

CWG Development

Caddens Development

Waste Management Plan

January 2017

Table of contents

1.	Introduction	1
1.1	O'Connell St, Caddens	1
1.2	Scope and limitations	1
2.	Council requirements	3
2.1	Waste management plan.....	3
2.2	Kitchen storage	3
2.3	Composting.....	3
2.4	Waste storage areas	3
2.5	Council collection vehicles.....	6
3.	Waste management plan.....	7
3.1	Apartments.....	7
3.2	Terraces.....	8
3.3	Commercial/retail	8
4.	Summary	9
4.1	Apartments.....	9
4.2	Terraces.....	9

Table index

Table 1	Council vehicle dimensions.....	6
Table 2	Number of apartments and total garbage and recycling capacity allowances.....	7
Table 3	Number of 1100 L garbage and recycling bins by block	8

Figure index

Figure 1	Proposed Concept Plan.....	1
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1. Introduction

1.1 O'Connell St, Caddens

CWG Development (CWG) is proposing to develop land at 46-66 and 46A O'Connell Street, Caddens in western Sydney. The project is being managed by APP Corporation.

The development will be on a greenfield site adjacent to Nepean College TAFE and vacant land owned by Western Sydney University. Three lots of land are proposed to be developed for a total of about 12 ha.

Over four stages, 320 townhouses and at least 70 garage-top units will be built over most of the site with 400 apartment units and commercial development on the western end on O'Connell Street. The site will also feature roads, landscape open space, on-site detention basins and services. A proposed concept plan is shown in Figure 1.



Figure 1 Proposed Concept Plan

1.2 Scope and limitations

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2. Council requirements

2.1 Waste management plan

Penrith City Council's Penrith Development Control Plan 2014 specifies that a waste management plan is required for this development.

The waste management plan should include:

- Supporting scaled waste management drawings that assist in demonstrating compliance with the provisions of this Plan
- The types and volumes of wastes and recyclables likely to be generated as a result of the development;
- How waste and recyclables will be stored and treated on site;
- How the residual non-reusable or non-recyclable wastes and recyclables are to be disposed of and
- How ongoing waste management will operate once the development is complete (for the life of the development).

Council has also published several guidelines that apply to this development, specifically:

- Residential Flat Building Developments Waste Management Guidelines
- Multi-Unit Dwellings Waste Management Guidelines
- Residential Subdivisions Waste Management Guidelines.

2.2 Kitchen storage

The kitchen of each dwelling should have space for the interim storage of one day's organic waste, other recyclable waste and non-recyclable waste to enable source separation of those wastes.

2.3 Composting

An area for composting is to be provided on site and made available for residents' use. The siting of composting facilities should consider proximity of dwellings (including those adjoining the subject property), to minimise likely odour impacts/nuisance, location of the drainage system, whether the facility is appropriately designed for composting and signposting to ensure inappropriate waste is not added to the compost.

2.4 Waste storage areas

2.4.1 All dwellings

The waste bin storage area in the development must be large enough to accommodate all required waste bins associated with the development. In residential flat buildings this is to be achieved through the provision of a communal waste storage area or multiple waste bin storage areas. All waste streams must be catered for, including general waste, bulky waste and recyclable waste.

Space must be provided to manoeuvre, clean and maintain all waste and recycling bins for the development and for any required equipment to manage waste, waste bins (including washing and cleaning) and the waste bin storage area.

The waste bin storage area is to be located within the basement footprint of the development on the ground level for multi-unit housing developments where its use and operation will not adversely impact the amenity of development occupants in terms of noise and odour.

If the waste bin storage area is to be used as the collection point (for multi-unit housing), it must be located and designed to meet the applicable requirements for servicing.

The waste bin storage area is to be designed so movement and servicing of bins is not restricted. An aisle space of 1.2 m is required to access and manoeuvre the bins. Whether waste bins are required to be rotated should be considered and if they are to be rotated, additional room size to aisle width will be required.

Waste bin storage rooms must have floors constructed of concrete at least 75 mm thick and graded and drained to a Sydney Water approved drainage fitting. Floors must be finished to a smooth even surface. Walls must be constructed of solid impervious material. Ceilings must be finished with a smooth faced non-absorbent material capable of being cleaned. Walls, ceilings and floors must be finished in a light colour.

There must be an adequate supply of hot and cold water mixed through a centralised mixing valve with hose cock and a close fitting and self-closing door openable from within the room. The room must be constructed to prevent the entry of vermin and provided with adequate light and ventilation. The light source must be through controlled light switches located both outside and inside the room.

The design and location of waste storage areas/facilities should complement the design of both the development and the surrounding streetscape and not be visually prominent from public areas.

2.4.2 Dwelling houses and dual occupancies

In addition to the above, in dwelling houses¹ and dual occupancies, that is, buildings with up to three dwellings, waste containers are to be stored in a suitable and easily accessible location on site with unobstructed access to Council's usual collection point and to avoid vandalism, nuisance and visual clutter.

2.4.3 Multi dwelling houses² and residential flat buildings³

A communal waste storage area must be provided for residential developments that contain four or more dwellings or where the number of bins would not fit comfortably on the street frontage or where the placement of bins along the nature strip would have a detrimental effect on residential amenity or where the characteristics of the site restrict or impede access to the collection site.

Communal waste bin storage/collection areas must be large enough to accommodate all required waste bins associated with the development. The waste storage bin area should be either at ground level or within the basement footprint of the development. It must provide direct and convenient access for the occupants of the development, allow for the safe and direct transfer of all waste bins from the waste bin storage area to the collection point, does not have visual amenity, noise and odour impacts on occupants within and adjoining the development in relation, does not interfere with the car parking (on or off-street), driveways, footpaths, landscaping and any existing trees and vegetation. Swept paths must demonstrate adequate manoeuvring area are to be provided with the application.

¹ Defined in the Penrith LEP 2010 as 'a building containing only one dwelling.'

² Defined in the Penrith LEP 2010 as '3 or more dwellings (whether attached or detached) on one lot of land, each with access at ground level, but does not include a residential flat building'

³ Defined in the Penrith LEP 2010 as 'a building containing 3 or more dwellings, but does not include an attached dwelling or multi dwelling housing.'

The size and number of the waste bins shall be determined by Council, having regard to the need for either on-site access by collection vehicles or the requirement for bins to be wheeled to the collection point for collection by a contractor. If transferred to the street for collection, the body corporate or a caretaker must be responsible for the movement of bins to their collection point and their subsequent return.

Where on-site collection is required, adequate and safe access must be provided for Council's Collection Vehicles and waste collection staff. The site must be designed to allow collection vehicles to enter and exit the site in a forward direction with limited manoeuvring and reversing on-site. The route of travel (including vehicle manoeuvring areas) for the vehicle to the collection point is to satisfy the typical dimensions of heavy rigid vehicle including adequate vehicle clearance for the vehicle. Australian Standard AS2890.2 Parking Facilities: Off-Street Commercial Vehicle Facilities provides typical dimensions, turning circles and clearance heights. The route of travel for the waste vehicle is to be adequately paved and of sufficient strength to support the waste collection vehicle. The grades of entry and exit ramps must not exceed the capabilities of the waste collection vehicle and are to comply with AS2890.2. The waste collection point and parking area for the waste vehicle is to be clearly nominated with dimensions on the site plan. The collection point is to be of sufficient space to accommodate and safely manoeuvre all required waste bins.

For developments where on-site collection is required or where Council collectors are required to enter a site for the purpose of waste collection services, an agreement will be required to be entered into with Council. This agreement is to be entered into with Council giving power and authority to Council to enter the; and for the purpose of waste services. Council is also to be provided with indemnity against any future claims for damage and loss.

For developments comprising three or more storeys, the development is to incorporate a waste chute system. Separate chutes for both residual and recyclable material will be provided. Waste Disposal points are to be provided on each residential level of the development located within a high trafficked area for residential use. The chute is to be designed to minimise noise and fire risk is reduced, is to be completely enclosed and fire-rated and comply with the BCA.

The chute will terminate in a garbage and recycling room and discharge directly into a receptacle. The waste chute service room must be located directly under where the chute terminates. The chute room needs to accommodate a linear or carousel bin system and two additional bins. A separate bin storage room located in the basement will need to accommodate the entire fleet of bins allocated to the development.

A site caretaker/manager will be required to transfer all bins from the bin storage room to the collection room located on ground floor.

Council may consider an alternative solution to the waste chute system for developments comprising three or more storeys if the applicant can demonstrate that the alternative system provides a convenient method for the transfer of waste to a centralised location within the basement/ground floor, provides adequate room to cater for the storage and easy access to all waste bins required for the size of the proposed development and does not require residents to walk to the ground floor with waste and dispose of the waste within designated bins.

The Waste Services Room is to be provided so that it is accessible for residents on each residential level of the development. The waste services room will include the access to the residual and recyclable chute with provisions for cardboard storage. The maximum travel distance from any dwelling to the waste services room is not to exceed 75 m. The waste service room must be of adequate size to accommodate the required access to chutes or waste infrastructure assigned to the development and the room is to be designed to accommodate waste generation rates projected for the development.

The on-site collection point is to be clearly nominated on the site plan which accompanies the development application. The collection point is to only temporarily store waste bins so that they can be serviced. The waste bin holding area is to be located fully within the development site. Consideration will be given to multiple waste bin holding areas for larger developments. The collection point is to be designed so that it is large enough to accommodate all required waste bins for the development, it is located at ground level away from pedestrian entrances of the development and habitable windows (including both the development and adjoining dwellings), it is to be clearly separated from car parking bays (on or off street), footpaths and landscaped areas.

The bin-carting route is to ensure that bin transfer complies with the requirements of Work Health and Safety legislation. It must be direct and as short as possible, of solid, concrete and non-slip, paved and be a minimum of 2 m wide, free from obstructions and is not required to be carried over any steps, is a maximum of 75 m long and maximum grade of 7%. For larger bins (660 L and 1100 L), the maximum length of the route of travel is 10 m.

A separate area should also be provided for the storage and collection of bulky waste. The sizing of the bulky waste area needs to be capable of holding the bulky waste generated from the development between scheduled pickups. The bulky waste area needs to be located near to the on-site loading bay.

2.5 Council collection vehicles

Council uses side-lift collection vehicles to empty kerbside bins. The DCP provides information on the specifications for these vehicles which is reproduced in Table 1 below.

Table 1 Council vehicle dimensions

Measure	Figure
Overall Length	12.5 m
Operational Length	14.5 m
Design Width	2.8 m
Design Height	3.7 m
Swept Circle	22.5 m
Clearance (travel height)	4.5 m
Weight Fully Loaded	22.5 t
Capacity	24 m ³
Front Chassis Clearance	13°
Rear Chassis Clearance	16°

Waste collection is expected to take place mostly from the front of properties, that is on main roads, which will be rated for heavy vehicles. Some collections for over-garage dwellings may take place from laneways.

3. Waste management plan

3.1 Apartments

3.1.1 Description

The development features two apartment precincts of six buildings each for a total of 12 apartment buildings. The number of floors in each block is not yet known. Each precinct contains a total of 200 apartments (for a total of 400) and will have a basement at ground level in which chute rooms and waste storage areas will be located.

3.1.2 Waste quantities

Table 2 below shows the number of apartments in each precinct and the total garbage and recycling capacity required in each case. Council supports the use of 1100 L bins for garbage and recycling and one bin should be provided for every 18 units per week for both garbage and recycling. No compaction is allowed for either stream.

Table 2 Number of apartments and total garbage and recycling capacity allowances

Precinct	Number of units	Litres per dwelling per week ⁴		Total weekly capacity required (m ³)	
		Garbage	Recycling	Garbage	Recycling
A	200	61	61	11.1	11.1
B	200	61	61	11.1	11.1
Total	400			22.2	22.2

3.1.3 Waste handling

Each building will feature two chutes, one for garbage and one recycling, running through all floors and into which residents will place the appropriate material. Garbage and recycling will most likely be collected in 1100 L wheeled bins located in a dedicated room at the base of the chutes. Neither garbage nor recyclables will be compacted.

Bins will be taken by cleaners or facilities management staff to a central collection point in each Block, from which Council vehicles will empty them. Council requires collection from within the property. Cleaners or facilities management staff will manage the rotation of full and empty bins, keep waste areas clean and operate plant and machinery.

Details of the number of apartments in each building is not yet clear, an estimate of the total number of bins for each precinct is shown in Table 3 below. In addition to the space for bins, Council requires space for bulky waste storage. This is calculated at a rate of 8 m² per 50 units per collection of which residents are allowed four per year. An allowance for this space is also shown in the table.

⁴ Based on Council's allocation of one 1100 L garbage bin and one 1100 L recycling bin per 18 units.

Table 3 Number of 1100 L garbage and recycling bins by block

Precinct	Number of units	Total bins		Space allowance (m ²)		Total	Bulky waste storage ⁵ (m ²)	Total including manoeuvring
		Garbage ⁶	Recycling ⁷	Garbage	Recycling			
A	200	12	12	16.2	16.2	32.4	8.0 ⁸	40.4
B	200	12	12	16.2	16.2	32.4	8.0	40.4
Total	400	24	24	32.4	32.4	64.9	16.0	80.8

3.2 Terraces

The balance of the development features 320 two- and three-bedroom terraces and at least 70 over-garage dwellings for a total of at least 390.

Each terrace and over-garage dwelling will be provided with three 240 L bins, one for garbage, one for recyclables and one for organics.

Bins will be stored within the boundary of each dwelling in a suitably sized area screened from the street. Bins will be placed out at by residents on the appropriate collection day each week mostly at the front of properties. Some collections for over-garage dwellings may take place from laneways. All residential lots will have space at the front or the rear to allow up to two 240 L bins to be presented on the kerb for collection. This area will be 2 m wide by 1 m deep, free from obstructions such as tree canopies and will not block driveway access.

3.3 Commercial/retail

Some commercial and/or retail premises are intended to be located at the base of the high rise buildings. Details on the size, type and location of these premises have not yet been determined.

⁵ Assumes bulky waste areas will be 2 m high

⁶ Assumes no compaction and collection weekly

⁷ Assumes no compaction and collection weekly

⁸ This has been calculated as follows. There are 200 units in each precinct. At a rate of 8 m² per 50 units that's four lots of 50 multiplied by 8 m² to give 32 m². Each residence is allowed four on-call clean up collections per year which when divided into 32 m² gives 8 m² of space in each precinct.

4. Summary

4.1 Apartments

Each apartment building will feature two chutes for garbage and one recycling which will empty into 1100 L wheeled bins in a dedicated chute room. Neither garbage nor recyclables will be compacted. Bins will be taken by cleaners or facilities management staff to a central collection point in each precinct, from which Council vehicles will empty them. Collection will take place on-site.

The 200 units each of the apartment precinct will be provided with a total of 12.0 m³ each of garbage and recycling capacity per week. If 1100 L bins are used, 12 bins each for garbage and recyclables will be provided in each precinct. In addition, 8.0 m² of space will be provided in each precinct for bulky waste.

4.2 Terraces

Each terrace and over-garage dwelling will be provided with three 240 L bins for garbage, recyclables and organics. These will be stored on each property and placed out by residents for collection mostly at the front of properties. Some collections for over-garage dwellings may take place from laneways.

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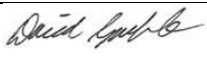



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48197/https://projects.ghd.com/oc/Sydney/wasteplanforoconnell/Delivery/Documents/2125934-REP-1_Waste Management Plan for Caddens Development - Copy.docx

Document Status

Revision	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
A	A Quinn	D Gamble	DRAFT	A Quinn	DRAFT	26/10/16
Rev 0	A Quinn	D Gamble		A Quinn		18/11/16
Rev 1	A Quinn	A Montgomery		A Quinn		19/1/17

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