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# **WASTE MANAGEMENT PLAN**

**MAY 2009**

## **157 REDFERN STREET- REDFERN MIXED USE REDEVELOPMENT**

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PREPARED FOR DEICORP CONSTRUCTION PTY. LTD.  
FOR SUBMISSION TO DEPARTMENT OF PLANNING  
PART 3A APPLICATION



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## 1.0 INTRODUCTION

The waste management plan to follow pertains to the mixed use development located at 157 Redfern Street, Redfern. This waste management plan is an operational waste management plan and will address the operational phases of the development. A Construction Waste Management Plan will need to be prepared by the contractor engaged for the construction stage of the development.

The plan outlines measures to achieve the following purposes:

- Avoid the generation of unnecessary waste;
- Minimising the quantities of wastes generated ending up as landfill;
- Recovering, reusing and recycling waste generated on site where possible;
- Compliance with any codes and policies that may apply to the development.

For the purpose of this report the proposed development will consist of four (4) primary sections as follows:

- **Commercial Tenancies** – Commercial Tenancies located on levels 3 & 4 with a total nett lettable area of approximately 1500 m<sup>2</sup>.
- **Retail Tenancies**- Retail space located on ground floor with a total nett lettable area of approximately 650 m<sup>2</sup>.
- **Redfern RSL Club** – Commercial club located on level 2 with a total nett lettable area of approximately 1500 m<sup>2</sup>.
- **Residential Apartments** - 84 residential apartments over levels 5 – 18.

Each section of this development has been examined individually within this report; however, the waste management process must be effectively coordinated between all sections for the system to work.

All figures and calculations are based on area schedules as advised by our client and shown on architectural drawings. Calculations have been made using industry standard rates for waste generation and rates supplied in Council of the City of Sydney Policy for Waste Minimisation in New Developments.

All waste facilities and equipment are to be designed and constructed to be in compliance with Sydney City Council Codes, BCA, Australian Standards and Statutory Requirements.

## 2.0 GENERATED WASTE VOLUMES

This assessment of waste volumes is an estimate only and will be influenced by the development's management and occupant's attitude to waste disposal and recycling. We have based our calculations on a five- (5) day operating week. Figures could be affected however, by changes in retail and commercial usage at a later date.

### 2.1 Commercial Tenancies

Using standard industry waste generation rates, the total waste generated by the commercial section of the development can be calculated as follows:

#### General Waste:

General Waste					
Location	Waste Generation Rate	Floor Area	Waste Generation	Collection Frequency	Waste Generation
<i>Reference</i>	<i>L / 100sq.m / day</i>	<i>sq.m</i>	<i>L / day</i>	<i>No. per week</i>	<i>L / collection</i>
Office areas	10	1500	150	3	250

#### Recycling waste:

Recyclable Waste					
Location	Waste Generation Rate	Floor Area	Waste Generation	Collection Frequency	Waste Generation
<i>Reference</i>	<i>L / 100sq.m / day</i>	<i>sq.m</i>	<i>L / day</i>	<i>No. per week</i>	<i>L / collection</i>
Office Areas	10	1500	150	3	250

### 2.2 Retail Space

Using standard industry waste generation rates, the total waste generated by the retail section of the development can be calculated as follows:

#### General Waste:

General Waste					
Location	Waste Generation Rate	Floor Area	Waste Generation	Collection Frequency	Waste Generation
<i>Reference</i>	<i>L / 100sq.m / day</i>	<i>sq.m</i>	<i>L / day</i>	<i>No. per week</i>	<i>L / collection</i>
Retail Space	100	650	650	3	1084

## Recycling waste:

Recyclable Waste					
Location	Waste Generation Rate	Floor Area	Waste Generation	Collection Frequency	Waste Generation
<i>Reference</i>	<i>L / 100sq.m / day</i>	<i>sq.m</i>	<i>L / day</i>	<i>No. per week</i>	<i>L / collection</i>
Retail Space	50	650	325	3	542

## 2.3 Commercial Club (RSL)

Using standard industry waste generation rates, the total waste generated by the commercial club section of the development can be calculated as follows:

## General Waste:

General Waste					
Location	Waste Generation Rate	Floor Area	Waste Generation	Collection Frequency	Waste Generation
<i>Reference</i>	<i>L / 100sq.m / day</i>	<i>sq.m</i>	<i>L / day</i>	<i>No. per week</i>	<i>L / collection</i>
Retail Space	100	1500	1500	3	2500

## Recycling waste:

Recyclable Waste					
Location	Waste Generation Rate	Floor Area	Waste Generation	Collection Frequency	Waste Generation
<i>Reference</i>	<i>L / 100sq.m / day</i>	<i>sq.m</i>	<i>L / day</i>	<i>No. per week</i>	<i>L / collection</i>
Retail Space	50	1500	750	3	1250

## 2.4 Residential Apartments

Using standard industry waste generation rates, the total waste generated by the residential apartments section of the development can be calculated as follows: (Note volumes are based on a 7 day a week usage)

### General Waste:

General Waste					
Location	Waste Generation Rate	Total No.	Waste Generation	Collection Frequency	Waste Generation
<i>Reference</i>	<i>L / week</i>		<i>L / day</i>	<i>No. per week</i>	<i>L / collection</i>
Apartments	80	84	960	3	2240

### Recycling waste:

Recyclable Waste					
Location	Waste Generation Rate	Total No.	Waste Generation	Collection Frequency	Waste Generation
<i>Reference</i>	<i>L / week</i>		<i>L / day</i>	<i>No. per week</i>	<i>L / collection</i>
Apartments	40	84	480	3	1120

### **3.0 WASTE MANAGEMENT RECOMMENDATIONS**

#### **3.1 General Waste**

##### **Commercial office tenancies**

It is recommended that each commercial tenant be responsible for their own in house storage of general waste. At the end of the day, staff or cleaners from the commercial tenancies will transport the waste to the designated garbage room located on Basement Level 1 and place it in the collection containers provided for general waste.

##### **Retail space**

It is recommended that each retail tenant be responsible for their own in house storage of general waste. At the end of the day, staff from the retailers will transport the waste to the designated garbage room located on Basement Level 1 and place it in the collection containers provided for general waste.

##### **RSL Commercial club**

It is recommended that RSL retail tenant be responsible for their own in house storage of general waste. At the end of the day, staff or cleaners from the RSL will transport the waste to the designated garbage room located on Basement Level 1 and place it in the collection containers provided for general waste.

##### **Residential Apartments**

Every apartment level from Levels 5 to 18 will be serviced via a centrally located garbage chute for the handling of general waste. The garbage chute will discharge into an automatic carousel unit (described in Waste Equipment Recommendation section) for collection of general waste. The carousel unit will be located within the dedicated residential garbage room on Basement Level 1.

Each resident will be provided with a waste cupboard space for storage of general waste until it is disposed of.

### **3.2 Recyclable Waste**

#### **Commercial / Retail / RSL**

Storage in-house of recyclable glass/plastic and paper/cardboard should be provided. Alternatively, all recyclable material can be stored together and sorted into the appropriate containers in the garbage room. Either way, separation of the glass/plastic and paper/cardboard will have to be carried out by the tenants. It is expected that the majority of recyclable waste generated by these tenants will most likely be paper recyclable products such as cardboard boxes and paper products. Tenants will be required to transport all recyclable waste to the designated garbage / recyclables room on Basement Level 1 as appropriate. The compacted bales will be emptied as required by an appropriate waste contractor, most likely on a weekly basis.

#### **Residential Apartments**

The recycled waste will be stored via the use of 55L & 240 ltr colour-coded receptacles as adopted by the "Australia and New Zealand Environment and Conservation Council" (ANZECC). The proposed method of waste handling for tenants is that they will have facilities for the storage and sorting of a day's waste in house. Two (2) 55L recycling crates will be provided per chute intake on each residential level for the storage of recyclable waste. As the recycling crates become full, the appointed waste caretaker will empty them into the larger 240L collection bins stored within the Residential Garbage Room on Basement B1 Level.

### **3.3 External Collection of Waste**

#### **Commercial / Retail / RSL General Waste**

Commercial / retail waste will be collected by a nominated private waste contractor. The private collection vehicle will collect all waste from the designated garbage room at Basement Level 1 accessed via Marion Street into Williams lane and then into the loading dock.

It is recommended that the waste be collected on a thrice weekly basis due to the nature of the waste being produced. However, this should be closely monitored and the collection frequency varied to suit the needs of the various tenants.

#### **Residential Apartments**

General waste will be collected by a nominated commercial contractor on the nominated collection day, from the dedicated Residential Garbage Room located adjacent to the loading dock on Basement Level 1. The appointed waste caretaker will transport all appropriate general waste bins to the Residential Garbage Room for collection and return them to the garbage room



once collection is complete. It is anticipated that three collections per week are to occur. Access to the loading dock is Via Marion Street into Williams Lane.

### **Commercial / Retail Recycling waste**

Again these materials will be collected by a nominated private waste contractor from the same storage room at ground level accessed off Williams Lane. It's recommended that the recyclables are also collected thrice weekly, however this should be closely monitored and collection frequency varied to suit the needs of the various tenants.

### **Residential Apartments**

Recyclable waste will be collected by a nominated commercial contractor on the nominated collection day, from the dedicated Residential Garbage / Recycling Room located adjacent to the loading dock on Basement Level 1. The appointed waste caretaker will transport all appropriate recycling waste bins to the Residential Garbage Room for collection and return them to the garbage room once collection is complete.

### **3.4 Waste Caretaker**

It is strongly recommended that a waste caretaker be employed to manage the garbage / recycling systems of this development. Further more, it is also strongly recommended that a part time care taker be employed to manage the system in the full time caretakers absence, i.e. on weekends and Public Holidays when the waste generation is expected to peak.

The caretaker's duties would include the following:

- ◆ Generally maintaining and cleaning the garbage areas. (Recommended at least once per week)
- ◆ Organising, maintaining and cleaning the general and recycled waste holding areas. Due to the nature of the waste it is recommended that in addition to cleaning, the garbage areas be deodorised (**recommended at least once per week**).
- ◆ Sorting recycled waste into appropriate receptacles if required.
- ◆ Organising for both Garbage and Recycled Waste pick-ups as required.
- ◆ Assisting with the emptying of bins during collection.

## 4.0 WASTE EQUIPMENT RECOMMENDATIONS

The following waste equipment and quantity recommendations have been made based on expected waste generation quantities.

### 4.1 Commercial office tenancies

#### General Waste

Based on the previously stated waste generation, our recommendations for waste handling equipment are as follows:

**Collection Containers** – Based on the previously calculated “waste generated”, the **240L plastic wheeled bin** requirements are, based on a thrice weekly collection cycle:

**Qty Required – Two (2) per collection for general waste**

**Note: 2 spare bins should be allowed for in case of service issues.**

#### Recyclable Waste

Based on the previously stated waste generation our recommendations for waste handling equipment are as follows:

**Collection Containers** – Based on the previously calculated “waste generated”, the **240L plastic wheeled bin** requirements are, based on a thrice weekly collection cycle:

**Qty Required – Two (2) per collection for container recyclables**

**Note: 2 spare bins should be allowed for in case of service issues.**

### 4.2 Retail tenancies

#### General Waste

Based on the previously stated waste generation, our recommendations for waste handling equipment are as follows:

**Collection Containers** – Based on the previously calculated “waste generated”, the **1100L plastic wheeled bin** requirements are, based on a thrice weekly collection cycle:

**Qty Required – One (1) per collection for general waste**

**Note: 1 spare bin should be allowed for in case of service issues.**

**240 ltr option:**

**Qty Required – Five (5) per collection.**

**Note: 2 spare bins should be allowed for in case of service issues.**

**Recyclable Waste**

Based on the previously stated waste generation our recommendations for waste handling equipment are as follows:

**Collection Containers** – Based on the previously calculated “waste generated”, the **240L plastic wheeled bin** requirements are, based on a twice weekly collection cycle:

**Qty Required – Three (3) per collection for container recyclables**

**Note: 2 spare bins should be allowed for in case of service issues.**

#### **4.3 Commercial RSL Club**

**General Waste**

Based on the previously stated waste generation, our recommendations for waste handling equipment are as follows:

**Collection Containers** – Based on the previously calculated “waste generated”, the **1100L plastic wheeled bin** requirements are, based on a thrice weekly collection cycle:

**Qty Required – Three (3) per collection for general waste**

**Note: 1 spare bin should be allowed for in case of service issues.**

**240 ltr option:**

**Qty Required – Eleven (11) per collection.**

**Note: 2 spare bins should be allowed for in case of service issues.**

**Recyclable Waste**

Based on the previously stated waste generation our recommendations for waste handling equipment are as follows:

**Collection Containers** – Based on the previously calculated “waste generated”, the **240L plastic wheeled bin** requirements are, based on a thrice weekly collection cycle:

***Qty Required – Six (6) per collection for container recyclables***  
***Note: 2 spare bins should be allowed for in case of service issues.***

#### **4.4 Residential Apartments**

##### **General Waste**

Based on the previously stated waste generation, our recommendations for waste handling equipment are as follows:

Installation of a carousel bin handling unit directly under the refuse chute system to fill awaiting 240 ltr bins on a rotational carousel unit.

**Collection Containers** – Based on the previously calculated “waste generated”, the ***240L plastic wheeled bin*** requirements are, based on a thrice weekly collection cycle:

***Qty Required – Ten (10) per collection for general waste***  
***Note: 5 spare bins should be allowed for in case of service issues.***

##### **Recyclable Waste**

Based on the previously stated waste generation our recommendations for waste handling equipment are as follows:

**Collection Containers** – Based on the previously calculated “waste generated”, the ***240L plastic wheeled bin*** requirements are, based on a thrice weekly collection cycle:

***Qty Required – Five (5) per collection for container recyclables***  
***Note: 3 spare bins should be allowed for in case of service issues.***

## **5.0 GARBAGE ROOMS & GARBAGE AREAS**

There is a dedicated garbage room located on Basement Level 1 adjacent to the loading dock for the storage of all waste. A nominated private waste contractor will collect all retail waste on a daily collection cycle. Collection will occur via Marion Street & Williams Lane to access the loading dock & garbage room.

Construction of both the garbage areas and garbage rooms is to meet all requirements set out in Sydney City Council Codes, BCA and Australian Standards. Waste generation rates used are based on previous experience and industry standards but are only an estimate and may change depending on the usage of each tenancy.

It is recommended that the waste management system be monitored in the initial stages to ensure that sufficient bins have been provided to handle the waste generated. The bin numbers above are only an approximate and the number of bins provided and collection frequency will need to be monitored and adjusted to suit the needs of the individual tenants. Also, the bin size above is only a recommendation. Tenants may nominate an appropriate bin size to suit their needs.