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# **WASTE MANAGEMENT PLAN**

**25<sup>th</sup> March 2009**

**UNIVERSITY OF TECHNOLOGY  
SYDNEY,  
PETER JOHNSON BUILDING STUDENT ACCOMMODATION**

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**PREPARED FOR HUTCHINSON BUILDERS  
FOR SUBMISSION TO NSW DEPARTMENT OF PLANNING.**



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## 1.0 INTRODUCTION

The waste management plan to follow pertains to the University of Technology Sydney, Peter Johnson Building Student Accommodation located at 702-730 Harris Street Ultimo. This waste management plan is an operational waste management plan and will address the operational phases 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:

- **Student Accommodation** – 720 bed.
- **Commercial Cafe** – 230m<sup>2</sup>

Each section of this development has been examined individually within this report; however, the waste management process must be effectively coordinated between the various sections for the system to work. The principles outlined in this Waste Management Report will be incorporated into the building design and submitted with the intended Project Application.

All figures and calculations are based on building areas and room numbers as shown on architectural drawings. Calculations have been made using waste generation rates devised from industry guidelines and using calculations listed within Sydney City Council's policy for Waste Minimisation in New Developments. All recommendations for waste facilities and equipment will be in compliance with Australian Standards, BCA and Local Authorities.

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 seven (7) days per week of waste generation. Figures could be affected however, by bed occupancy rates.

### 2.1 Student Accommodation:

Projected waste quantities during the operational phase of the accommodation section of the development are listed below. Waste source generation has been separated into general and recyclable waste.

#### General Waste:

Location	Waste Generation Rate	General Waste Generated
<i>Bed Nos.</i>	<i>L/bed/per week</i>	<i>L/per week</i>
<b>720</b>	40	28800
	<b>Total</b>	<b>28800</b>

#### Recyclable Waste:

Location	Waste Generation Rate	General Waste Generated
<i>Bed Nos.</i>	<i>L/bed/per week</i>	<i>L/per week</i>
<b>720</b>	20	14400
	<b>Total</b>	<b>14400</b>

## 2.2 Café

Projected waste quantities during the operational phase of the Cafe section of the development are listed below. Waste source generation has been separated into general and recyclable waste.

### General Waste:

Location	Waste Generation Rate	General Waste Generated
<i>m<sup>2</sup></i>	<i>L/100m<sup>2</sup>/day</i>	<i>L/per week</i>
230	50	805
	<b>Total p/wk</b>	<b>805</b>

### Recyclable Waste:

Location	Waste Generation Rate	General Waste Generated
<i>m<sup>2</sup></i>	<i>L/100m<sup>2</sup>/day</i>	<i>L/per week</i>
230	25	402.5
	<b>Total p/wk</b>	<b>402.5</b>

## 2.3 Existing L4 Café

Current arrangements are as follows:

### General Waste:

The Level 4 existing café produces approximately 4 x 240 ltr mobile garbage bins full on a daily basis. These bins are a different colour and are kept in the loading dock outside the current garbage room.

The bins get collected on a daily basis from the kerbside by the current contractor engaged by Swan. Current cleaners take full bins out each morning and return them later after collection has occurred to the same storage area.

### Recycling:

This appears to be collected twice weekly and the bins are stored in the current garbage room access via the loading dock. A smaller collection vehicle makes good these collections after 7am once the loading dock is opened when required or agreed to by current contractors.

## 3.0 WASTE MANAGEMENT RECOMMENDATIONS (Redevelopment only)

### **3.1 General Waste**

#### **Student Accommodation:**

##### **Peter Johnson Building (720 beds)**

Residents will deposit their general waste in the garbage chute located adjacent to the student tutorial room at the eastern end of the building on a daily basis or as appropriate. From there the garbage will flow down the chute until it discharges either directly into large front lift or rear lift bins or the preferred option of a small stationary compactor unit fitted with a 3 cubic metre container. Either of these options will be located in the proposed garbage room located on level two.

### **3.2 Recyclable Waste**

#### **Student Accommodation:**

Residents will be required to transport their Recyclables from their apartment to the proposed centrally located recycling chute located directly beside the garbage chute at the eastern end of the building.

Recyclables will then flow down the chute and again discharge into either large 3m bins or possibly smaller 1m bins depending on which option can be easily collected by a private contractor. This would need to be determined by the site's operations management in conjunction with the private collector.

Either option has been allowed for in the design of the refuse storage room located on level 2.

### **3.3 Cafe:**

#### **General Waste / Recycling:**

Garbage and recycling to be collected by cleaning staff and transported to the storage bins located on level 2 at the garbage and recycling storage room on a daily basis or as appropriate. These storage bins will then be collected out of that storage area via the truck loading bay.

### **3.4 External Collection of Waste:**

**Student Accommodation:**

Residential apartment waste / recycling will be collected by a private contractor's collection vehicle. Collections will take place directly from the storage facility located on level 2 via the truck bay access. Once collection is complete, the waste caretaker / contractor will transport the bins back into the storage area. Collection times to be determined between the operational staff and the private contractor, but generally will occur during business hours and not prior to 6am due to noise restrictions.

**Cafe:**

Cafe waste and recycling will be stored internally at the same garbage and recycling storage room on level 2. Again a private contractor will be engaged to provide this collection service with frequency to be determined between the Cafe Management and that contractor.

**3.6 Organic Waste**

It is recommended that all organic waste be handled and managed by the personnel responsible for maintaining landscaped areas. It is also recommended that all waste of this nature is removed off site by contractor and recycled where possible.

**4.0 WASTE EQUIPMENT RECOMMENDATIONS**

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

#### **4.1 Student Accommodation:**

##### **General Waste**

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

**Collection Containers** – A private contractor is to be engaged to provide a daily collection service for residential general waste if not using a compactor option. If using the compactor option the frequency will be reduced by the 3:1 compaction ratio of the machine. Therefore, utilising the previously calculated *General Waste* for the student accommodation section, the following **3000L front / rear lift Bins** are required:

**Qty Required – Ten (10) 3000L bins collected per week.**  
***Suggest daily collection service and the possibility of 4000 litre bins.***

**OR**

***1 Stationary Macca Pak 800 Compactor unit fitted with a 3 cubic metre container on castors. (Note: two containers required)***

**Qty Required – Four (4) 3000L bins per week.**  
***(This option is strongly recommended)***

##### **Recycled Waste**

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

**Collection Containers** – A private contractor to provide a weekly collection service for residential recycling. Therefore, utilising the previously calculated *Recyclable Waste* for the residential section, the following **1000L Mobile Garbage Bins** are required:

**Qty Required – Fifteen (15) 1000L bins for mixed recyclables per week.**

**OR**

***Qty Required – Five (5) 3000L bins for mixed recyclables per week.***

##### **Cafe**

##### **General Waste**



**Collection Containers** – A private contractor is to engaged to provide a weekly collection service for the general waste. Therefore, utilising the previously calculated *General Waste* for the Cafe section, the following **240L Mobile Garbage Bins** are required:

**Qty Required – 4 (4) 240L bins collected weekly**

#### **Recycled Waste**

**Collection Containers** – A private contractor to provide a weekly collection service for Cafe recycling. Therefore, utilising the previously calculated *Recyclable Waste* for this section, the following **240L Mobile Garbage Bins** are required:

**Qty Required – two (2) 240L bins collected weekly**

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

Space has been allocated for refuse storage for the proposed development at the North East corner of the site. Floor plans of the garbage area are included on the DA drawings submitted with this application. Private contractors will collect general waste on a twice-weekly basis for all sections of the development. All recyclable waste will be collected on again on a twice weekly basis. All collections of waste will occur from the central location as near as possible to the storage area.

Please refer to DA drawings submitted with this application for garbage area layouts as prepared by *Nettletontribe*.

Construction of both the garbage areas and or garbage rooms is to meet all requirements set out in Typical Council Codes, BCA and Australian Standards.

The garbage rooms are to be constructed to the following requirements:

- The floors of the garbage rooms shall be constructed of concrete at least 100mm thick or other impervious material, graded and drained to an approved connection to the sewer;
- The floor shall be finished to a smooth even surface coved at the intersection with walls and plinths;
- Waste areas or bins shall be constructed to prevent the entry of vermin;
- An adequate supply of hot and cold water shall be provided to all waste areas and drainage to sewer;
- Hose cocks shall be located and protected so they cannot be damaged and fitted with an adequate length of hose;
- There is adequate ventilation either natural or mechanical;
- The waste area shall be appropriately signposted e.g. for recycling bins.