

DICKENS SOLUTIONS

AMENDED
WASTE MANAGEMENT PLAN
(VERSION 3)

FOR
URBAN LINK PTY LTD
(H. CORP NATIONAL PTY LTD)

PROPOSED
RESIDENTIAL FLAT BUILDING
(INCORPORATING A CHILD CARE
CENTRE)

@

71 PARK AVENUE
KINGSWOOD
JUNE 2018

DISCLOSURE STATEMENT

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

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

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

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

TABLE OF CONTENTS

PART	SUBJECT	PAGE
PART 1 – OVERVIEW & PROPOSAL		
1.1	Executive Summary	3
1.2	Introduction	4
1.3	Description of Property	4
1.4	Applicants Details	5
1.5	Proposal	5
PART 2 – DEMOLITION		
2.1	Demolition – Generally	6
PART 3 – CONSTRUCTION		
3.1	Construction – Generally	7
3.2	Construction – Recycling, Reuse and Disposal Details	7
3.3	Construction – On Site Storage of Materials	11
3.4	Construction – Excavated Material	11
PART 4 – GARBAGE CHUTE SYSTEM		
4.1	Design Requirements	12
4.2	Use and Operation of Garbage Chute 1 – Southern Core	13
4.3	Use and Operation of Garbage Chute 1 – Northern Core	14
4.4	On Going Use, Maintenance & Management	15
4.5	Management of Recycling	15
PART 5 – ON GOING USE		
5.1	Objectives	17
5.2	Assumptions	17
5.3	Residential Waste Handling & Management	18
5.4	Residential Waste & Recycling – Service Requirements	18
5.5	Residential Waste & Recycling – Service Arrangements	18
5.6	Provision of Residential Waste & Recycling Services	19
5.7	Waste Services – Child Care Centre	22
5.8	Green Waste	23
5.9	Bulk Waste	23
5.10	On Going Operation, Use & Management of Facilities	24
PART 6 – SUMMARY		
6.1	Summary	26
PART 7 – ADDENDUMS		
7.1	Addendum 1	27

PART 1 – OVERVIEW AND PROPOSAL

1.1 EXECUTIVE SUMMARY

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

The aims and objectives of this WMP are to: -

- 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; and,
- e) Ensure that the provision of waste and recycling services to the completed building is carried out in an efficient manner, which will not impact negatively on the health, safety and convenience of all stakeholders.

This WMP is prepared in accordance with: -

- Penrith Local Environment Plan 2010;
- Penrith DCP 2014 – Part C5 – Waste Management;
- All conditions of consent issued under the approved Development Application;
- The 'Better Practice Guide for Waste Management in Multi Unit Dwellings';
- The objective of ensuring that all waste management facilities and collection services will provide an outcome that will be effective and efficient, as well as promote the principles of health, safety and convenience.

This Waste Management Plan has been prepared for a Development Application to be submitted to Penrith City Council, for the construction of a five (5) storey residential flat building, containing 50 x one, two and three bed units, as well as incorporating a child care centre on part of the ground floor area, at 71 Park Avenue, Kingswood.

This Amended WMP is dated 1 June 2018 and supercedes all previous versions of the document.

The WMP has been amended to address all waste management issues in relation to Council's correspondence dated 30 April 2018.

The specific issues that Council referred to in that correspondence have also been attached to this Amended WMP as Addendum 1 on pages 27-30 of this document. All of the information in the Addendum has been incorporated into this Amended Waste Management Plan.

1.2 INTRODUCTION

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

DESCRIPTION	One x five (5) Storey Residential Flat Building.
NUMBER OF UNITS	50 Sole Occupancy Residential Units consisting of: - <ul style="list-style-type: none">- 4 x 1 bed units;- 44 x 2 bed units;- 2 x 3 bed units;- 1 x Child Care Centre on the ground floor; and, Two (2) basement Levels for the provision of car parking, service and ancillary facilities
LOCATION	71 Park Avenue, Penrith
LGA	Penrith City Council

1.3 DESCRIPTION OF PROPERTY

PROPERTY DESCRIPTION	The development is to be constructed over one (1) existing Torrens Title allotment at Lot 101, DP 816440, No 71 Park Avenue, Kingswood
STREET ADDRESS	71 Park Avenue, Kingswood.
DIMENSIONS	- Front (Park Road) Boundary – 30.58m; - Rear (North) Boundary – 30.49m; - Side (West) Boundary – 63.20m; and, - Side (East) Boundary – 65.43m.
AREA	1,960.4 square metres
ZONING	Zone R4 – High Density Residential
PLANNING INSTRUMENTS	Penrith LEP 2010. Penrith DCP 2014.

The site occupies one (1) large Torrens Title allotment, on the northern side of Park Avenue, Kingswood, a short distance east of Richmond Road.

The site is directly opposite the Kingswood Railway Station and a short distance north of the Kingswood Town Centre, which is on the opposite of the railway line, and the Great Western Highway.

The site is situated approximately 3km east of the Penrith CBD, and 1.5km east of the Nepean Hospital.

The land is currently vacant. The immediate surrounding development to the north, and east primarily consists of medium density residential housing, with some pockets of low density (villa, town houses, single dwellings) in its vicinity. South of the site, also consists of low density housing.

To the west of the site are low density housing areas, small pockets, of light industrial, and passive and active recreation areas.

1.4 APPLICANTS DETAILS

APPLICANT	Urban Link Pty Ltd (H. Corp National Pty Ltd)
ADDRESS	PO Box 2223, Burwood. NSW. 2134.
TELEPHONE	02 9745 2014
E-MAIL	lujie@urbanlink.com.au

1.5 PROPOSAL

The proposal involves the construction of a five (5) storey residential flat building, at 71 Park Avenue, Kingswood, comprising:

- 50 residential units (4 x 1 bed, 44 x 2 bed, and 2 x 3 bed);
- A child care centre on part of the ground floor area; and,
- Two (2) basement levels.

The basements provide for: -

- Resident, visitor, and adaptable car parking;
- Storage spaces, bicycle spaces;
- Provision for waste management facilities; and,
- Ancillary services, areas for lift wells, and other facilities in each basement.

Vehicular egress from the site will be onto Park Avenue on the southern side of the site.

All waste management activities and facilities are located and will take place from dedicated storage and collection areas located in Basement 1.

Two garbage chute systems for the reception of all waste and recyclable material, will be incorporated into the building design.

The site is vacant.

The project consists of:

- a) The excavation of the site to construct two (2) basement levels for car parking and other services;
- b) The construction of a five (5) storey residential flat 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 DEMOLITION

2.1.1 Generally

The land is vacant. As such there is no demolition component to this WMP. All materials removed as part of excavation and site-works will be dealt with under 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 and 11 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 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 construction waste that will be reused or recycled.

1. Excavated Materials

Volume / Weight	13,650 cubic metres / 23,205 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 receipt authority.

2. 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	Brandown, Lot 9 Elizabeth Drive, Kemps Creek (Tel 02 9826 1256) 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	5 cubic metres / 12 Tonnes
On Site Reuse	Existing driveway to be retained during construction. Crushed and used as aggregate, drainage backfill.
Percentage Reused or Recycled	60% - 75%
Off Site Destination	Brandown, Lot 9 Elizabeth Drive, Kemps Creek (Tel 02 9826 1256) or, 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	5 cubic metres / 7 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) or, Hallinan's Recycling Centre, 37 Lee Holm Road, St. Marys (Tel 02 9833 0883)

5. Plasterboard & Fibro

Volume / Weight	12 cubic metres / 4 Tonnes
On Site Reuse	Break up and use in landscaping. Any material containing asbestos will be dealt with separately
Percentage Reused or Recycled	To be determined – depended on quantities of asbestos
Off Site Destination	Ecocycle, 155 Newtown Road, Wetherill Park (Tel 02 0757 2999) or, Jacks Gully Waste Management Centre, Richardson Road, Narellan (Tel 1300 651 116)
Off Site Destination (Asbestos)	Jacks Gully Waste Management Centre, Richardson Road, Narellan (Tel 1300 651 116) or, Enviroguard, Cnr Mamre and Erskine Roads, Erskine Park (Tel 02 9834 3411).

6. Metals / Steel / Guttering & Downpipes

Volume / Weight	15 cubic metres / 3.75 Tonnes
On Site Reuse	No
Percentage Reused or Recycled	60 – 90%
Off Site Destination	Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 424 646) 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. Roof Tiles / Tiles

Volume / Weight	8 cubic metres / 6 Tonnes
On Site Reuse	Broken up and used as fill.
Percentage Reused or Recycled	80% - 90%
Off Site Destination	Obsolete Tiles, 3 South Street, Rydalmere. (Tel 02 9684 6333) or, Hallinan's Recycling Centre, 37 Lee Holm Road, St. Marys (Tel 02 9833 0883) or, Bingo Industries, 3-5 Duck Street, Auburn (Tel 1300 424 646)

8. Plastics

Volume / Weight	6 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	6 cubic metres / 1 Tonne
On Site Reuse	No
Percentage Reused or Recycled	70% - 90%
Off Site Destination	To an approved agency, or agencies.

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

Volume	25 cubic metres / 8 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)

11. Pallets

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

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 building, which are beyond the control of the developer, including but not being limited to theft, accidents, and other acts of misadventure.

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 receipt 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 demolished materials 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 excess to the construction of the building.

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

3.3 CONSTRUCTION – ON SITE STORAGE OF MATERIALS

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

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

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

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

3.4 CONSTRUCTION – EXCAVATED MATERIAL

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

All relevant details must be reported to the PCA.

PART 4 – GARBAGE CHUTE SYSTEM

4.1 DESIGN REQUIREMENTS

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

Two (2) Garbage Chute Systems will be provided, one for each core of the building: -

- Chute 1 – South Core; and,
- Chute 2 – North Core.

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

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

All waste deposited into the waste chutes for both cores, will discharge into 1100 mobile bins placed onto a two (2) bin mechanically operated linear track system in the bin room in Basement 1.

All recyclable material deposited into the recycling chutes for both cores, will discharge into 1100 mobile bins placed onto a two (2) bin mechanically operated linear track system in the bin room in Basement 1.

Each chute will be located adjacent to one another in a 'Chute Compartment'. A chute compartment will be located on each residential floor of both buildings.

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

1. Chutes and service openings must be constructed of metal or other smooth faced, durable, fire resistant and impervious material of non-corrosive nature.
2. Chutes will be cylindrical in section with a minimal internal diameter of 500 mm. The diameter around each chute will be a minimum width of 750 mm to allow for infrastructure fittings, such as fixing brackets and noise insulation.
3. Chutes will be vertical without bends or "off-sets" (except for the chute outlets) and not be reduced in diameter.
4. The waste chute in the South Core will terminate on the southern side of the Bin Room located in Basement 1 and discharge all waste directly into an 1100 receptacle placed onto the 2 Bin Linear track system.
5. The recycling chute in the South Core will terminate on the southern side of the Bin Room located in Basement 1 and discharge all recyclable material directly into an 1100 receptacle placed onto the 2 Bin Linear track system.
6. The waste chute in the North Core will terminate on the northern side of the Bin Room located in Basement 1 and discharge all waste directly into an 1100 receptacle placed onto the 2 Bin Linear track system.
7. The recycling chute in the Northern Core will terminate on the northern side of the Bin Room located in Basement 1 and discharge all recyclable material directly into an 1100 receptacle placed onto the 2 Bin Linear track system.
8. The Chute and service openings must be capable of being easily cleaned.
9. Chutes must be ventilated to ensure that air does not flow from the chute through any service opening.

10. 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).
11. All Linear Bin Systems will be designed, manufactured and installed in accordance with relevant Australian Standards and to manufacturers specifications.

4.2 USE & OPERATION OF GARBAGE CHUTE – CHUTE 1 – SOUTH CORE

In the South Core of the building, a 'Chute Compartment' is provided to each residential floor level of the building. Each chute compartment is located at the end of the lobby on the eastern side of the lift.

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

4.2.1 – Waste Chute

Residents will deposit waste material into the chute inlet hopper, labelled 'Waste Chute – Reception of Garbage Only'. Waste from the chute outlet will fall directly into an 1100 litre mobile waste bin located in the Garbage Chute Outlet Compartment on the southern side of the Bin Room, in Basement 1.

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

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

Representatives of the Owners Corporation will be responsible for transferring full 1100-litre waste bins from the Bin Room, into the Residential Waste Collection Area located in the north-eastern corner of Basement 1 (See Basement 1 Plan).

Bins will be transferred to the collection area on the ground floor by way of a Mobile Bin Towing Device.

The Garbage Chute Outlet Compartment will be inspected daily in order to ensure that receptacles will be removed when full. Full bins will be removed from the Chute compartment and replaced immediately with an empty one.

4.2.2 – Recycling Chute

Residents will deposit waste material into the chute inlet hopper, labelled 'Recycling Chute – Reception of Recycling Material Only'. Recycling material from the chute outlet will fall directly into an 1100 litre mobile recycling bin located in the Recycling Chute Outlet Compartment on the southern side of the Bin Room, in Basement 1.

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

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

Representatives of the Owners Corporation will be responsible for transferring full 1100-litre recycling bins from the Bin Room, into the Residential Waste Collection Area located in the north-eastern corner of Basement 1 (See Basement 1 Plan).

Bins will be transferred to the collection area on the ground floor by way of a Mobile Bin Towing Device.

The Recycling Chute Outlet Compartment will be inspected daily in order to ensure that receptacles will be removed when full. Full bins will be removed from the Chute compartment and replaced immediately with an empty one.

4.3 USE & OPERATION OF GARBAGE CHUTE – CHUTE 2 – NORTH CORE

4.3.1 – Waste Chute

Residents will deposit waste material into the chute inlet hopper, labelled 'Waste Chute – Reception of Garbage Only'. Waste from the chute outlet will fall directly into an 1100 litre mobile waste bin located in the Garbage Chute Outlet Compartment on the northern side of the Bin Room, in Basement 1.

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

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

Representatives of the Owners Corporation will be responsible for transferring full 1100 litre waste bins from the Bin Room, into the Residential Waste Collection Area located in the north-eastern corner of Basement 1 (See Basement 1 Plan).

Bins will be transferred to the collection area on the ground floor by way of a Mobile Bin Towing Device.

The Garbage Chute Outlet Compartment will be inspected daily in order to ensure that receptacles will be removed when full. Full bins will be removed from the Chute compartment and replaced immediately with an empty one.

4.3.2 – Recycling Chute

Residents will deposit waste material into the chute inlet hopper, labelled 'Recycling Chute – Reception of Recycling Material Only'. Recycling material from the chute outlet will fall directly into an 1100 litre mobile recycling bin located in the Recycling Chute Outlet Compartment on the northern side of the Bin Room, in Basement 1.

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

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

Representatives of the Owners Corporation will be responsible for transferring full 1100 litre recycling bins from the Bin Room, into the Residential Waste Collection Area located in the north-eastern corner of Basement 1 (See Basement 1 Plan).

Bins will be transferred to the collection area on the ground floor by way of a Mobile Bin Towing Device.

The Garbage Chute Outlet Compartment will be inspected daily in order to ensure that receptacles will be removed when full. Full bins will be removed from the Chute compartment and replaced immediately with an empty one.

4.4 LINEAR BIN TRACK SYSTEM

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

Any breakdowns or system malfunctions are to be attended to and addressed immediately.

In the event of any system breakdown, the Owners Corporation shall make immediate alternative arrangements to ensure that there is no disruption to the provision of scheduled waste and recycling services, and that any spillage from the bins as a result of any disruption to the system is removed and cleaned up immediately.

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.

4.5.2 Chute Room Infrastructure

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

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

4.5.3 Chute Construction Requirements

As Council would appreciate, whilst the installation of chutes has a range of generic requirements, the actual installation of the chute system is dependent upon the unique characteristics of the design of the building. In this regard each system is specifically designed to each building specification and requirements.

Due to the positioning of the dual chutes in the Waste and Recycling Compartments above the chute outlet points in the Chute Room, and Council's requirement to locate the tracks a minimum of 900mm from one wall and 1.8m from the other, it will be necessary to extend the distance of the chute ductwork up to a maximum of 1.8 metres to reach the centre bin in the linear track system. This would mean that the angle of the chute, from its horizontal outlet point to the centre bin of the track would be approximately 35-degrees.

In contacting a number of chute manufacturers, Standards Australia, and examining the relevant requirements of the BCA, it is unable to establish whether or not there is an Australian Standard or other regulation that quantifies a minimum standard for chute angles, as well as chute ductwork travel distances. Notwithstanding, this particular method of chute installation demonstrates, that the physical properties of a horizontal gravity drop into a 35-degree angle, both waste and recycling material will fall into the bins as required.

As each system is specifically designed to each building specification and requirements, it is not uncommon for chute ductwork below the horizontal outlet to travel lengthy distances to the final point of discharge.

Manufacturers specifications, prescribe requirements for securing, mounting and bracketing chute ductwork to walls, ceilings and floors (including angling) in order to ensure structural integrity and maintain system function-ability, without limiting the effectiveness of waste disposal.

Upon the appointment of the chute manufacturer, supporting documentation, in the form of a comprehensive Manufacturers Specification will be submitted to Council on the design, manufacture and installation of the dual chute system.

PART 5 – ON GOING USE OF BUILDING

5.1 OBJECTIVES

1. To ensure 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 efficiently, and in a manner, that is efficient, and 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. Two (2) Garbage Chute Systems will be incorporated into the development, with separate Chute Systems being installed in both its southern and northern core.
2. The chutes will be dual chutes for the reception of both waste and recyclables.
3. Waste and Recycling Chute Compartments will be provided to both the southern and northern cores of all residential levels for the use of residents to deposit both waste (into the garbage chute) and recyclable material (into the recycling chute) – (see Floor Plans).
4. All waste and recycling material deposited into the chutes will discharge into separate waste and recycling bins located on a linear track system in the Bin Room in Basement 1 of the building.
5. The waste chute in the South Core will terminate on the southern side of the Bin Room located in Basement 1 and discharge all waste directly into an 1100 receptacle placed onto the 2 Bin Linear track system.
6. The recycling chute in the South Core will terminate on the southern side of the Bin Room located in Basement 1 and discharge all recyclable material directly into an 1100 receptacle placed onto the 2 Bin Linear track system.
7. The waste chute in the North Core will terminate on the northern side of the Bin Room located in Basement 1 and discharge all waste directly into an 1100 receptacle placed onto the 2 Bin Linear track system.
8. The recycling chute in the Northern Core will terminate on the northern side of the Bin Room located in Basement 1 and discharge all recyclable material directly into an 1100 receptacle placed onto the 2 Bin Linear track system.
9. All waste will be stored in 3 x 1100-litre mobile bins.
10. All recycling will be stored in 3 x 1100-litre mobile bins.
11. All waste services will be provided twice weekly.
12. All recycling services will be provided weekly.
13. The number and size of bins have been calculated from information provided by Penrith City Council, by Council staff and from information contained in Penrith Council's DCP 2014.
14. A Residential Waste Collection Room located in the north-eastern section of Basement 1 will be provided to facilitate all storage and collection activities.
15. All waste and recycling collections will take place from a dedicated waste collection loading zone adjacent to the residential waste collection room.
16. Penrith City Council will provide all residential waste and recycling services to the development.

17. A Child Care Centre is to be incorporated into the development. As such, a commercial waste and recycling service will be provided to the centre.
18. All commercial waste and recycling services will be provided by a licensed private waste and recycling collection contractor.

5.3 WASTE HANDLING & MANAGEMENT

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

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

5.4 WASTE & RECYCLING – SERVICE REQUIREMENTS

All waste and recycling materials will be stored in approved receptacles of an appropriate size. 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.

All bins will be colour coded appropriately to reflect the nature of each service component.

No green waste services will be provided to this development.

All garden and green waste generated from the on-going use of the building will be collected and disposed of privately.

5.5 WASTE & RECYCLING – SERVICE ARRANGEMENTS

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

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

All waste and recycling generation rates were obtained from discussions with and advice from Council staff, and from information contained in Penrith City Council's DCP 2014 – Part C5 – Waste Management.

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	50	120	6,000	1100	2	2.73	3
Recycling	50	60	3,000	1100	1	2.73	3

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

TABLE 2 – PROPOSED SERVICING ARRANGEMENTS

WASTE	RECYCLING
3 x 1100 litre bins / twice weekly	3 x 1100 litre bins / weekly

5.6 PROVISION OF WASTE & RECYCLING SERVICES

5.6.1 Waste and Recycling Collection Service Provider Details

Penrith City Council's respective waste and recycling contractors will provide all 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)
1100 litre mobile container	1.470	1.070	1.240

In addition to the 3 x 1100 litre mobile waste bins required by Council as part of their service requirements, the Owners Corporation will provide an additional number of 1100 litre mobile waste bins in order to ensure that a bin is provided at all times below each Waste Chute Outlet Compartment.

Similarly, in addition to the 3 x 1100 litre mobile recycling waste bins required by Council as part of their service requirements, the Owners Corporation will provide an additional number of 1100 litre mobile recycling bins in order to ensure that a bin is provided at all times below each Recycling Chute Outlet Compartment.

5.6.3 Mobile Bin Towing Device

A Mobile Towing Device will be provided to transport bins through the basement. It will be designed and manufactured to transport a minimum of 4 x 1100 litre waste bins with a weight of 1,200kg's at any one time.

As soon as the device is purchased and prior to the occupation of the building a full and comprehensive manufacturers specification of the mobile bin towing device (tug) will be provided to Council.

Prior to the occupation of the building the Owners Corporation will carry out a risk assessment of this activity and as a result will provide Council with a Safe Work Method Statement (SWMS) demonstrating how this work will be undertaken to comply with all relative work, health and safety requirements.

The Mobile Bin Towing Device will be stored in a secure location, within the Residential Waste Collection Room in Basement 1.

5.6.4 Waste & Recycling Requirements

Waste and recycling requirements are provided in the table below.

SERVICE	NUMBER OF CONTAINERS	COLLECTION FREQUENCY
Waste Service	3 x 1100 litre mobile containers	Weekly
Recycling Service	3 x 1100 litre mobile containers	Weekly

5.6.5 Location, Design, and Construction of Waste Storage Areas

5.6.5.1 Waste and Recycling Compartments – All Residential Floors

Waste and recycling compartments will be located on each residential floor level of the complex, in both cores.

Each compartment will have dimensions of 0.8m x 0.8m, and will provide space for: -

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

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

5.6.5.2 Bin Room

The bin room houses the waste and recycling chutes for both cores of the building. It is located next to Lifts 1 and 2, in the middle of Basement 1.

The waste chute in the South Core will terminate on the southern side of the Bin Room located in Basement 1 and discharge all waste directly into an 1100 receptacle placed onto the 2 Bin Linear track system.

The recycling chute in the South Core will terminate on the southern side of the Bin Room located in Basement 1 and discharge all recyclable material directly into an 1100 receptacle placed onto the 2 Bin Linear track system.

The waste chute in the North Core will terminate on the northern side of the Bin Room located in Basement 1 and discharge all waste directly into an 1100 receptacle placed onto the 2 Bin Linear track system.

The recycling chute in the Northern Core will terminate on the northern side of the Bin Room located in Basement 1 and discharge all recyclable material directly into an 1100 receptacle placed onto the 2 Bin Linear track system.

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

- Waste and recycling chute outlets for both the south and north cores;
- 4 x 1100-litre 2 bin linear track systems;
- 2 x 1100-litre spare mobile waste bins;
- 2 x 1100-litre spare mobile recycling bins;
- The mobile towing device and,
- The provision of washing and ancillary facilities.

All electrical equipment, including the provision of lighting, will be installed in accordance with the relevant Australian Standards.

Natural and mechanical ventilation will be required to be installed within each WSA in accordance with the relative provisions of the Building Code of Australia.

According to the architectural drawings the size and design of the WSA is an irregular shaped rectangular shaped structure, with a floor area of approximately 55 square metres (See Basement Floor Plan).

In assessing the size and design of the WSA, it is considered that it is of a sufficient size and dimension to adequately facilitate all waste management activities.

5.6.5.3 Waste Collection Room

A waste collection room is provided to store all 1100-litre waste and recycling bins prior to their servicing. The waste collection room is located in the north-eastern corner of basement 1.

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

- 3 x 1100-litre mobile waste bins; and,
- 3 x 1100-litre mobile recycling bins.

In assessing the size and design of the waste collection room, it is considered that it is of a sufficient size and dimension to adequately house all waste management equipment required for the building.

5.6.6 Servicing Arrangements – Waste Collections

All waste services will be provided by Penrith City Council.

Representatives of the Owners Corporation will be responsible for presenting the bins for servicing and returning them to the waste collection room, after collection.

All waste services will be provided twice per week, on days to be determined by Council.

On the evening prior to each collection day, all 1100-litre waste bins will be removed from the waste collection area and transferred to the loading zone for servicing.

The bins will be returned to the waste collection area as soon as practicable after servicing.

All 3 x 1100-litre mobile waste bins will be presented for servicing on each collection day.

5.6.7 Servicing Arrangements – Recycling Collections

All recycling services will be provided by Penrith City Council.

Representatives of the Owners Corporation will be responsible for presenting the bins for servicing and returning them to the waste collection room, after collection.

All recycling services will be provided weekly, on a day to be determined by Council.

On the evening prior to each collection day, all 1100-litre waste bins will be removed from the waste collection area and transferred to the loading zone for servicing.

The bins will be returned to the waste collection area as soon as practicable after servicing.

All 3 x 1100-litre mobile recycling bins will be presented for servicing on each collection day.

5.7 COMMERCIAL WASTE & RECYCLING SERVICES – CHILD CARE CENTRE

5.7.1 Waste & Recycling Generation – Child Care Centres

A Child Care Facility, of 420 square metres, providing day care for 90 children, will be incorporated into the development. It will be located on the ground floor of the building, on the western side of the development.

The Table below (Table 3) details the waste and recycling generation rates for the land uses proposed. These rates have been obtained from Council’s DCP ‘Commercial Waste Generation Rates Guideline’.

TABLE 3 – FORMULA FOR CALCULATION WASTE & RECYCLING GENERATION RATES FOR CHILD CARE CENTRES

SERVICE	WASTE & RECYCLING GENERATION RATES
Waste	80 litres of waste per 100m ² of floor area per day
Recycling	80 litres of recyclable material per 100m ² of floor area per day

The following table (Table 4) specifies the criteria for waste and recycling generation rates based on the above formula.

TABLE 4 – COMMERCIAL WASTE & RECYCLING SERVICE REQUIREMENTS

DESCRIPTION	WASTE	RECYCLING
Proposed Use	Child Care Centre	Child Care Centre
Waste Generation Rate	80L / 100m ² Floor Area / Day	80L / 100m ² Floor Area / Day
Total Floor Area	420m ²	420m ²
Total Waste Generation (Week)	80 X 4.2 x 5	80 x 4.25 x 5
Litres of Space per Week	1,680	1,680
Bin Size	1 x 1100-litre mobile bin	1 x 1100-litre mobile bin
Services Per Week	2	2
Total Litres of Space	2,200	2,200
Service Requirements	1 x1100 Bins / Twice per Week	1 x 1100 Bin / Twice per Week

5.7.2 Waste and Recycling Collection Service Provider Details

A licensed private waste and recycling collection contractor will provide all commercial waste and recycling services to the Child Care Centre.

5.7.3 Child Care Centre – Waste & Recycling Requirements

Waste and recycling requirements are provided in the table below.

SERVICE	NUMBER OF CONTAINERS	COLLECTION FREQUENCY
Waste Service	1 x 1100-litre mobile container	Twice Weekly
Recycling Service	1 x 1100-litre mobile container	Twice Weekly

5.7.4 Location, Design, and Construction of Waste Storage Area

A Commercial Waste Storage Area (WSA) is provided to facilitate all waste and recycling storage and collection activities. The Commercial WSA is located next to the Residential WSA, in the north-eastern corner of Basement 1.

All mobile waste and recycling bins required for the on-going operation of the development will be stored within the confines of this WSA.

5.7.5 Servicing Arrangements – Commercial Waste and Recycling

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

The proprietors of the complex will be responsible for managing their waste and recycling activities and will be required to enter into a Service Level Agreement with the contractor.

Written evidence of this agreement with the contractor will be kept on site in order to ensure that the regular collection and disposal of all waste and recycling materials generated from these activities, has taken place appropriately.

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

All waste and recycling services will be carried out so as not to impede or impact on vehicular and pedestrian traffic movement throughout and adjacent to the development.

If for any reason, the land use activity, generates more waste and, or recyclables than specified in Table 1, it will be the responsibility of the occupant of that unit to provide additional bins or services to ensure that adequate waste management facilities are provided, and that the impact to the health, safety and convenience of any other person or unit, will not be compromised.

5.8 GREEN WASTE

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.

5.9 BULKY WASTE STORAGE

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

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

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

This area is located next to the Residential WSA in the north-eastern corner of Basement 1 (See Basement 1 Floor Plan). It has a total floor area of approximately 17 square metres. Council's requirements for 50 units is 7.7 square metres.

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

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

Regular maintenance of the Bulky Waste Storage area is area will be carried out by the Owners Corporation.

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

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

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

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

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

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

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

1. The Chute and Linear Tack Systems will be appropriately maintained in accordance with relevant manufacturers specifications and regular maintenance programs will be undertaken to ensure the efficient operation of all systems at all times.
2. The walls and floors of all Bin Rooms, Waste Storage and Collection Areas (WSA's) are to be constructed of smooth faced masonry or concrete, and all walls will be painted with light coloured and washable paint.
3. The junction between all floors and walls will be coved and sealed up to 100mm above the floor level, in order to eliminate the build-up of dirt and grime.
4. A floor waste, connected to the Sydney Water drainage system in accordance with that Authority's requirements, will be provided to all WSA's, and the floors will be graded to drain into it.
5. Appropriate washing facilities will be provided to all WSA's, including appropriate plumbing and drainage fixtures and fittings, and the provision of running water.

6. The WSA's will be washed and cleaned on a regular basis.
7. All mobile bins will be washed and cleaned on a regular basis.
8. All electrical equipment, including the provision of lighting, will be installed in accordance with the relevant Australian Standards.
9. Natural and mechanical ventilation will be required to be installed within each WSA in accordance with the relative provisions of the Building Code of Australia.
10. A Mobile Bin Towing Device, of an approved type, will be provided to transport and manoeuvre bins through the development.
11. Appropriate signage will be displayed in both basements clearly identifying waste and recycling bins and the waste storage areas.
12. Appropriate signage will be erected within each WSA providing instruction to residents on how to use waste and recycling facilities, including what is and what is not recyclable.
13. The Building Manager / Caretaker will be responsible for the supervision and management of all waste activities and facilities.
14. 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. Penrith City Council have insisted that all activities associated with the installation of waste management facilities and the provision of waste management services are to take place in accordance with the requirements of their DCP.
2. This Waste Management Plan has been developed and documented in accordance with the Council's directions.
3. The number and size of bins have been calculated from information provided by Penrith City Council.
4. All residential waste and recycling services will be provided by Council's respective waste and recycling collection contractors.
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.

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

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

PART 7 - ADDENDUMS

7.1 ADDENDUM 1- WASTE MANAGEMENT REPORT

In an E-Mail from Council to the Applicant dated 30 April 2018, Council has sought additional information in relation to a number of waste management issues associated with the proposed development.

In response to this E-Mail the following information is provided.

1. Dual Chute System

Residential flat buildings are required to incorporate dual chute systems in accordance with section 5.2.2.4, subsection 2 of the C5 DCP: 'The waste chute system will provide a separate chute for both residual and recyclable material. The submitted plans show a single chute system which does not comply with this requirement;

A dual chute system is to be incorporated into the building design – as originally intended – refer to Part 4 (pages 12-16) of the Amended Waste Management Plan (Version 3) dated 1 June 2016.

2. Positioning of Dual Chutes over Linear Track System

The northern and southern chute currently extent 2.67m to the centre of the linear track system. This configuration is not in accordance with Council's requirements. The dual chutes are required to be located over the centre of the track system to perform a waste collection service. Amended plans are to be submitted illustrating the revised location of the dual chute inlets on each level to allow the outlets to be located over the centre of the linear track system;

In relation to the positioning of the chute outlet points, advice from chute manufacturers has indicated that the installation of the chute in the Chute Room as indicated on the Basement 1 Floor Plan is an accepted form of chute installation.

As Council would appreciate, whilst the installation of chutes has a range of generic requirements, the actual installation of the chute system is dependent upon the unique characteristics of the design of the building. In this regard each system is specifically designed to each building specification and requirements.

Due to the building design, the positioning of the dual chutes in the Waste and Recycling Compartments above the chute outlet points in the Chute Room, and Council's requirement to locate the tracks a minimum of 900mm from one wall and 1.8m from the other, it will be necessary to extend the distance of the chute ductwork up to a maximum of 1.8m to reach the centre bin in the linear track system. This would mean that the angle of the chute, from its horizontal outlet point to the centre bin of the track would be approximately 35-degrees.

In contacting a number of chute manufacturers, Standards Australia, and examining the relevant requirements of the BCA, it is unable to establish whether or not there is an Australian Standard or other regulation that quantifies a minimum standard for chute angles, as well as chute ductwork travel distances. Notwithstanding, this particular method of chute installation demonstrates, that the physical properties of a

horizontal gravity drop into a 35-degree angle, both waste and recycling material will fall into the bins as required.

This angle is considered satisfactory to allow the continuous fall of waste, and, or recycling material from the end of the horizontal drop point in to the bin on the middle of the track. It is also considered that this would provide additional benefits to the overall functioning of the system, as the angle would potentially reduce the impact of material falling into the bins by reducing noise and more importantly reducing potential breakage and contamination of the recycling stream by minimising the velocity of the fall.

As each system is specifically designed to each building specification and requirements, it is not uncommon for chute ductwork below the horizontal outlet to travel lengthy distances to the final point of discharge.

Manufacturers specifications, prescribe requirements for securing, mounting and bracketing chute ductwork to walls, ceilings and floors (including angling) in order to ensure structural integrity and maintain system function-ability, without limiting the effectiveness of waste disposal.

Upon the appointment of the chute manufacturer, supporting documentation, in the form of a comprehensive Manufacturers Specification will be submitted to Council on the design, manufacture and installation of the dual chute system.

3. Clearance Zones – Access to Chutes/Tack System

A 1.8m unobstructed clearance zone between the linear/circular track system and the entrance for access and manoeuvrability is required. Plans submitted show a 1.4m clearance which is not supported;

A distance of 2.815m is provided on both sides of the Waste/Store (Chute Room) to allow for an unobstructed clearance zone to access and manoeuvre the bins – refer to Basement 1 Floor Plan.

4. Size of Waste Storage Areas

Rooms are required to be built to store the entire fleet of bins plus 0.4m between bins to allow adequate manoeuvrability. The current configuration does not provide adequate storage for the entire fleet of bins (6x 1100L bins);

The Residential Waste Collection Room in the northern end of Basement 1 will house all waste and recycling bins required to be serviced (6 x 1100-litre bins in total). The distance between each bin and adjoining walls varies between 1.0m and 1.8m.

The Basement 1 Floor Plan clearly demonstrates that this configuration provides adequate clearance between bins, and the bins can be stored and manoeuvred in and out of the room in a manner that safe, and in compliance with Council's requirements.

5. Access to Waste Collection Areas

Suitable door access for the service of bins with a minimum width of 1.8m and 1.8m unobstructed access corridor. Should a roller door be provided an additional 0.9m service door is required

All access points to all waste storage and collection areas have a minimum access doorway of 1.8m. Where roller doors are installed an additional 900mm single door, opening outwards will be provided.

6. Bulky Household Goods Room

The bulky households goods room is to be 8m² in area to allow service of the development;

The bulky waste storage area is a 17 square metres in floor area, and as such complies with Council's requirements in this regard.

7. Access to Bulky Waste Area

The bulky households goods room is to be enclosed with separate unobstructed access. The current configuration permits items/storage into the waste collection room. A separate, enclosed and unobstructed access/room is required for the storage of bulky waste items;

Access to the Bulky Waste Storage Area is by a 1.8m roller door. As required by the BCA, an additional 900mm single door, opening outwards will be provided. As such this complies with Council's requirements in this regard.

8. Room Dimensions

Room dimensions are to be designed to ensure items can be placed and manoeuvred within the room, with a minimum width of 1.8m;

The Bulky Waste Storage Area is a fully enclosed rectangular structure measuring 5.8m x 2.8m, with an access doorway of 1.8m. As such all items stored within this area are able to be place and manoeuvred in and out of the room in a satisfactory manner.

9. Door Access to Bulky Waste Area

Suitable door access for the service of bulky items with a minimum width of 1.8m and 1.8m unobstructed access corridor;

The Bulky Waste Storage Area is a fully enclosed rectangular structure measuring 5.8m x 2.8m, with an access doorway of 1.8m.

10. Minimum Room Width

Minimum room width of 1.8m to all internal walls

The minimum room width to all internal walls is 1.8m.

11. Location of Rooms

A room is to be located in close proximity to the on-site loading bay

All waste collection areas are located within close proximity to the Onsite loading bay (waste collection area).

12. Bin Movement and Transportation

The movement of bins from the basement to the waste collection room is not permitted via the basement ramp.

No bins will be transported from the basement to the waste collection rooms by the basement ramp – this is not considered practical.

13. Waste Infrastructure

Plans are required to show the following:

- **The floor must be finished so that it is non-slip and has a smooth and even surface covered at all intersections;**
- **Floor graded to a central drainage point connected to the sewer, enabling all waste to be contained and safely disposed of;**
- **Fully enclosed and roofed with a minimum internal room height in accordance with the Building Code of Australia 2016 (BCA);**
- **The room is to be provided with an adequate supply of water through a centralized mixing valve with hose cock;**
- **Incorporation of adequate lighting and naturally/mechanical ventilation to meet Building Code of Australia 2016 requirements.**

As required by Council, all onsite waste infrastructure including the Waste Chute Room Waste Chute Room, temporary Waste Storage Room, Waste Collection Room and Bulky Household goods room will need to incorporate the following minimum design specifications:

- a) The floor must be finished so that it is non-slip and has a smooth and even surface covered at all intersections;
- b) Floor graded to a central drainage point connected to the sewer, enabling all waste to be contained and safely disposed of;
- c) Fully enclosed and roofed with a minimum internal room height in accordance with the Building Code of Australia 2016 (BCA);
- d) The room is to be provided with an adequate supply of water through a centralized mixing valve with hose cock; and,
- e) Incorporation of adequate lighting and naturally/mechanical ventilation to meet Building Code of Australia 2016 requirements

All of the above information has been incorporated into the Waste Management Plan.

Garry Dickens
Waste Management Consultant
Dickens Solutions
1 June 2018.