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# Operational Waste Management Plan

## Woodside Health and Aged Care Precinct

**Prepared for Hall & Prior**

**April 2022**

**Project Number: TW20067**

**DOCUMENT CONTROL**

| Version | Description | Date | Author | Reviewer | Approver |
|---|---|---|---|---|---|
| 1a Final | First Approved Release | 18/09/20 | RH | JW | RH |
| 2a Final | Second Approved Release | 29/04/22 | DP | RH | DP |
| | | | | | |

**Approval for Release**

| Name | Position | File Reference |
|---|---|---|
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| **Signature** | | |

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# Executive Summary

Hall & Prior is seeking development approval for the proposed refurbishment and restoration of the heritage-listed former Woodside Residence to develop the Woodside Health Care Precinct located at 18 Dalgety Street, East Fremantle (the Facility).

As part of the development approval process the Town of East Fremantle (the Town) requires a Waste Management Plan (WMP) that describes how waste will be managed at the Facility. Hall & Prior has aspired to go beyond this requirement and have an Operational WMP prepared which will satisfy the Town's waste compliance requirements and assist with achieving ecologically sustainability development (ESD) goals to work towards a zero waste Facility.

The below table provides a summary of the waste services required for the Facility.

**Proposed Waste Services Summary**

| Waste Stream | Generation (L/week) | Bin / Equipment Size | Number | Collection Frequency | Collection |
|---|---|---|---|---|---|
| **Bin Storage Area** | | | | | |
| Refuse | 36,349 | 660L | 19 | Three/week | Private Contractor |
| Food Organics | 12,116 | 660L | 7 | Three/week | Private Contractor |
| Commingled Recyclables | 4,847 | 660L | 3 | Three/week | Private Contractor |
| Cardboard | 3,635 | 660L | 2 | Three/week | Private Contractor |
| | | Baler | 1 | Ad Hoc | Private Contractor |
| Medical / Sanitary | 3,030 | 120L | 9 | Three/week | Private Contractor |
| Confidential Paper | 606 | 240 | 1 | Ad Hoc | Private Contractor |

Private contractors will service the Facility onsite, directly from the Bin Storage Area utilising the Loading Dock. The private contractor's waste collection vehicle will enter and exit the Facility in forward gear via Fortescue Street.

Facility management and maintenance/cleaning teams will monitor and maintain the waste system to ensure it continually meets the needs of the Facility.

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# 1 Introduction

Hall & Prior is seeking development approval for the proposed refurbishment and restoration of the heritage-listed former Woodside Residence to develop the Woodside Health Care Precinct located at 18 Dalgety Street, East Fremantle (the Facility).

As part of the development approval process the Town of East Fremantle (the Town) requires a Waste Management Plan (WMP) that describes how waste will be managed at the Facility. Hall & Prior has aspired to go beyond this requirement and have an Operational WMP prepared which will satisfy the Town's waste compliance requirements and assist with achieving ecologically sustainability development (ESD) goals to work towards a zero waste Facility.

## 1.1 Location

The Facility is bordered by residential properties to the north and south, Fortescue Street to the east and Dalgety Street to the west, as shown in Figure 1.

## 1.2 Objectives of the Operational Waste Management Plan

The objective of this OWMP is to outline the equipment and procedures that will be adopted to manage all waste at the Facility. Specifically, the OWMP demonstrates that the Facility has been designed to:

- Adequately cater for the anticipated quantities of waste and commingled recyclables to be generated;
- Provide a suitable Bin Storage Area including appropriate bins; and
- Allow for efficient collection of bins by appropriate waste collection vehicles.

## 1.3 Scope of the OWMP

To achieve the objective, the scope of the OWMP comprises of:

- Section 2: Waste Generation;
- Section 3: Waste Storage;
- Section 4: Waste Collection;
- Section 5: Separation of Waste Streams/Materials;
- Section 6: Operational Waste Reduction and Recycling Targets;
- Section 7: Roles and Responsibilities;
- Section 8: Review Process; and
- Section 9: Conclusion

# 2 Waste Generation

The following sections show the waste generation rates used and the anticipated waste volumes to be generated at the Facility.

## 2.1 Proposed Tenancies

The anticipated volume of waste to be generated by the Facility has been based on the number of Aged Care Suites and the floor area ($m^2$) of the shared services/amenities. The Facility consists of the following:

- Aged Care Suites – 130;
- Wellness Centre – 457$m^2$;
- Staff/Amenities – 755$m^2$;
- Function Spaces (Halls, Ballrooms etc) – 293$m^2$;
- Kitchen – 218$m^2$;
- Communal Spaces (Lounge/Kitchen/Dining/Servery etc) – 1,144$m^2$; and
- Café – 100$m^2$.

## 2.2 Waste Generation Rates

In order to achieve a more accurate projection of waste volumes for the Facility, consideration was given to the following guidelines:

- Western Australian Local Government Association's (WALGA) *Commercial and Industrial Waste Management Plan Guidelines* (2014);
- City of Melbourne's *Guidelines for Preparing a Waste Management Plan* (2014); and
- City of Perth's *Waste Guidelines for new Developments* (Revision 5, effective from June 2019).

The anticipated quantities of refuse and recyclables for the Aged Care Suites were generated utilising the City of Melbourne's specialised waste generation rates as they are the only guidelines within Australia which contain a waste generation rate for aged care facilities.

Table 2-1 shows the waste generation rates applied to the Facility.

**Table 2-1: Refuse and Commingled Recyclables Waste Generation Rates**

| Facility | Guidelines | Guideline Description | Refuse Generation Rate | Commingled Recyclables Generation Rate |
|---|---|---|---|---|
| Aged Care Suites | Melbourne | *Retirement Village* | 60L/Apartment/week | 60L/Apartment/week |
| Wellness Centre | WALGA | *Gym* | 10L/100m²/day | 10L/100m²/day |
| Staff/Amenities | WALGA | *Offices* | 10L/100m²/day | 10L/100m²/day |
| Function Spaces | Perth | *Function* | 200L/100m²/day | 100L/100m²/day |
| Kitchen | Melbourne | *Restaurant* | 660L/100m²/day | 200L/100m²/day |
| Communal Spaces | Perth | *Function* | 200L/100m²/day | 100L/100m²/day |
| Café | Melbourne | *Café* | 300L/100m²/day | 200L/100m²/day |

## 2.3 Waste Generation Volumes

Waste generation is estimated by volume in litres (L) as this is generally the influencing factor when considering bin size, numbers and storage space required.

Waste volumes for the whole Facility have been included in this waste assessment in order to show the maximum volume of waste that could be generated if the Facility was operating at full capacity.

### 2.3.1 Waste Generation

Waste generation volumes in litres per week (L/week) adopted for this waste assessment is shown Table 2-2. It is estimated that when operating at full capacity, the Facility would generate 38,595L of refuse and 21,988L of commingled recyclables each week.

**Table 2-2: Estimated Waste Generation**

| Facility | Number of Suites / Floor Area ($m^2$) | Waste Generation Rate | Waste Generation (L/Week) |
|---|---|---|---|
| **Refuse** | | | |
| Aged Care Suites | 130 | 60L/Apartment/week | 7,800 |
| Wellness Centre | 457 | 10L/100m²/day | 320 |
| Staff/Amenities | 755 | 10L/100m²/day | 529 |
| Function Spaces | 293 | 200L/100m²/day | 1,758 |
| Kitchen | 218 | 660L/100m²/day | 10,072 |
| Communal Spaces | 1,144 | 200L/100m²/day | 16,016 |
| Café | 100 | 300L/100m²/day | 2,100 |
| | | **Total** | **38,595** |
| **Commingled Recyclables** | | | |
| Aged Care Suites | 130 | 60L/Apartment/week | 7,800 |
| Wellness Centre | 457 | 10L/100m²/day | 320 |
| Staff/Amenities | 755 | 10L/100m²/day | 529 |
| Function Spaces | 293 | 100L/100m²/day | 879 |
| Kitchen | 218 | 200L/100m²/day | 3,052 |
| Communal Spaces | 1,144 | 100L/100m²/day | 8,008 |
| Café | 100 | 200L/100m²/day | 1,400 |
| | | **Total** | **21,988** |
| | | **Total Waste Generation** | **60,583** |

# 3 Waste Storage

To ensure that waste is managed appropriately at the Facility, it is important to allow for sufficient space to accommodate the required quantity of bins within the Bin Storage Area. This section defines the bin requirements, equipment and internal bin transfer process for the Facility.

## 3.1 Bin Dimensions

Table 3-1 presents the typical dimensions of bin sizes ranging from 120L to 1,100L which could be used by the Facility. It should be noted that these sizes are approximate and will vary between different waste contractors.

**Table 3-1: Typical Bin Dimensions**

| Bin Capacity | 120L | 240L | 660L |
|---|---|---|---|
| Width (m) | 0.5 | 0.6 | 1.26 |
| Depth (m) | 0.6 | 0.8 | 0.78 |
| Height (m) | 1.0 | 1.1 | 1.2 |

*Source: Cleanaway, Suez, Wastech & WALGA*

## 3.2 Bin Requirements and Bin Storage Area

To ensure sufficient area is available for storage of bins and waste management equipment, the size and quantity of bins required for the Bin Storage Area was modelled utilising the waste generation rates in Table 2-2 and the bin sizes in Table 3-1.

It is the intention of the Facility to separate a number of waste streams on-site for collection. Table 3-2 shows the bins required for source separation of waste streams.

This breakdown has been based on private collection contractors' monthly environmental reports provided to Talis by Hall & Prior for their operations at Karingal Green Health and Aged Care Facility, which is similar in size and operational capacity to this Facility. In addition, Talis has utilised industry specific waste composition data which has then been averaged across the Facility.

**Table 3-2: Breakdown of Waste Streams**

| Waste Streams | Waste generation (L/week) | Bin / Equipment Size | Quantity of Bins | Collection Frequency |
|---|---|---|---|---|
| Refuse | 36,349 | 660L | 19 | Three/week |
| Food Organics | 12,116 | 660L | 7 | Three/week |
| Commingled Recyclables | 4,847 | 660L | 3 | Three/week |
| Cardboard | 3,635 | 660L | 2 | Three/week |
| | | Baler | 1 | Ad Hoc |
| Medical/Sanitary | 3,030 | 120L | 9 | Three/week |
| Confidential Paper | 606 | 240 | 1 | Ad Hoc |
| **Total** | **60,583** | | | |

The configuration of these bins within the Bin Storage Area is shown in Figure 2. It is worth noting that the number of bins and corresponding placement of bins shown in Figure 2 represents the maximum requirements assuming the collection frequencies shown in Table 3-2.

In the future, bin volumes allocated to each of the separate waste streams may alter, depending on the nature of the Facility once operational. Changes to the bin volumes in Table 3-2 will be a decision for the Facility management once the development is operational and the compositional breakdown of each of the separate waste stream can be accurately determined.

The Bin Storage Area will be monitored by Facility management and maintenance/cleaning teams during the operation of the Facility to ensure that the quantity of bins remains sufficient.

## 3.3 Bin Storage Area Design

Bins and equipment will be contained within a Bin Storage Area that aligns with the requirements of the Town's Health Laws and considers noise, odour, hygiene, vermin, security, health and safety and the environment.

A bin wash will be available for maintenance/cleaning teams to regularly wash the bins, floors and walls of the Bin Storage Area, as required. This will help control any potential odour issues.

In addition to the above, the design of the Bin Storage Area will take into consideration:

- Design and construction in a manner that has regard for the design and appearance of the Facility of which they are a part;
- 75mm concrete floors grading to a 300mm industrial floor waste (including a charged 'water-trap' connected to sewer or an approved septic system), with a spray hose or high pressure hose to enable bins, walls and ceilings to be washed out;
- Internal walls and ceilings finished with a smooth faced, non-absorbent material capable of being easily cleaned;
- Appropriate ventilation. Openings should be protected against flies and vermin and located as near the ceiling and floor as possible. If forced ventilation or air conditioning system is used it should be provided in accordance with the ventilation requirements of the Building Code of Australia and Australian Standard AS 1668 and should not be connected to the same ventilation system supplying air to the rest of the facility;
- Artificial lighting, sensor or switch controlled both internally/externally;
- Easy, direct and convenient access for the users by providing sufficient room to manoeuvre bins within the Bin Storage Area; and
- Adequate signage and clear labelling on bins, so users can easily interpret and operate the waste system.

## 3.4 Internal Transfer of Waste

Internal bins will be available throughout the Facility for the source separation of waste streams. Bins will be available to separate refuse, commingled recycling, food organics, cardboard, medical/sanitary wastes and confidential paper.

To promote positive recycling behaviour and maximise diversion from landfill, the following measures will be implemented at the Facility to help manage waste internally:

- Each Aged Care Suite will have one small bin for the disposal of waste by residents. The contents of these bins will be separated and transferred by the staff/cleaners to the bins located within the dirty utility stores for consolidation daily.
- Administration offices and staff areas will have space to accommodate internal (60L) bins for the separation of food organics, refuse and commingled recycling. The contents of these bins will be transferred by the staff/cleaners to the bins located within the dirty utility stores for consolidation at the end of each day.
- Administration offices will also have access to a 240L confidential paper bin which will be collected by specialist providers on an ad hoc basis.
- The Café and main kitchen/serveries will have space within their back of house to accommodate bins for the separation of food organics, refuse and recycling. In addition, waste generated in communal dining areas which are accessed by residents and visitors, for example near the Café, will be collected in appropriately sized and labelled bins to separate refuse, commingled recyclables, cardboard and food organics. The contents of these bins will be transferred by the staff/cleaners to the bins located within the dirty utility stores for consolidation at the end of each day.
- Deliveries/pallets will be unpackaged within the Loading Dock before distributing in order to reduce waste in the main areas of the Facility. Cardboard and commingled recycling during decanting will be deposited directly into the appropriate bins within the Bin Storage Area. Cardboard boxes will be required to be flattened by staff/cleaners before disposal.

Internal bins throughout the Facility, as discussed above, will be collected by the staff/maintenance/cleaning team at least once each day and transferred to the Bin Storage Area for consolidation into the appropriate bins. These bins will be transferred through the Facility utilising the dedicated service lifts/corridors. This internal servicing method will be conducted outside of main operational hours to mitigate disturbances to residents/visitors.

All bins will be colour coded and labelled in accordance with Australian Standards (AS 4123.7) to assist residents, visitors, staff and cleaners to dispose of their separate waste materials in the correct bins.

## 3.5 Waste Chute System

To assist with efficient disposal of refuse and commingled recyclables throughout the Facility, three lift cores and adjacent waste chutes are proposed.

Chutes are typically 610mm in diameter and are required to be vented to reduce odour and insulated for noise reduction. The waste chute will have self-closing doors with a bottom hinge and have a fire rating to AS1530.4-2005. To reduce odour, the chute system will be ventilated with an extraction fan at the top of the chute and will be routinely cleaned via chute flushing operations. Contact to chute rooms/chute terminus will be restricted to the maintenance/cleaning teams. It is anticipated the bins located at the terminus of the waste chutes will be transferred daily by the maintenance/cleaning staff to the Bin Storage Area for consolidation and collection.

A chute system with diverter could also be utilised at the Facility. These systems use a common chute with a diverter mechanism at the terminus for the separation of refuse and commingled recyclables. A LED panel on the chute door will enable users to select the waste stream, which then directs the waste to the appropriate refuse or commingled recycling bin.

The separation and disposal of commingled recyclables as loose items (without containment in plastic bags) should be encouraged. Training will be provided to staff/cleaners to wrap glass items in paper and cardboard before depositing down the chute to prevent glass smashing at the bottom of the bin at the terminus. Wrapping of glass recyclables will be completed by staff/cleaners in the dirty utility stores, as required. Protective skirting between the chutes and bins could also be installed to prevent spillage and minimise dirt or spray.

Education and increased communication between facility management and staff/cleaners to facilitate correct use of the chutes will aid in maximising recycling and monitoring contamination. The maintenance/cleaning team will monitor the chute system and ensure the swapping of empty and full bins at the terminus is completed in a timely manner.

The exact design of the chute system will be determined at a later date following discussions with waste chute providers as the design is finalised.

## 3.6 Cardboard Baler

Space has been allocated within the Bin Storage Area for a cardboard baler.

Cardboard will be placed into the cardboard baler ready for baling once sufficient amount has accumulated to warrant baling. Baled cardboard will be stored in the Bin Storage Area ready for transfer to the Loading Dock for collection with the aid of a pallet jack.

Balers come in a wide variety of sizes and capacities and can be customised by size and use requirements. The exact size and capacity of the technology to be used by the Facility will be determined at a later date following discussions with equipment providers.

# 4 Waste Collection

Private waste contractors will be engaged to supply and service the bins and equipment discussed within this OWMP. A range of waste collection vehicles will collect waste, as shown in Table 4-1.

**Table 4-1: Waste Collection Frequencies**

| Stream | Bin Size | Management Protocols | Collection Frequency | Collection Type |
|---|---|---|---|---|
| Refuse | 660L | Maintenance/cleaning teams ensure bins are presented closest to the roller door for servicing from the Loading Dock | Three days a week | Rear Loader |
| Food Organics | 660L | Maintenance/cleaning teams ensure bins are presented closest to the roller door for servicing from the Loading Dock | Three days a week | Rear Loader |
| Commingled Recyclables | 660L | Maintenance/cleaning teams ensure bins are presented closest to the roller door for servicing from the Loading Dock | Three days a week | Rear Loader |
| Cardboard | 660L | Maintenance/cleaning teams ensure bins are presented closest to the roller door for servicing from the Loading Dock | Three days a week | Rear Loader |
| | Baler | Maintenance/cleaning team bales collected cardboard and stores bales in the Bin Storage Area. Bales are collected from the Loading Dock | Ad Hoc | Pantech |
| Medical / Sanitary | 120L | Contractor collects bins from the Bin Storage Area and bags/containers which are stored in dirty utilities throughout the Facility | Ad Hoc | Pantech / Rear Loader |
| Confidential Paper | 240L | Contractor collects bins from the administration offices | Ad Hoc | Pantech |
| Liquid Waste / Grease Traps | N/A | Contractor collects waste stored in holding tanks within the Loading Dock/lower ground | Ad Hoc | Tanker |
| Bulk Waste | Skip Bin | Contractor collects via Skip Bin | Ad Hoc | Pantech / Hook Lift |

Private contractors waste collection vehicles will travel with left hand lane traffic flow on Fortescue Street and turn into the Facility in forward gear utilising the entry ramp. The waste collection vehicle will reverse into the Loading Dock, pulling up directly opposite the Bin Storage Area for servicing, as shown in Diagram 1.

Private contractor's staff will ferry bins to and from the Bin Storage Area during servicing. The private contractors will be provided with key/PIN code access to the Bin Storage Areas and any security access gates to facilitate servicing, if required.

Once servicing is complete, the waste collection vehicle will exit in a forward motion, turning left onto Fortescue Street moving with traffic flow, refer Diagram 1.

The above servicing method will preserve the amenity of the area by removing the requirement for bins to be presented to the street on collection days. In addition, servicing of bins onsite will reduce the noise generated in the area during collection. Noise from waste vehicles must comply with the *Environmental Protection (Noise) Regulations*.

The ability for the various waste collection vehicle to access the Facility in a safe manner has been assessed by Stantec and will be included within their reports.

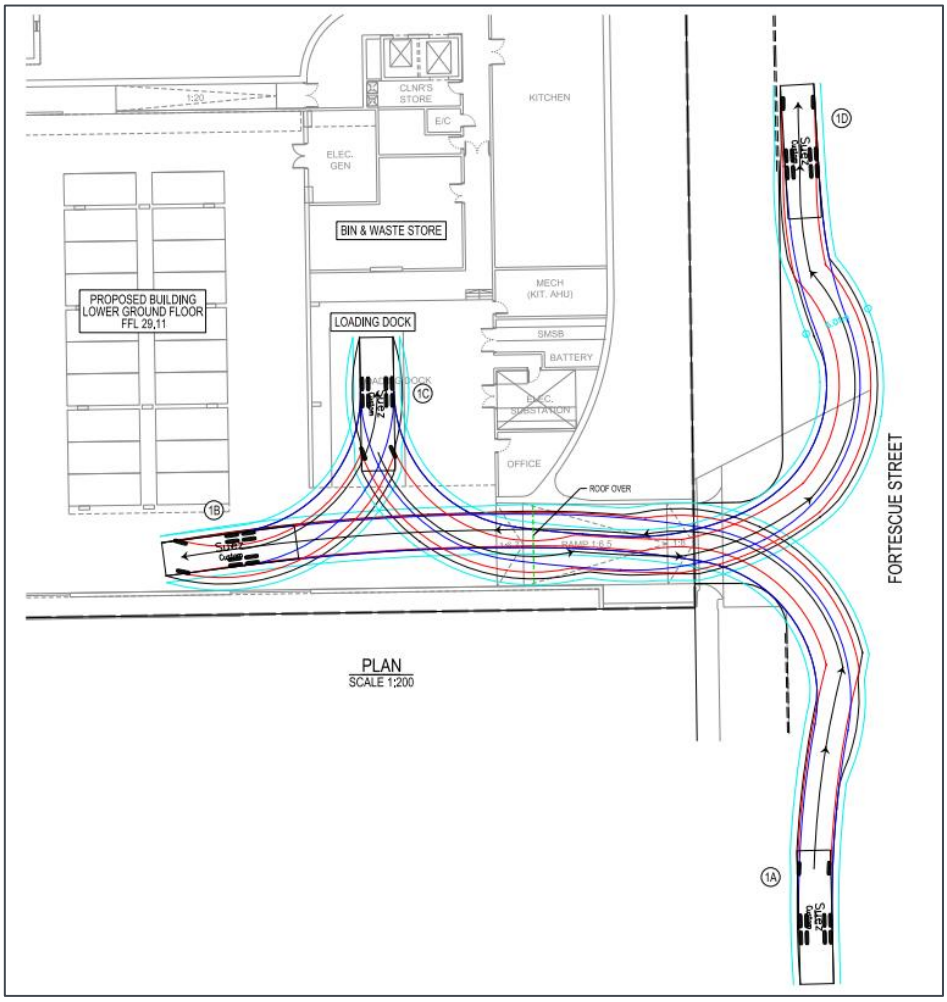



**Diagram 1: Waste Collection Swept Path**

## 4.1 Bulk and Specialty Waste

Bulk and speciality waste materials will be removed from the Facility as they are generated on an 'as required' basis.

Adequate space may be allocated throughout the Facility for placement of cabinets/containers for collection and storage of bulk and specialty wastes that are unable to be disposed of within the bins in the Bin Storage Area. These may include items such as:

- Mattresses;
- Clothing;
- E-wastes & Batteries;
- Used cooking oil;
- White goods/appliances;
- Cleaning chemicals; and
- Commercial Light globes

These materials will be removed from the Facility once sufficient volumes have been accumulated to warrant disposal. A temporary skip bin could be utilised for collections, if required.

## 4.2 Controlled Medical and Sanitary Waste

The volume of medical waste generated at the Facility will be dependent on the nature and scale of the medical practises undertaken. Appropriate bags/containers will be placed in all locations where particular categories of medical waste may be generated. Instructions on identification and separation of medical wastes will be posted at each waste collection point to remind staff of procedures.

Medical waste bins (120L) will be located within the dirty utility stores throughout the Facility and in the wellness centre/consult rooms. These bins will be transported by the maintenance/cleaning team as required to the Bin Storage Area where they will be collected by a suitably qualified medical waste service provider.

Suitably qualified medical waste service providers will be engaged to verify storage and collection requirements.

Sanitary wastes will be collected in situ. A suitably qualified sanitary waste collection and disposal provider will be engaged to determine storage and collection requirements.

The following points are indicative of minimum requirements for environmental best practice relating to controlled medical wastes and will be considered within the Facility:

- Ensuring all clinical and related waste is properly contained;
- Ensuring staff/cleaners are aware of their individual responsibilities for waste management and obtain appropriate education and training to ensure correct procedures are followed;
- Ensuring all relevant measures are taken to reduce risk to staff, the community and the environment; and
- All waste containers to meet the Australian Standards and are to be of the appropriate colour and have suitable symbols/wording for the waste types to be deposited into that container.

# 5 Separation of Waste Streams/Materials

Education engagement, signage and innovations are critical to ensure waste reduction targets are achieved. This section outlines the methods for encouraging separation of waste streams by staff, cleaners, residents and visitors to the Facility.

## 5.1 Education

Education and engagement are critical to ensure waste and recycling targets are achieved and to address any non-compliances of the waste system. Facility management will work closely with staff/cleaners to maintain an efficient waste system and maintain a good working relationship through regular meetings.

Facility management will be encouraged to provide leaflets on the correct use of the waste and recycling facilities/equipment and define materials which can and cannot be recycled.

Appropriate training will be provided to all persons with responsibility under this OWMP. Training will be conducted annually as a minimum, and as part of new employee inductions. Training will be evidenced and validated to ensure those responsible are competent and fully aware of their responsibilities.

## 5.2 Signage

Consistent and clear signage is a key element of effective source separation and minimising incorrect disposal and it is vital that signage is consistent throughout the Facility.

Key signage aspects will include:

- Refuse waste, commingled recycling, food organics, cardboard, medical/sanitary and confidential paper bins to be colour coded and clearly labelled at all times using both words and images with the type of materials that should be put in each bin – refer Diagram 2;
- Demonstrating to users how to use the waste system and to identify any hazards or potential dangers within the Bin Storage Area/Loading Dock, including those from the use of waste handling equipment;
- Bin Storage Area, serveries and dirty utility stores to have clear and consistent signage instructing staff/cleaners on how to correctly separate waste; and
- Signage conforming to the relevant Australian Standard (AS 4123) bins, (AS 4123.7) bin colours and (AS1319) safety signs.

Information will be displayed in the Bin Storage Area to clearly identify the relevant contact details for waste management and/or other waste services at the Facility.


**Diagram 2: Bin Signage Examples**

## 5.3 Innovative Solutions

There are a variety of innovate solutions available that could assist the Facility in reducing the overall quantity of waste generated while maximising the quantities of materials recycled, particularly for speciality wastes that may not be generated on a daily basis but are still significant and can be diverted from landfill.

Improving waste and recycling management performance will demonstrate to potential residents, their families and visitors a commitment to corporate, social and environmentally responsible objectives. Reducing waste to landfill will also provide financial savings from reductions in collection and the impacts of future cost increases.

A Zero Waste to landfill approach, refer Diagram 3, is a whole system approach to resource management focusing on reducing, reusing, and recycling to reduce consumption, maximise recycling and minimise waste going into landfill thereby saving energy by reducing consumption associated and extracting processing and transport of raw materials with a goal of reducing reliance of landfill or incineration.


**Diagram 3: Zero Waste Approach**

Table 5-1 provides a list of resources available to assist with reducing the amount of waste going to landfill.

**Table 5-1: Resource Opportunities**

| Item | Provider |
|---|---|
| Mobile Phones | Mobile Muster |
| Fluorescent Tubes | Fluorocycle |
| Office Stationery | Terracycle |
| Office Furniture | Good 360 |
| Disposable Coffee Cups | BioPak |

*Source: Based on Cityswitch Guide to Office Waste*

# 6 Operational Waste Reduction and Recycling Targets

Facility management will be responsible for delivering and reviewing this OWMP. As part of this process, specific percentage targets for waste and recycling could be determined in line with the appropriate waste strategies. To assist with this process, a waste audit could be carried out six times during the first 12 months of operation to establish baseline data for the Facility and every 4 months thereafter. Data can be collected on a monthly basis and reported on every 12 months. The targets assigned by Facility management could be focussed on:

1. A reduction in the total amount of waste generated (this includes both the total refuse sent to landfill and total materials recycled); and
2. Improving/maximising the amount of material recycled (as a proportion of waste generated).

It is important that targets are SMART:

- **S**pecific – be clear about what is achievable;
- **M**easurable – use units which can be measured/tracked e.g. tonnes of waste;
- **A**chievable – use baseline data to estimate what may be achieved;
- **R**ealistic – use the waste data to estimate how much of the waste is recyclable, (percentage recyclable rate); and
- **T**imely – state when the targets will be achieved.

There is no standard target for waste minimisation and recovery. Waste generation is closely linked to production and efficiency, so targets should be developed based on baseline data, the proportion of recyclable material and which materials can be recovered.

SMART targets could be determined every 12 months or as required based on baseline data and depending on adjustments to Facility operation. SMART targets should aim to divert or/and reduce the amount of total waste (refuse and commingled recyclables) going to landfill. SMART targets could be based on the following:

- Design and implement a data collection reporting system to suit the Facility including a report every 12 months and 4 waste audits per year;
- Monitor generated waste streams by weight;
- Ensure baseline data is kept updated monthly;
- Establish a baseline data set for the first 12 months' of operation to set reduction targets;
- A recommended recycling rate of 60% is initially encouraged, and can be revised once baseline data has been reviewed; and
- Future recycling and waste reduction SMART targets be determined as a rate (percentage by weight) every 12 months, or as required for waste streams.

# 7 Roles and Responsibilities

This section outlines the individual roles and responsibilities for waste management at the Facility.

As discussed in Section 5, Facility management will ensure all new staff, cleaners or any person who may be required to utilise the waste system, are provided with waste management guidelines, inducted on use of the waste system, and made aware of their responsibilities under this OWMP. Table 7-1 outlines these roles and responsibilities.

**Table 7-1: Waste Management Roles and Responsibilities**

| Title | Area of Responsibility | Role |
|---|---|---|
| Facility Management | • Ensure suitable systems are in place to meet the Facilities waste needs.<br>• Ensure bins and equipment are suitable in terms of capacity and use.<br>• Regularly engage with staff/cleaners to develop opportunities to reduce waste volumes and increase material recovery.<br>• Review of audit data and set targets to reduce the overall quantity of waste generated and maximise the quantity of materials recycled from the Facility and the review and update of this OWMP, as required. | Review waste systems and management of the Facility. |
| Facility Management | • Ensure staff/cleaners are provided with suitable waste systems.<br>• Monitor staff/cleaners behaviour and identify requirements for further education.<br>• Address any non-compliances by staff/cleaners.<br>• Ensure staff/cleaners are provided with a waste policy manual.<br>• Co-ordinate waste review meetings. | Manage staff/cleaner participation in the OWMP. |
| Facility Management | • Ensure staff/cleaners are aware of their responsibilities under the OWMP.<br>• Provide staff/cleaners with suitable education and training regarding waste and recycling practices onsite.<br>• Display and maintain waste signage.<br>• Assist with the organisation of bulk/speciality waste removal.<br>• Regularly engage with the Private Contractors to ensure an efficient and effective waste service is maintained. | Monitor Bin Storage Area and waste facilities. |
| Maintenance / Cleaning Team | • Rotate bins within the Bin Storage Area to ensure easy access to all bins.<br>• Ensure waste areas are kept clean and safe.<br>• Cleaning of bins in the Bin Storage Area, as required.<br>• Transport internal bins to and from the Bin Storage Area for collection.<br>• Monitoring the use of Bin Storage Areas by staff/cleaners.<br>• Weighing of bins and keeping a bin record sheet for input into setting of targets, if required. | Daily management of the waste streams on site. |
| Private Waste Collection Contractors | • Safe and correct collection and disposal of refuse, commingled recycling, food organics, cardboard, medical/sanitary and confidential paper waste streams as per this OWMP. | Collection and disposal of each waste stream and |

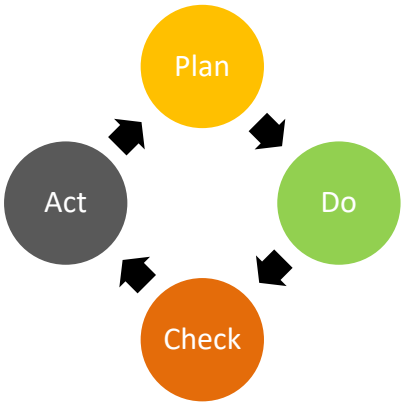
| Title | Area of Responsibility | Role |
|---|---|---|
| | • Maintenance and replacement of bins at the Facility (if required).<br>• Aid in achieving SMART targets by reporting refuse and recycling tonnages and composition monthly to Facility Management. | bulk/speciality waste (as required). |
| Staff / Cleaners | • Ensure waste and recycling is correctly segregated and placed in correct bins in the respective dirty utility stores, serveries, waste chute and Bin Storage Area as per the OWMP. | Correct segregation and disposal of wastes. |

# 8 Review Process

Reviewing the performance of an Aged Care Facility can deliver benefits including providing baseline measurements which can be evaluated in the future, benchmarking performance alongside other facilities and determining internal improvement opportunities.

The Plan-Do-Check-Act (PDCA) review process is a continuous improvement cycle that seeks to increase the Facilities effectiveness and efficiency in fulfilling the requirements of the operational waste management plan by:

- Plan;
- Do;
- Check; and
- Act.




PDCA is a continuous improvement cycle for implementing change which, when followed and repeated, will lead to improvements in waste and recycling. The **Plan** identifies targets, delegates work, assigns responsibility and sets a clear action plan with milestones; **Do** is implementing the plan and collecting data for analysis; **Check** is reviewing the data and comparing against the targets to see if the desired result was achieved and **Act** involves the actions required to address any issues or where improvements are needed in the plan.

The OWMP will use this PDCA review process to assess the success of the plan and the SMART targets set for recyclables and refuse at the Facility. The OWMP will be revised and updated every 12 months or as required depending on changes at the Facility. Updating the OWMP may include:

- Establishing new baseline data if there is a change in tenancy or a change in Facility operations;
- Review the baseline data for refuse and recycling every 12 months;
- Check success of SMART targets;
- Identifying new opportunities for the separation of waste streams;
- Establish new objectives and SMART targets every 12 months;
- Education of staff and cleaners should be regular and ongoing to ensure the continued success of the OWMP. Staff and cleaners will change from time to time, and participation may also decrease over time as staff lose interest/enthusiasm, so it is important to regularly communicate and update staff on system requirements;
- Reviewing refuse and recycling bin placement and locations; and
- Ensuring signage is colour coded and conforms to Australian Standards.

# 9 Conclusion

As demonstrated within this WMP, the Facility provides a sufficiently sized Bin Storage Area for storage of all waste streams, based on the estimated waste generation and a suitable configuration of bins. This indicates that an adequately designed Bin Storage Area has been provided, and collection of waste can be completed from the Facility.

Private contractors will service the Facility onsite, directly from the Bin Storage Area utilising the Loading Dock. The private contractor's waste collection vehicle will enter and exit the Facility in forward gear via Fortescue Street.

Facility management and maintenance/cleaning teams will monitor and maintain the waste system to ensure it continually meets the needs of the Facility.

# Figures

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## LEGEND

- Site Boundary
- Cadastre




## LOCALITY

18 Dalgety St
East Fremantle WA 6158
Donald Cant Watts Corke

N
metres
0 5 10 15 20
Coordinate System: GDA 1994 MGA Zone 50
Projection: Transverse Mercator, Datum: GDA 1994
Scale @ A3: 1:600

| | | | |
|---|---|---|---|
| Prepared: | E Dolecki | Date: | 9/06/2020 |
| Reviewed: | D Patel | Revision: | A |
| Project: | TW20067 | | |

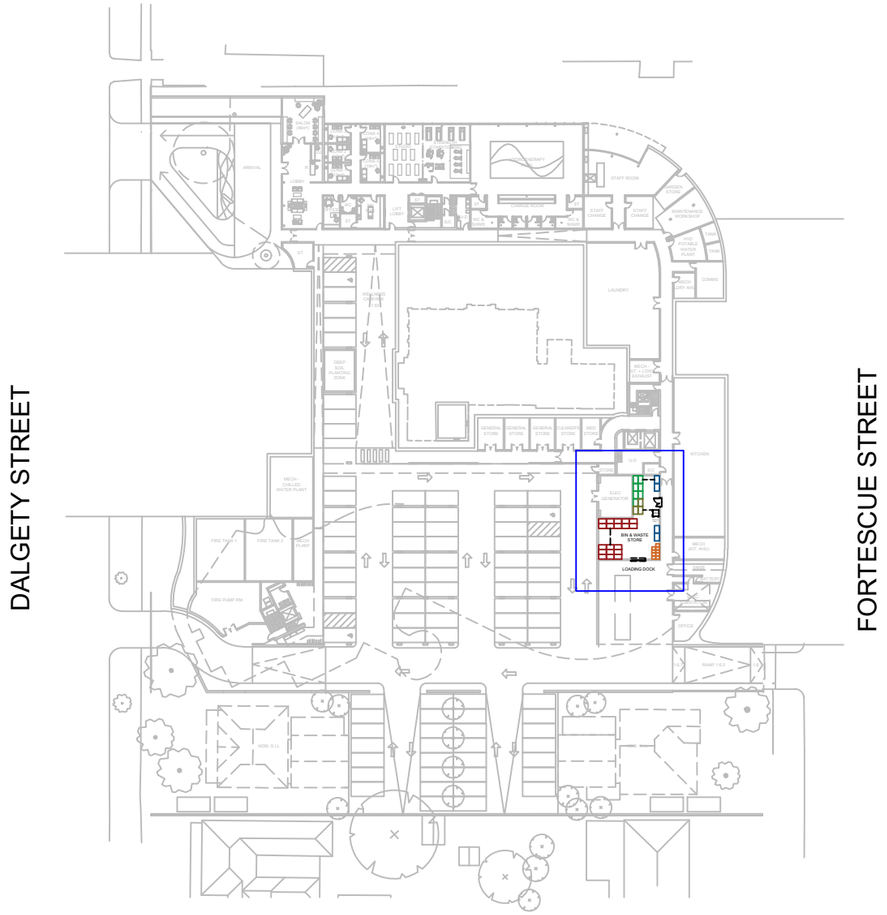
talis consultants

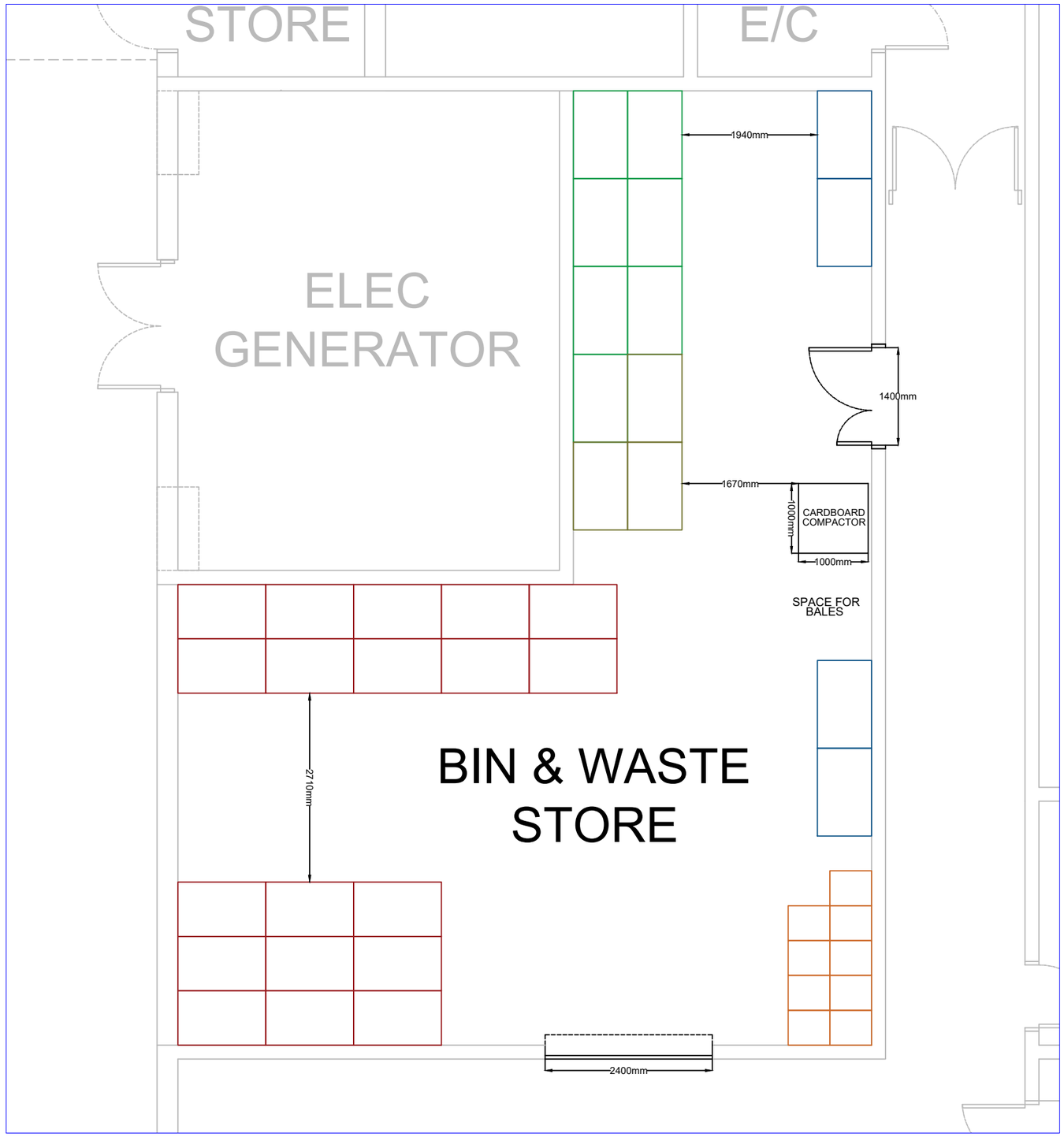
Figure 01

Data source: Roads - MRWA, 2020. Imagery: Landgate, 2020.

Document Path: \\server\Talis\SECTIONS\Waste\PROJECTS\TW2020\TW20067 - Woodside Health and Aged Care Precinct OWMP\5 GIS\Maps\TW20067_01_Locality_RevA.mxd

# Bin Storage Area




## Legend:

### Bin Storage Area

- 19 x 660L Refuse (1,260mm x 780mm)
- 7 x 660L Food Organics (1,260mm x 780mm)
- 3 x 660L Commingled Recyclables (1,260mm x 780mm)
- 2 x 660L Cardboard (1,260mm x 780mm)
- 9 x 120L Medical / Sanitary (500mm x 600mm)

N

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ASSET MANAGEMENT
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PO Box 454, Leederville WA 6903

Client: Hall & Prior

NOTES

1. This drawing is the property of Talis Consultants Pty Ltd. It is a confidential document and must not be copied, used, or its contents divulged without prior written consent.
2. All levels refer to Australian Height Datum.
3. DO NOT SCALE, use figured dimensions only, if in doubt please contact Talis Consultants.

| No. | Date | Drawn / Chkd | Amendment / Issue | App. |
|---|---|---|---|---|
| B | 29/04/22 | DP / RH | SECOND ISSUE | DP |
| A | 17/09/20 | RH / DP | FIRST ISSUE | RH |

Project: Woodside Health and Aged Care Precinct

Title: Bin Storage Area

| | | | |
|---|---|---|---|
| Drawn by: | DP | Job No: | TW20067 |
| Checked by: | RH | File No: | TW20067DWG001 |
| Approved by: | DP | Fig. No: | 002 |
| Scale: | NTS | Rev: | B |
| Date: | 29/04/22 | | |

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