

# WASTE MANAGEMENT PLAN

# PREPARED FOR MORSON GROUP

Hotel Redevelopment MANLY LODGE 22 VICTORIA PARADE MANLY NSW 2095

19/11/2019

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### **REVISIONS**

Revision	Copy No.	Date	Prepared by	Reviewed by	Approved by	Remarks
А	1	18/06/2015	E Boone	N Beattie	E Saidi	Preliminary
В	1	23/06/2015	E Boone	N Beattie	E Saidi	Prelim updates
С	1	9/07/2015	E Boone	N Beattie	E Saidi	Amendements
D	1	13/07/2015	E Boone	N Beattie	E Saidi	For DA
E	1	7/11/2019	J Parker	A Armstrong	A Armstrong	Amendments
F	1	19/11/2019	J Parker	A Armstrong	A Armstrong	Amendments
G	1	19/11/2019	J Parker	A Armstrong	A Armstrong	Amendments

### **DISTRIBUTION LIST**

Recipient Name	Company	Revision	Copy No.
Peter Morson	Morson Group	G	1

### EXECUTIVE SUMMARY

This waste management plan covers the ongoing management of waste generated by the Hotel redevelopment located at Manly Lodge, 22 Victoria Road, Manly NSW 2095.

Waste audit and management strategies are recommended for new developments to provide support for the building design and promote strong sustainability outcomes for the building. All recommended waste management plans will comply with council codes and any statutory requirements. The waste management plan has three key objectives:

- i. **Ensure waste is managed to reduce the amount of waste and recyclables to land fill** by assisting residents to segregate appropriate materials that can be recycled; displaying signage to remind and encourage recycling practices; and through placement of recycling and waste bins in the retail precinct to reinforce these messages.
- ii. *Recover, reuse and recycle* generated waste wherever possible.
- iii. **Compliance** with all relevant codes and policies.

To assist in clean and well-segregated material, building management can work proactively with residents in the following way:

- Building management should ensure their communications achieve a regular and consistent message.
- By-laws: the resident's by-laws should include a requirement to actively participate in recycling/ diversion initiatives implemented within the residential buildings.

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### **GLOSSARY OF TERMS**

TERM	DESCRIPTION
Baler	A device that compresses waste into a mould to form bales which may be self-supporting or retained in shape by wire ties and strapping
Chute	A ventilated, essentially vertical pipe passing from floor to floor of a building with openings as required to connect with hoppers and normally terminating at its lower end at the roof of the central waste room(s)
Collection Area/Point	The position or area where waste or recyclables are actually loaded onto the collection vehicle
Compactor	A Machine for compressing waste into disposable or reusable containers
Composter	A container/machine used for composting specific food scraps
Crate	A plastic box used for the collection of recyclable materials
Garbage	All domestic waste (Except recyclables and green waste)
Hopper	A fitting into which waste is placed and from which it passes into a chute or directly into a waste container. It consists of a fixed frame and hood unit (the frame) and a hinged or pivoted combined door and receiving unit
Recycling	Glass bottles and jars – PET, HDPE and PVC plastics; aluminium aerosol and steel cans; milk and juice cartons; soft drink, milk and shampoo containers; paper, cardboard, junk mail, newspapers and magazines
Green	Garden organics such as small branches, leaves and grass clippings, tree and shrub pruning, plants and flowers, and weeds
L	Litre(s)
Liquid Waste	Non-hazardous liquid waste generated by commercial premises that is supposed to be connected to sewer or collected for treatment and disposal by a liquid waste contractor (including grease trap waste)
Mobile Garbage Bin(s) (MGB)	A waste container generally constructed of plastic with wheels with a capacity in litres of 120, 240, 660, 1000 or 1100, 1500 or 2000

*Putrescible Waste* Component of the waste stream liable to become putrid. Usually breaks down in a landfill to create landfill gases and leachate. Typically applies to food, animal and organic products.

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### INTRODUCTION

The following waste management plan pertains to the Hotel development located at Manly Lodge, 22 Victoria Road, Manly NSW 2095. This waste management plan is an operational waste management plan and will address the phases of the completed development.

Manly Lodge is an existing boutique hotel that will be redeveloped.

For the purpose of this report the proposed development will consist of:

- One building
  - 49 suites in total
    - 1 retail unit
    - 1 hotel atrium restaurant
  - $\circ$  42.1m<sup>2</sup> for retail outlets
  - 67.4m<sup>2</sup> hotel atrium

### MANLY COUNCIL

The 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.

The waste and recycling will be guided by the services and acceptance criteria of the Manly Council. The hotel's waste and recycling will be collected by a private contractor.

All waste facilities and equipment are to be designed and constructed to be in compliance with the Manly Local Environment Plan 2013 and Manly Development Control Plan 2013, Australian Standards and statutory requirements.

#### OBJECTIVES

- To facilitate sustainable waste management in a manner consistent with the principles of Ecologically Sustainable Development (ESD).
- To achieve waste avoidance, source separation and recycling of household and industrial/commercial waste.
- To design and locate waste storage and collection facilities which are convenient and easily accessible; sage; hygienic; of an adequate size, and with minimal adverse impacts on residents, surrounding neighbours, and pedestrian and vehicle movements.
- To ensure waste storage and collection facilities complement waste collection and management services offered by Council and private service providers and to support ongoing control for these services.
- To minimise risks to health and safety associates with handling and disposal of waste and recycled material, and ensure optimum hygiene.
- To minimise any adverse environmental impacts associates with the storage and collection of waste.
- To discourage illegal dumping.

### **GENERATED WASTE VOLUMES**

The assessment of projected waste volumes is a calculated estimate only and will be influenced by the development's management and occupant's waste disposal and recycling practices.

### **CONSTRUCTION AND DEVELOPMENT WASTE**

The head contractor will be responsible for removing all construction-related waste offsite in a manner that meets all authority requirements. Please refer to the separate waste management plan submitted for construction waste as part of the Development Application.

#### **BUILDING MANAGER/WASTE CARETAKER**

All waste equipment movements are to be managed by the building manager/cleaners at all times. No tenants or residents will be allowed to transport waste or recyclables from the waste room; tenants and residents will only transport their waste to the allocated bin room.

The building manager/cleaner duties include, but are not limited to, the following:

- general maintenance and cleaning of the chute doors on each level (Frequency dependent on waste generation and will be determined based upon building operation);
- organising, maintaining and cleaning the general and recycled waste holding areas (Frequency will depend on waste generation and will be determined based upon building operation);
- transporting of bins as required;
- organising both garbage and recycled waste pick-ups as required;
- cleaning and exchanging all bins;
- ensure site safety for residents, children, visitors, staff and contractors;
- abide by all relevant OH&S legislation, regulations, and guidelines;
- assess any manual handling risks and prepare a manual handling control plan for waste and bin transfers; and
- provide to staff/contractors equipment manuals, training, health and safety procedures, risk assessments, and PPE to control hazards associated with all waste management activities

<u>NOTE</u>: It is the responsibility of the building manager to monitor the number of bins required for the development. As waste volumes may change according to the development's management and occupants' attitudes to waste disposal and recycling, bin numbers and sizes may need to be altered to suit the building operation.

### REPORTING

It is recommended that building management ensure that all waste service providers submit monthly reports on all equipment movements and weights of any waste and recycling products removed from the development. Regular reviews of servicing should take place to ensure operational and economic best practise and to assist with sustainability reporting.

### EDUCATION

Building management is responsible for creating and managing the waste management education process.

Educational material encouraging correct separation of garbage and recycling items must be provided to each resident to ensure correct use of the waste and recycling chute. This should include the correct disposal process for bulky goods (old furniture, large discarded items, etc.) It is recommended that information is provided in multiple languages to support correct practises and minimise the possibility of chute blockages as well as contamination in the collective waste bins.

It is expected that leasing arrangements with retail/commercial operations contain direction on waste management services and expectations.

### HOTEL WASTE PLAN

The New South Wales Environmental Protection Authority *Better Practice Guide for Resource Recovery* (2019) has been referenced to calculate the total number of bins required for the development. Please note that calculations are based on generic figures; waste generation rates may differ according to waste management practice. Please note that if food tenants are placed, the waste generation rates will require adjustment. A seven day operating week has been assumed.

#### Table 1: Hotel Suites Requirements

Beds	Waste Calculation	Recycling Calculation	
	(10L/bed/day)	(5L/bed/day)	
49	3430.0	1715.0	

#### Table 2: Calculated Waste Generation - Retail

Туре	NLA (m²)	Waste Calculation (L/100m <sup>2</sup> /day)	Generated Waste (L/week)	Recycling Calculation (L/100m <sup>2</sup> /day)	Generated Recycling (L/week)
Restaurant (Eating)	67.4	400	1887.2	280	1321.0
Non-Food (<100m <sup>2</sup> ) (shop)	42.1	5	14.7	20	58.9
TOTAL	109.5		1901.9		1380.0

#### Table 3: Total Waste Generated

Waste (L)	Recycling (L)
5332	3095

#### **BIN SUMMARY**

 Table 4: Bin Summary – Retail/Hotel

	Garba	ge	Recycling		
Capacity		Collection	Capacity		Collection
(L)	Quantity	Rate	(L)	Quantity	Rate
(⊏)		(times/week)	(Ľ)		(times/week)
1100	2	3	1100	1	3

Due to there being food and food preparation at least 3 weekly collections is recommended due to spoilage.

<u>NOTE</u>: Subject to the stakeholders preference/capability (and as built constraints), bin sizes and quantities may be changed. As waste volumes may change according to the development's type, bin numbers and collection frequencies may be altered to suit the building operation.

### WASTE MANAGEMENT - HOTEL

The vast majority of hotel guests generally spend a relatively short time at the facility, therefore the waste generated in each suite is managed by the staff. Most waste generated is from goods received at the loading area in the form of packaging (cardboard and plastic film), food waste, recyclables (mixed containers), newspapers and magazines. Office paper may also be generated however this is generally a minimal quantity.

Each hotel suite will be supplied with a collection receptacle (generally in the main room and bathroom, under bench or similar) to deposit garbage and collect recyclable material suitable for one day's storage. Garbage receptacles must be supplied with bin liners. Recycling must not be bagged. It is recommended that hotel guests use a dedicated bin for collecting recyclables within the space provided to ensure correct separation before recyclables are transferred to the garbage room. It is expected that hotel guests will place clean and empty recycling items into the collection bins.

Nominated staff or cleaners will transport sorted garbage and recyclable items to the waste room on the basement level and deposit into the relevant 1100L bins. Collections will be undertaken by a private waste contractor to an agreed schedule.

### WASTE MANAGEMENT – RETAIL/RESTAURANT

Retail tenants are responsible for their own storage of waste and recycling back of house (BOH). On completion of each trading day or as required, nominated staff/cleaners will transport their waste and recycling to the allocated retail waste area and place waste and recycling into the appropriate collection bins.

Cleaners/Caretakers of the suites will be responsible for managing the rooms waste and recycling and bring it down to the waste rooms as required.

Food handling for food cooked or prepared, served and consumed on site will produce a typical waste composition of food scraps from plates, packaging waste and some plastics. Café or restaurant staff will be responsible for their waste management.

Cardboard is a major component of the waste generated by cafes/restaurants. All cardboard should be flattened (to save bin space), placed in and collected from bulk bins. Whilst cardboard is bulky, it is generally lightweight however it can be contaminated with food or liquid which makes it unsuitable for recycling.

On completion of each trading day or as required, nominated retail staff/cleaners will transport their waste and recycling, using the access corridor, to the retail waste room on the basement level and place waste and recycling into the appropriate 1100L bins.

It is recommended that:

- all waste should be bagged and waste bins should be plastic lined;
- bagging of recyclables is not permitted;
- all waste collections located BOH during operations;

- individual recycling programs are recommended for retailers to ensure commingled recycling is separated correctly;
- any food and beverage tenant will make arrangements for storing used and unused cooking oil in a bunded storage area;
- the operator will organise grease interceptor trap servicing;
- a suitable storage area needs to be provided and affectively bunded for chemicals, pesticides and cleaning products;
- dry basket arresters need to be provided to the floor wastes in the food preparation and waste storage areas;
- washroom facilities should be supplied with collection bins for paper towels (if used); and
- all flattened cardboard will be collected and removed to the waste room recycling MGB

#### COMMON AREAS

The lobbies, retail amenities and circulation areas will be supplied with suitably branded waste and recycling bins, where considered appropriate. Building management will monitor use and ensure bins are exchanged and cleaned. These areas generate negligible waste however garbage and recycling receptacles should be placed in convenient locations.

#### WASHROOM FACILITIES

Washroom facilities in retail and staff areas should be supplied with collection bins for paper towels (if used). Sanitary bins for female restroom facilities must also be arranged with an appropriate contractor.

Building management will monitor use and ensure waste bins are exchanged and cleaned.

#### **GREEN WASTE**

There will be green waste generated by the buildings landscaped areas. Any green waste will be collected and removed from site by the maintenance contractor during scheduled or arranged servicing of these areas.

<u>NOTE</u>: Subject to the stakeholders preference/capability (and as built constraints), bin sizes and quantities may be changed.

### WASTE ROOM AREAS

The bin store must hold the required number of bins and allow enough room to clean and safely manoeuvre bins. A bin wash down area is provided in this area (see Appendix A.1 – Basement Floor plan).

All waste storage areas must be screened from view from any adjoining residential property or public place.

Where a residential development and commercial development occupy the same site or development, the waste handling, storage and collection systems for residential and commercial waste are to be completely separate and self-contained.

The areas allocated for commercial/retail bin store, collection areas are detailed in Table 5 below. The areas provided are considered suitable for purpose.

#### Table 5: Waste Room Areas

Location	Waste Room Type	Equipment	Allocated Area (m <sup>2</sup> )
Basement	Hotel/Retail	2 x 1100L MGBs (Garbage) 1 x 1100L MGB (Recycling)	23.7

### COLLECTION OF WASTE

A plan is to be negotiated with a private contractor on the safest and more efficient way to collect waste from this development. The Waste room is at the back of the development and contractor will need to move the bins from the waste room to the collection truck on the ground floor.

If a contractor's truck fits in the carpark and they prefer to park rather than transport the bins outside then a plan is to be negotiated for the safest route to ensure little interference with the vehicles parked.

A Bin-tug may be required to move the bins to the collection trucks location.

#### **COLLECTION AREA**

All access and egress details including a swept path analysis for all vehicle movements on site will be provided by the traffic consultant's report.

The development will be managed by a private contractor so the requirements for a collection area will be negotiated with a private contractor.

### GARBAGE ROOMS

### **CONSTRUCTION REQUIREMENTS**

The garbage room will be required to contain the following facilities to minimise odours, deter vermin, protect surrounding areas, and make it a user-friendly and safe area:

- waste room floor to be sealed with a two pack epoxy;
- waste room walls and floor surface is flat and even;
- all corners coved and sealed 100mm up, this is to eliminate build-up of dirt;
- a cold water facility with hose cock must be provided for washing the bins;
- any waste water discharge from bin washing must be drained to sewer in accordance with the relevant water board. (Sydney Water);
- tap height of 1.6m;
- storm water access preventatives (grate);
- all walls painted with light colour and washable paint;
- equipment electric outlets to be installed 1700mm above floor levels;
- the room must be mechanically ventilated;
- light switch installed at height of 1.6m;
- waste rooms must be well lit (sensor lighting recommended);
- optional automatic odour and pest control system installed to eliminate all pest types and assist with odour reduction – this process generally takes place at building handover – building management make the decision to install;
- all personnel doors are hinged and self-closing;
- waste collection area must hold all bins bin movements should be with ease of access;
- conform to the Building Code of Australia, Australian Standards and local laws;
- childproofing and public/operator safety shall be assessed and ensured; and
- no other service infrastructure or services bays are to be located in the waste rooms. This
  includes and is not limited to air conditioning ducts, pipes, gas or water meters, swimming
  pool pumps or electrical installations.

### SIGNAGE

The building manager/caretaker is responsible for waste room signage including safety signage (see *APPENDIX B.2*). Appropriate signage must be prominently displayed on walls and above all bins, clearly stating what type of waste or recyclables is to be placed in the bin underneath.

All chute doors on all residential levels will be labelled with signs directing chute operations and use of chute door.

### VENTILATION

Waste and recycling rooms must have their own exhaust ventilation system either;

- Mechanically exhausting at a rate of 5L/m<sup>2</sup> floor area, with a minimum rate of 100L/s minimum; or
- Naturally permanent, unobstructed, and opening direct to the external air, not less than one-twentieth (1/20) of the floor area

Mechanical exhaust systems shall comply with AS1668 and not cause any inconvenience, noise or odour problem.

### **STORM WATER PREVENTION & LITTER REDUCTION**

Building management shall be responsible for the following to minimise dispersion of site litter and prevent stormwater pollution to avoid impact to the environment and local amenity:

- promote adequate waste disposal into the bins;
- secure all bin rooms (whilst affording access to staff/contractors);
- prevent overfilling of bins, keep all bin lids closed and bungs leak-free;
- take action to prevent dumping or unauthorised use of waste areas; and
- ensure collection contractors clean-up any spillage that may occur when clearing bins

### ADDITIONAL INFORMATION

Transfer of waste and all bin movements require minimal manual handling therefore the operator must assess manual handling risks and provide any relevant documentation to building management. If required, a bin-tug, trailer or tractor consultant should be contacted to provide equipment recommendations. Hitches may require installation to move multiple bins to the collection area. Council must be informed of any hitch attachments required to be installed on bins.

### LIMITATIONS

The purpose of this report is to document a Waste Management Plan as part of a development application and is supplied with the following conditions:

- drawings and information supplied by the project architect;
- the figures presented in the report are an estimate only the actual amount of waste generated will be dependent on the occupancy rate of the building/s and waste generation intensity as well as the building managements approach to waste management;
- the building manager will make adjustments as required based on actual waste volumes (if waste is greater than estimated) and increase the number of bins and collections accordingly;
- the report will not be used to determine or forecast operational costs or prepare any feasibility study or to document any safety or operational procedures; and
- any manual handling equipment should be provided at the recommendation of the appropriate equipment provider who will assess the correct equipment for supply.

### USEFUL CONTACTS

Elephants Foot Recycling Solutions does not warrant or make representation for goods or services provided by suppliers.

### MANLY COUNCIL CUSTOMER SERVICE

Phone: 02 9976 1500

#### SULO MGB (MGB, Public Place Bins, Tugs and Bin Hitches) Phone: 1300 364 388

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CLOSED LOOP (Organic Dehydrator) Phone: 02 9339 9801

ELECTRODRIVE (Bin Mover) Phone: 1800 333 002

Email: sales@electrodrive.com.au

**RUD (Public Place Bins, Recycling Bins)** Phone: 07 3712 8000

Email: Info@rud.com.au

#### CAPITAL CITY WASTE SERVICES Phone: 02 9359 9999

### RELIVIT

Phone: 1300 247 732

Email: mailto:info@relivit.com.au

#### **REMONDIS (Private Waste Services Provider)** Phone: 13 73 73

#### SITA ENVIRONMENTAL (Private Waste Services Provider) Phone: 13 13 35

NATIONAL ASSOCIATION OF CHARITABLE RE	ECYCLING ORGANISATIONS INC. (NACRO)
Phone: 03 9429 9884	Email: information@nacro.org.au

PURIFYING SOLUTIONS (Odour Control) Phone: 1300 636 877

Email: <a href="mailto:sales@purifyingsolutions.com.au">sales@purifyingsolutions.com.au</a>

#### Elephants Foot Recycling Solutions (Chutes, Compactors and eDiverter Systems) 44 – 46 Gibson Avenue

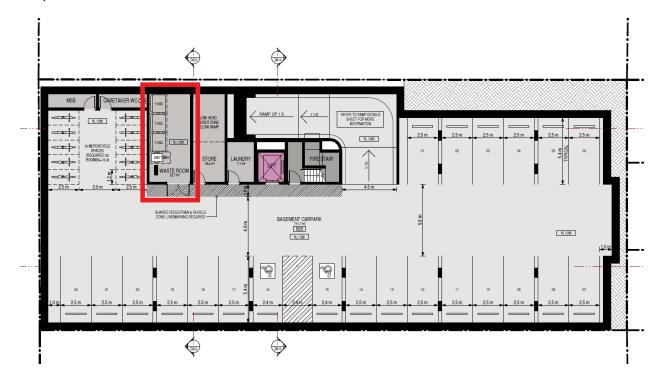
Padstow NSW 2211 Free call: 1800 025 073

Email: <a href="mailto:wmp@elephantsfoot.com.au">wmp@elephantsfoot.com.au</a>

### **APPENDICES**

APPENDIX ADRAWING EXERPTSAPPENDIX A.1BASEMENT FLOOR PLAN

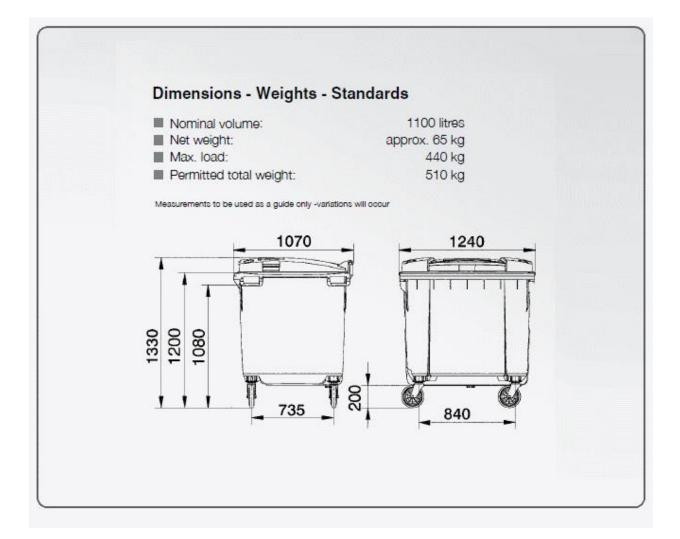
Proposed Waste Room Location.



Source: Morson Group: Basement Level DA06 Iss.P1

# APPENDIX B EQUIPMENT SPECIFICATIONS

APPENDIX B.1 BIN DIMENSIONS



#### APPENDIX B.2 SIGNAGE FOR WASTE & RECYCLING BINS



# WASTE AND RECYCLING IN WARRINGAH

Bin lids are different colours to separate our waste into what can and can't be recycled





APPENDIX B.3 TYPICAL BIN MOVER



Typical applications:

- Move trolleys, waste bin trailers and 660litre/1100 litre bins up and down a <u>ramp incline</u>. Ideal for Apartment Buildings (to move waste bins located at a basement level to road level).
- Quiet, smooth operation with zero emissions and simple to use, no driver's licence required

Features:

- Up to 1 Tonne on a ramp surface (depending on ballast and incline)
- Anti-rollback system on slopes
- Foot print: 1548L x 795W x 1104H (handle in the drive position)
- Pin Hitch is standard however alternate hitching options may be available to suit your specific application (e.g. tow ball)

Safety Features:

- Intuitive paddle lever control
- Stops and repels the unit if activated when reversing.
- Site assessment recommended to assess ramp incline steepness (See Useful Contacts)





\* Products and specifications may change according to manufacturer.

SOURCE: SULO Environmental Technology