WASTE MANAGEMENT PLAN

Prepared for: **JW Neale Pty Ltd (Receivers & Managers Appointed)**
For submission to Ku-ring-gai Council

Project Site: **Residential Development**
Building 1
1, 1A & 5 Avon Road & 4 Beechworth Road
PYMBLE NSW

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Contact: **Eddy Saidi**
1800 025 073

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ABOUT ELEPHANTS FOOT

Elephants Foot Waste Compactors Pty Ltd is a family owned Australian company whose philosophy is providing quality recycling & waste solutions through product innovation. We are Australia's leading supplier of garbage, recycling & laundry chute systems.

Our team of experts has been proudly assisting architects, builders and developers with advice on how best to solve waste management & odour issues in dwellings since 1976. We have a long history of completed projects within the Australian building environment.

1. EXECUTIVE SUMMARY

This waste management plan covers the ongoing management of waste generated by the residential and retail precinct of the residential development at Avon Road, Pymble NSW. 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 encouraging 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

The residential waste and recycling will be guided by the services and acceptance criteria of Ku-ring-gai Council. The residential waste and recycling will be collected by Council as part of council residential waste services.

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

• Resident education and awareness – Communications will introduce residents to the systems in place; explain and reinforce the concepts of recycling; avoid contaminating recycling bins; and promote good practice. Please note that Ku-ring-gai Council produces educational material for residents.

Building management should also ensure their communications achieve a consistent message.

• By-laws – the resident's by-laws, should include a requirement to actively participate in the recycling/diversion initiatives implemented within the building.

Waste Management Report
Project: Building 1, Avon Road, Pymble NSW

We submit a waste management report for the above residential development.
The development activity on this project is the construction of one building.

2. INTRODUCTION

The waste management plan to follow pertains to the complete mixed development located at Pymble. This waste management plan is an operational waste management plan and will address the residential waste management operation of the completed development.

The plan outlines measures to achieve the following objectives:

- Avoid the generation of unnecessary waste
- Minimising the quantities of wastes generated ending up as landfill;
- Recovering, reusing and recycling waste generated onsite where possible.

This report will address the residential aspect of the proposed development which will consist of;

- Five (5) level building with residential units
- Forty four (44) residential units (see mix below)

Unit Mix

Type	Quantity
1 Bed	8
2 Bed	29
3 Bed	7
TOTAL	44

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.

All waste facilities and equipment are to be designed and constructed to be in compliance with Ku-ring-gai Council Codes DCP, BCA, Australian Standards and Statutory Requirements

3.0 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.

3.1 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. A separate report will be submitted by the head contractor regarding construction and development waste operations and will be attached to this report.

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

3.3 Waste and Recycling Calculation

General waste:	80-litres (L) per unit
Recycling:	40-litres (L) per unit

Waste
44 units supplied equal 3,520L compacted at ratio 2:1 with an Elephants Foot bin compactor (or similar) will reduce the volume to 1,760L requiring 7 x 240L MGB.

7 x 240L waste MGB plus 1 spare MGB required

Recycling
44 units @ 40-litres equal 1,760L requiring 7 x 240L MGB.

7 x 240L recycling MGB required plus 1 spare MGB required

3.4 Residential Bin Summary

Waste:
8 x 240L MGB (red lids)
Recycling:
8 x 240L MGB (yellow lids)

3.5 Waste Chutes
The waste and recycling chute for the residential areas are supplied in either 510mm galvanised steel or 510mm recycled LLDPE polyethylene plastic with 2-hour fire rated doors. Galvanised steel chutes are wrapped with 50 mm poly-wool R1.3 noise insulation foil and the polyethylene chute hoppers are wrapped in 50 mm poly-wool R1.3 noise insulation foil to assist in noise reduction. It is preferable that all chutes are installed without offsets wherever possible to achieve best operational outcome for all buildings.

3.6 Chute Summary
Waste: Galvanised steel or recycled LLDPE plastic chutes as supplied by Elephants Foot Recycling Solutions (or similar): one (1) required with compactor system

3.7 Waste Handling
All residents will be supplied with a collection area in each unit (generally in the kitchen or other convenient area) to deposit waste and collect recyclable material. This area should achieve a storage time of 1 – 2 days. Residents should bag their waste before depositing into the waste chute. Recycling must be sorted prior to being emptied in the appropriate bins located in the residential bin room located on each building level which also houses the waste chute door.

3.8 Cardboard recycling
Large Cardboard box recycling bins must be made available in the waste room for residents to dispose of flattened bulky cardboard. Cardboard can become lodged in the chute and must be collected separately.

3.9 Green Waste:
Any green waste generated by the site, either by residents balcony gardens or communal open spaces will be collected and removed from site by the maintenance contractor.

3.10 Composting
Consideration should be given to providing space for individual home unit worm farms or small compost bin on the balconies. A communal compost bin or work farm could also be located in the garden area however this option is only recommended if a caretaker or gardener is available to manage the operation.

3.11 Other Waste Streams
Disposal of hard, electronic, liquid waste and home detox (paint/chemicals) etc shall be organised with the assistance of the building caretaker.

3.12 Waste management storage and collection area:
The waste room located on the lower ground level of the building requires sufficient area to house the compactus and spare 240L MGB.
The residential garbage bin room will need to hold all the waste and recycling bins generated

weekly, as well as areas to manoeuvre and clean bins and the waste room designated is suitable for this purpose. A room or caged 4m3 area is to be allocated for collection of bulky goods with appropriate signage. Council requires a bulky goods area to be provided to discourage Illegal Street dumping by residents. Currently this area is not marked on the plans.

It is recommended that the bin room is a minimum size of 26 sqm.

4.1 Garbage Waste & Recyclables

All bins in the waste room will have to be managed by the caretaker/cleaner by rotating the full waste bins around and ensuring empty ones are available to place under the waste chute. Residents must ensure that waste is bagged before depositing into the chute operation. Therefore clear signs must be prominently displayed and education material and instruction must be implemented by building management including translation of educational material where required. Combined with resident education, the aim is to increase separation of recyclables and decrease waste to land fill. Please note that all collection bins should be branded with the appropriate stickers and the use of the moebius loop or similar identifying recycling equipment is required by Council. Ku-ring-gai Council provides educational material for this purpose.

4.2 Collection of Waste

It will be the caretaker's responsibility to have the correct bins ready and placed for quick collection according to council collection schedule. All bins will be collected from the bin collection area on lower ground level.

Unimpeded access for the council small waste collection vehicle must be provided with the following:

- Minimum head room of 2.6 metres for the full path of travel from the street to the collection point
- Turning area available for the small waste collection vehicle to enter and leave the basement in a forward direction with only one turning movement.

A waste bin mover or electric tug is recommended to be installed for transporting bins safely and efficiently if bins are being moved via any ramps. As bins will need to be transported from the lower ground level, it is important that any ramps meet the regulatory requirements. Steps are not suitable.

4.3 Waste Caretaker

All equipment movements in the room are managed by the building manager / cleaners at all times, the tenants will only transport their waste and recycling to the chute door housed in the alcove in the lobby area on each residential level.

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

- Generally maintaining and cleaning the waste chute alcoves on each level (Frequency will be dependent upon waste generation and will be determined based upon building operation)
- Organising, maintaining and cleaning the general and recycled waste holding areas.

(Frequency will be dependent upon waste generation and will be determined based upon building operation)

- Educating & updating all tenants on sorting methods for recycled waste and the appropriate disposal methods.
- Making all waste drop off points safe & accessible to tenants at all times
- Organising for both Garbage and Recycled Waste pick-ups as required
- Cleaning and exchanging all bins

5.0 WASTE ROOM

Garbage rooms construction requirements:
The garbage room will be required to contain the following facilities to minimize odours, protect surroundings areas & make it a user friendly & safe area:

(1) Waste room floor to be sealed with a two pack epoxy
(2) Waste room floor surface is flat and even
(3) All corners coved and sealed 100 mm up, this is to eliminate build up of dirt
(4) A hot & cold water facility provided for washing the bins
(5) Tap height 1.6m
(6) Drain to sewer
(7) Storm water access preventatives (grate)
(8) All wall painted with light colour & washable paint.
(9) Equipment electric outlets to be installed 1700 mm above floor levels
(10) The room must be mechanically ventilated
(11) Light switch installed at height of 1.6m
(12) Waste rooms must be well lit
(13) Optional automatic odour and pest control system installed to eliminate all pest types. This process generally takes place at building handover – building management make the decision to install. Please note that odour systems spraying product directly onto galvanised steel surfaces may cause corrosion
(14) All personnel doors are hinged and self closing
(15) Appropriate signage prominently displayed on walls & above all bins clearly stating what type of waste or recyclable is to be placed in the bin underneath.
(16) Building management/caretaker is responsible for waste room signage and further education after building handover
(17) Waste collection area must hold all bins; bin movements should be with ease of access.
(18) All chute doors on all levels will be labelled with signs encouraging occupants to recycle and minimise their waste.
(19) Signage directing chute operations regarding waste and recycling will be posted on each chute door.

Please note: This waste management system is only indicative & waste generation rates are based on figures stipulated in Appendix A of “Better Practice Guide for Waste Management in Multi Unit Dwellings” published by the Department of Environment and Climate Change

All chute doors on all levels will be labelled with signs encouraging occupants to recycle and minimise their waste.

- 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.

USEFUL CONTACTS

KU-RING-GAI COUNCIL
818 Pacific Highway,
Gordon NSW 2072
Call Centre/General Enquiries: +61 02 9424 0000
After hours telephone: +61 02 9424 0000

ELECTRODRIVE (Bin tug)
Unit 2, 14 Merri Concourse
Cambellfield VIC
P: + 61 03 9357 7699
E: info@electrodrive.com.au

ELEPHANTS FOOT RECYCLING SOLUTIONS
Natalie Beattie
44 – 46 Gibson Avenue
Padstow NSW 2211
Free call: 1800 025 073
Natalie@elephantsfoot.com.au

If you require any further information please do not hesitate to call on 1800 025 073.

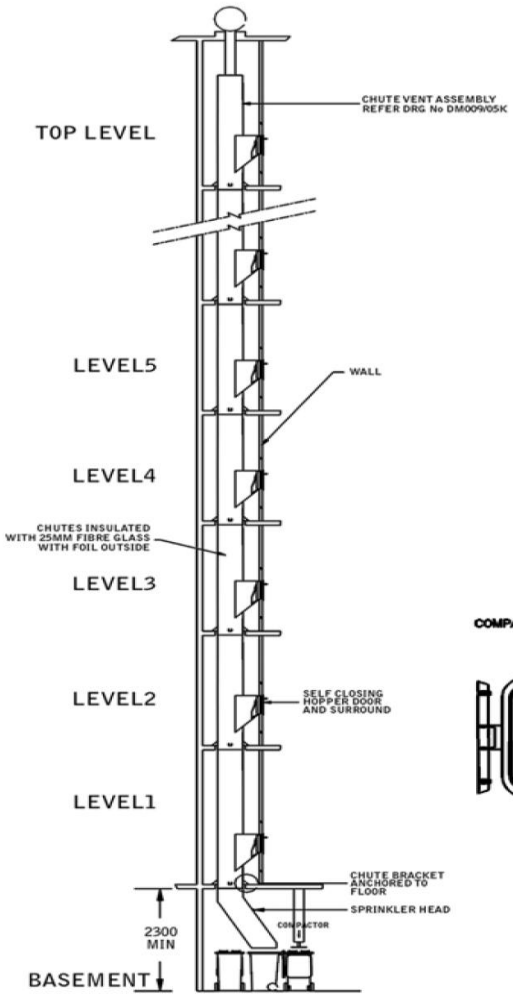
Regards,

Eddy Saidi
Director

ELEPHANTS FOOT
recycling solutions

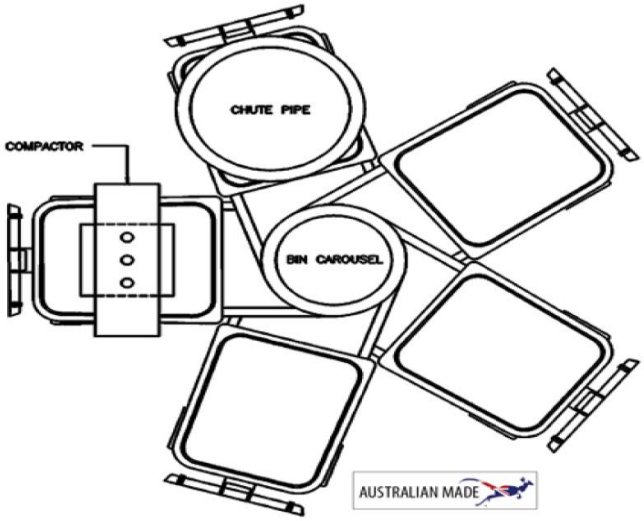
ELEPHANT'S FOOT WASTE COMPACTORS

ELEPHANTS FOOT WASTE COMPACTORS
CHUTES & CAROUSELS



CHUTES
1.6mm gal
510mm Diameter
Sound insulated
Self cleaning system
150 Phase vent
430 x 430mm inlet door
We help in design & waste management reports

More specifications upon request



FREE CALL: 1800 025 073
PH: 61-2-9780 3500 **FAX:** 61-2-9707 2588
EMAIL: info@elephantsfoot.com.au

Elephants Foot Waste Compactors
44-46 Gibson Ave Padstow
Australia NSW 2211
www.elephantsfoot.com.au

Appendix 2

ELEPHANTS FOOT WASTE COMPACTORS
CAROUSEL & LINEARS

CAROUSEL

CAROUSEL

LINEAR

LINEAR

BIN COMPACTOR + CAROUSEL OR LINEAR
Built for under chutes systems in high rise building
Waste falls directly into bins
Fits over carousel or linear system
Compacts into, 240, 660, 1100 standard bins
Fully automatic, compaction ratio 2:1
Minimise strata cost
Low cost maintenance
415 Volts - 10Amp

LINEAR NO COMPACTOR
Built to minimise strata cost
Can be fitted with 240, 660 or 1100 litre bins
Fully automatic
Designed for building where no compaction required
Minimises bin movement
Low maintenance
415 Volts - 10Amp

AUSTRALIAN MADE

FREE CALL: 1800 025 073
PH: 61-2-9780 3500 **FAX:** 61-2-9707 2588
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