Summit Care – 11-19 Frenchmans Road, Randwick

Aged Care Development

OPERATIONAL WASTE MANAGEMENT PLAN

27/08/2020
Report No.
Revision C

Client

Summit Care

Architect

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SCOPE

This waste management plan (WMP) only applies to the **operational** phase of the proposed development; therefore the requirements outlined in this WMP must be implemented during the operational phase of the site and may be subject to review upon further expansion for, and/or changes to the development.

The waste management of the **construction** and **demolition** phases of the development are not addressed in this report. It is EFRS's understanding that a construction and demolition WMP will be completed by a separate party appointed by the developer, and submitted separately to this report. Typically, the head contractor of the site will be responsible for removing all construction-related waste offsite in a manner that meets all authority requirements.

REVISION REFERENCE

Revision	Date	Prepared by	Reviewed by	Description
A	25/09/2019	A Armstrong	E Saidi	Draft
B	14/08/2020	A Armstrong	E Saidi	Final
C	27/08/2020	A Armstrong	E Saidi	Amendment

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GLOSSARY OF TERMS

TERM	DESCRIPTION
Collection Area/Point	The identified position or area where garbage 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)
Green Waste	All vegetated organic material such as small branches, leaves and grass clippings, tree and shrub pruning, plants and flowers
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)
LRV	Large rigid vehicle described by AS 2890.2-2002 Parking facilities – Off-street commercial vehicle facilities as heavy rigid vehicle (HRV)
Mobile Garbage Bin(s) (MGB)	A waste container generally constructed of plastic with wheels with a capacity in litres of 120, 240, 360, 660, 1000 or 1100
MRV	Medium rigid vehicle
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.
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
SRV	Small rigid vehicle as in AS 2890.2-2002 Parking facilities – Off-street commercial vehicle facilities, generally incorporating a body width of 2.33

INTRODUCTION

Elephants Foot Recycling Solutions (EFRS) has been engaged to prepare the following waste management plan for Summit Care for the operational management of waste generated by the aged care development located at 11-19 Frenchmans Road, Randwick.

Waste management strategies and auditing are a requirement for new developments to provide support for the building design, and promote strong sustainability outcomes for the building. It is EFRS's belief that a successful waste management strategy contains three key objectives:

i. ***Promote responsible source separation*** to reduce the amount of waste that goes to landfill, by implementing convenient and efficient waste management systems

ii. ***Ensure adequate waste provisions and robust procedures*** that will cater for potential changes during the operational phase of the development

iii. ***Compliance*** with all relevant council codes, policies, and guidelines.

To achieve these objectives, this WMP identifies the different waste streams likely to be generated during the operational phase of the development. Associated information includes: how the waste will be handled and disposed of, details of bin sizes/quantities and waste rooms, descriptions of the proposed waste management equipment used and information on waste collection points and frequencies.

It is essential that this waste management plan is integrated into the overall management of the building and clearly communicated to all relevant stakeholders.

REPORT CONDITIONS

The purpose of this report is to document a Waste Management Plan (WMP) as part of a development application and is supplied by EFRS with the following limitations:

- Drawings, estimates and information contained in this waste management plan have been prepared by analysing the information, plans and documents supplied by the client, and third parties including Council and government information. The assumptions based on the information contained in the WMP is outside the control of EFRS;
- 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 educating residents and tenants regarding waste management operations and responsibilities;
- 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;
- The report has been prepared with all due care however no assurance or representation is made that the WMP reflects the actual outcome and EFRS will not be liable to you for plans or outcomes that are not suitable for your purpose, whether as a result of incorrect or unsuitable information or otherwise;
- EFRS offer no warranty or representation of accuracy or reliability of the WMP unless specifically stated;
- Any manual handling equipment recommended should be provided at the recommendation of the appropriate equipment provider who will assess the correct equipment for supply;
- Design of waste management chute equipment and systems must be approved by the supplier.
- EFRS cannot be held accountable for late changes to the design after the WMP has been submitted to Council.
- EFRS will provide specifications and recommendations on bin access and travel paths within the WMP, however it is the architect's responsibility to ensure the architectural drawings meet these provisions.
- EFRS are not required to provide information on collection vehicle head heights, internal manoeuvring and loading requirements. These variables are considered to be within the applicable Traffic Consultants domain.
- Council are subject to changing waste and recycling policies and requirements at their own discretion. Information in this operational waste management plan is correct as of August 2020.

This WMP has only been finalised once the Draft Watermark has been removed. If the Draft Watermark is present, the information in the WMP is not confirmed.

DEVELOPMENT SUMMARY

The proposed development falls under the LGA of Randwick Council, and consists of 1 x 4-storey (plus 2 basements) building with 78 x RACF rooms, cafes, dining areas and 2 x ILU's.

All figures and calculations are based on area schedules as advised by our client and shown on architectural drawings.

SITE LOCATION

The site is located at 11-19 Frenchmans Road, Randwick, as shown in Figure.1. The site has frontages and vehicular access to Frenchmans Road.

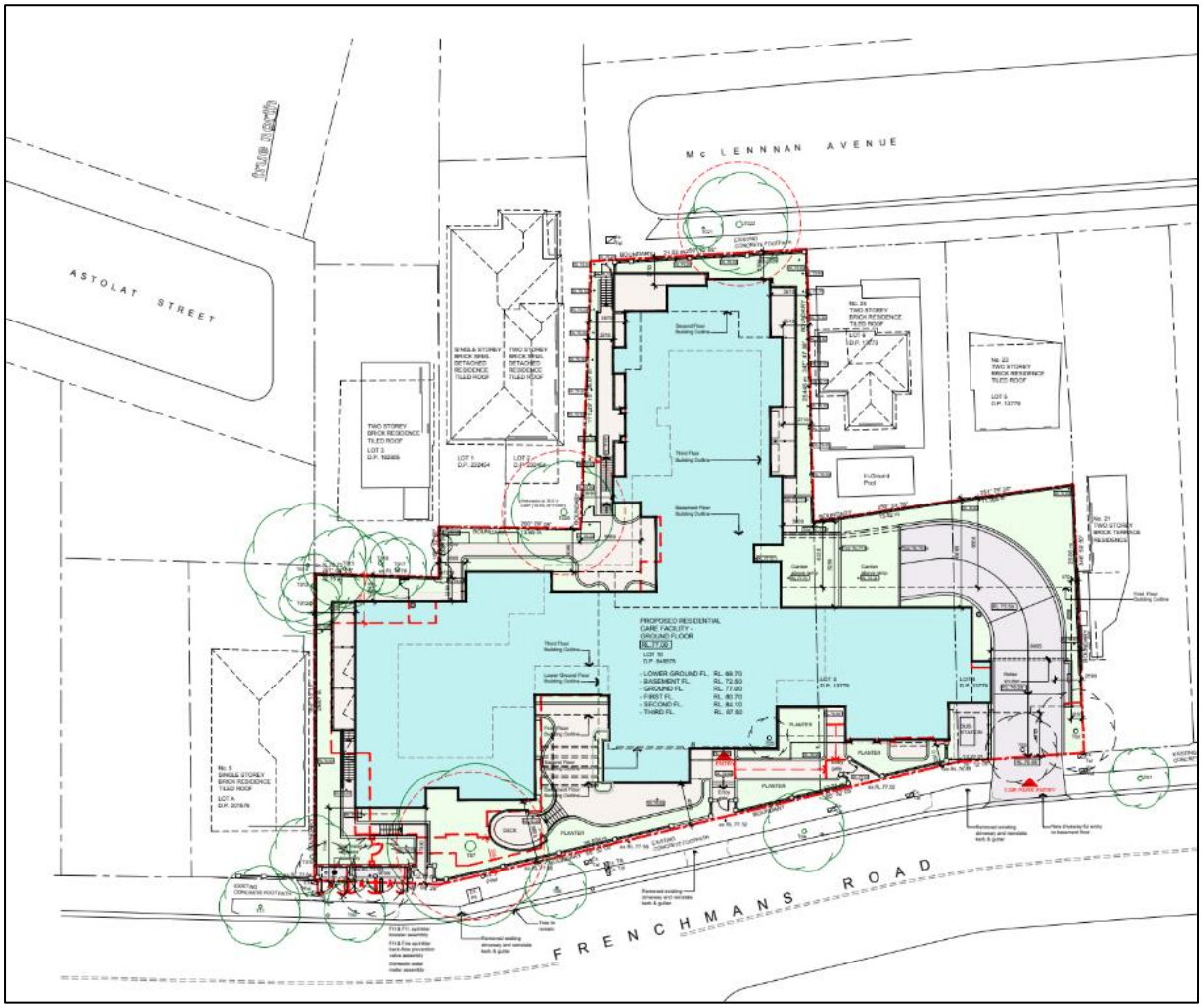


Figure 1: Site Location

RANDWICK COUNCIL

The waste and recycling will be guided by the acceptance criteria of Randwick Shire Council and will be serviced by a private waste contractor. All waste facilities and equipment are to be designed and constructed to be in compliance with the *Randwick Comprehensive Development Control Plan 2013,* Australian Standards and statutory requirements.

COUNCIL OBJECTIVES

- Provide suitable and sufficient waste storage facilities for all development, in accordance with Council's Guideline.

- Identify in any required Waste Management Plan:
    - estimated volume of general waste, recyclables, garden waste and bulky waste likely to be generated on the premise;
    - required type, size and number of bins and space for storage of bins and bulky waste; and
    - details of on-going management arrangements, including responsibility for cleaning, transfer of bins between storage facilities and collection points and maintenance of the storage facilities.

- Illustrate on the DA plans/drawings:
    - storage space and layout for bins;
    - storage room for bulky waste;
    - waste collection point(s) for the site;
    - path of access for users and collection vehicles; and
    - layout and dimensions required to accommodate collection vehicles when on-site collection is required.

- Locate and design the waste storage facilities to visually and physically complement the design of the development. Avoid locating waste storage facilities between the front alignment of a building and the street where possible.

- Locate the waste storage facilities to minimise odour and acoustic impacts on the habitable rooms of the proposed development, adjoining and neighbouring properties.

- Screen the waste storage facilities through fencing and/or landscaping where possible to minimise visual impacts on neighbouring properties and the public domain.

- Ensure the waste storage facilities are easily accessible for all users and waste collection personnel and have step-free and unobstructed access to the collection point(s).

- Provide sufficient storage space within each dwelling/unit to hold a single day's waste and to enable source separation.

- Bin enclosures/rooms must be ventilated, fire protected, drained to the sewerage system and have lighting and water supply.

- For mixed use development, provide separate waste storage facilities for residential and commercial uses.

STAKEHOLDER ROLES AND RESPONSIBILITIES

The following table demonstrates the primary roles and responsibilities of the respective stakeholders:

Table 1: Stakeholder Roles and Responsibilities

Roles	Responsibilities
Strata/Management	• Ensuring that all waste service providers submit monthly reports on all equipment movements and waste quantities/weights; • Organising internal waste audits/visual assessments on a regular basis; and • Manage any non-compliances/complaints reported through waste audits.
Building Caretaker	• Ensuring effective signage, communication and education is provided to occupants, tenants and cleaners; • Providing staff/contractors with equipment manuals, training, health and safety procedures, risk assessments, and PPE to control hazards associated with all waste management activities; • Ensuring site safety for residents, children, visitors, staff and contractors; • Abiding by all relevant OH&S legislation, regulations, and guidelines; • Assessing any manual handling risks and prepare a manual handling control plan for waste and bin transfers; • Preventing storm water pollution by taking necessary precautions (securing bin rooms, preventing overfilling of bins) • Organising, maintaining and cleaning the general and recycled waste holding area; • Organising both waste and recycled waste pick-ups as required; • Organising replacement or maintenance requirements for bins; • Organising bulky goods collection when required; and • Investigating and ensuring prompt clean-up of illegally dumped waste materials.
Staff	• Dispose of all waste and recycling in the allocated MGBs provided; • Ensure adequate separation of garbage and recycling; • Transferring MGBs to the collection area and returning them to their operational location; and • Compliance with the provisions of Council and the WMP.
Waste Contractor	• Provide a reliable and appropriate waste collection service; • Provide feedback to building managers/residents in regards to contamination of recyclables; and • Work with building managers to customise waste systems where possible.
Gardening/Landscaping Contractor	• Removal of all garden organic waste generated during gardening maintenance activities for recycling at an offsite location.
Building Contractors	• Removing all construction related waste offsite in a manner that meets all authority requirements.

EDUCATION

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

Educational material encouraging the correct separation of waste and recycling items must be provided to all staff to ensure the correct disposal of waste and recycling. It is recommended that management provides information in multiple languages to support correct practises and minimise the possibility of contamination in the collective waste bins.

RESIDENTIAL CARE UNITS (RCU) WASTE PLAN

Residential care units will be dependant aged care. The occupants within the residential care units will have their meals, living need and cleaning conducted by the residential care unit staff.

The waste generation rates obtained from the *Randwick Comprehensive Development Control Plan 2013* for the RACF's are as follows

Waste: 40L per room per week (without kitchen)
Recycling: 40L per room per week (without kitchen)

The waste generation rates obtained from the *Randwick Comprehensive Development Control Plan 2013* for the ILU's are as follows

Waste: 120L per ILU per week
Recycling: 120L per ILU per week

Please note that calculations are based on generic figures; waste generation rates may differ according to the residents' waste management practice.

Table 2: Calculated Waste Generation – RACF & ILU

Type	**# Rooms**	**Waste Generation Rate** (L/unit/week)	**Generated Waste** (L/week)	**Recycling Generation Rate** (L/unit/week)	**Generated Recycling** (L/week)
RACF	78	40	3120	40	3120
ILU	2	120	240	120	240
TOTAL	**80**		**3360**		**3360**
MGBs & Collection		Waste Bin Size (L)	1100	Recycling Bin Size (L)	1100
		Waste Bins per Week	3	Recycling Bins per Week	3
		Waste Collections per Week	3	Recycling Collections per Week	2
		Total Waste Bins Required	**1**	Total Recycling Bins Required	**2**

RACF WASTE DISPOSAL PROCEEDURE

Each resident's room will be supplied with small receptacle bins to collect waste and recyclable materials suitable for 1 days' worth.

The bins are emptied by contract cleaners. The cleaners circulate around each resident's room and also perform other cleaning tasks.

Cleaners empty the bins into bags which they transport around the building in a cart which is also used to store cleaning products, spare bags, PPE and consumables.

The cleaners or staff will transport and dispose of the central waste room on the basement level.

ILU WASTE DISPOSAL PROCEEDURE

Each apartment will be supplied with small receptacle bins to collect waste and recyclable materials suitable for 1 days' worth.

Residents will be responsible for transferring their own waste and recycling to the waste room on the basement level, via the lift system, when required.

COMMERCIAL & MEDICAL WASTE MANAGEMENT

Randwick Comprehensive Development Control Plan 2013 has been referenced to calculate the total number of bins required for the retail and commercial areas. Calculations are based on generic figures; waste generation rates may differ according to the tenants' waste management practice.

ESTIMATED WASTE VOLUMES AND PROVISIONS

The following table shows the estimated volume (L) of waste and recycling generated by the commercial areas of the development. A seven day operating week has been assumed.

Table 3: Calculated Waste Generation – Commercial

Location	Type	NLA (m^2)	Waste Generation Rate (L/100m^2/day)	Generated Waste (L/week)	Recycling Generation Rate (L/100m^2/day)	Generated Recycling (L/week)
Basement	Kitchen	100	670	4690	140	980
Ground	Café	50	670	2345	140	490
Ground	Dining/Servery	80	670	3752	140	784
Ground	Offices	50	10	35	10	35
Level 1	Dining/Servery	100	670	4690	140	980
Level 2	Dining/Servery	100	670	4690	140	980
TOTAL	**TOTAL**	**480**		**20202**		**4249**
Bins and Collections		Bin Size (L)		1100	Bin Size (L)	1100
		Waste Bins per Week		19	Recycling Bins per Week	4
		Waste Collections per Week		3	Recycling Collections per Wee	2
		Total Waste Bins Required		**7**	TotaL Recycling Bins Required	**2**

KITCHEN/DINING WASTE

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.

Waste, cardboard recycling and co-mingled recycling MGBs will be placed in receptacles BOH (kitchen areas). It is the staff's responsibility to ensure that waste and recycling is separated and is disposed of in the appropriate bin.

Cardboard is a major component of the waste generated by the kitchen areas. 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.

At the end of each day or when required, all waste and recycling will be transferred to the central waste room on basement 1.

OFFICES, SEATING AREAS AND COMMON AREAS

The offices, seating areas and common areas will be supplied with suitably branded waste and recycling bins, where considered appropriate. Waste and recycling receptacles should be placed in convenient locations.

The cleaners or building management will monitor use and ensure bins are exchanged and cleaned. Bags of waste will be transferred to the corresponding waste room (commercial or RCU).

WASHROOM FACILITIES

Washroom facilities in 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.

STAFF AREAS

Any staff tea points or food preparation areas will be supplied with a dedicated commingled bin for the collection of all recyclable glass, aluminium, steel and plastic items. Staff will be responsible for sorting this material and allocating recyclables into the correct collection facility.

MEDICAL WASTE

The management of medical waste (as used in aged care facilities) is a highly specialised field. If not stored and treated appropriately, some materials can cause infections or injuries, while others can be highly toxic. As such the correct and safe handling of generated medical waste will be required at all times with all medical waste being removed off site by a specialist waste removal contractor.

aged care facility will have dedicated medical waste bins supplied as per the medical waste contractor's recommendations for the site. Waste from out-of-date and partly used medicines, infectious medical wastes, hazardous wastes and sharps waste must be stored and disposed of according to specific industry-based regulations. Correct segregation and containment of all wastes is required under the Waste Act.

Table 4: Required Provisions for Medical Waste

Size/Type of Vicinity	Generated Waste (# 240L Bins)	Collection	Comments
2-3 Doctors	1	Weekly	**Medical waste requires locked 240L MGBs** Sharps containers should be placed within "arms reach" of where the sharps are generated. Full containers will be sealed and then transported utility rooms/ designated storage area to awaiting collection by contractors. Replacement sharps containers provided by the medical waste service provider
4-6 Doctors	2	Weekly	
7-12 Doctors	3	Weekly	

Based on Table. 4 above, it is likely that 1-2 x 240L medical waste bins will be required for the RACF component of the site.

Medical waste bins will be kept in the central waste room, however they will be segregated and caged off with access granted to authorised personnel only.

Medical waste bins will be collected by the appointed contractor on a wheel in/wheel out basis and replacement bins provided to an agreed collection scheduled.

Please refer to Table. 5 for the storage and collection requirements for any medical waste.

Table 5: Storage and collection requirement for medical waste

Area	Location
Storage	An EPA license may be required to store Hazardous Wastes. Storage areas are to be free from odour and must discourage the harbourage of vermin. Health Care Facilities must provide an enclosed structure such as a shed, garage, cage, fenced area or separate loading bay to store waste. The holding area should be located away from food and clean storage areas, it must not be accessible to the public, have a lockable door and rigid impervious flooring. Clean up facilities, spills kits, appropriate drainage and bunding should be provided. Where wastes are stored in bins the bin must be locked and a specific area, with adequate drainage, for washing equipment should be designated
Containers	All containers of medical waste to be stored in a secure location. Loads contained in MGBs and trolleys should be less than 55kgs and bins must be colour coded and marked in accordance with the Waste Management Guidelines for Health Care Facilities
Spillage	Ensure all necessary equipment required to clean and disinfect the area in case of accidental spillage is easily available and accessible. It is essential that personnel involved in spill management receive education and training in emergency procedures and handling requirements. Spill kits that have been used should be disposed of with the type of waste that has been cleaned up, eg used cytotoxic spill kits should be disposed of with cytotoxic waste
Mixed waste	Any waste mixed with medical waste must be treated as medical waste
Sharps	Needles, syringes and surgical instruments must be handled so the disposal of these items does not incorporate cutting, bending or any other manipulation that could generate aerosols or splatter contaminated fluids. All sharps containers should be assessed for compliance with the current NSW Health Infection Control Policy and the relevant Australian Standard
Collections	Medical waste shall remain within the storage areas and only be moved during collections. Collections will be performed by a transporter licensed by the EPA to collect and transport

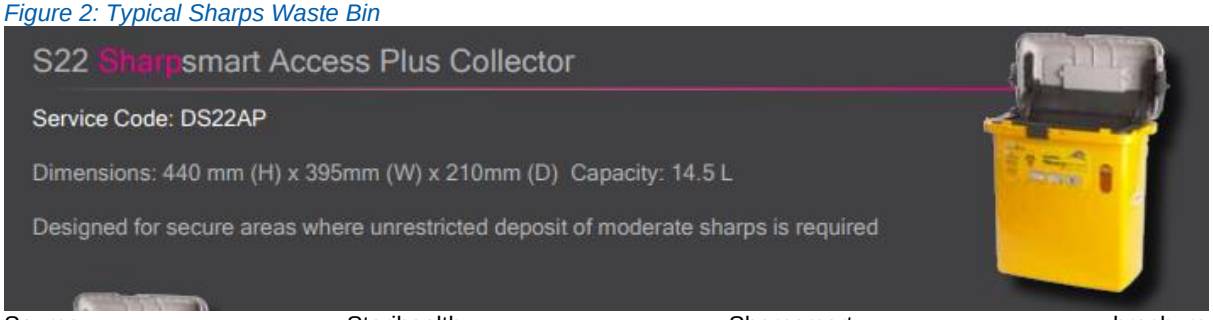
SHARPS WASTE

Sharps waste refers to objects or devices having sharp points or protuberances or cutting edges, capable of penetrating the skin or the container in which it is discarded. Examples of this are needles, lancets and scalpel blades. All glass used in clinical procedures e.g. vials, ampoules whether broken or unbroken, contaminated or not is best disposed as sharps.

Any sharp waste must be disposed of into sharp waste bins. Building management will be responsible for providing enough sharps bins for the facility and for arranging the private contractor to service the sharps bins.

Sharps waste must be segregated and disposed of into rigid, impenetrable containers, which comply with AS 4031-1992. bins will be serviced from their operational location by an appropriate contractor.

Figure 2: Typical Sharps Waste Bin



Source: Sterihealth, Sharpsmart brochure http://www.sterihealth.com.au/sites/sterihealth.com.au/files/fck_images/file/Sharpsmart%20Accessories%20version%20SEPT%202010%20for%20web.pdf

COLLECTION OF WASTE

A private waste contractor must be engaged to service all waste and recycling MGBs to an agreed collection schedule. This report assumes 3 x weekly collections for waste and 2 x weekly collections for recycling.

The collection vehicle will enter the site via Frenchmans Road and park in the designated vehicle loading bay. The waste contractors will service all MGBs directly from the waste room.

Medical receptacles will be collected by a specialised medical waste contractor directly from their allocated storage location. Replacement receptacles will be provided on a scheduled collection frequency.

COLLECTION AREA

It is Elephant Foot's understanding that the collection areas have been reviewed by a traffic consultant to confirm the swept paths, load requirements and height clearances for waste collections. It must be ensured that that the collection vehicle (and other trucks if required) can enter and exit the building in a forward direction.

The final number of truck collection will depend on management of waste contract.

WASTE ROOM AREAS

The central waste room must have the capacity to store all of the required MGBs for the site, sufficient room to adequately access and manoeuvre MGBs and a bin wash down area.

The MGBs and required waste room size is as per the below:

Waste:	**8 x 1100L** MGBs collected 3 x weekly
Recycling:	**4 x 1100L** MGBs collected 2 x weekly
Medical (caged off/secured):	1**-2 x 240L** MGBs
The recommended waste room size:	**35m^2**.

CONSTRUCTION REQUIREMENTS

The waste 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;
- For residential: a hot and cold water facility with mixing facility and 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;

- If 660l or 1100l bins are utilised, 2 x 820mm (minimum) door leafs must be used;
- All personnel doors are hinged, lockable 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; and
- Childproofing and public/operator safety shall be assessed and ensured

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 doors, walls and above all bins, clearly stating what type of waste or recyclables is to be placed in the bin underneath.

VENTILATION

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

- Mechanically - exhausting at a rate of 5L/m² 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.

USEFUL CONTACTS

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

RANDWICK COUNCIL CUSTOMER SERVICE
Phone: (02) 9093 6000 Email: council@randwick.nsw.gov.au

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

RUD (Public Place Bins, Recycling Bins)
Phone: 07 3712 8000 Email: Info@rud.com.au

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

PURIFYING SOLUTIONS (Odour Control)
Phone: 1300 636 877 Email: sales@purifyingsolutions.com.au

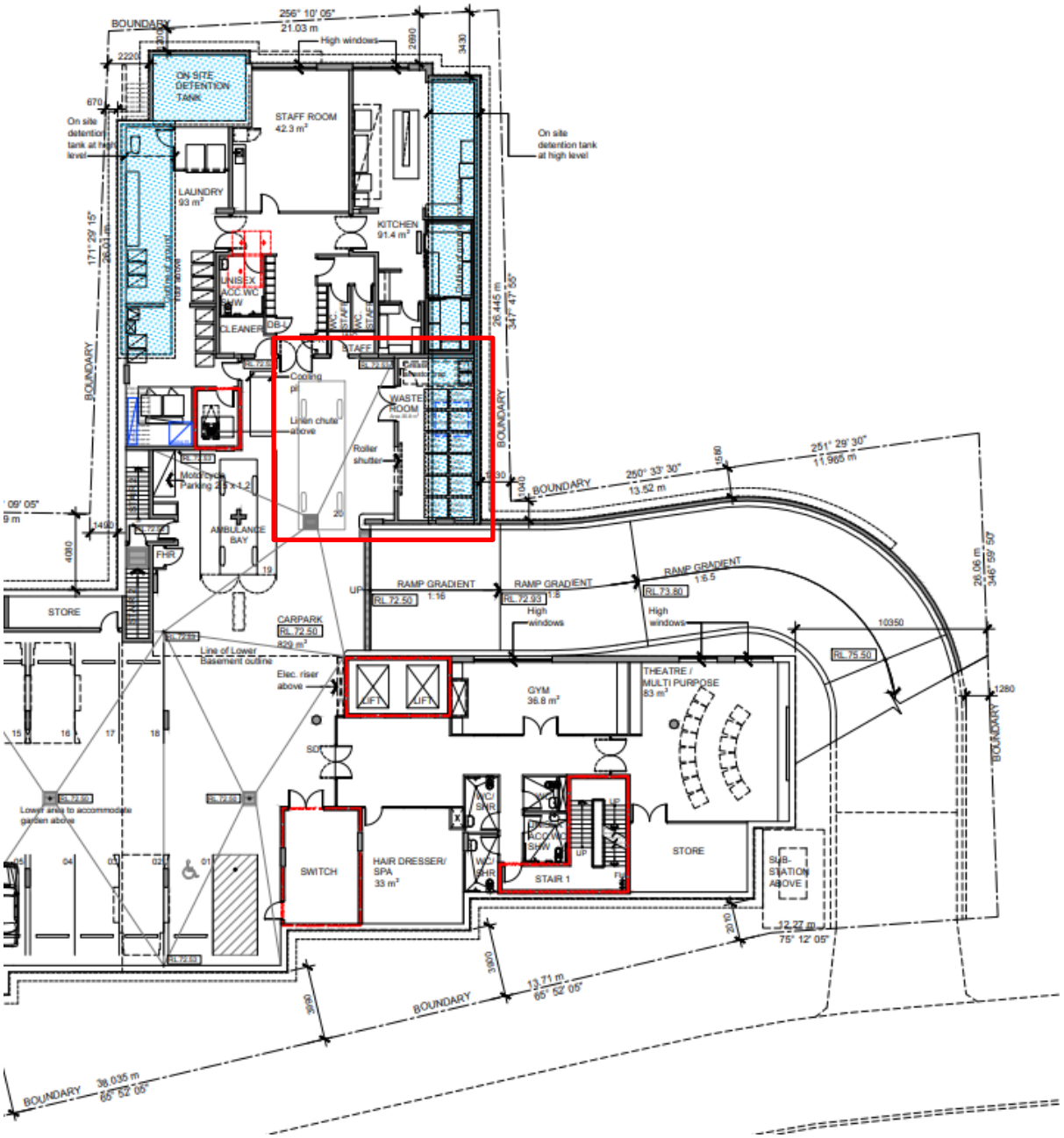
Elephants Foot Recycling Solutions (Chutes, Compactors and eDiverter Systems)
44 – 46 Gibson Avenue
Padstow NSW 2211
Free call: 1800 025 073 Email: info@elephantsfoot.com.au

Kompact Equipment (Waste Handling Equipment Sales, Servicing and Maintenance)
1/81 Governor Macquarie Drive
Chipping Norton NSW 2170
Free call: 1800 566 722
Email: info@kompactequipment.com.au

APPENDICES

APPENDIX A ARCHITECTURAL DRAWING EXCERPTS

APPENDIX A.1 BASEMENT LEVEL DISPLAYING WASTE ROOM AND COLLECTION AREA



Excerpt – Boffa Robertson Group, DA04 Rev 11 dated 14/08/2019 - Basement

APPENDIX B PRIMARY WASTE MANAGEMENT PROVISIONS

APPENDIX B.1 TYPICAL BIN SPECIFICATIONS

Bin Type	140L MGB	240L MGB	660L Bulk Bin	1100L Bulk Bin
Construction material	Plastic	Plastic	Plastic	Plastic
Height (mm)	1065	1080	1235	1470
Depth (mm)	540	735	765	1245
Width (mm)	500	580	1360	1370

Note: crate dimensions may vary between different bin manufacturers

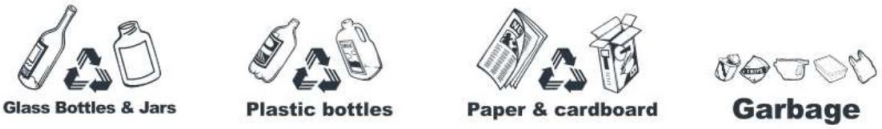
APPENDIX B.2 SIGNAGE FOR WASTE & RECYCLING BINS

WASTE SIGNS

Signs for garbage, recycling and organics bins should comply with the standard signs promoted by the Department of Environment and Heritage.

Example wall posters

Example bin lid stickers



SAFETY SIGNS

The design and use of safety signs for waste rooms and enclosures should comply with AS1319 Safety Signs for Occupational Environment. Safety signs should be used to regulate and control safety behaviour, warn of hazards and provide emergency information, including fire protection information. Below are some examples. Each development will need to decide which signs are relevant for its set of circumstances and service provided.

Examples of Australian Standards:

Australian Standards are available from the SAI Global Limited website (www.saiglobal.com).

SOURCE: Department of Environment and Climate Change NSW 2008, Better Practice Guide for Waste Management in Multi-Unit Dwellings

APPENDIX B.3 COLLECTION VEHICLE DIMENSIONS

Vehicle capacity	6 m^3	8 m^3	10 m^3	15 m^3	19 m^3	19 m^3	19 m^3	25 m^3	27 m^3
Collection mechanism	Rear-lift	Rear-lift	Side lift	Rear-lift	Rear-lift	Side lift	Front	Side lift	Front
Overall length	7.0 m	7.5	7.3 m	8.9 m	8.0 m	8.7-9.6 m	9.9 m	10.5 m	12 m
Width	2.5m (with side mirrors 2.9 m)	2.5m (with side mirrors 2.9 m)	2.5m (with side mirrors 2.9 m)	2.5m (with side mirrors 2.9 m)	2.5m (with side mirrors 2.9 m)	2.5m (with side mirrors 2.9 m)	2.5m (with side mirrors 2.9 m)	2.5m (with side mirrors 2.9 m)	2.5m (with side mirrors 2.9 m)
Travel height	2.4 m + exhaust pipe	2.6 m + exhaust pipe	2.9 m + exhaust pipe	3.1 m + exhaust pipe	4.3 m	3.7 m	3.6 m	3.7 m	> 4 m
Height when loading	2.4 m + exhaust pipe	2.6 m + exhaust pipe	2.9 m + exhaust pipe	3.1 m + exhaust pipe	3.7 m	4.2 m	6.10 m	4.2 m	6-6.5 m
Reach of side arm	NA	NA	NA	NA	NA	2.0 m	NA	2.6 m	NA

Sources: Collex Pty Ltd, MacDonald Johnston Engineering, Resource NSW 2000, Sita Environmental Solutions