furniture, 10 Raglan Road, Auburn (Tel 02 96443054) or, Hallinan's Recycling Centre, 37 Lee Holm Road, St. Marys (Tel 02 9833 0883) or, Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 651 116)

6. Plasterboard & Fibro

Volume / Weight	90 cubic metres / 30 Tonnes
On Site Reuse	No. All materials will be processed off-site
Percentage Recycled	To be determined (dependent on asbestos content)
Off Site Destination	Suez Eastern Creek Resource Recovery Park, Wallgrove Road, Eastern Creek. Tel 8887 6112 or, Blacktown Waste Services, 920 Richmond Road, Marsden Park. Tel 9835 4544
Off Site Destination (Asbestos)	or, Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 424 646), Jacks Gully Waste Management Centre, Richardson Road, Narellan (Tel 1300 651 116)

7. Metals / Steel / Guttering & Downpipes

Volume / Weight	100 cubic metres / 33 Tonnes
On Site Reuse	No
Percentage Reused or Recycle	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, Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 651 116)

8. Roof Tiles / Tiles

Volume / Weight	90 cubic metres / 67.5 Tonnes
On Site Reuse	Broken up and used as fill, aggregate, driveways.
Percentage Reused or Recycle	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) or, Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 651 116)

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

Volume	120 cubic metres / 40 Tonnes
On Site Reuse	No. All material will be processed or disposed of 0ff-site.
Percentage Reused or Recycle	80% - 90%
Off Site Destination	Suez Eastern Creek 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)

10. Glass, Electrical & Light Fittings, PC Items, Ceramics, etc

Volume / Weight	150 cubic metres / 75 Tonnes
On Site Reuse	No
Percentage Reused or Recycle	To be determined (dependent upon nature of material)
Off Site Destination	To an approved agency, or agencies.

11. Residual Waste

Volume / Weight	230 cubic metres / 230 Tonnes
On Site Reuse	No
Off Site Destination	Suez Eastern Creek 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 approved and licensed 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 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 2.2) 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 demolition 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.

2.4 DEMOLITION – ON-SITE STORAGE OF MATERIALS

During the demolition stage of the project, 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, recyclable, and waste materials.

Prior to the commencement of demolition works, the developer will provide Council with a 'Site Plan for the On-Site Storage of Materials at Demolition'. 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.

2.5 DEMOLITION – EXCAVATED MATERIAL

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

All relevant details must be reported to the PCA, if required.

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 18, 19, 20, 21, 22 and 23 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	17,000 cubic metres / 28,900 Tonnes
On Site Reuse	Yes. Keep and reuse topsoil for landscaping. Store 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. Green Waste

Volume / Weight	10 cubic metres / 1.5 Tonnes
On Site Reuse	No – All to be processed off-site.
Percentage Reused or Recycle	75% - 90%
Off Site Destination	Suez Eastern Creek 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).

3. Bricks

Volume / Weight	10 cubic metres / 10 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 Creek 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. Concrete

Volume / Weight	10 cubic metres / 24 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).

5. 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	Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 424 646)

6. Plasterboard & Fibro

Volume / Weight	8 cubic metres / 2.8 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 Creek 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)

7. Metals / Steel / Guttering & Downpipes

Volume / Weight	10 cubic metres / 1.25 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)

8. Tiles

Volume / Weight	5 cubic metres / 3.75 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)

9. Plastics

Volume / Weight	8 cubic metres / 2.5 Tonnes
On Site Reuse	Nil
Percentage Reused or Recycled	80% - 95%
Off Site Destination	Recycle Works, 45 Parramatta Road, Annandale (Tel 02 9517 2711)

10. Glass, Electrical & Light Fittings, PC items

Volume / Weight	6 cubic metres / 2.5 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)

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

Volume	10 cubic metres / 3.5 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)

12. 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.

13. Residual Waste

Volume / Weight	1,750 cubic metres / 1,750 Tonnes
On Site Reuse	No
Off Site Destination	Suez Eastern Creek 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, if required.

PART 4 – GARBAGE CHUTE SYSTEM

4.1 CHUTE DESIGN REQUIREMENTS

Garbage Chute Systems will be incorporated into the building design. The chute system will be for the disposal of waste material only.

There will be two (2) chutes in all, one for each core of the building:

- Chute 1 – South Core (Albert Road) – containing 66 x 1 , 2 bed and 3 bed room residential units from Levels 1 to 10 and two (2) ground floor commercial units comprising of 202sqm, and,
- Chute 2 – North Core (Pilgrim Avenue) – containing 98 x 1 and 2 bed room residential units from the Level 1 Ground Floor to Level 14.

Two (2) bin chute rooms will be located on the ground floor (Level 00) which is common to all buildings.

Waste and Recycling Compartments will be located on each residential floor of all cores and both buildings for residents to deposit their waste (into the chute) and recyclables (into a 240-litre bin located next to the chute).

There are four (4) apartments located on the ground floor that do not have access to the waste and recycling compartments. The residents of these units will deposit their waste and recycling material directly into the designated bins in the bin presentation area on the ground floor.

4.2 CHUTE SYSTEM 1 SOUTH (ALBERT ROAD) CORE

The Waste and Recycling Compartments for all 66 units situated in this Core are located on the south-eastern side of the lobby on each residential floor next to the fire stair and opposite the lifts as indicated on the Architectural Drawings.

Each compartment will have approximate internal dimensions of 3.0m x 1.0m, with a floor area of 3.0sqm, and will provide space for:

- The garbage 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, and,
- 2 x 240-litre recycling bins next to the chute.

All waste deposited into the Waste Chute will discharge into 1 x 660-litre mobile waste bin positioned under the chute outlet point of a 2 x 660-litre bin splitter system in Bin/Chute Room 1 on the southern side of the ground floor as indicated on the Architectural Drawings.

Based on Council's waste generation rates (120-litres of space per unit per week), it is anticipated that the 66 units in this core will generate 7,920 litres of waste per week, or 1,131.42 litres per day.

The capacity of the 2 x 660-litre bin splitter system is 1,320 litres. Accordingly, the bin/chute will be inspected at least one (1) time per day in order to ensure that waste receptacles will be removed when full.

Representatives of the Owners Corporation will be responsible for transferring full 660-litre waste bins from under the chute into the Residential Waste Collection Area located on the Ground Floor where they will be stored prior to collection.

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

Representatives of the Owners Corporation 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.

4.3 CHUTE SYSTEM 2 – NORTH (PILGRIM AVENUE) CORE

The Waste and Recycling Compartments for all 98 units situated in this Core are located on the northern side of the lobby on each residential floor opposite the lifts as indicated on the Architectural Drawings.

Each compartment will have approximate internal dimensions of 3.0m x 1.0m, with a floor area of 3.0sqm, and will provide space for:

- The garbage 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, and,
- 2 x 240-litre recycling bins next to the chute.

All waste deposited into the Waste Chute will discharge into 1 x 660-litre mobile waste bin positioned under the chute outlet point of a 4 x 660-litre bin carousel system in Bin/Chute Room 2 on the northern side of the ground floor as indicated on the Architectural Drawings.

Based on Council's waste generation rates (120-litres of space per unit per week), it is anticipated that the 98 units in this core will generate 11,760 litres of waste per week, or 1,680.00 litres per day.

The capacity of the 4 x 660-litre bin carousel system is 2,640 litres. Accordingly, the bin/chute will be inspected at least one (1) time per day in order to ensure that waste receptacles will be removed when full.

Representatives of the Owners Corporation will be responsible for transferring full 660-litre waste bins from under the chute into the Residential Waste Collection Area located on the Ground Floor where they will be stored prior to collection.

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

Representatives of the Owners Corporation 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.

4.4 OPERATIONAL REQUIREMENTS – BOTH CHUTES

At a minimum, each Garbage 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 Garbage 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.

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: -

a) Displaying signage indicating appropriate use of all waste management systems, including what is and what is not recyclable.
b) Educating residents in the correct use of the chute, and the need to keep bulky items out of the chute systems.
c) Providing regular maintenance, including cleaning and unblocking chutes.
d) 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.
e) 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.

Resident access to all bin/chute rooms is not permitted. Only the Building Manager or their authorised representative can access these areas.

All bin storage and serving rooms allocated on each habitable floor must be designed to comply with BCA and be fire-rated.

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 2016,
6. Rooms are 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 in accordance with requirements of the BCA 2016.

4.6 MANAGEMENT OF RECYCLING

Residents will place their recycling material into one of the 2 x 240-litre mobile recycling bins located in the waste and recycling compartment on that level of the building.

A representative of the Owners Corporation will be responsible for transporting full 240-litre mobile bins from the compartment on each floor of the building into the recycling bin storage area of the Residential Waste Collection Area on the ground floor.

An empty 240 litre mobile recycling bin will be placed in the waste and recycling compartment when a full one is removed.

Servicing and replacement of 240 litre recycling bins located in the waste and recycling compartments on each residential level of the building 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 representatives of the Owners Corporation.

PART 5 – ONGOING 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 construction of a part five (5), part eleven (11) and part (15) storey building of mixed commercial and residential components.
2. As there are both residential and commercial components within the building, separate waste storage facilities will be provided for each component.
3. The residential component of the building will be constructed of two (2) cores:
   a) Albert Road Core containing 70 x 1, 2 and 3 bed room units,
   b) Pilgrim Ave Core containing 98 x 1, 2 and 3 bed room units.
4. A Garbage Chute System will be incorporated into the building design for the residential component for the reception of waste material only for all cores over all levels from Level 1 up.
5. Where chutes are installed Waste and Recycling Compartments will be provided to all residential levels of the building for the use of residents to deposit both waste into the chute hopper.
6. All waste from the garbage chute will fall into 1 x 660-litre waste bin located under the chute outlet compartment located in the one (1) of two (2) bin/chute rooms located in Ground level (Level 00) as indicated in the Architectural Drawings.
7. Also located in each Waste and Recycling Compartment, provided on all residential levels, will be 2 x 240-litre recycling bins for residents to dispose of their recycling material.
8. All full recycling bins will be transferred from each recycling compartment by the Building Manager or their representative, into the Residential Waste Collection Area (RWCA) on the ground floor, where they will be stored prior to servicing.
9. The RCSA is located on the ground floor as indicated in the Architectural Drawings.
10. All waste and recycling services for both the residential and commercial components of the building will take place from a dedicated Loading Bay located adjacent to the RWCA.
11. In order to meet Council's servicing requirements, all residential waste will be stored in 32 x 660-litre red lidded waste bins.
12. In order to meet Council's servicing requirements, all recycling will be stored in 86 x 240-litre yellow lidded recycling bins.
13. Residential waste services will be weekly.
14. Residential recycling services will be provided fortnightly.

15. The number and size of bins have been calculated from information provided by Strathfield Council, and from the Strathfield DCP 2015 – Part H – Waste Management and Minimisation Plan.
16. Strathfield Council will provide all waste and recycling services to the complex.
17. The loading bay will be designed to accommodate a rear loading MRV collection vehicle.
18. Two (2) commercial units will be located on the ground level of the complex in the Albert Road core.
19. Commercial waste and recycling services will be provided to the units in accordance with Council's DCP as specified in this WMP.
20. All commercial waste and recycling bins will be stored in commercial waste storage areas as detailed in Part 5.9.5 on page 37.
21. A licensed private waste collection contractor will provide all commercial waste and recycling services to the complex.
22. 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, or in the case of the building without the chute the RWSA.

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.

No formal green waste service will be provided to the development.

It will be the responsibility of the Owners Corporation to ensure that all green waste generated from the on-going use of the development is disposed of appropriately.

5.5 RESIDENTIAL WASTE & RECYCLING – SERVICE ARRANGEMENTS

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

- Waste – 120 litres of bin space per unit per week, serviced twice weekly; and,
- Recycling – 60 litres of bin space per unit per week, serviced fortnightly.

All waste and recycling generation rates were obtained from discussions with Council staff, and from information contained in the Strathfield DCP 2015 – Part H.

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	168	120	20,160	660	1	30.54	32
Recycling	168	60	10,080	240	0.5	84.00	86

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
32 x 660-litre bins / 1 x Weekly	86 x 240-litre bins / 1 x Fortnightly

5.6 PROVISION OF WASTE & RECYCLING SERVICES

5.6.1 Waste and Recycling Collection Service Provider Details

Strathfield Council will provide all residential waste and recycling services to the building.

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)
240-litre mobile container	1.080	0.735	0.585
660-litre mobile container	1.470	1.070	1.240

In addition to the number of 660-litre mobile waste bins required by Council as part of their service requirements, the Owners Corporation will provide an additional number of 660-litre mobile waste bins in order to ensure that a bin is provided at all times below the Garbage Chute Outlet.

In addition to the number of 240-litre mobile recycling bins required by Council as part of their service requirements, the Owners Corporation will provide an additional number of 240-litre mobile recycling bins in order to ensure that a bin is provided at all times in the Recycling Compartments on each residential floor level.

5.6.4 Waste & Recycling Requirements

Waste and recycling requirements are provided in the table below.

SERVICE	NUMBER OF CONTAINERS	COLLECTION FREQUENCY
Waste Service	32 x 660-litre mobile containers	One (1) Service per Week
Recycling Service	86 x 240-litre mobile containers	One (1) Service per Fortnight

5.6.5 Location, Design, and Construction of Waste and Recycling Compartments, Chute/Bin Rooms and Collection Area

Details of all waste storage facilities are listed below.

5.6.5.1 Garbage Chute Compartments

Where chutes are installed a service room in the form of a 'Waste and Recycling Compartment' (See Floor Plans) will be provided to each residential level of the of each core of the building.

Each compartment is of varying dimension, but all will provide sufficient space for:

- A garbage chute, which will have internal dimensions of 750 mm x 750 mm and be installed within these confines in a fire rated compartment, and
- 2 x 240-litre recycling bins.

Residents will place their recycling material into one of the 2 x 240-litre mobile recycling bins located in the Recycling Compartment on that level of the building.

5.6.5.2 Bin/Chute Room 1 – Albert Road Core

All waste deposited into the Waste Chute for the 66 units in this core of the building will discharge into one (1) x 660-litre mobile waste bin located under a 2 x 660-litre bin splitter system under one of the two chute outlet points in Bin/Chute Room 1.

Bin/Chute Room A is a fully enclosed rectangular structure measuring 8.0m x 4.0m with an area of 32.0sqm. Within its confines will be space for:

- The Waste chute outlet point with the 2 x 660-litre waste bin splitter located under,
- Storage space for 10 x 660-litre mobile bins,
- A 1.5m wide access doorway, and,
- Appropriate infrastructure.

5.6.5.3 Bin/Chute Room Building 2– Pilgrim Avenue Core

All waste deposited into the Waste Chute for the 98 units in this core of the building will discharge into one (1) x 660-litre mobile waste bin located on a 4 x 660-litre bin carousel system under one of the two chute outlet points in Bin/Chute Room 2.

Bin/Chute Room 2 is a fully enclosed rectangular structure measuring 6.0m x 5.5m with an area of 33.0sqm. Within its confines will be space for:

- The Waste chute outlet point with the 4 x 660-litre waste bin carousel system located under,
- Storage space for 15 x 660-litre mobile bins,
- A 1.5m wide access doorway, and,
- Appropriate infrastructure.

5.6.5.4 Residential Waste Storage / Bin Presentation Areas

There are three separate area provided for all bins to be stored prior to servicing.

The Waste Bin Storage (Presentation) Area is located on the ground floor of the building adjacent to the driveway into the building at the entry to the ‘garbage area’ on the eastern side of the Loading Bay as indicated on the Architectural Drawings. It has sufficient space for the storage for servicing of all 32 x 660-litre waste bins required to be serviced by Council.

The Recycling Bin Storage (Presentation) Areas are located on either side of the Loading Bay Storage as indicated on the Architectural Drawings. Both areas have sufficient space to store all 86 space x 240-litre recycling bins required to be serviced by Council, which are within 5.0 metres of the Loading Bay.

5.6.5.5 Waste Collection Area (WCA) / Loading Bay

All residential waste and recycling bins will be serviced from a dedicated Loading Bay located adjacent to the RWSA. The loading bay will be designed to accommodate a MRV rear loading collection vehicle, with a minimum operational and travel height clearance provided for its access of 3.6m.

Council’s rear loading waste collection vehicle will be used to provide all residential waste and recycling services to the building. Based on information provided by Council, the vehicle will be a MRV, with the following approximate dimensions:

- Length – 8.8m,

- Operational Height – 3.6m,
- Width – 2.82m (mirror to mirror), and,
- A 22m swept path.

As required by Council, all collection vehicles will enter and exit the building in a forward direction. Collection and servicing activities will take place in the following manner: -

1. The Collection vehicle will enter the building from Pilgrim Avenue on the western side of the site and proceed into the building.
2. The collection vehicle will reverse into the loading bay so that the rear of the vehicle is facing towards the eastern side of the RWSA.
3. A member of Council's collection team will remove the bins from the RWSA and place the bins onto the rear lifter which will load the bins into the body of the collection vehicle.
4. Once the bins have been serviced, they will be returned to the RWSA a member of Council's collection team.
5. The vehicle will then exit the building in a forward direction.
6. Servicing of bins will be as specified in Sections 5.6.6 and 5.6.7 on pages 29 and 30 of this Plan.

All internal access, parking and servicing arrangements are to comply with all relevant Australian Standards.

5.6.6 Servicing Arrangements – Residential Waste Collections

All waste services will be provided by Strathfield Council, 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 waste collections will take place from the loading bay located adjacent to the RWSA.

A member of Council's collection team will remove the bins from the RWSA and place the bins onto the rear lifter which will load the bins into the body of the collection vehicle.

Once the bins have been serviced, they will be returned to the RWSA by a member of Council's collection team.

The waste bins will be serviced one (1) day per week, on a day to be determined by the Council.

All 32 x 660-litre mobile waste bins will be presented for servicing on each collection day.

5.6.7 Servicing Arrangements – Residential Recycling Collections

All recycling services will be provided by Strathfield Council, 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 recycling collections will take place from the loading bay located adjacent to the RWSA.

A member of Council's collection team will remove the bins from the RWSA and place the bins onto the rear lifter which will load the bins into the body of the collection vehicle.

Once the bins have been serviced, they will be returned to the RWSA by a member of Council's collection team.

The recycling bins will be serviced one (1) day per fortnight, on a day to be determined by the Council.

All 86 x 240-litre mobile recycling bins will be presented for servicing on each collection day.

5.7 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.

5.8 BULKY WASTE STORAGE AREAS (BWA'S)

Secure storage spaces are required to be provided for each residential unit in accordance with the provisions of Council's DCP 2015.

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

The Bulky Waste Storage Area is located in the adjacent to loading bayas indicated on the Architectural Drawings. It has an area of 70sqm as required by Council.

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

Regular maintenance of the area will be carried out.

The Owners Corporation will also be responsible for arranging Clean Ups 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.

Further information in relation to Council's Clean-up service can be obtained from Council's website at www.strathfield.nsw.gov.au

5.9 COMMERCIAL WASTE & RECYCLING SERVICES

5.9.1 Details of Commercial Land Uses

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

TABLE 3 – COMMERCIAL UNITS

TENANCY	PROPOSED USE	LOCATION	FLOOR AREA (Sqm)
Commercial 1	To be Determined	Ground Floor	89.37
Commercial 2	To be Determined	Ground Floor	111.94

Notwithstanding the fact that the use of each unit has yet to be determined, for the purposes of this WMP is will be assumed that the units will be used for the following activities:

- Commercial 1 – Retail shop (no food),
- Commercial 2 – Takeaway food shop.

5.9.2 Waste & Recycling Generation Rates

The Table below (Table 4) details the waste and recycling generation rates for the land uses proposed. These rates have been obtained from Appendix B – Waste and Recycling Generation Rates on page 272 of Council's Waste Management DCP.

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

SERVICE	LAND USE	WASTE & RECYCLING GENERATION RATES
Waste	Retail (No Food)	50 litres of waste per 100sqm of floor area per day – more than 100sqm
Recycling	Retail (No Food)	50 litres of recyclables per 100sqm of floor area per day – more than 100sqm
Waste	Office	10 litres of waste per 100sqm of floor area per day
Recycling	Office	10 litres of recyclables per 100sqm of floor area per day
Waste	Takeaway Food Shop	80 litres of waste per 100sqm of floor area per day
Recycling	Takeaway Food Shop	40 litres of recyclables per 100sqm of floor area per day

5.9.3 Commercial Waste Service Requirements

The following table (Table 5) specifies the criteria for waste generation rates (as specified in Part 5.9.2.

TABLE 5 – COMMERCIAL WASTE GENERATION RATES & SERVICE REQUIREMENTS

DESCRIPTION	COMMERCIAL 1 Retail No Food	COMMRCIAL 3 Takeaway Food
Waste Generation Rate	50L/100sqm Floor Area/Day	80L/100sqm Floor Area/Day
Total Floor Area	90sqm	112Sqm
Waste Generation/Week	90 / 100 x 50 x 7 (Days)	112 / 100 x 80 x 7 (Days)
Space Required/Week	315.00	627.20
TOTAL SPACE BOTH UNITS	**942.20-litres of Space to be serviced per Week**	
SERVICE REQUIREMENTS	**1 x 1100-Litre Mobile Waste Bins Serviced One (1) Day per Week (1,100-Litres of Space Serviced per Week)**	

It is considered that the most efficient, economic and practical method of providing waste services to all 3 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 waste 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 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.

5.9.4 Commercial Recycling Service Requirements

The following table (Table 6) specifies the criteria for recycling generation rates (as specified in Part 5.9.2).

TABLE 6 – COMMERCIAL RECYCLING GENERATION RATES & SERVICE REQUIREMENTS

DESCRIPTION	COMMERCIAL 1 Retail No Food	COMMRCIAL 3 Takeaway Food
Recycling Generation Rate	50L/100sqm Floor Area/Day	40L/100sqm Floor Area/Day
Total Floor Area	90sqm	112Sqm
Waste Generation/Week	90 / 100 x 50 x 7 (Days)	112 / 100 x 40 x 7 (Days)
Space Required/Week	315.00	313.60
TOTAL SPACE BOTH UNITS	**628.60-litres of Space to be serviced per Week**	
SERVICE REQUIREMENTS	**2 x 240-Litre Mobile Waste Bins Serviced Two (2) Days per Week (960-Litres of Space Serviced per Week)**	

It is considered that the most efficient, economic and practical method of providing recycling services to both units would be to have one (1) service provider doing all services. One (1) x 240-litre mobile recycling bin to be provided to each unit, each serviced two (2) day pers week, would satisfy Council's requirements in this regard.

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.

5.9.5 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 Basement1 adjacent to Bin/Chute Room Building B. it is a fully enclosed square structure, measuring 3.0m x 3.0m with an area of 9sqm, and will provide space for:

- 1 x 1100-litre waste bin, and,
- 2 x 240-litre recycling bins.

All waste and recycling material derived from all commercial units on the Ground Floor will be stored within the confines of the Commercial WSA.

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.

5.9.6 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 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.

All services will be provided from the loading bay, and all commercial waste and recycling bins will be returned to the CWSA immediately after they have been serviced.

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 walls and floors of all Bin/Chute Rooms and WSA's are 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 all waste storage facilities, and the floors will be graded to drain into it.
4. Appropriate washing facilities will be provided to all waste storage facilities, including appropriate plumbing and drainage fixtures and fittings, and the provision of running water.
5. All waste storage facilities will 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 all waste storage facilities, providing instruction to residents 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.
11. All waste rooms and common areas will have signs providing information on proper waste management, litter prevention, clean up collection and better recycling.
12. All bin routes from the respective waste rooms to the collection points have been provided with a minimum width of 2.5m, and are constructed of impervious 'hard' surfaces and are free of steps and excessive gradients. All travel distances and transfer of bin sizes and capacity are considered acceptable.
13. As the transfer of waste and all bin movements involve manual handling, all operational, work health and safety task will undergo risk assessments and documentation will be provided to support these assessment and their results
14. Where the bin-carting route from the storage areas to the collection point exceeds the acceptable maximum permitted distances for 660-litre or a large number of bins need to be moved around the site, a Mobile Bin Towing Device will be provided (according to EPA's "Better practice guide for resource recovery in residential developments").

PART 6 – SUMMARY

6.1 SUMMARY

In summarising this proposal, the following information is provided:

1. This Waste Management Plan (WMP) has been developed and documented generally in accordance with the Strathfield Council DCP 2015 – Part H - Waste Management and Council's waste management RFI.
2. The number and size of bins have been calculated from information provided by Strathfield Council.
3. All residential waste and recycling services will be provided by Strathfield Council.
4. All commercial waste and recycling services will be provided by a licensed private waste and recycling collection contractor.
5. 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.
6. The WMP aims to promote the use of recyclable materials in the excavation, demolition, construction and on-going operation of the building;
7. 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.
8. 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.

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 Strathfield Council.