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Waste Management Plan

Seniors Housing

66-70 Pegler Avenue, South Granville

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Document Prepared by:

Brewster Murray Pty Limited

ABN 63 804 200 206

Level 6, 99 York Street

Sydney NSW 2000

T +61 2 9299 0988

E a.geck@brewstermurray.com.au

W BrewsterMurray.com.au

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Author		Anthony Geck
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1 Contents

2 Waste Management Plan

2.1 Construction Waste Management

NOTE: The existing buildings will be demolished and clearance certificates provided under a separate application. The information below supports the application for the proposed new development.

The waste management principles of the DCP relevant to construction are:

Demolition and construction

Objectives:

- Ensure the adoption of efficient waste management strategies which include waste minimisation, re-use and recycling for demolition materials and construction waste.
- Encourage demolition, building design and construction techniques which will avoid and minimise waste generation.
- Maximise reuse and recycling of building and construction materials and minimise disposal of materials to landfill.

Controls

All materials that arise from demolition and construction shall comply with a Waste Management Plan (WMP) before recycling or disposal.

Note: The WMP shall provide details of on-site storage, volume or area estimates and information about reuse, recycling and disposal options for all waste produced on-site, including excavation materials.

The WMP is a plan that provides Council with details of the following:

- the volume and type of waste to be generated;
- how the waste is to be stored and treated on-site;
- how the waste is to be disposed of; and
- how ongoing waste management will function.

The applicant should also consider the following additional criteria when planning and undertaking demolition:

- does the site require a contaminated land assessment?
- what type of waste is going to be produced from the site?
- is the waste to be produced hazardous (e.g. does it contain lead paint or asbestos)?
- will special arrangements need to be made for the removal and disposal of
- hazardous material and it will need to be separately handled and stored on-site?
- can packaging be reduced or recycled by:

  - returning packaging to the supplier?

  - seeking cardboard or metal drums instead of plastic?

- seeking metal straps rather than shrink wrap?
- returning packaging such as delivery storage pallets and reels?

- All waste streams to be separated on site.
- Waste materials are to be recycled.

This can be achieved with the following strategies and example:

Examples of Building Material Reuse	
Materials On-site	**Reuse/Recycling Potential**
Concrete	Filling, levelling materials and/or road base
Bricks	Cleaned and/or rendered over for reuse
Roof-tile	Crushed as landscaping and driveways
Hardwood beams	Floorboards, fencing and/or furniture
Other timber	Formwork, bridging, blocking and propping
Doors, windows, fittings	Second hand building materials
Glass	Aggregate for concrete production
Synthetic and recycles rubber (e.g. under carpets)	Used for safety barriers and/or speed humps
Significant trees	Relocated on-site
Garden organics	Mulching, composting, for reuse as landscaping/fertiliser
Overburden	Power screened for topsoil

The control of building waste arising from the construction works will be managed by way of detailed procedures set out in a Waste Management Plan (WMP) prepared by the Construction Contractor specific for the project.

Generally, the construction works will create a range of waste management issues across the following key areas:

- Demolition: building material waste
- Excavation: ground material waste (soil and sand)
- Building: excess materials waste (concrete)
- Building: materials and equipment packaging

For each of the above, the waste should be controlled during construction using the principles of recycling and re-use to minimize waste in the following manner:

- Demolition – Building Waste
    - All waste disposal will be to approved waste management centres.
    - Concrete waste will be packaged to concrete recycling centres.
    - Building rubble will be separated by type – masonry, steel and plastics.

    - Timber windows/doors and fittings – specialist re-sale merchant.
- Excavation – Ground Materials
    - All waste disposal will be to approved waste management centres.
    - Excavated top soil, sand and loam will be separated by type.
    - Rock material will be kept separate.
- Building – Excess Material
    - The primary material waste will be concrete, mortar and render material.
    - All excess concrete, mortar and render will be deposited into water proof bunded plastic containment areas.
- Building – Materials Packaging
    - All pallets will be returned to sender.
    - All cardboard, plastic and metal will be pre-sorted and separately disposed of to an approved waste management centre.
- Building – Waste Water
    - All waste water will be retained and held in metal drums to settle sediment.
    - Sediment free waste water could be re-used on site.
    - Sediment will be re-used as local fill.
- Asbestos
    - Allow for all removal of all asbestos and any hazardous materials on site. Dispose hazardous material in-accordance with EPA and local Council's requirement. Pay for fees associated with removal & disposal of waste.

2.1.1 Sediment & Erosion Control

All sediment and erosion control is to follow the Civil Engineer's details.

- The contractor shall implement all soil erosion and sediment control measures relating to a particular upstream catchment prior to stripping of topsoil from that catchment. Where it is necessary to undertake stripping in order to construct a sediment control device only sufficient ground shall be stripped to allow construction.
- The contractor shall regularly maintain sediment and erosion control structures and desilt such structures. The sediment shall be disposed in a manner approved by the local Authority.
- The contractor shall provide inlet sediment traps at all pits during construction.
- Vehicular traffic shall be controlled during construction confining access where possible to proposed or existing road alignments.

2.2 Garbage & Recycling

The Cumberland Council DCP Part G includes waste management controls as set out below. There is also guidance available in Appendix A of the 'Better Practice Guide for Waste Management in Multi-unit Dwellings' which is also compared below:

EPA Better practice guide for resource recovery in residential developments - waste generation rate:	
Garbage	80L / unit / week
Comingled Recycling	40L / unit / week

Cumberland Council DCP Part G Table 3:		
Dwelling Type	Number of Garbage Bins	Number of Recycling Bins
RFB 1-20 units	1 x 240L bin per 2 units plus (or alternative as provided by Council)	1 x 240L bin per 3 units
RFB 20+ units	1 x 1100L bin per 8 units or 1 x 660L bin per 5 units	1 x 240L bin per 3 units or 1 x 1100L bin per 14 units

Cumberland Council collection schedule	
Red Garbage Bin	Weekly
Yellow Comingled Recycling Bin	Fortnightly
Green Garden Waste Bin	Fortnightly

Comment was sought from Cumberland Council on the preference for provision and location of the bins. Response was received from Ziggy Shlemon (Senior Project Officer -Resource Recovery Contracts) that it should follow the requirements of Part G of the DCP.

The table from the DCP gives options on bin sizes. Larger bins are more efficient in terms of volume vs space taken, however, they are more difficult for a single person to manoeuvre, and the larger size bins are intended in the situation where the waste truck will enter site and pick up directly from a collection area. The smaller 240L bins are able to be moved easily by a single person and picked up from the kerbside.

Based on this, two options were considered, one with a single garbage storage area at the rear with 5 x 1100L bins, which would use common area space and require additional space in the carpark for a truck turning and loading bay. The second option considers the building in two separate parts, one with 8 units (South) and one with 16 units (North) and provides the bins accordingly within screened enclosures in the frontage off the entry pathway. This would result in 12 garbage bins presented on the kerb weekly, plus an additional 9 recycling bins (21 total) fortnightly. This is indicated on the site plan. Despite the increased number of bins on the kerb, this is considered to be more desirable for the project than a garage truck entering the site.

Based on the above information, the following provision of bins is proposed:

Minimum required No. of bins		
Waste Type	Calculation	Required
Garbage (collected weekly)	Cumberland DCP – RFB 1-20 Units: 1x240L bin per 2 units (120L per unit per week) Cumberland DCP – RFB 20+ Units: 1x1100L bin per 8 units (137.5L per unit per week)	16 Unit Part / 2 = 8 x 240L bins 8 Unit Part / 2 = 4 x 240L bins 24 units / 8 = 3 x 1100L bins
Comingled Recycling (collected fortnightly)	Cumberland DCP – RFB 20+ Units: 1x240L bin per 3 units (40L/unit / week) Cumberland DCP – RFB 20+ Units: 1x1100L bin per 14 units (39.3L per unit per week)	16 Unit Part / 3 = 6 x 240L bins 8 Unit Part / 3 = 3 x 240L bins 24 units / 14 = 2 x 1100L bins
Garden Waste (collected fortnightly)	Nil requirement	.

It is necessary to locate the garbage bins in reasonably convenient locations for the residents. Given the size of the development, it is proposed to provide two separate garbage areas, next to each of the main pedestrian entries, each with a suitable number of bins for the number of units served, and meeting or exceeding the minimum requirement, as per the table below:

Proposed allocation of bins			
16 Units (three storey part)	8 x 240L garbage bins	6 x 240L recycling bins	1 x 360L garden waste bin
8 Units (two storey part)	4 x 240L garbage bins	3 x 240L recycling bins	1 x 360L garden waste bin
TOTAL (24 units)	**12 x 240L garbage bins**	**9 x 240 L recycling bins**	**2 x 360L garden waste bins**

Each storage area is to be screened behind a wall and landscape planting. All waste bins will be stored at all times within the boundaries of the bin storage areas only, unless required on the street for collection purposes. To allow ease of cleaning, a hose tap and a waste outlet will be provided to each bin area. The garbage areas in these circumstances will not be covered.

The bins will be presented on the street frontage of Pegler Avenue for Council collection.

A composting bin may be provided in a common garden area of the development.

Space will also be provided to add extra bins to each bin storage area if required in future.

In review of the objectives and controls for waste management as per Cumberland DCP – Part G – Waste Management Controls – Section 3.3 Residential:

Objectives		Response
O1	Ensure facilities are provided for efficient solid waste management.	Facilities are proposed in accordance with the planning controls.
O2	Achieve the design of waste and recycling storage/collection systems in buildings and land use activities which are: hygienic; accessible; safe to operate; quiet to operate; of an adequate size; and visually compatible with their surroundings.	The proposed bin areas will be readily able to be cleaned with a hose tap and waste outlet provided, accessible clearances, good visual surveillance for safety, of sufficient size for the required bins and extra bins and visually screened with a 1.5m ht masonry wall with planting in front.
O3	Reduce waste removed from residential sites.	The recycling and garbage bins will be located together along with a green bin to encourage residents to recycle. A compost bin may also be provided at the rear common area.
O4	Ensure that adequate and appropriate storage areas for recyclables and waste are designed to meet the objectives of ecologically sustainable development.	Adequate space is proposed for the required number of waste and recycling bins, plus provisional space for further types of bins should Councils waste strategy change in future.

The proposed bin storage areas will fully comply with the BCA and will include a hose tap and concrete floor graded to a drain. The drain will have a valve that drains to sewer during cleaning.

The proposed bin areas are adequately sized to allow storage of the bins each side plus at least 1550mm clear in between for accessibility.

Each individual unit will include space within the kitchen cabinets for waste and recycling bins sized for minimum two days of domestic waste. The common bin storage areas are located on each of the main pedestrian entryways at the front allowing convenient access from all units.

Bulky waste should generally only be moved to the street frontage on the day of Council collection.

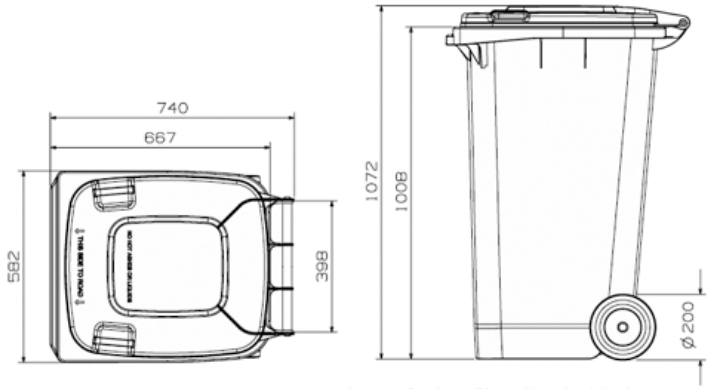
For special types of waste not collected by Council, signage is to be provided advising how to correctly dispose e.g. e-waste drop-off.

Appendix A – 240L Bin Example

240 LITRE WHEELIE BIN

Australian made for Australian conditions with a 10 year limited warranty.

Show/Hide Specifications



*Dimensions are a guide only and may vary due to manufacturing conditions and/or product design changes.