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SHOALHAVEN HOSPITAL REDEVELOPMENT

OPERATIONAL WASTE MANAGEMENT PLAN

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Shoalhaven Hospital Redevelopment
Operational Waste Management Plan

WSP
Level 27, 680 George Street
Sydney NSW 2000
GPO Box 5394
Sydney NSW 2001

Tel: +61 2 9272 5100
Fax: +61 2 9272 5101
wsp.com

REV	DATE	DETAILS
1	28/04/2022	Draft Operational Waste Management Plan
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	NAME	DATE	SIGNATURE
Prepared by:	Harriet Carlile	20/07/2022	
Reviewed by:	Whitney Brunson	21/07/2022	
Approved by:	Whitney Brunson	21/07/2022	

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1 EXECUTIVE SUMMARY

Health Infrastructure NSW (HI) is the applicant for the proposed Shoalhaven Hospital Redevelopment at Scenic Drive, Nowra in the City of Shoalhaven Local Government Area (LGA).

The proposal is State Significant Development (SSD) for the purposes of the Environmental Planning and Assessment Act 1979 (EP&A Act) and section 14(a) of Schedule 1 of the State Environmental Planning Policy (Planning Systems) 2021 (Planning Systems SEPP) as it involves development for the purposes of a hospital with a capital investment value in excess of $30 million.

The Shoalhaven Hospital Redevelopment seeks to deliver significantly enhanced acute services, as well as a new campus main entry and drop-off area.

The proposed Acute Services Building will be located south and east of the hospital's existing cluster of buildings at will address Shoalhaven Street to the hospital's east. The development is proposed to be located on the site of the existing Shoalhaven Community Pre-school (which will be separately relocated) and part of the former Nowra Park.

The proposed Shoalhaven Hospital Redevelopment under this SSD relates primarily to the development of a new hospital building and its ancillary works. The scope includes a new 7-level building of about 31,000m2 GFA with rooftop plant and helipad, generally accommodating the following:

Level 00	Back of House (BOH), Loading Dock, Kitchen, plant, Pharmacy, Staff amenities, Mortuary, and plant.
Level 01	Front of House (FOH), Emergency Department (ED), Medical Imaging, and Cafe
Level 02	Operating Suites & Endoscopy, Central Sterile Supply Department (CSSD), and linkway to Block B
Level 03	Coronary Care Unit (CCU), Close Observation Unit (COU), Intensive Care Unit (ICU), cultural centre, and plant
Level 04	In-Patient Unit (IPU), Mental Health, and plant
Level 05	In-Patient Unit (IPU)
Level 06	In-Patient Unit (IPU)
Level 07	Rooftop plant
Level 08	Helipad

This generally results in 209 new beds and treatment spaces across a range of departments, eight new operating theatres, and two new endoscopy theatres. The works include a new ambulance entry from Shoalhaven Street, new public and servicing accessway off North Street, and separate loading dock entry and mortuary parking off Shoalhaven Street.

A range of infrastructure and civil engineering works are proposed as well as demolition of existing structures within the footprint of the new building and/or on the existing hospital campus where a new linkway connection is proposed. Earthworks will be necessitated within the building's footprint and immediate environs.

Subdivision of the balance of Lot 104 (the former Nowra Park) remaining and consolidation of the existing pre-school lot into the hospital lot is also proposed.

A number of selected trees will require removal. Other significant trees will be retained and protected. Replacement planting at a minimum rate of 1:1 is proposed.

The development's SEARs were issued by the Department of Planning and Environment on 23 February 2022.

In preparing this report, the following SEARs General Requirements and Key Issues have been addressed.

The table below sets out the reference or location of these matters within this report.

Table 1 SEARs Requirements

18. Waste Management	
General Requirement or Key Issue	**Reference / Location within this report**
• Identify, quantify and classify the likely waste streams to be generated during construction and operation.	Section 4.2 (page 8)
• Provide the measures to be implemented to manage, reuse, recycle and safely dispose of this waste.	Section 5.3 (page 11) Section 6.3 (page 13)
• Identify appropriate servicing arrangements for the site.	Section 7 (page 15) Section 8 (page 17)

2 GREEN STAR CRITERIA ASSESSMENT

The Operational Waste Management Plan (OWMP) within this document follows best practice waste engineering systems. Section 11 provides a review of Credit 8A (Operational Waste) of *Green Star Design & As Built v1.2* criteria in comparison to this OWMP.

A summary of Credit 8A requirements is provided in Table 2 below.

Table 2 Green Star Criteria Assessment (Credit 8A)

Green Star Credit 8A Criteria	Operational Waste Management Plan Response
Identify the site boundary, the waste streams relevant to the project, and the individual roles responsible for delivering and reviewing the OWMP;	Appendix A identifies the site boundaries. Section 4.3 identifies the relevant waste streams, such as general waste and commingled recyclables. Sections 11.4 and 11.5 identify the individual roles with regard to delivery and review of the OWMP.
Set diversion from landfill targets and/or targets for reducing total materials generation (general waste materials and recyclable/reusable materials), as well as monitoring and measurement procedures for waste and recycling streams by weight;	Section 11.1 identifies the diversion target. Section 11.2 outlines the waste/recycling monitoring and measurement procedures.
Outline methods for encouraging the separation of waste streams, such as bins, storage areas, or recycling facilities in public areas as required;	Sections 5.3 and 6.3 contain relevant information regarding the provision of bin storage, recycling facilities and encouragement for waste stream separation.
Identify storage areas for all waste streams and outline best practice safety and access requirements for their collection;	Sections 7 and 8 detail the collection methods and bin storage requirements respectively, adhering to best practice waste design and safety.
Identify safe methods for vehicle access and transfer of waste; and	Section 7.2 identifies the waste collection method in accordance with best and safe practices.
Incorporate a review process to assess the success of the OWMP and make improvements, based on operational experience.	Section 11.4 identifies the review process to be implemented for the OWMP.

3 WASTE MANAGEMENT SUMMARY

The below is a summary of the waste management strategy proposed for the subject site, prepared in accordance with Credit 8A (Operational Waste) of *Green Star Design & As Built v1.2*. The complete report must be read in detail prior to implementing the waste management plan.

The proposed redevelopment of Shoalhaven District Memorial Hospital (SDMH) will provide additional healthcare services for the growing and ageing populating within the Illawarra and Shoalhaven Local Health District (ISLHD). The NSW government has committed to the redevelopment of the Shoalhaven Hospital in order to expand existing services including paediatrics and maternity, medical imaging, surgical IPUs, aged care, palliative care, ambulatory care, emergency department, critical care, and acute IPUs. The outcome of the proposed redevelopment is to provide clinical and non-clinical services infrastructure to expand, enhance, and optimise current capacity at SDHM.

The proposed new building (7 levels) will provide acute services, while the existing main building for ambulatory, acute, and sub-acute services will be refurbished. The loading dock will be relocated to the proposed new building, where all waste collection will occur via North Street.

WASTE MITIGATION MEASURES

The development will be provided with a waste system that ensures ease of waste separation, thus allowing for maximum diversion from landfill. Waste storage and equipment will be carefully considered and incorporated into the ongoing design where appropriate, as to provide a high-functioning waste system once the site is operational.

Waste mitigation initiatives as specified throughout this report include:

- Extended waste stream separation (e.g., electronic waste and soft plastics).
- The use of large waste compactors where appropriate, minimising frequency of waste collection.
- Separate waste stores for common and clinical waste volumes, as to minimise risk of inappropriate material handling.
- Separate “clean” (incoming deliveries, food, clean linen, etc.) and “dirty” (waste, dirty linen, etc.) loading bays, as to minimise risk of cross contamination.

WASTE COLLECTION STRATEGY

The following waste systems are proposed for the development:

Table 3 SDMH Redevelopment - Waste Collection Summary

Waste Stream & Classification		Waste Equipment	Collection Frequency	Collection Operator
COMMON	General Waste (wet)	1 x 25m^3 Compactor	2 x weekly	Private Contractor
	General Waste (dry)	1 x 10m^3 Skip Bin	2 x weekly or as needed	
	Paper / Cardboard	1 x 25m^3 Compactor	1 x fortnightly	
	Commingled Recycling	36 x 240L Bins	3 x weekly	
	Food Organics	Dehydrator	1 x weekly or as needed	
	Secure Paper	240L Bins	As needed	
	E-Waste	1 x 660L Bin	As needed	
	Soft Plastics	Soft plastics bale	As needed	
CLINICAL	Clinical	8 x 660L Bins	7 x weekly	
	Cytotoxic	4 x 240L Bins	3 x weekly	
	Pharmaceutical	2 x 240L Bins	2 x weekly	
	Laparoscopic waste	4 x 60L Bins	3 x weekly	

Collections will be undertaken directly from the loading dock at ground level. Collection vehicles will access the loading dock via Shoalhaven Street.

Swept path diagrams prepared by TTW (dated 30/06/2022, drawing number SK26-B, Issue B) demonstrate sufficient vehicle access is provided for a hook lift vehicle and 12.5m HRV to enter and exit the site in a forward direction. WSP have assessed these swept paths and consider them sufficient.

Compactor collections will be undertaken directly from the loading dock at ground level. Minimum height clearances of 5.0m at the point of compactor lift and 4.5m across the vehicle path of travel are provided across the dock, which will provide sufficient clear for compactor collection and vehicle access.

Additional collections (recycling bins, clinical waste bins, extended waste streams) will be undertaken directly from the loading bays at ground level. Collection vehicles will prop within the designated loading area and collect the bins in the temporary loading zone.

Waste equipment will not be stored outside the title boundary or presented to kerb for collection at any time. Building management will ensure sufficient access is provided for collection vehicle operators during collection times. Typically, operators are provided with keypad/swipe card access to the service doors.

4 INTRODUCTION

The following Operational Waste Management Plan has been prepared for the proposed redevelopment of Shoalhaven District Memorial Hospital (SDMH), which will provide additional healthcare services for the growing and ageing populating within the Illawarra and Shoalhaven Local Health District (ISLHD).

The existing SDMH currently provides 206 beds. The redevelopment includes the addition of a new building that will contain 7 storeys (including ground floor) and 209 additional beds (415 beds in total). The new building will also include a new loading dock where and waste and recyclables for the entire site will be collected from.

This Waste Management Plan (WMP) and the waste generation rates therein have been prepared in accordance with the *Shoalhaven Development Control Plan 2014* (Chapter G7) and current best practice waste management methodology and technologies commonly available in Australia.

4.1 LAND USE

Client:	Health Infrastructure
Land Use Type:	Hospital
Overview:	• Erection of new acute services building with loading dock • 7 storeys above ground level (no basement) • Appx. GFA of 31,000 m^2

Table 4 Development Summary

Hospital / Clinical	
Use	**Quantity**
Hospital Bed	415 beds
Associated Retail	
Use	**Net Leasable Area (m^2)**
Café	275
Takeaway / Kiosk	40

A site plan is provided below for context. Further design drawings are provided in Appendix A.

Figure 1 Shoalhaven Hospital – Proposed site plan (DWG No. ASB-SD-DR-AR-1000, Issue 6)

4.2 DEFINITIONS

Within the proceeding report, three categories are established to describe waste systems:

Common waste is considered in this report to be waste generated through the ongoing operation of the site which does ***not*** have specific disposal requirements under the *AS3816: 1998 Management of clinical and related wastes*. This waste includes garbage, commingled recycling and paper/cardboard.

Clinical & related wastes (referred to as "clinical waste" throughout) are considered in this report to be waste which is regulated under the *AS3816: 1998 Management of clinical and related wastes*. In the context of this report, this waste includes sharps, pharmaceutical substances and laboratory specimens / cultures.

4.3 WASTE SYSTEMS

Throughout the development, recyclable materials will be as easy to dispose of as general waste. This will be achieved by ensuring the development is appropriately furnished with bin stations throughout the various hospital services, tenancies, and communal areas. The bin stations are to be clearly signed such that waste stream separation is easily identifiable and that correct use of the bins is upheld.

Bin stations encourage the separation of recyclable materials. This system incorporates the provision of multiple bins for different waste streams at central locations and common areas for ease of disposal. This system is beneficial, as users are required to make a conscious decision as to which bin they place their items. This typically results in a reduced volume of general waste (landfilled material). In addition, the use of bin stations minimises the number of locations cleaners are required to service throughout the development.

Figure 2 Example Bin Station Application

Internal Fitout

Public Place Integration

Each level of the proposed acute services building will provide at least one centralised waste room for the interim collection of waste and recycling streams. These areas will have minimum cumulative holding capacities as deemed appropriate by SDMH.

4.3.1 COMMON WASTE SYSTEMS

Common waste shall be sorted on-site by users as appropriate into the following streams:

- General Waste
- Paper / Cardboard
- Commingled Recycling
- Food Organics
- Bulky Waste
- Extended Waste Streams, including:
  - Secure Paper
  - Electronics
  - Soft Plastics

4.3.2 CLINICAL WASTE SYSTEMS

Clinical waste shall be sorted on-site by users as appropriate into the following streams:

- Clinical / Sharps
- Cytotoxic
- Pharmaceutical
- Laparoscopic
- Additional Streams, which ***may*** include:
  - Anatomical

5 HOSPITAL WASTE MANAGEMENT

5.1 WASTE GENERATION RATES

Waste generation rates are shown in the tables below. Calculations are based on a 7-day operating week.

Waste generation rates have been derived through a review of waste data from existing hospitals in the ISLHD, the results of which are held by WSP. Note that the waste generation rates used below are indicative only based on projected estimates.

Table 5 Common Waste Generation Rates

Use	Common Waste Generation Rates (L/Bed/Week)			
	General Waste	Paper / Cardboard	Commingled Recyclables	Food Organics
Hospital	236	58	66	26

Table 6 Clinical Waste Generation Rates

Use	Clinical Waste Generation Rates (L/Bed/Week)			
	Clinical	Cytotoxic	Pharmaceutical	Laparoscopic
Hospital	70	3	2	1

5.2 ESTIMATED VOLUMES

Note that waste volumes of the existing hospital and proposed redevelopment facilities represent those generated **in service** of the in-patient hospital beds, inclusive of associated administrative, operative and technical facilities. Waste volumes as shown are **not** limited to those generated solely by the hospital beds (and the associated patients thereof). The volumes below are estimates only and may change once the development is operational.

Table 7 Common Waste Volumes

Use	Quantity	General Waste (L/week)	Paper / Cardboard (L/week)	Commingled Recyclables (L/week)	Food Organics (L/week)
Hospital	415 beds	97,940	24,070	27,390	10,790
TOTAL		**97,940**	**24,070**	**27,390**	**10,790**

Table 8 Clinical Waste Volumes

Use	Quantity	Clinical (L/week)	Cytotoxic (L/week)	Pharmaceutical (L/week)	Laparoscopic (L/week)
Hospital	415 beds	29,292	1,450	725	258
GRAND TOTAL		**29,292**	**1,450**	**725**	**258**

5.3 WASTE DISPOSAL PROCEDURES

5.3.1 GENERAL WASTE & PAPER / CARDBOARD

General waste (240L capacity) and paper/cardboard bins (240L & 660L capacity) will be stored in the centralised waste rooms on each level. Hospital staff and/or cleaners will be responsible for decanting waste items from the various services into the designated bins for interim storage. General waste must be bagged before disposal. Paper/cardboard must not be bagged, and instead should be loosely placed in the designated bins.

As the bins are filled, it is the responsibility of the cleaning staff to transport them via the lifts to the loading dock on ground level. Note that outlying service buildings may require the use of a bin tug and trailer to transport bins longer distances.

Once at the loading dock, the bins can be decanted into the general waste or paper/cardboard compactor using the attached bin lifts. Once emptied, the bins will be returned to their respective storage rooms to resume operational use or placed in the designated bin wash area if dirty. Bins placed in the bin wash may be swapped for cleaned bins that are collected from the designated clean bin holding area. Note that use of bin lifters will be limited to trained staff only.

5.3.2 COMMINGLED RECYCLABLES

Commingled recycling bins (240L capacity) will be stored in the centralised waste rooms on each level. Hospital staff and/or cleaners will be responsible for decanting commingled recyclables from the various services into the designated bins for interim storage. Commingled recyclables must not be bagged, and instead should be placed loosely in the designated bins.

As the bins are filled, it is the responsibility of the cleaning staff to transport them via the lifts or bin tug and trailer to the Recycling Storage Room on ground level. There they will be swapped out with empty bins and returned to their respective storage rooms to resume operational use.

5.3.3 FOOD ORGANICS

Staff tea rooms and kitchen areas may be equipped with organics bins (e.g., 120L MGBs and/or caddies) for the storage of discarded food scraps. As the food waste bins are filled, it is the responsibility of the cleaning staff to transport them to the loading dock for disposal into the food waste processor. This can be accomplished by manually decanting the caddies or using a bin lifter for the 120L bins. Once the bins are decanted, they will be returned to resume operational use.

The dry end-product will be automatically unloaded into a designated container, sized at a capacity deemed appropriate by building management. Full containers containing the dry end-product will be held within the waste storage area for collection. Only trained staff/cleaners are to operate the dehydrator unit.

5.3.4 SECURE PAPER

Spaces throughout the development may be furnished with secure paper bins as deemed appropriate. Secure paper collections will be performed on an ‘as required’ basis via an authorised contractor.

5.3.5 DRY (HARD) WASTE

During routine maintenance of the facilities, dry waste may be generated. These materials will be transported to the $10m^3$ skip bin stored in the existing loading dock.

5.3.6 EXTENDED RECYCLING STREAMS

Additional space may be provided in the centralised waste storage rooms on each level for the collection of extended waste streams such as e-waste and/or soft plastics. Cleaning staff will be responsible for transporting these collection bins to the Common Waste Storage Room on ground level and decanting into the larger collection bins as needed. The separation of additional extended streams (soft plastics, PVC, textiles, etc.) may be considered, pending hospital preference.

5.3.7 CLINICAL WASTE

Clinical waste generally includes human tissue, body fluids, soiled bandages, and sharps. Clinical waste will be collected in designated bags per the current practice in the existing hospital buildings. These bags are then sealed and placed in 660L clinical waste bins that are generally located in the theatres. Used sharps containers are also placed in the 660L clinical waste bins. When full, it is the responsibility of cleaning staff to transport the filled clinical waste bins to the Clinical Waste Room via the lifts. Once there, the staff member will swap the filled clinical bin with an empty one that is stored in the room. The empty one will be returned the previous location to resume operational use.

Clinical waste bins and/or bags may also be stored in the Interim Clinical Waste Rooms on the relevant level as needed.

5.3.8 CYTOTOXIC WASTE

Cytotoxic waste is generally any material (i.e., medicines) that are toxic to cells, usually used in chemotherapy treatments. Cytotoxic waste will be stored in 240L bins in the relevant service department. These bins may also be stored in the Interim Clinical Waste Rooms on the relevant level as needed. Once filled, it is the responsibility of cleaning staff to transport the cytotoxic waste bins to the Clinical Waste Room on ground level via the lifts. Once there, the staff member will swap the filled bin with an empty one stored in the room and will then return it to the respective level to resume operational use.

5.3.9 PHARMACEUTICAL WASTE

Pharmaceutical waste generally includes drugs, remedies, or medicines that have expired or are unused. Pharmaceutical waste will be stored in 240L bins that are most commonly located in service departments such as the pharmacy, pathology, and COVID-19 clinic. These bins may also be stored in the Interim Clinical Waste Rooms on the relevant level as needed. Once filled, it is the responsibility of cleaning staff to transport the pharmaceutical waste bins to the Clinical Waste Room on ground level via the lifts. Once there, the staff member will swap the filled bin with an empty one stored in the room and will then return it to the respective level to resume operational use.

5.3.10 LAPAROSCOPIC WASTE

Laparoscopic waste generally consists of surgical instruments that are used in a theatre environment. It is anticipated that 240L bins for laparoscopic waste will be located in the theatres, with space available for additional storage in the Interim Clinical Waste Rooms on the relevant level as needed. Once filled, it is the responsibility of cleaning staff to transport the laparoscopic waste bins to the Clinical Waste Room on ground level via the lifts. Once there, the staff member will swap the filled bin with an empty one stored in the room and will the return it to the respective level to resume operational use.

5.3.11 ADDITIONAL CLINICAL STREAMS

Further storage provision for additional clinical streams will be allowed for within each clinical waste store. Additional clinical streams may include:

- Soft biohazard
- Anatomical Waste

Additional clinical streams as listed above are often managed through smaller pails / closed containers which may be stacked upon shelving for ease of storage.

6 RETAIL WASTE MANAGEMENT

6.1 WASTE GENERATION RATES

Waste generation rates for the retail component of the hospital development are shown in the table below.

Table 9 Common Waste Generation Rates

Use	General Waste (L/100m^2/Week)	Paper / Cardboard (L/100m^2/Week)	Commingled Recyclables (L/100m^2/Week)	Food Organics (L/100m^2/Week)
Café	1,680	945	455	420
Takeaway / Kiosk	840	700	350	210

6.2 ESTIMATED VOLUMES

The table below shows the estimated waste volumes generated from the retail component of the hospital redevelopment. Calculations are based on a 7 day per week operation for all uses. Note that these volumes are estimates only and are subject to change once the development becomes operational.

Table 10 Common Waste Volumes

Use	Quantity / Area	General Waste (L/week)	Paper / Cardboard (L/week)	Commingled Recyclables (L/week)	Food Organics (L/week)
Café	275 m^2	4,620	2,599	1,251	1,155
Takeaway / Kiosk	40 m^2	336	280	140	84
TOTAL		**4,956**	**2,879**	**1,391**	**1,239**

6.3 WASTE DISPOSAL PROCEDURES

6.3.1 GENERAL WASTE, PAPER / CARDBOARD

General waste and paper/cardboard bins (240L and/or 660L capacity) will be stored back of house (BOH) of the retail tenancies. At the end of each trading day or as needed, designated staff or cleaners will be responsible for transporting the bins to the loading dock and decanting them into the appropriate compactor with the attached bin lift. Once the bins are emptied, they will be returned to the retail spaces to resume operational use. General waste must be bagged before disposal. Paper/cardboard must not be bagged, and instead should be loosely placed in the designated bins.

Note that use of bin lifters will be limited to trained staff only.

6.3.2 COMMINGLED RECYCLABLES

Commingled recycling bins (240L capacity) will be stored BOH in the retail tenancies. At the end of each trading day or as needed, designated staff or cleaners will be responsible for transporting the bins to the Recycling Storage Room on ground level and swapping with empty bins. Once the bins are emptied, they will be returned to their respective storage rooms to resume operational use. Note that commingled recyclables must not be bagged, and instead should be placed loosely in the designated bins.

6.3.3 FOOD ORGANICS

Staff tea rooms and/or kitchen areas in the retail tenancies may be equipped with organics bins (e.g., 120L MGBs and/or caddies) for the storage of discarded food scraps. As the food waste bins are filled, it is the responsibility of designated retail staff or cleaners to transport them to the loading dock for disposal into the food waste processor. Once the bins are decanted, they will be returned to resume operational use.

6.3.4 EXTENDED RECYCLING STREAMS

Additional space may be provided BOH for the collection of extended waste streams such as e-waste and/or soft plastics. Designated retail staff or cleaners will be responsible for transporting these collection bins to the Recycling Storage Room on ground level and decanting into the larger collection bins as needed.

7 WASTE COLLECTION METHODOLOGY

7.1 PROCEDURES PER WASTE STREAM

Private collection contractors will be engaged to collect waste and recyclables from the new loading dock at the proposed acute services building. The various waste streams will be collected as follows:

7.1.1 GENERAL WASTE, PAPER / CARDBOARD

A hook lift vehicle will enter the loading dock via Shoalhaven Street. The vehicle will collect the designated compactor and remove it offsite to a licenced disposal and/or recovery facility. Once the compactor is emptied, it will be returned to site to resume operational use. All vehicle movements entering and exiting the site will be in a forward direction.

While the compactors are in transit, interim 1100L bins may be placed at the loading dock to receive materials. The bins can then be decanted into the compactors when they are returned.

7.1.2 COMMINGLED RECYCLABLES

Prior to collection, it is the responsibility of the caretaker to transport the commingled recycling bins to the temporary collection point via the ramp. A bin tug may be used. A rear-lift vehicle will enter the site via Shoalhaven Street and temporarily park at the loading dock on ground level. Once the bins are decanted into the vehicle, the caretaker will return them to resume operational use. Note that the temporary loading zone of commingled recyclables is shared with compactor loading area. Collection of commingled recyclables should therefore occur on days separate from the collection of compactors.

Note that there is a designated collection point retained at the existing loading dock should commingled recyclables need to be collected from that location as well.

7.1.3 FOOD ORGANICS

A private contractor will enter the site via Shoalhaven Street and park at the loading dock. The driver will swap the empty bins with the full bins and remove the by-product compost material from site for further processing at an off-site facility. Alternatively, garden maintenance staff may be able to utilize the material onsite, depending on the type and quality of the compost material produced. Note that as organics recovery improves across the hospital, it is possible to upgrade to a larger food waste processor if needed.

7.1.4 SECURE PAPER

Collection contractors will enter the building, collect, and exchange the secure paper bins directly from the storage location on each level, as per common practice. Building management (or equivalent) will coordinate collection services as required.

7.1.5 DRY (HARD) WASTE

A hook lift vehicle or similar will enter the existing loading dock via Shoalhaven Street and drop off an empty skip bin. The contractor will then load the filled skip and transport it to a licenced waste facility for disposal of the material.

7.1.6 EXTENDED RECYCLING STREAMS

Private collection contractors will enter the loading dock via Shoalhaven Street and temporarily park in the loading dock. The drivers will be able to access the Recycling Storage Room and transport the material via the ramp to the vehicle. Once the materials are loaded, the contractors will return empty bins to the Recycling Storage Room to resume operational use.

7.1.7 CLINICAL & RELATED WASTE (PHARMACEUTICAL, LAPAROSCOPIC, ETC.)

A private collection contractor will enter the site via Shoalhaven Street and park in the loading dock on ground level. The contractor will be able to access the Clinical Waste Room and transport the filled bins to the vehicle via the ramp. Clean, empty bins will replace the collected ones.

7.2 COLLECTION VEHICLE CONSIDERATIONS

Compactor collections will be undertaken directly from the compactor zone at ground level. Minimum height clearances of 5.0m at the point of compactor lift and 4.5m across the vehicle path of travel are provided across the dock, which is sufficient clearance for compactor collection and vehicle access.

Additional collections (recycling bins, food organics, extended waste streams) will be undertaken directly from the loading bays at ground floor via a rear-load vehicle. Clearances have been allowed for a standard HRV sized vehicle of 12.5m length or smaller.

Swept path diagrams prepared by TTW (dated 30/06/2022, drawing number SK26-B, Issue B) demonstrate sufficient vehicle access is provided.

Waste equipment will not be stored outside the title boundary or presented to kerb for collection at any time. Building management will ensure sufficient access is provided for collection vehicle operators during collection times. Typically, operators are provided with keypad/swipe card access to the service doors.

7.3 CLEAN & DIRTY MATERIAL SEPARATION

As per standard hospital operations, the separation of "clean" incoming materials (clean linen, food and beverage, medicine / hospital equipment, etc.) and "dirty" outgoing materials (waste volumes, soiled linen, etc.) will be allowed for throughout design in order to minimise risk of cross-contamination. This will be achieved through separate lifts, corridor connections, storerooms and loading bays where appropriate.

Ideally, waste collection will be limited to the "dirty" loading bays only, per hospital operations and nominated schedule. Waste collections should **not** be undertaken from the "clean" bays under any circumstance.

8 WASTE STORAGE

8.1 WASTE STORAGE CAPACITY

The tables below contain information regarding equipment type, quantity, and frequency of collection.

As per industry standard, a compaction ratio of 3:1 has been assumed for both the general waste and paper / cardboard compactors. WSP understands that higher compaction ratios can be achieved under certain conditions.

Table 11 Waste Equipment Information and Capacity

Waste Stream	Bins/Equipment	Qty	Collection Frequency	Weekly Volume (L)	Weekly Capacity (L)
General Waste (wet)	25m^3 compactor	1	2 x weekly	102,896	150,000
General Waste (dry)	10m^3 skip bin	1	2 x weekly or as needed	20,000	20,000
Paper/Cardboard	25m^3 compactor	1	1 x fortnightly	30,269	75,000
Commingled Recyclables	240L bins	36	3 x weekly	25,461	25,920
Food Waste	Dehydrator	1	1 x weekly or as needed	12,029	10,000
Clinical Waste	660L bins	8	7 x per week	29,262	36,960
Cytotoxic	240L bins	3	3 x weekly	1,450	2,160
Pharmaceutical	240L bins	4	2 x weekly	725	960
Laparoscopic	60L bins	4	3 x weekly	258	540

Table 12 Additional Waste Streams Information

Waste Stream	Bins/Equipment	Qty	Collection Frequency
Secure Paper	240L bins	As required	As required
E-Waste	660L bin	1	As required
Soft Plastics	Baler	1	N/A
	Soft plastics bale	1	As required

Note that the information provided in the table above is presented based on projected waste volumes. Once the proposed development becomes operational the above bin/equipment types and collection frequencies may be modified to suit.

8.2 WASTE STORAGE AREAS

Table 13 demonstrates the cumulative area requirements and provision of waste areas. Note that additional space has been reserved within the existing loading dock as contingency storage of commingled recyclables in the case where a certain volume of waste is unable to be transferred to the allocated common waste hold. Storage of hard (dry) waste has also been allocated to the existing loading dock. Table 14 demonstrates the cumulative area requirements and provision of waste areas for these select waste streams.

Note that the tables below provide estimated area requirements based on anticipated bin quantities and example equipment specifications. WSP acknowledges this is a presentation of one waste strategy based on better practice guidelines, but others may also be employed to suit the needs of the development.

Table 13 Waste Storage Areas

Waste / Equipment Storage	Waste Stream	Bins/Equipment	Qty	Collection Frequency	Estimated Area Required (m^2)	Actual Area Provided (m^2)
Compactor Zone	General Waste	25m^3 compactor + bin lift	1	2 x weekly	35	73
	Paper/Cardboard	25m^3 compactor + bin lift	1	1 x fortnightly		
Common Waste Storage Room	Commingled Recyclables	240L bins	36	3 x weekly	54	65
		Bin lifter	1	NA		
	Extended recycling streams	240L-660L bins	4	As needed		
		Soft Plastics Baler	1	NA		
		Soft Plastics Bale	1	As needed		
Clinical Waste Storage	Clinical Waste	660L bins	8	7 x per week	28	50
	Cytotoxic	240L bins	4	3 x weekly		
	Pharmaceutical	240L bins	2	2 x weekly		
	Laparoscopic	60L bins	4	3 x weekly		
Interim Holding Bins	General Waste	240L bins	4	NA	14	20
	Paper/Cardboard	240-660L bins	5	NA		
Food Waste Processor Storage	Food Waste	Dehydrator	1	1 x weekly or as needed	6.5	6.5
		120L bins	4	NA		

* *Area required including circulation does **not** include clear zones for vehicle access.*

Table 14 Waste Storage Areas – Existing Loading Dock Contingency

Waste / Equipment Storage	Waste Stream	Bins/Equipment	Qty	Collection Frequency	Estimated Area Required (m^2)	Actual Area Provided (m^2)
Dry Waste Storage Area	Dry (Hard) Waste	10m^3 skip bin	1	As needed	14	162 (Approx.)
Indicative Recyclables Storage Area	Commingled Recyclables	240L bins	18	As needed	19	

* *Area required including circulation does **not** include clear zones for vehicle access.*

9 WASTE EQUIPMENT

9.1 TYPICAL EQUIPMENT DIMENSIONS

Typical equipment dimensions are provided in Table 15 below. Note that the specifications listed are for reference only and must be confirmed with the nominated supplier prior to any works commencing.

Table 15 Typical Equipment Dimensions

Typical Equipment Dimensions (mm) – Excluding Circulation			
Item	**Width**	**Depth**	**Height**
25m^3 Compactor	7,000	2,500	2,500
10m^3 Skip Bin	5,000	2,000	1,000
Bin Lift (660L – 1100L Bins)	2,000	1,600	3,300
Bin Lift (120L – 240L Bins)	950	1,150	2,565
Dehydrator	2,500	2,569	2,340
Baler	1,355	890	2,370
1100L Bin	1,240	1,070	1,330
660L Bin	1,260	780	1,330
240L Bin	585	730	1,060
120L Bin	480	545	930

9.2 EXAMPLE WASTE EQUIPMENT

The following are examples of typical waste bins and equipment that may be used on site and are in accordance with the methodologies outlined in this waste management plan. Note that the specifications listed are for reference only and must be confirmed with the nominated supplier prior to any works commencing.

Figure 3 Example Compactor + Bin Lift

Integrated Auger Compactor and Bin Lift

Figure 4 Example Food Waste Systems

Dehydrator Unit

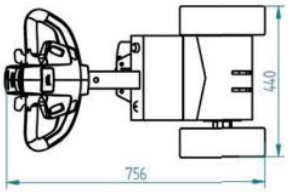
Food organics caddies and trolley

Figure 5 Example Bin Lifters for 120-240L

Full-Swing Bin Lifter (Manual)

Lift and Tilt Bin Lifter (Manual)

Figure 6 Example Bin Tug



Movexx T1000

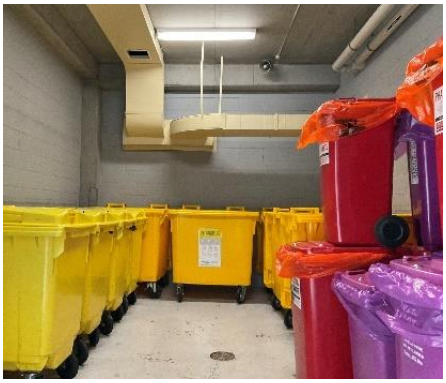
Movexx T1000

Figure 7 Current and Anticipated Clinical Waste Systems

Storage bag for clinical waste

16/02/2022 from Johnstaff

Storage bins for clinical, pharmaceutical, and laparoscopic waste.
**Note that bin stacking is not considered better practice and is not recommended in this WMP.*



06/12/2021 from Conrad Gargett

9.3 HIGH LEVEL EQUIPMENT SCHEDULE

Table 16 lists the waste equipment required for the development under the conditions proposed within this report.

Table 16 Equipment Supply Schedule

Item	Supplier	Typical Services Requirement(s)**	Quantity / Notes
25m^3 Compactor	Private Supplier	***Power***: 3-Phase, 415V 20A Power per unit	1 No. General Waste 1 No. Paper / Cardboard
Bin Lifters	Private Supplier	***Power***: 240V 10A Power per unit	2 No. Units Fitted to each compactor
Food Waste Dehydrator	Private Supplier	***Power***: 3-Phase, 415V 64A Power per unit	1 No. Food Waste
240L Bins (Common Waste)	Private Supplier*	nil	4 No. General Waste 36 No. Commingled Recycling 4 No. Paper / Cardboard 4 No. Organics
660L Bins (Common Waste)	Private Supplier*	nil	4 No. Paper / Cardboard 1 No. E-Waste
660L Bins (Clinical Waste)	Private Supplier*	nil	8 No. Clinical Waste
240L Bins (Clinical Waste)	Private Supplier*	nil	3 No. Cytotoxic 4 No. Pharmaceutical
60L Bins (Clinical Waste)	Private Supplier*	nil	3 No. Laparoscopic
**Private waste collection contractors often supply their own bins for collection.* ***Services requirements are indicative only and must be confirmed with the manufacturer prior to commencement of construction*			

10 EDUCATION

Any successful waste management strategy requires implementation of education techniques to inform staff, visitors, contractors, and building management of on-site procedures. This will aid in the proper segregation and disposal of materials in a safe way that also promotes diversion from landfill, efficiencies in operation, and cost savings in reduced bin contamination. It is important that this information is updated and reiterated on a regular basis due to updates in better practice guidance, additional waste stream segregation, and/or turnover of staff.

Education programs will be provided to staff, cleaners and students by the occupant at the expense of the occupant.

The below is a complimentary listing of resources available to provide education. The occupant is not obligated to use these materials. This is not, nor is it intended to be, a complete list of available materials. WSP does not warrant (or make representations for) the below materials.

Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities (NSW EPA, 2012)

- NSW Waste Avoidance and Resource Recovery Strategy 2014–21 (NSW EPA, 2014)
- Resource Smart: Recycling and Reusing in Your Workplace (Sustainability Victoria, 2008)
- Simple Changes to Make Your Workplace Resource Smart (Sustainability Victoria, 2011)
- Operational Waste Guidelines: Procurement, Management and Reporting (Better Building Partnership, 2015)
- National Waste Policy – Less Waste, More Resources (Department of Environment and Energy, 2018)

The following sections provide general information on correct colour-coding of bins and basic signage to assist waste generators with proper disposal of waste and recyclables.

10.1 BIN COLOUR

The below bin colours are specified by Australian Standard AS4123.7 2006 and are nationally recognisable. Note that these are recommendations, and not mandatory:

- Garbage (general waste) bins shall have red lids with dark green or black body.
- Recycle bins shall have yellow lids with dark green or black body.
- Paper / Cardboard bins shall have blue body with dark green or black body.
- Food Organics bins shall have burgundy lids with dark green or black body.
- Soft Biohazard (clinical) bins shall have yellow lids with yellow body and with the black biological hazard symbol.
- Cytotoxic bins shall have purple lids with purple body and with the white telophase symbol.

Private collection contractors often provide their own bins for collection.

10.2 SIGNAGE

Waste storage areas, bins and equipment are to be clearly marked and signed with industry standard signage, or equivalent, such as that illustrated below. At minimum, common waste stream signage should:

- Utilise Australian standard colours for waste streams (AS4123.7 2006).
- Include examples of accepted vs. not accepted material contents.
- Utilise a combination of universally accepted words, terms and images

Figure 8 Example Common Waste Stream Signage

Figure 9 Example Clinical Waste Signage

11 GREENSTAR CRITERIA & TARGETS

11.1 IDENTIFYING OPERATIONAL WASTE TARGETS

A commitment to operational waste minimisation initiatives will be observed across the development. All reporting and required agreements therein are the responsibility of the occupiers (building management or equivalent). All streams except for prescribed waste are subject to comprehensive waste audit for benchmarking.

Waste diversion targets for this site have been adopted based on the *NSW Waste and Sustainable Materials Strategy 2041: Stage 1 – 2021-2027*. **The Shoalhaven Hospital Redevelopment aims to divert 80% of waste from landfill by 2030** (not inclusive of clinical and related waste).

Table 17 shows the total projected waste and recyclables that will be generated by Shoalhaven Hospital when the new acute services building becomes operational.

Table 17 Targets

Material	Weekly Volume (L)	NABERS Density Factor (kg/m^3)	Tonnes (t)	Recovered (t)	Landfilled (t)	Total Diversion of Waste from Landfill
General Waste	102,896	105	10.80	0.00	10.80	0.00%
Paper/Cardboard	30,269	50	1.51	1.51	0.00	8.79%
Commingled Recyclables	25,461	60	1.53	1.53	0.00	8.87%
Food Waste	12,029	280	3.37	3.37	0.00	19.57%
Totals			17.21	6.41	10.80	**37.23%**

The **estimated diversion rate of 37.23%** is based on the following assumptions:

- Hospital and retail common wastes are included.
- Clinical and related waste is excluded due to the specialised nature of these waste materials.
- Additional waste and recycling streams (e.g., dry waste, e-waste, soft plastics, etc.) have been excluded due to lack of operational data.

It must be noted that the estimated volumes in Table 17 are based on projected data and are indicative only. Actual volumes should be used based on completed waste audits once the acute services building becomes operational.

11.2 MEASURING WASTE MANAGEMENT PERFORMANCE

When the new building becomes operational, a baseline value must be established within the first three months. This will be accomplished with a waste audit conducted by an accredited auditor. An accredited waste auditor is defined as one of the following:

- An auditor employed by a waste management organisation, possessing a minimum of five years' experience, working in waste auditing in the built environment, with specific experience in conducting commercial audits in line with guidelines issued by State/Territory waste authorities; or
- A waste auditor or waste specialist, working for a consultant, building owner or contractor, possessing a minimum of three years' experience developing OWMPs; or
- An auditor who has undertaken at least one NABERS Waste audit as a certified assessor; or
- An auditor holding Environmental Management Systems Auditor certification issued by Exemplar Global (formerly RABQSA Inc.)

- To find a certified auditor, refer to the 'Search for Certified Individuals' section of the Exemplar Global website (http://www.exemplarglobal.org/what-we-offer/search-for-certified-individuals-or-organizations/).

Waste must then be monitored on a regular basis in order to detect changes in weights/volumes, analyse and develop an appropriate response, and then implement strategies to stay on track. The following outlines a typical methodology for increasing waste diversion from landfill.

11.2.1 DATA COLLECTION

Nominated staff or waste contractors may be requested to collect and report waste data on a regular basis. Two different methods may be employed to collect data depending on the waste stream and collection system. For the waste and recycling materials that are collected in bulk bins (e.g., general waste, paper/cardboard, commingled recyclables), waste collection contractors will provide weight receipts of the materials to building management on a regular basis (e.g., monthly). Building management will be responsible for maintaining these records and tracking waste volumes/weights over time. To allow for data collection through this method:

- Scales must be calibrated and tested by the National Measurement Act.
- Building management must ensure that collection contracts are established to ensure that services are charged by weight, and data is provided to building management.

For waste and recycling materials that are not weighed when collected (e.g., soft plastics or e-waste) the volume & density method may be employed. In this case, it is the responsibility of nominated staff or collection contractors to conduct visual audits of receptacles prior to collection. Weights can be estimated based on the total volume capacity of the bin, the fullness of the bin, and the density of that particular waste stream (e.g., refer to *NABERs Waste: List of Waste Streams* for density factors). All observations must be recorded and provided to building management for maintaining documents and tracking waste volumes/weights over time).

The following performance metrics are recommended to be present in each report:

- Total waste volumes per week, measured in accordance with waste generation rates as follows:
  - Litres of waste, per stream, per 100m^2 floor space, per week for all uses.
- Percentage recovery rate relative to total landfill volume.

It will be the responsibility of facilities management to analyse the metrics to provide required actions going forward regarding either increasing or maintaining performance.

11.3 IMPLEMENTING STRATEGIES

11.3.1 WASTE MINIMISATION INITIATIVES

On a daily basis, hospital and retail staff can implement a series of strategies in line with the waste disposal hierarchy and circular economy principles to increase diversion of waste from landfill. These may include:

Table 18 Example Waste Minimisation Initiatives

Waste Hierarchy Principles	Example Initiatives
Avoid and Reduce	▪ Audit surgical packs to determine if items are not used frequently enough for inclusion ▪ Purchase cleaning materials/equipment in quantities for use across departments ▪ Improve process of ordering supplies to prevent outdating and waste of perishable products ▪ Purchase items with little or no packaging ▪ Purchase items in bulk where possible ▪ Use digital rather than printed documents, and print double-sided if needed

	▪ Use air dryers in bathrooms rather than paper towels
Reuse	▪ Purchase items that can be reused (e.g., reusable sharps containers, dishes/cutlery, surgical/nursing gowns) ▪ Reuse cardboard boxes and/or pallets for other packaging and transporting purposes ▪ Return cardboard boxes or pallets to suppliers ▪ Donate usable items to charity ▪ Consider program for donating unused items (e.g., personal care items such as tissues, shampoo, baby wipes, etc.)
Recycle	▪ Continue identifying opportunities for recovering and recycling unwanted items (e.g., soft plastics, Kimguard, used blankets, mattress pads, etc.) ▪ Consider purchasing products that can be easily recycled ▪ Consider purchasing items with packaging that can be easily recycled

11.3.2 CONTAMINATION MANAGEMENT

The recycling streams may be considered contaminated if there is an unacceptable level of general waste contained in the recycling bin. Different processing facilities may have varied levels of acceptable contamination rates (e.g., less than 5% of the recycling stream may be contaminated with general waste). If contamination reaches the acceptable threshold, then the entire container of materials may be disposed of landfill.

To prevent contamination of recycling streams, the following procedures are recommended:

- Proper training and education of hospital and retail staff to segregate waste and recyclables.
- Clear signage must accompany each bin and indicate which type of material is accepted.
- Regular inspection of recycling bins on each level by cleaning staff prior to transporting to loading dock.
    - Inspections should be recorded and provided to building management or waste caretaker.
    - Personnel should decontaminate affected bin if easy to do so and presents minimal risk.
- Regular inspection of recycling bins by private collection contractors prior to loading and/or during off-loading at recovery facility.
    - Inspections should be recorded and provided to building management or waste caretaker.
    - If loads are rejected by recovery facility, then the facility must notify the building manager or waste caretaker.

The building manager / waste caretaker will maintain records of contamination incidents in order to address the issued where appropriate.

11.4 ONGOING MONITORING & REVIEW

Managerial staff will be responsible for the delivery and review of this Operational Waste Management Plan on an annual basis in accordance with best practice waste management and Green Star Criteria.

The review process should include (but not be limited to) the following:

- Addressing any feedback or issues that have been raised in regard to waste management within the previous reporting period.
- Developing a summary of waste volumes generated and comparison to landfill diversion targets.
- Identifying areas for potential improvement in regard to waste management systems and increased recycling rates.
- Revising and setting landfill diversion minimisation targets based on past performance and current best practice for upcoming reporting periods.

The building manager / waste caretaker may also consider adopting key performance indicators (KPIs) to stay on target for achieving the diversion target and improving overall site management of waste.

Table 19 Example KPIs

Example KPI	Performance Monitoring	Tracking Target
Meet 80% Diversion of Waste from Landfill by 2030	Waste and recyclable materials are measured (e.g., weighed) and reported to the building manager for monitoring.	Aiming for an increase of +5% diversion each year to reach target by 2030.
Reduction in bin contamination	Contamination incidents are monitored and reported to building management on a regular basis.	Aiming for a maximum of two contamination incidents per month.
Education and training	Key personnel are responsible for regularly educating and training staff on waste management. Workshops and attendees are reported to building management.	Aiming for at least one training session per month.
Review and OWMP	The OWMP will be reviewed and updated by building management.	Aiming to review OWMP and issue updates on an annual basis.

11.5 ROLES & RESPONSIBILITIES

The table below outlines the expected roles and responsibilities for hospital staff and private contractors with regards to waste management operations on site.

Table 20 Roles and Responsibilities

Responsible Party	Performance Monitoring
Building Management / Waste Caretaker	▪ Overseeing education and training staff with regards to waste management procedures. ▪ Ensuring proper signage and communication for waste segregation is implemented. ▪ Organising private contractors for waste/recycling collection and maintaining contracts. ▪ Ensuring waste data (e.g., weight tickets, contamination incidents) are provided by relevant staff and / or collection contractors. ▪ Organising waste audits on a regular basis. ▪ Maintaining records of waste data from collection contractors, staff, and/or auditors. ▪ Monitoring waste diversion rates. ▪ Implementing waste strategies in response to diversion trends and contamination incidents. ▪ Ensuring bins and equipment are cleaned and maintained regularly. ▪ Ensuring manual handling of bins and operation of waste equipment is in accordance with Work Health and Safety regulations. ▪ Reviewing and updating OWMP on an annual basis.
Hospital and Retail Staff (including cleaning contractors)	▪ Participating in waste education and training workshops as required. ▪ Maintaining waste/recycling bins back of house and ensuring proper storage (e.g., waste is bagged, recyclables are not bagged, cardboard is flattened). ▪ Properly segregating waste and recyclables into the appropriate receptacle in accordance with the OWMP. ▪ Monitoring bin capacity and transporting to loading dock on a regular basis to prevent overflow. ▪ Cleaning bins on a regular basis. ▪ Handling bins and operating waste equipment in accordance with Work Health and Safety regulations. ▪ Monitoring contamination of bins on each floor and reporting to building management on a regular basis. ▪ Estimating and reporting volumes of waste and recyclables as requested by building management.
Waste Collection Contractors	▪ Maintaining scheduled collections per contract. ▪ Providing weight receipts to building management on regular basis (e.g., monthly). ▪ Collaborating with building management to develop efficient and effective bin collections (e.g., monitoring bin capacity and adapting collection frequencies and/or bin quantities).
Patients, Guests, and Patrons	▪ Properly segregating waste and recyclables into the appropriate receptacle provided. ▪ Providing feedback to staff with regards to bin accessibility (e.g., too few and/or overflowing).

12 ADDITIONAL INFORMATION

12.1 STANDARDS & COMPLIANCE

12.1.1 VENTILATION

Ventilation will be provided in accordance with Australian Standard AS1668.

12.1.2 WASHING & VERMIN PROTECTION

An appropriately drained wash down area will be provided within the loading zone in which each bin is to be washed regularly by building management. Bin washing areas or bin wash bays must discharge to a grease trap.

Alternatively, a third-party bin washing service can be engaged to perform this service. Bin washing suppliers must retain all wastewater to within their washing apparatus and not impact on the drainage provisions of the site.

12.1.3 NOISE REDUCTION

All waste areas shall meet BCA and AS2107 acoustic requirements as appropriate with operational hours and collection times assigned to minimise acoustic impact on surrounding premises.

12.2 SUPPLIER CONTACT INFORMATION

A complimentary listing of contractors and equipment suppliers is provided in Table 21 below for your reference. You are not obligated to procure goods/services from these companies. This is not, nor is it intended to be, a complete list of available suppliers. WSP does not warrant (or make representations for) the goods/services provided by these suppliers.

Table 21 Supplier Contact List

Service Type	Contractor / Supplier Name	Phone	Website
Private Waste Collectors	SUEZ Environment	13 13 35	www.sita.com.au
	Cleanaway	13 13 39	www.cleanaway.com.au
	Veolia	132 955	www.veolia.com
Equipment Suppliers	Wastech Engineering (*Balers, Compactor, Bin Lifters*)	(03) 8787 1600	www.wastech.com.au
	Elephant's Foot (*Balers, Compactor, Bin Lifters*)	(02) 9780 3500	www.elephantsfoot.com.au
	Superior Pak (*Balers, Compactor, Bin Lifters*)	1800 013 232	www.superiorpak.com.au
	GreenEcoTec (*WasteMaster*)	1800 614 272	www.greenecotec.com/
	Cookers (*Oil Vats*)	1300 88 22 99	www.cookers.com.au
	Sulo Australia *(Bins)*	1300 364 388	www.sulo.com.au
E-waste Collection Services	TechCollect	1300 229 837	www.techcollect.com.au
	Mobile Muster *(Mobile Phones)*	1800 249 113	www.mobilemuster.com.au
	ToxFree *(Secure E-waste Destruction)*	1300 869 373	www.toxfree.com.au

APPENDIX A

SCALED WASTE STORAGE DRAWINGS

WSP Australia Pty Limited
Level 27, 680 George St
Sydney NSW Australia

Project
Shoalhaven District Memorial Hospital

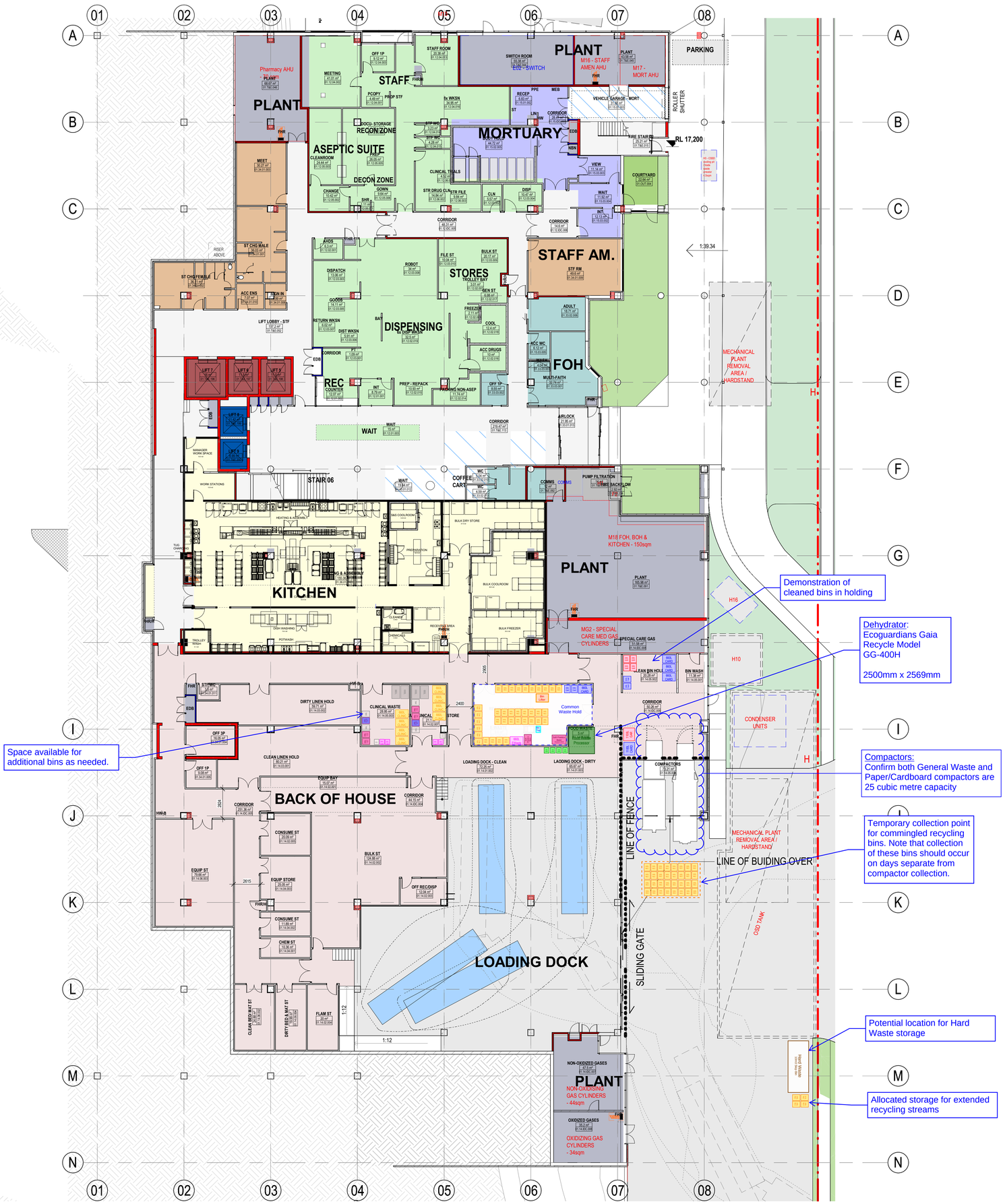
Client
Health Infrastructure

Drawing Title
Waste Storage Sketch Comments v2

Date	Drawn	Checked	Approved
20/07/2022	HC	WB	WB
Scale	**Job No.**	**Sheet No.**	**Rev.**
1:200@A1	PS126630	1 OF 1	1

Area Schedule Level 0

Name	Briefed Area	Designed Area	Comments
Level 00			
BOH	1,034 m²	1,143.08 m²	Excludes 30sqm Bike Racks
FOH	78 m²	89.08 m²	
KITCHEN	475 m²	540.53 m²	
LOADING DOCK	0 m²	574.13 m²	Area allocation TBC
MORTUARY	126 m²	125.09 m²	
MORTUARY COURTYARD	20 m²	19.87 m²	
MORTUARY GARAGE	0 m²	31.28 m²	Enclosed Mortuary Drop-off (not brief)
PHARMACY	575 m²	593.73 m²	
PLANT	453 m²	541.03 m²	
Project Specific FOH Area	0 m²	58.94 m²	
STF AMENITIES	236 m²	164.03 m²	
TERRACE NOT BRIEFED	0 m²	0 m²	Not Briefed
TRAVEL	0 m²	618.6 m²	
	2,997 m²	4,499.39 m²	



Conrad Gargett

Legend

Revision

REV	DESCRIPTION	DATE	INT.
7	ISSUED FOR INFORMATION	20.12.21	JZ
8	ISSUED FOR INFORMATION	21.01.22	JZ
9	ISSUED FOR 80% SD	04.02.22	JZ
10	ISSUED FOR INFORMATION	25.02.22	JZ
11	ISSUED FOR INFORMATION	04.03.22	JZ
12	ISSUED FOR INFORMATION	18.03.22	JZ
13	ISSUED FOR 100% SD	14.04.22	JZ
14	ISSUED FOR DA	13.05.22	JZ
15	ISSUED FOR INFORMATION	03.06.22	JZ
16	50% ARCHITECTURAL ISSUE	16.06.22	JZ

KEY PLAN

Project
SDMH Shoalhaven District Memorial Hospital
Scenic Dr, Nowra NSW 2541

Client
NSW GOVERNMENT Health Illawarra Shoalhaven Local Health District
NSW GOVERNMENT Health Infrastructure

Project Manager / Contract Administrator

Managing Contractor
JOHNSTAFF

Building
ASB

Drawing
OVERALL PLAN - LEVEL 0

A1 Scale 1 : 200
Project No. 20278
Issue 16

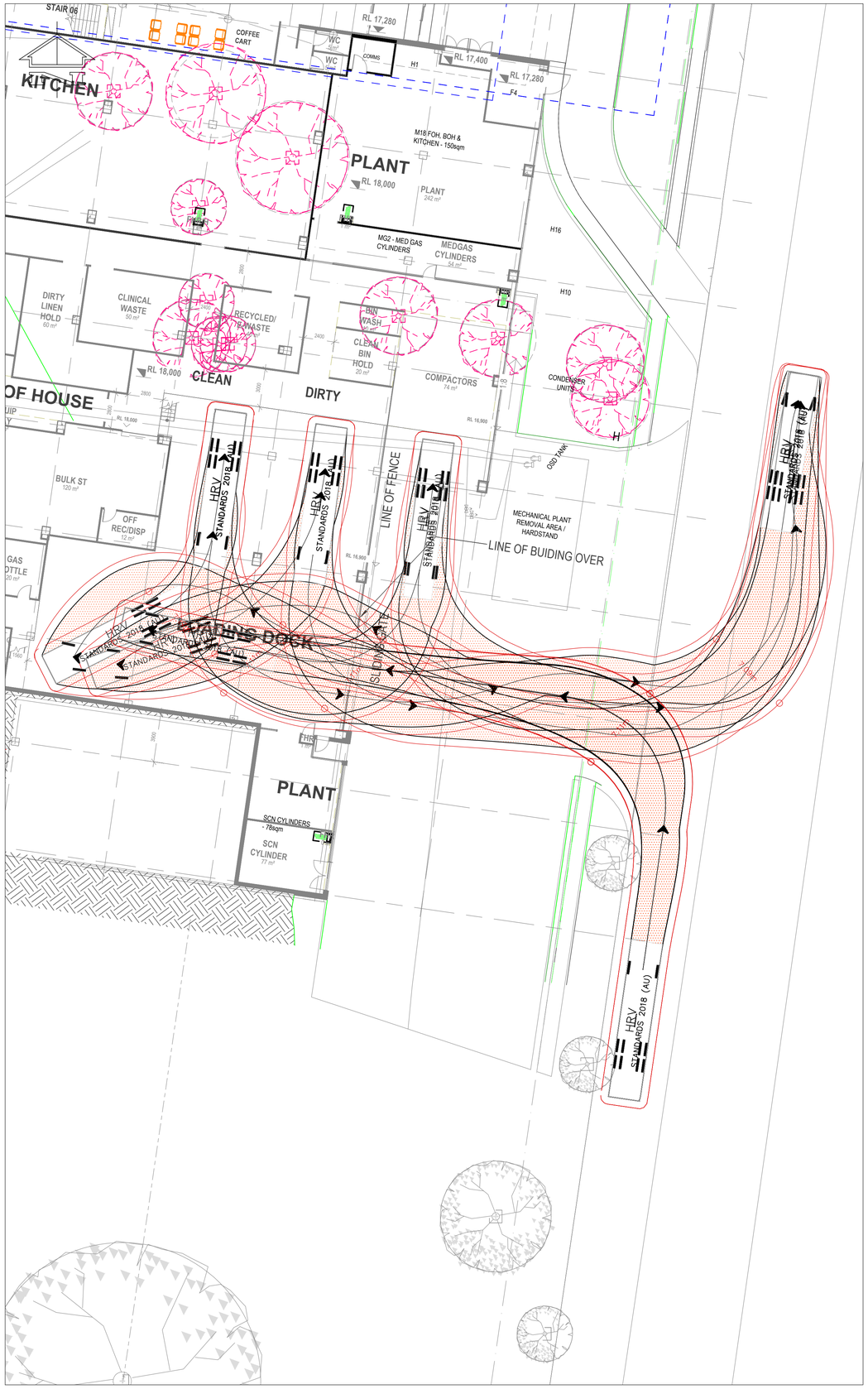
Drawing No.
ASB-DD-DR-AR-22001

Details

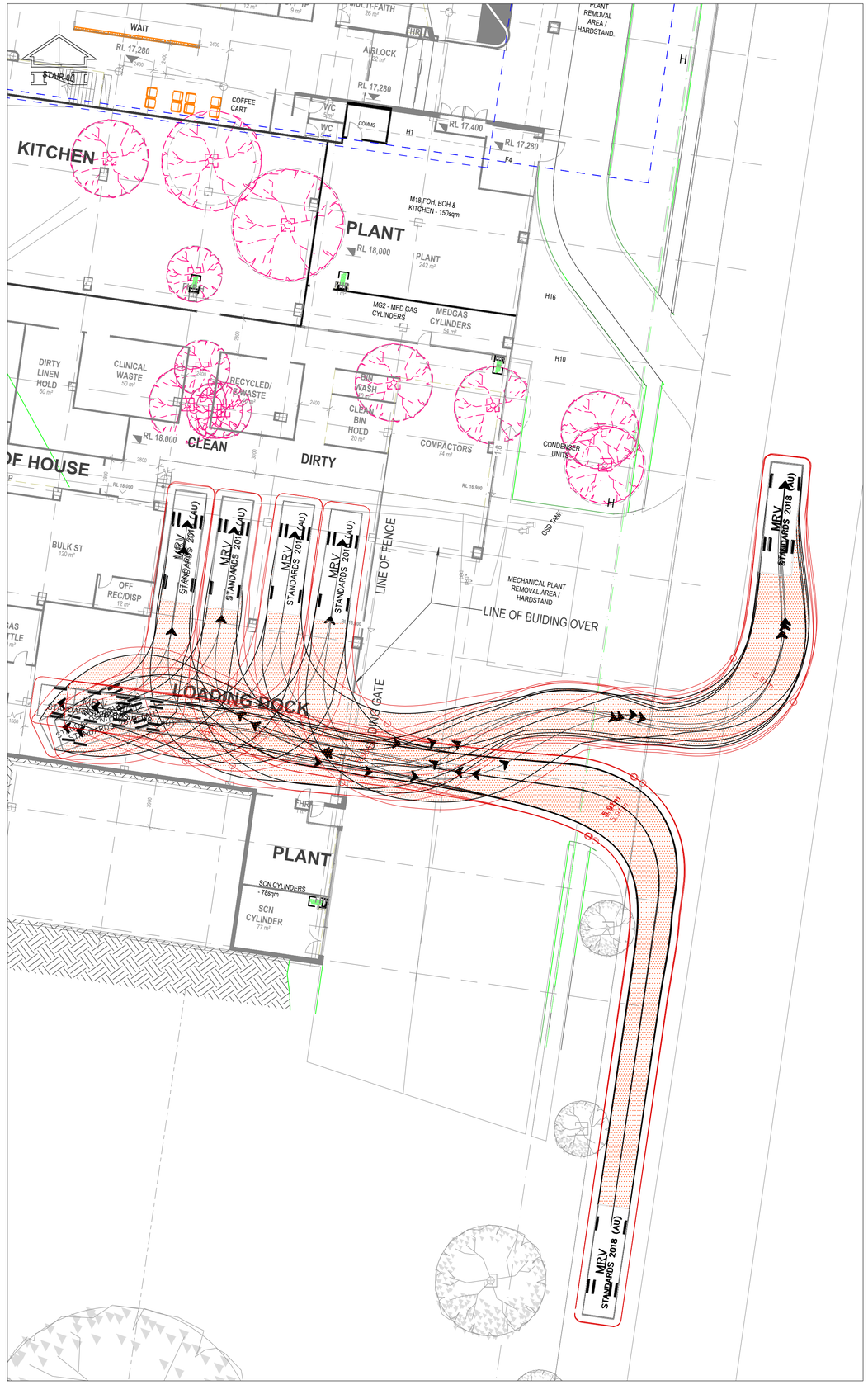
2 0 2 4 6 8 10 12 14 m
SCALE 1:200
Scale at A1

APPENDIX B

SWEPT PATH DIAGRAMS



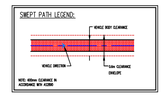
HRV INTO LOADING DOCK



MRV INTO LOADING DOCK

TTW Structural Civil Traffic Façade
612 9439 7288 | Level 6, 73 Miller Street, North Sydney, NSW 2060

Legend



Revision

REV	DESCRIPTION	DATE	INT
A	ISSUED FOR INFORMATION	18.03.22	NB
B	ISSUED FOR INFORMATION	30.06.22	EC

Project
SDMH Shoalhaven District Memorial Hospital
Scenic Dr, Nowra NSW 2541

Client
NSW GOVERNMENT Health Illawarra Shoalhaven Local Health District

Project Manager / Contract Administrator
JOHNSTAFF

Managing Contractor
NSW GOVERNMENT Health Infrastructure

Building
ASB

Drawing
SWEPT PLAN
GROUND LEVEL - LOADING DOC
HEAVY AND MEDIUM RIGID VEH

A1 Scale 1:200
Project No. 201815
Issue B

Drawing No.
SK26-B

PRELIMINARY

Details

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SCALE 1: 1000
Scale at A1