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St George Private Hospital Expansion

119 – 129 Princes Highway and 2 Hogben Street, Kogarah, and 1 South Street, Kogarah

Operational Waste Management Plan

State Significant Development, Application Number SSD-86969958

Prepared for Akalan Projects Pty Ltd

October 2025

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1 Introduction

1.1 Purpose of this Report

This Operational Waste Management Plan has been prepared on behalf of Akalan Projects Pty Ltd in support of a State Significant Development Application (SSDA) submitted to the Department of Planning, Housing and Infrastructure (DPHI) under Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act 1979).

The SSDA seeks approval for the expansion of the St George Private Hospital. Specifically, the SSDA seeks consent for two components: the first being the erection of a health services facility (hospital), and the second relating to upgrades to the main hospital campus, including a new emergency department.

For reporting purposes, the site subject to the new health services facility (hospital) is referred to herein as the 'clinical tower site' and the main hospital campus is referred to as such. This report provides an assessment of operational waste and responds to the Secretary's Environmental Assessment Requirements (SEARs) issued by DPHI on 30 June 2025 in relation to the project.

1.2 Site Location and Context

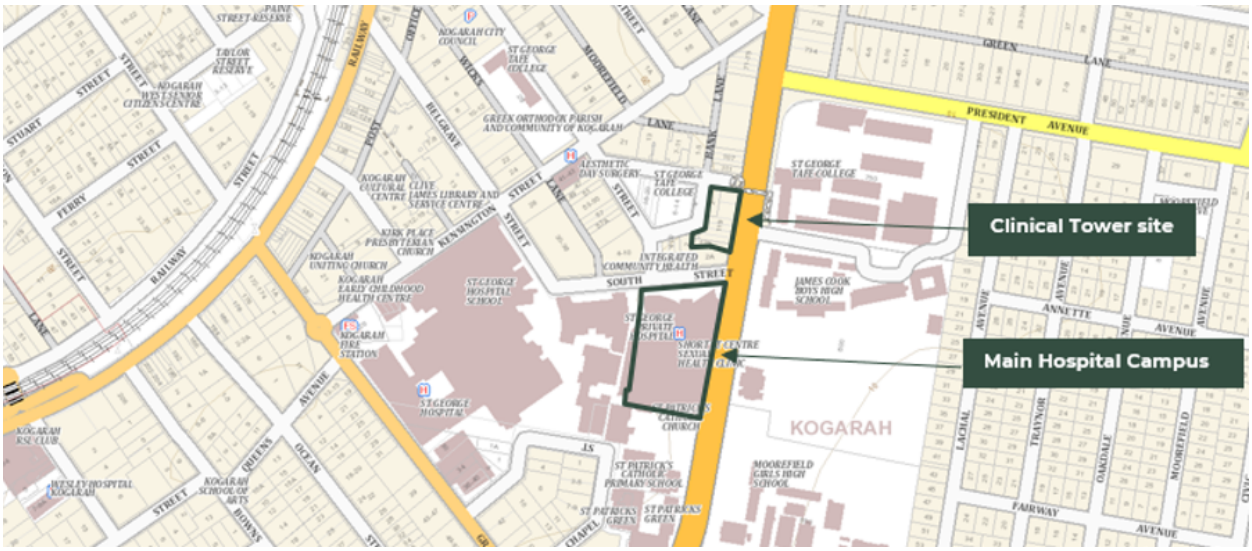
The sites are in the Georges River Local Government Area (LGA), within the Kogarah town centre.

The clinical tower site is adjoined to the south by an existing multi-storey health services facility, which forms part of the St George Private Hospital campus. South Street separates this facility from the main hospital campus, though a connecting sky-bridge provides pedestrian access between the buildings. Further west is the St George Public Hospital, and other surrounding development comprises a mix of commercial premises (typically at ground floor) and medium and high-density residential premises.

On the opposite (eastern) side of Princes Highway is a mix of educational premises including Moorfield Girls High School, James Cook Boys Technology High School, St George High School, and a TAFE NSW campus. Surrounding development on this side of Princes Highway primarily constitutes low density residential premises.

Kogarah Train Station is south-west of the site, approximately 500m away. There is a pedestrian bridge that extends from Hogben Street over the Princes Highway, which provides direct access to the eastern side of the highway. The sites are approximately 1.7km from Brighton Le Sands Beach, and approximately 3.5km from Sydney Airport. Refer to Figure 1 for a site context map.

Figure 1. Site Context (Source : Six Maps)



1.3 Site Description

Clinical Tower Site

The proposed new health services facility (hospital) will be located on land that is bound by three road frontages, being Princes Highway to the east (a classified road), Hogben Street to the north, and Bank Lane to the west. This site comprises eight adjoining allotments of land, known as 119 – 129 Princes Highway, Kogarah, and 2 Hogben Street, Kogarah.

The site currently accommodates a hard-stand parking lot, providing approximately 90 car parking spaces and a two-storey commercial premises (subject to separate demolition), which is attached to the existing multi-storey health services facility at 2 South Street, Kogarah.

Figure 2. Site Aerial Extract (Source: Metro Map, modified by Patch)

Main Hospital Campus

The existing hospital is located at 1 South Street, Kogarah which is also known as 1A South Street, Kogarah. This site is bound by two road frontages, being South Street to the north and Princes Highway (a classified road) to the east.

The site accommodates the St George Private Hospital's main campus, with vehicular access provided off South Street. Refer to Figure 3 for a site aerial extract.

Figure 3. Main Hospital Site Aerial Extract (Source: Metro Map, modified by Patch)

1.4 Overview of Proposed Development

The SSDA seeks approval for the expansion of the St George Private Hospital. Specifically, the SSDA seeks consent for two components: the first being the erection of a health services facility (hospital), and the second relating to upgrades to the main hospital campus, including a new emergency department.

In summary, approval for the following is sought for the clinical tower site:

- Site preparation works and bulk earthworks, including tree clearing;
- Construction of a seven (7) storey health services facility (hospital) equating to a total approximate GFA of 9,952 sqm GFA;
- Construction of a five (5) level basement carpark including a radiation oncology unit, providing a total of 241 parking spaces;
- Ancillary office, amenities, and loading dock provisions;
- Basement storage and a substation; and
- Landscaping works.

The proposed clinical tower site development is depicted in in Figure 4.

Figure 4. Clinical Tower Development Render (Source: Fitzpatrick Partners)

In addition, approval for the following is sought for the main hospital campus:

- Construction of an emergency department at the northern end of the existing hospital, to be operated between 24 Hours per day, seven days a week;
- Alterations to the South Street frontage, to facilitate ambulance bays and access requirements; &
- Associated internal re-configurations.

The proposed main hospital campus development is depicted in Figure 5.

Figure 5. Main Hospital Campus Development Render (Source: Fitzpatrick Partners)

1.5 SEARs Relevant to this Report

This report has been prepared to respond to the Planning Secretary's Environmental Assessment Requirements (SEARs) for *Hospitals, Medical Centres, and Health Research Facilities.*
Table 1 references the sections of the report addressing each requirement:

Table 1: SEARS Requirements

Item	Description of Requirement	Report Section
Item 18. Waste	• Identify, quantify and classify the likely waste streams to be generated during construction and operation • Provide the measures to be implemented to manage, reuse, recycle and safely dispose of this waste • Identify appropriately sited waste storage areas, collection access paths/roads, and appropriate servicing arrangements for the site • If buildings are proposed to be demolished or altered, provide a hazardous materials survey	OpWMP Sections 5-6 D&CWMP Sections 4-5 OpWMP Sections 5-7 D&CWMP Sections 4- 5 OpWMP Section 13 OpWMP Appendix 5 See separate report

2 Applicable Legislation, Standards & Guidelines

The following have been referred to in compiling this report:

- NSW *Protection of the Environment Operations (Waste) Regulation 2014, Part 11*
- NSW *Waste Avoidance and Resource Recovery Act 2001*
- NSW EPA *Waste Classification Guidelines* 2014
- NSW *Protection of the Environment (General) Operations Act 1998*
- NSW *Environmental Planning and Assessment Regulation 2021 (EP&A Regulation)*
- *Planning Secretary's Environmental Assessment Requirements – Hospitals, Medical Centres, and Health Research Facilities*
- Georges River Development Control Plan 2021

3 Reference Documents, Plans, & Reports

The following have also been consulted in compiling this report:

- St George Private Hospital - 250814 Consultant Coordination
- Industry Specific SEARs Hospitals Medical Centres and Health Research Facilities 2040514
- Consultant Report Template – St George Private Hospital Expansion 2025

4 Construction Waste

4.1 Objectives & Targets

This Waste Management Plan will be implemented throughout the project's demolition and construction phases. The project's waste management objectives will include:

- Meeting all waste management standards while ensuring the health and safety of the workers on the project
- Maximising the quantities of materials diverted from landfill by reusing, recycling and reprocessing off-site
- Disposal of no more than 20% of residual waste materials to a licensed landfill in accordance with both regulatory and legal requirements
- The diversion from landfill of 80% of construction waste by weight, to meet the criteria of the NSW State Government's waste legislation, policy settings and regulatory regime

Management strategies and responsibilities for ensuring these objectives are achieved are further detailed in Section 7.

4.2 Hazardous Materials

Regulatory requirements under Clause 42 of the *Protection of the Environment Operations (Waste) Regulation 2005* apply to the management of hazardous materials.

Please refer to the separate Demolition and Construction Waste Management Plan for further information applying to the management of hazardous waste arising from the demolition and construction phases.

5 Operational Stage

5.1 Materials Streams & Volumes

Table 2 shows example weekly volumes of materials being produced by the baseline existing Hospital.

Table 2: Baseline Hospital Materials Streams & Volumes

Description of baseline healthcare facilities materials generation			
Lake Macquarie Private Hospital - A hospital extension: 114 inpatient beds, 3 additional day surgery theatres, 2 additional impatient theatres, 11 additional consulting suites			
Material Stream	**Bin Size/Type**	**Collection Frequency**	**Weekly m^3**
General Waste	2 x 1.5 m^3 front lift	2 x daily, 6 days per week	36
Cardboard & Paper Recycling	1 x 3 m^3 front lift	1 x daily, 7 days per week	21
Commingled Recycling	1 x 1100L rear lift	Once per week	1.1
Organics Recycling	1 x 240L rear lift	Once per fortnight	0.1
Secure Document Recycling	1 x 240L rear lift	Once per fortnight	0.1
Clinical Waste	10 x 240L rear lift	1 x daily, 5 days per week	120
Cytotoxic Waste	1 x 240L (TBC)	2 x weekly	0.5
Chemical Waste	1 x 240L (TBC)	Monthly	0.1

To calculate operational volumes, we have used this existing operational waste data from typical projects which are similar in size and patient capacity, and data generated by Waste Audit over 25 years of compositional waste audits.

Compositional data is shown in Table 2 as a baseline, and multiplied volumes of each material by an expansion factor of 1.4, reflecting the new addition in patient bed numbers, triage/ consulting/ treatment rooms, kitchen, pharmacy, pathology, café and back of house accommodation and administrative areas resulting from the new development.

It is assumed that the existing Hospital's waste generation and materials streams will be carried over into the capacity of their existing waste room (Appendix 5, Existing Hospital Alterations).

Liquid waste collections will continue to be performed on a quarterly schedule, as per relevant authority requirements. Predicted future weekly volumes of materials for the private hospital expansion building are shown in Table 3.

Table 3: Predicted Materials Streams & Volumes

Material Stream	**Number**	**Bin Size/Type**	**Collection**	**Frequency**	**Weekly m^3**
General Waste	3	1.5 m^3 front lift	2 times	6 days per week	54
Cardboard & Paper Recycling	1	3 m^3 front lift	1 time	7 days per week	21
Commingled Recycling	2	1100L rear lift	2 times	Per week	4.4
Organics Recycling	2	240L rear lift	1 time	Per week	0.4
Secure Document Recycling	2	240L rear lift	1 time	Per fortnight	0.4
Clinical Waste	14	240L rear lift	1 time	5 days per week	16.8
Cytotoxic Waste	1	240L (TBC)	2 times	Per week	0.5
Chemical Waste	1	240L (TBC)	1 time	Per Month	0.1

Table 4 shows expected weekly operational volumes in litres, bin and equipment sizing and numbers, recommended collection frequencies, and bin footprints in m^2, with an allowance of 30% additional area for bin circulation and staff access.

Table 4: Recommended Waste Equipment & Collection Frequencies

Material Stream	m^3	Size, Number and Collections			Area Required m^2	
Material Stream	**Weekly m^3**	**Bin Size**	**No.**	**Collections Per Week**	**m^2 per Bin**	**Total m^2**
General Waste	54	1.5 m^3	3	12	2.2	6.6
Cardboard & Paper Recycling	21	3.0 m^3	1	7	2.7	2.7
Commingled Recycling	4.4	1100L	2	2	1.7	3.4
Organics Recycling	0.4	240L	2	1	0.4	0.8
Secure Document Recycling	0.4	240L	2	Fortnight	0.4	0.8
Clinical Waste	16.8	240L	14	5	0.4	5.6
Cytotoxic Waste	0.5	240L	1	1	0.4	0.4
Chemical Waste	0.1	240L	1	1	0.4	0.4
Sub Total	97.6		26			20.7
Circulation Space (+30% of bin footprint)	N/A					6.2
Bin Wash Area	N/A					4
Bulky Waste Area	N/A					10
Total	**97.6**					**40.9**

5.2 Bulky Waste Items

A designated area of at least 10 m^2 will be provided for storage of bulky waste items including furniture, mattresses, and broken or obsolete equipment. These will be collected as required by a private contractor. Where possible, items in reusable condition will be donated to charities.

This area will be located on Ground level and will be accessible only to authorised site staff. As it will not contain any putrescible waste streams, it will not be required to be separately mechanically ventilated or refrigerated.

6 Clinical Wastes

All clinical and related wastes must be:

- Handled by staff with access to appropriate Personal Protective Equipment (PPE)
- Packaged so that there is no risk of wastes escaping
- Transported and disposed of in accordance with EPA NSW legislation and guidelines

In this regard the NSW Health *Clinical and Related Waste Management for Health Services* Policy, August 2017 provides clear guidance and detailed procedures for managing various types of clinical waste. These materials must be stored in uniquely identified receptacles located in separate rooms from all other wastes and recyclables, as per the colour-coding outlined in Appendix 2 and disposed of according to designated Clinical and Hazardous Waste Procedures.

Clinical wastes may include:

- Anatomical
- Laboratory
- Sharps
- Cytotoxic
- Pharmaceutical
- Radioactive
- Chemical

Anatomical, Laboratory, and Sharps wastes must be managed using the following protocols:

1. Community sharps accepted or collected at a public hospital or authorised outlet of the Needle and Syringe Program are classified as clinical sharps waste and must be managed in accordance with this Policy.
2. Genetically modified organisms (GMOs) must be disposed of in clinical waste, except if the GMOs also contain cytotoxic waste, in which case they must be disposed of as cytotoxic waste for incineration.
3. Incontinence pads and disposable nappies can be treated as general waste unless the material is locally judged to come from an infectious patient and (consistent with the *CEC Infection Prevention and Control Practice Handbook*), is visibly blood stained, or is disposed of in unusually large quantities, in which case it must be treated as clinical waste.
4. Sharps containers that are resistant to impact, penetration and leakage, are stable, have integrity of the handles/other carrying features and closure device, and have a capacity indicator (fill line) marked on the outside wall of the container must be used.
5. Reusable sharps containers must be emptied and cleaned before reuse.
6. Microbiological and pathological wastes must be decontaminated in accordance with *Australian and New Zealand Standard 2243.3: Safety in Laboratories* and shredded by the waste contractor prior to disposal.
7. Waste service providers require the application form for approval of a method to treat clinical waste if they collect, transport and treat clinical waste. Refer to the *Guideline for Approval of Method to Treat Clinical Waste*.
8. Reclassify waste in accordance with the EPA step-by-step waste classification process after treatment and before recycling or disposal.
9. For further clarification on requirements for disposal of infectious substances, refer to the most current *Australian and New Zealand Standard 2243.3: Safety in Laboratories*.

Cytotoxic, Pharmaceutical, and Radioactive wastes must be managed as follows:

1. Radioactive sharps must be placed in a clinical sharps bin and the bin must be labelled with a radioactive sticker while the waste is radioactive, the name of the substance, activity level and the date at which it is measured. When radioactivity decays to background, the sticker must be removed and waste disposed of as clinical waste.
2. For requirements on medication handling and recommended destruction of Schedule 8 Medications, refer to NSW Health Policy Directive *Medication Handling in NSW Public Health Facilities* (PD2013_043).
3. Refer to the RPS No.20 *Safety Guide for Classification of Radioactive Waste* for the classification of radioactive waste in consideration of long-term safety and disposal.
4. Refer to the EPA classification guidelines for the step-by-step procedure to classify and manage radioactive waste.
5. For guidance on safe handling, segregation and storage of radioactive waste, refer to Part A2 'Requirements for Radioactive Waste' of the Code of Practice for Radiation Protection in the Medical Applications of Ionizing Radiation (RPS14). The Radiation Management Plan document needs to address dose limit requirements for the public and occupationally exposed persons as provided in Schedule 5 of the Radiation Control Act 1990.
6. The policy and procedure for radioactive sharps waste management is to be determined locally, e.g. storage in a dedicated room.
7. Specific obligations are placed on the responsible person (including obtaining consent) and transporter by the *Code for the Safe Transport of Radioactive Material* (RPS2) which is mandated by the *Radiation Control Regulation* 2013.

Chemical wastes must be managed as follows:

Chemical waste is generated by the use of chemicals in medical, veterinary and laboratory procedures. Chemical waste is to be classified in accordance with the step-by-step process in the *Waste Classification Guidelines Part 1: Classifying Waste* and the ADG Code.

These wastes must be managed and disposed of as per the Safety Data Sheet (SDS) for the hazardous chemical and recommended handling precautions, PPE and disposal.

All containers containing chemical waste must have labelling as per the requirements in Part 3 of Schedule 9 Classification, packaging and labelling requirements of the *WHS Regulation 2017* and the *Labelling of Workplace Hazardous Chemicals Code of Practice*. This applies for a waste product that is reasonably likely to be a hazardous chemical. The waste is to be packed in a container with a label in English including the following for the hazardous chemical:

- Product identifier
- Name, and the Australian address and telephone number of the manufacturer or importer
- Hazard pictogram and hazard statement consistent with the classification of the chemical

A licence may be required for the disposal of high activity level radioactive substances classified as hazardous waste in accordance with the *Waste Classification Guidelines* Part 3: Waste Containing Radioactive Material.

7 General Waste & Recycling

7.1 General Waste

General waste is to be contained in clearly labelled white or opaque bags. General waste is any waste that is not clinical waste of any of the materials listed in Sections 7.2-7.7 and:

- Has not been in contact with infectious agents, hazardous chemicals or radioactive materials
- Does not pose a sharps hazard

This material will be managed as follows:

1. Hospital staff will dispose of material into correct bin within bin hubs
2. Cleaners will collect materials and transfer to the bins within storage room
3. Contractor will collect according to designated schedule

7.2 Cardboard and Paper Recycling

Most cardboard packaging will originate from deliveries of supplies and stationery. Paper materials such as non-confidential office paper, newspapers, magazines, etc. will be generated from offices, reception areas, and waiting rooms, and managed as follows:

1. Hospital staff will dispose of paper into correct bin within bin hubs
2. Hospital staff will flatten cardboard boxes and leave in designated area for collection
3. Cleaners will collect materials and transfer to the bins within storage room
4. Recycling contractor will collect from here according to designated schedule

7.3 Secure Document Destruction

These materials will be placed in 240-litre bins located in each office area and collected on an as-required basis by a specialist contractor. To avoid contractors using lifts for transporting these materials during busy times, the following system is recommended:

1. Hospital staff will dispose of secure documents into designated bin(s)
2. Hospital will arrange for cleaning contractor to collect bins and take to storage room
3. Secure document contractor will collect according to designated schedule

7.4 Commingled Recycling

Commingled recycling consists of all (non-hazardous) mixed plastic bottles and containers, glass bottles, and steel and aluminium cans. This material will have the following separation and collection processes:

1. Hospital staff will dispose of materials into correct bin within bin hubs
2. Cleaners will collect materials and transfer to the designated bins in storage room
3. Recycling contractor will collect according to designated schedule

7.5 Organic Recycling

There are significant opportunities for recycling food organics from the Hospital. The following process is recommended:

1. Hospital staff will dispose of materials into small bins for collection by cleaners
2. Cleaners take separated materials to organics bins in main Hospital bin storage area
3. Recycling contractor will collect according to designated schedule

7.6 Polystyrene Recycling

Variable quantities of polystyrene packaging will be generated from deliveries of medical supplies. A 660-litre bin located in the main Hospital storage area will be used for these materials and collections will be done as required by the Hospital's recycling contractor.

1. Hospital staff will leave polystyrene boxes in designated area for collection
2. Cleaners will collect materials and transfer to the designated bin within storage room
3. Recycling contractor will collect as required

7.7 Specialised Recycling (E-Waste, Printer Cartridges, Lamps, Batteries)

Variable quantities of e-waste (discarded electrical and electronic items) will be generated from office areas and general hospital operations. A 660-litre bin is recommended for storage of these materials in the main Hospital bin area.

Used printer cartridges will be generated from office areas. The usual recycling system consists of a cardboard box supplied by the service provider (e.g. Planet Ark) that is located next to print facilities. The system will be managed by Facilities Maintenance staff, who will organize transfer of the full boxes to the main storage room.

Maintenance staff and electrical contractors are generally required to remove all lamps and globes generated through their activities for correct disposal offsite. Alternatively, a dedicated recycling box can be left in the main storage room for this purpose. The full box would be collected by a specialist contractor on request by the Hospital.

Used batteries would be stored and collected separately, or combined with the e-waste materials, depending on contract arrangements.

8 Operational Management Procedures

8.1 Labelling of Waste

All waste containers and bin liners are to be correctly colour coded and identified. The labelling, packing and transport of Division 6.2 Infectious Substances must comply with the ADG Code for dangerous goods. These requirements typically apply for waste classified as UN 2814 (Category A Infectious Substances) and UN 3291 (Category B Infectious Substances).

Portable and mobile bins must be marked, labelled and noted as required by Chapters 5.2 and 5.3 of the ADG Code. Refer to the SafeWork NSW fact sheet *Packing and Transporting Clinical Waste*. Health service staff will need to liaise with the transporter to ensure they have a transport document describing what is being transported.

8.2 Mobile Garbage Bins (MGBs) & Trolleys

MGBs are re-usable bins used to contain and move clinical and related wastes. Trolleys are used to move clinical wastes contained in plastic bags or non-mobile rigid-walled containers.

MGBs and trolleys must be dedicated solely for collecting and transporting waste to decrease spills, eliminate direct contact with waste and minimise manual handling. MGBs and trolleys must be washable, with a lid that is lockable. MGBs must be securely closed during movement but not necessarily locked, unless the MGB is a pharmaceutical waste bin.

MGBs and trolleys must never be overfilled and not be more than three-quarters full. Waste collection rounds are to be performed as often as necessary to minimise housekeeping hazards.

The following procedures are recommended to be regularly completed by the hospital:

- Rinse with cold water then wash with warm water and a neutral detergent, or equivalent (e.g., chemical formulated for cold water use)
- Trolleys and MGBs are to be drained to sewer and left to dry
- Clean trolleys and bins are to be stored separately to soiled containers
- Appropriate personal protective equipment must be worn when cleaning MGBs

In addition, MGBs are to be readily inspected and cleaned after each use by the waste contractor. Defective containers must be repaired before use or taken out of service. Plastic bags/liners must have sufficient strength to safely contain waste and be suitable for the purpose if used for moist heat sterilization. Chemical waste containers must be suitable for the chemical contained within and labelled.

8.3 Handling of Bags/Bin Liners

It is best practice to minimise the handling of waste bags and to avoid decanting from one bin to another. When clinical waste bags must be handled, all bags are to be held away from the body by the closed top of the bag, and placed directly into a bin appropriate to the waste (see Table 1).

Gloves, apron and protective eyewear must be worn when closing the bags and placing them into the container. Gloves worn are to be appropriate for the type of waste being handled.

Waste bags must not be filled to more than two-thirds capacity and contents are to be secured within the bag when closing. Excess air is to be excluded without compaction, prior to closure at the point of generation. The bag is not to be secured with sharp protuberances, e.g. staples.

All clinical waste stream bags and receptacles stored pending collection are to be in a secure area with restricted access. Pathology specimens and associated materials must be double packaged. Anatomical waste must be packaged to minimise the risk of contents spilling or puncturing the bin liner before being placed into the anatomical waste bin. This includes triple bagging of body parts or amputated limbs that may have sharp bone edges and/or the use of wet bags. Sharps must never be placed in waste bags.

8.4 Spill Management

Spills will be managed according to standard procedures. The hospital will ensure that:

- Personnel involved in spill management are trained in emergency procedures and handling requirements, including use of spill kits. Spill kits are to be readily accessible throughout the health service and clearly labelled and mapped
- Health services have personal protective equipment and emergency spill kits that are appropriate to the waste streams handled, so staff can safely and effectively clean up and dispose of waste
- Spill kits are restocked with the necessary components immediately after use, returned to their locations and regularly inspected for malfunctioning or missing components
- Spill kits are to be disposed of with the relevant waste stream

8.5 Internal Tracking

The hospital will comply with the record keeping requirements specified in the EPA clinical waste tracking exemption for clinical waste, cytotoxic waste, sharps waste, pharmaceuticals and poisons, and radioactive waste.

8.6 Movement Pathways

Please refer to Appendix 6 for diagrams showing all materials movement pathways and workflows.

8.7 Auditing

Auditing is important to establish benchmarks and whether waste is appropriately managed. This includes reviewing contractor information and developing an agreed auditing process, including frequency and selection of samples. Audits will include:

- Checking waste streams are appropriately used and managed
- Checking that bags and MGBs/trolleys are not overfilled
- Reviews of WMP procedures
- Interviews with key staff
- Reviews of records

Auditing is to be conducted by the waste management contractor at a frequency determined by the contract upon negotiation with the contractor. The frequency of auditing should be at least quarterly to ensure correct management of all waste streams.

9 Workplace Health & Safety

As detailed in the NSW Health *Clinical and Related Waste Management for Health Services* Policy, August 2017, the following procedures must be followed:

9.1 Notifying Incidents

Reporting serious injuries and illnesses is a requirement under WHS legislation. If a serious injury or illness, a death or a dangerous incident occurs, processes must be in place to ensure it is reported to SafeWork NSW immediately and the workers compensation insurer is notified within 48 hours. Staff must be made aware of and trained in processes for notifying incidents.

Depending on the nature of materials involved in incidents, there may be other legislative requirements regarding who must be informed if there is an incident.

9.2 Hygiene & Cleaning

The health service must provide hand hygiene facilities for workers and promote regular hygiene procedures that comply with the NSW Health Policy Directive *Infection Prevention and Control Policy* (PD2017_013). In addition, the health service must:

- Designate specific areas for equipment cleaning (e.g. bunding or enclosed areas), maintenance and hygiene that are properly equipped with emergency showers and drainage to sewer. Locations of emergency showers and spills equipment are to be understood by relevant workers and identified on signage and evacuation diagrams
- Regularly clean and maintain equipment used to contain and transport waste
- Clean all contaminated items as soon as possible, using approved detergents and hospital grade disinfectants
- Cleaning contaminated items ensure staff wear appropriate Personal Protective Equipment (PPE), including face protection, use a scrubbing brush, and avoid splashing the water. If any item of PPE becomes contaminated or damaged, the item must be changed before continuing with the task

9.3 Personal Protective Equipment (PPE)

Health services must ensure all contractors, such as waste collectors, comply with all WHS and other legislative requirements, e.g. wearing appropriate PPE. For tasks involving hazardous chemicals, ensure that the PPE recommended in the Safety Data Sheet (SDS) is provided and used. Staff must be trained in the proper selection, fitting (donning/doffing, or putting on/removing), storage and maintenance of PPE.

10 Storage & Loading Areas

Central waste and recycling storage facilities will be located on Ground, adjacent the loading dock with dedicated areas for storage of general waste and recycling, including a bin wash area. All rooms will be locked and accessible by authorised staff only and will conform with standard practices and relevant Council specifications.

All waste and recycling containers will be clearly differentiated through appropriate signage and colour coding to reflect the materials contained, with each stream located in a designated area with large, clear colour-coded signage to assist in easy identification by users. This is critical particularly for clinical and similar wastes to avoid cross-contamination.

The City of Sydney's *Guidelines for Waste Minimisation in New Developments 2018* provide 'best practice' guidance on storage area design (note that these are not requirements, as the development is outside the Sydney LGA, but are generally accepted best practice standards).

- The floors, walls and ceilings of waste and recycling storage areas are to be finished with a rigid, smooth-faced impermeable material capable of being easily cleaned.
- The floors of waste and recycling storage areas are to be graded and drained to a Sydney Water approved drainage fitting. The floor is to be provided with a ramp to the doorway where necessary.
- A close-fitting and self-closing door or gate operable from within the room is to be fitted to all waste and recycling storage areas.
- Doors/gates to the waste and recycling storage rooms are to provide a minimum clearance width of 900 mm.
- At least one door or gate to the waste and recycling storage area is to have sufficient dimensions to allow the entry and exit of waste containers of a capacity nominated for the development.

- Lightweight roller shutter-type doors or grilles should be considered for access to waste and recycling storage areas, as these do not impact on the available storage space. If these types of doors or grilles are used, the requirement for a close-fitting and self-closing door remains, so that waste collectors can access the waste and recycling storage area other than through the roller door or grille.
- The design shall restrict the entry of trespassers, vermin or other animals into the area.
- The waste and recycling storage area is to be provided with an adequate supply of water for cleaning purposes with a hose cock. This does not include within chute rooms.
- The waste and recycling storage area is to be adequately ventilated by either:
  - Natural ventilation openings to external air. The dimension of the openings are not to be less than 5 per cent of the bin bay or bin room floor area.
  - A mechanical exhaust ventilation system in accordance with relevant Australian standards.
- Waste and recycling areas are to be provided with artificial light controlled by switches located both outside and inside the storage area.

Other best practice standards for storage and handling areas include:

- Ensuring the loading dock and waste loading areas are level and free of kerbs, steps, etc.
- Line markings showing the loading area and positions of bins within the storage room
- Highly visible signage as illustrated in Appendices 3-4

11 Internal Bins

11.1 Administrative Areas

These areas will be equipped with 4-stream bin hubs for:

- Paper/Cardboard Recycling
- Commingled Recycling
- Food Organics Recycling
- General Waste

Bins will be situated in areas which service a group of workstations and offices, as opposed to having bins under every desk; this improves cleaner efficiencies by reducing the number of bins that require collection and reduces the number of bin liners required. Offices with these types of systems typically achieve higher recycling rates than those with bins at desks or workstations.

Figure 2 shows examples of bin configurations commonly used in offices. Colour-coded translucent bin liners are recommended to assist cleaning staff to distinguish different materials streams and identify contamination prior to final disposal in the bins in the central storage room.

Figure 4: Four Stream Bin Configuration

11.2 Clinical Areas

Clinical areas will have receptacles for the following streams located in dirty utility rooms:

- Commingled Recycling
- General Waste
- Clinical Waste
- Sharps Waste

12 Staff & Contractor Education

An education program will be implemented for all staff, to ensure the highest possible standard of waste management and diversion resource recovery.

Tenancy leases will contain clauses outlining compliance with the development's systems, and a continuing tenant education program will be implemented on an ongoing basis throughout the development's operational phase for all tenancies. New tenants will receive detailed information on the waste management and recycling programs as part of their leasing documentation.

Specific waste management clauses will also be written into cleaning contract specifications, including requirements for cleaning staff to monitor contamination of recycling streams and condition of bins and compactor equipment, and provide Ramsay Healthcare with feedback on the ongoing performance of the waste management and recycling programs.

13 Waste & Recycling Contractor Requirements

13.1 Transport & Disposal

Transport documents must describe the dangerous goods being transported, and appropriate emergency information for those goods. The ADG Code requirements commonly apply for the packing and transport of the following waste categories:

- UN 2814 (Category A Infectious Substances): Infectious substances affecting humans
- UN 3291 (Category B Infectious Substances): Infectious substances which do not meet the criteria for inclusion in Category A, which includes clinical wastes which are reasonably believed to have a low probability of containing infectious substances. (Refer to Chapter 2.6.3 of the ADG Code for further information on classification).

The SafeWork NSW factsheet *Packing and Transporting Clinical Waste* assists health services with the handling and transport of UN3291 clinical waste in accordance with Packing Instruction P62A of the ADG Code. UN 2814 waste may involve higher hazards and will need to comply with full packing and transport requirements of the ADG Code.

13.2 Servicing & Access

Collections will take place from the main Hospital's waste storage dock on South Street and as necessary for the clinical tower building via the Hogben Street loading dock.

It is possible that differently sized collection vehicles may be used for collection of some additional streams; if so, the waste contractor will be responsible for notifying the Hospital in advance of any vehicles entering the site, to ensure specifications (heights and turning circles in particular) are consistent with access and clearance requirements.

13.3 Further Requirements

To maintain best practice, the Hospital's waste and recycling contractor(s) will be required to demonstrate high service standards and comply with the following requirements:

- Reliable and efficient servicing, and meeting all agreed schedules
- Suitably sized collection vehicles to be able to access the loading dock
- Having collection vehicles fitted with suitable weighing technology
- Working with the Hospital to achieve improved resource recovery
- Maintaining accurate and comprehensive tracking systems for all materials collected, including hazardous and prescribed wastes
- Providing detailed monthly and annual reports on diversion and financial outcomes
- Maintaining current details of processing facilities used, and providing information on these if requested by the Hospital
- Providing detailed monthly reports on diversion and financial outcomes

These processes should be supported by an annual weight-based physical audit of all non-hazardous materials streams, to be conducted by a qualified independent third party.

14 Operational Resource Recovery Targets

Specific targets for diversion of operational waste from landfill to resource recovery outcomes will form part of the contract between the development and its waste and recycling contractor(s). These will be set by site management during the first few months of operation of the redevelopment, using data from similar facilities as a guide. To monitor progress, ongoing reporting systems will be implemented as detailed in Section 15.

15 Ongoing Performance Reporting

Following implementation of the new systems, a monthly reporting system, based on the Better Buildings Partnership (BBP) *Operational Waste Guidelines*, will be instituted. This will ensure the accurate tracking of performance, continued improvement, and cost-effective waste removal.

Specific performance clauses and KPIs in waste and cleaning contracts will ensure that all parties actively participate in the resource recovery initiatives and meet regularly to resolve performance issues and identify new improvement opportunities for.

Contractors will be required to report actual volumes and tonnages by stream so that site management can monitor performance and feed this back to stakeholders.

Appendix 1: Glossary

Abbreviation/Term	Definition
Anatomical Waste	Limbs, organs, placenta, pathological specimens, biopsy specimens and body tissue taken during laboratory testing, surgery or autopsy and/or resulting from investigation or treatment of a patient.
Chemical Waste	Chemical waste generated by the use of chemicals in medical, veterinary and laboratory procedures.
Clinical Waste	(a) Human tissue waste (b) Discarded sharps (c) Laboratory waste (d) Animal waste
Commingled Recycling	Refers to a mixed container recycling stream. Typically, this would include glass containers, aluminium cans, milk cartons, tins, and plastic containers. This stream does not strictly include any paper or cardboard materials however small portions of these materials are acceptable. Drinking glasses, ceramic mugs or plates, coffee cups or plastic bin liners are considered contaminants.
Contamination	Any item not designated under the contract as a recyclable.
Cytotoxic Waste	Material, which is, or may be, contaminated with a cytotoxic drug during the preparation, transport or administration of cytotoxic therapy.
General Waste	Assorted waste materials put into the recycling stream, usually characterised by being contained in plastic "garbage" bags. There may or may not be recyclable materials in the bag.
Hazardous Waste	Component of the waste stream which poses a danger to humans, the environment, equipment and physical structures.
Landfill	Land used for the burial of waste
Material Recovery Facility (MRF)	Plant and equipment for sorting and pre-processing materials from the waste stream for resource recovery.
MGB	Mobile Garbage Bin
Organic Waste	Component of the waste stream derived from living organisms.
Plastics:	
PET	Polyethylene Terephthalate. Clear, tough material that may come in different colours: used in soft drink bottles, as filling for pillows and sleeping bags and other textile fibres.
HDPE	High Density Polyethylene. Very common plastic usually white or coloured, used for milk and cream bottles, shampoo and cleaners, freezer bags and milk crates.
LDPE	A plastic material – Low Density Polyethylene, a soft flexible plastic that is made into the lids of icecream containers, garbage bags, garbage bins and black plastic sheet material.
PVC, UPVC, PPVC	Plastic materials in the polyvinyl chloride class. 1. UPVC is Unplasticised Polyvinyl Chloride which is usually made into clear cordial and juice bottles, blister packs and plumbing pipes and fittings. 2. PPVC is Plasticised Polyvinyl Chloride and is usually made up into items such as garden hose, shoe soles and blood bags and tubing.
PP	Polypropylene, a hard but flexible plastic that has many uses. Examples of uses are ice cream containers, potato crisp bags, drinking straws and hinged lunch boxes.
PS & EPS	Polystyrene 1. PS is a rigid brittle plastic that may appear clear and glassy. It is used for yoghurt containers, plastic cutlery and imitation "crystal" glassware. 2. EPS – expanded polystyrene is the white material that is made into hot drink cups, food containers, meat trays and fruit boxes.

Abbreviation/Term	Definition
Other Plastic	There is another category of plastic – Category 7 which includes all other plastics including acrylic and nylon.
Pharmaceutical Waste	Consists of pharmaceutical (drug, remedy/medicinal substance) or other chemical substance specified in the Poisons. Pharmaceutical waste, excluding cytotoxics, may arise from expired or discarded pharmaceuticals, those no longer required by patients, and waste materials/substances generated during the manufacture and administration of pharmaceuticals.
Recycled Materials	Materials recovered and manufactured into new products of the same general type (which may be manufactured from virgin recycled materials).
Recycling	Set of processes (including biological) for converting recovered materials that would otherwise be disposed of as wastes, into useful materials and or products.
Resource Recovery	Process that extracts material or energy for a useful purpose
Sharps Waste	Means any waste resulting from medical, nursing, dental, veterinary, pharmaceutical, skin penetration or other related clinical activity, and that contains instruments or devices: (a) That have sharp points or edges capable of cutting, piercing or penetrating the skin (e.g. needles, syringes with needles or surgical instruments), and (b)that are designed for such a purpose, and (c) that have the potential to cause injury or infection.
Waste	Materials and energy which have no further use and are released to the environment as a means of disposal.
Waste Generator	Any person or organisation that consumes goods and services resulting in addition to the waste stream.
Waste Management	Entire process of monitoring process of monitoring, collecting, sorting, storing and transporting for processing and reclamation of materials and energy resources and disposal of waste.

Appendix 2: Clinical Waste Stream Management

The following tables are taken from the NSW Health *Clinical and Related Waste Management for Health Services* Policy and details procedures for management of waste and recycling streams that may be generated by the development's tenants during the operational phase.

Stream	Anatomical Waste	Clinical Sharps Waste	Clinical Waste (Including Pathological Waste)
Definition	Identifiable human body parts such as limbs, organs, placenta and recognisable or large pathological specimens resulting from investigation or treatment of a patient It does not include deceased bodies	Any clinical object capable of inflicting a penetrating injury which may or may not be contaminated with blood and or body substance. This includes needles, ampoules and any other sharp objects or instruments designed to perform penetrating procedures May contain clinical material or Genetically Modified Organism (GMO) waste	Clinical waste with the potential to cause injury, infection or offence: • Unrecognisable human tissue (excluding hair, teeth, nails and anatomical waste) • Bulk blood or other body fluids (or body substances) • Material and equipment visibly stained by blood or body fluids (includes incontinence pads and disposable nappies from an infectious patient) • Lab specimens, cultures or other waste from lab investigations • Waste from medical or veterinary research • Genetically Modified Organisms (GMOs)
Bin Colour	Yellow	Yellow	Yellow
Bin Lid Colour	Orange	Yellow	Yellow
Bin Liner	Orange	N/A	Yellow
Symbol			
Label (if GMOs present)		Contains GMOs	Contains GMOs
Specific Requirements	For incineration only	For incineration or autoclaving and shredding Sharps containers must be rigid-walled and meet the requirements specified in AS/NZS 4031 and AS/NZS 4261[4,5] Autoclave tape and bag indicators must be used to show autoclaving has been completed	For incineration or autoclaving [6] and shredding. Autoclave tape and bag indicators must be used to show autoclaving has been completed. Fluid may be able to be discharged into sewer depending on Liquid Trade Agreement between the health service and water utility All clinical waste once treated by a process acceptable to NSW Health[7] may be reclassified in accordance with the Waste Classification Guidelines[8] before recycling or disposal There are special precautions regarding disposal of waste related to cases of viral haemorrhagic fever

Stream	Anatomical Waste	Clinical Sharps Waste	Clinical Waste (Including Pathological Waste)
Relevant Act/ Regulation /Australian Standard	AS/NZS 3816:1998 Management of clinical and related waste AS/NZS 4123:2008 Mobile Waste Containers	AS/NZS 3816:1998 Management of clinical and related waste AS/NZS 4123:2008 Mobile Waste Containers *Protection of the Environment Operations Act 1997* *Protection of the Environment Operations (Waste) Regulation 2014*	AS/NZS 3816:1998 Management of clinical and related waste AS/NZS 4123:2008 Mobile Waste Containers *Protection of the Environment Operations Act 1997* *Protection of the Environment Operations (Waste) Regulation 2014*
EPA licence requirements	No	No	No

Stream	Cytotoxic Waste	Pharmaceutical Waste	Radioactive Waste
Definition	Material contaminated with residues or preparations containing materials toxic or otherwise harmful to cells. This includes any residual cytotoxic drug or laboratory chemical and any discarded material or clinical waste associated with the preparation or administration or excretion of cytotoxic drugs May include Genetically Modified Organisms (GMOs) or tissues containing GMOs	Pharmaceuticals or other chemical substances specified as regulated goods in the Poisons and Therapeutic Goods Act 2008. Includes any substance specified in a Schedule of the Poisons List under the Act, as well as any therapeutic good which is unscheduled Includes expired or discarded pharmaceuticals, filters or other material contaminated by pharmaceutical products	Waste material, including sharps and clinical waste contaminated with a radioisotope which arises from the medical or research use of radionuclides, e.g. during nuclear medicine, radioimmunoassay and bacteriological procedures, and may be in solid, liquid or gaseous form, and which emits a level of radiation above the level set by regulatory authorities
Bin Colour	Purple	Red	Red
Bin Lid Colour	Purple	Red	Red
Bin Liner	Purple	N/A	Red
Labelling of Bins	Cytotoxic waste	Pharmaceutical waste	Radioactive waste plus specific requirements below
Symbol		None	
Label (if GMOs present)	Contains GMOs		

Stream	Cytotoxic Waste	Pharmaceutical Waste	Radioactive Waste
Specific Requirements	For incineration only Collection, transport and handling only by licensed and registered waste management companies	Storage, destruction and disposal methods must comply with PD2013_043 Medication Handling in NSW Public Health Facilities Pharmaceutical waste must be incinerated at a licensed controlled waste facility. Certain pharmaceuticals may only be destroyed by authorised persons under the *Poisons and Therapeutic Goods Act 1966* Pharmaceutical waste bins must be lockable	Radioactive material to be stored on- site in appropriate storage area until it decays to below the thresholds of a "radioactive substance" as defined under the Radiation Control Act and Regulation Waste is to be classified with reference to the Safety Guide for the Classification of Radioactive Waste[4] and in accordance with the EPA Waste Classification Guidelines[5] Radioactive waste must be labelled with the substance, activity level and the date at which it is measured Handling and storage to comply with a Radiation Management Plan in accordance with the Code of Practice for Radiation Protection in the Medical Applications of Ionizing Radiation (ARPANSA 2008) Radioactive sharps When radioactive waste is to be transported, health services must comply with the Code of Practice for the Safe Transport of Radioactive Material (ARPANSA 2014)
Relevant Act & Regulation	AS/NZS 4123:2008 Mobile Waste Containers *Protection of the Environment Operations Act 1997* *Protection of the Environment Operations (Waste) Regulation 2014*	*Poisons and Therapeutic Goods Act 1966* *Poisons and Therapeutic Goods Regulation 2008*	AS/NZS 4123:2008 Mobile Waste Containers *Radiation Control Act 1990* *Radiation Control Regulation 2013*
EPA Licence Requirements	No	No	Yes - Waste Classification Guidelines Part 3: Waste containing radioactive material (EPA, 2014)

Appendix 3: Signage Examples - Hazardous Waste

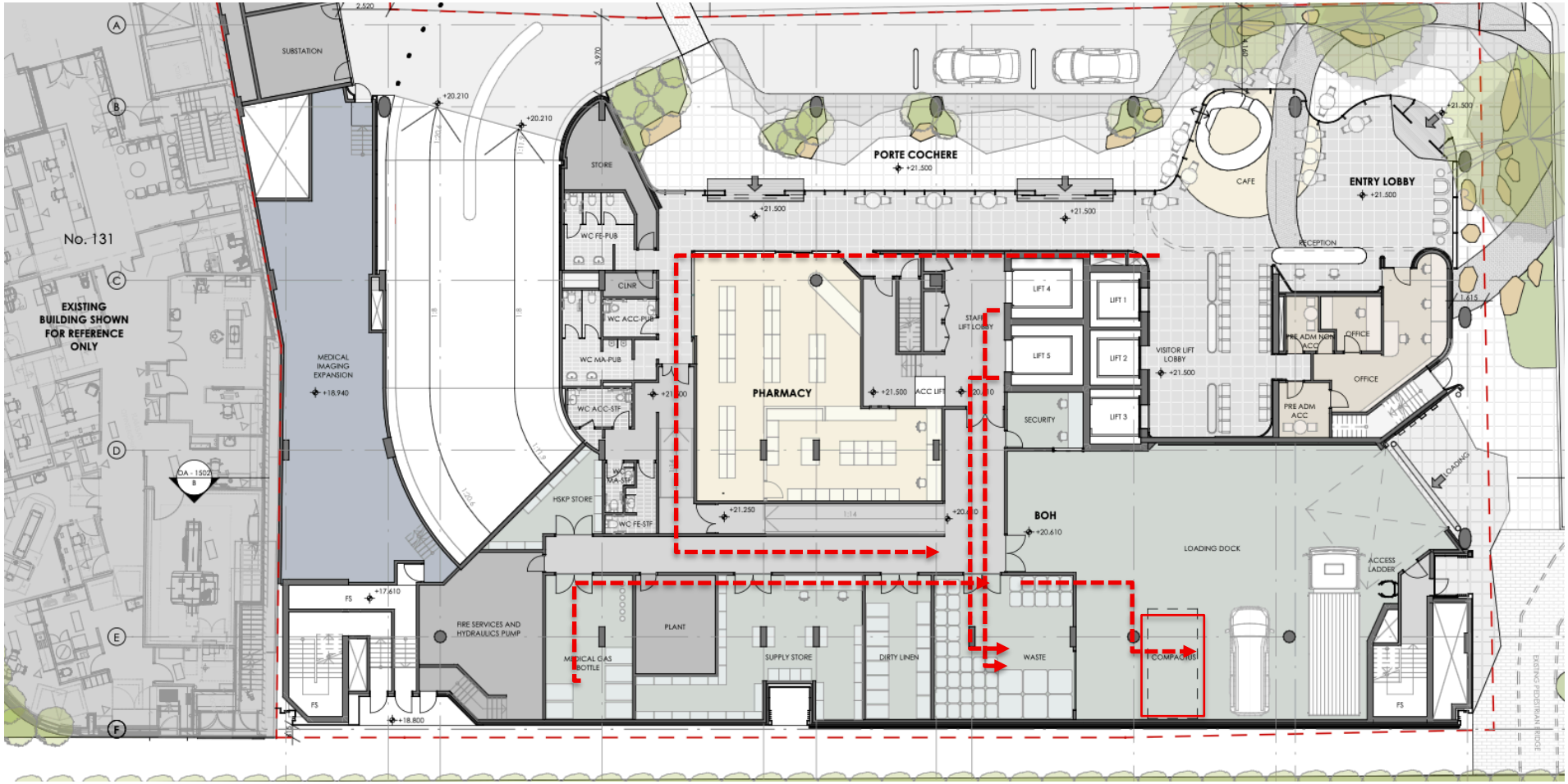
The examples below are for illustration purposes only.

Appendix 4: Signage Examples - Internal & Loading Dock

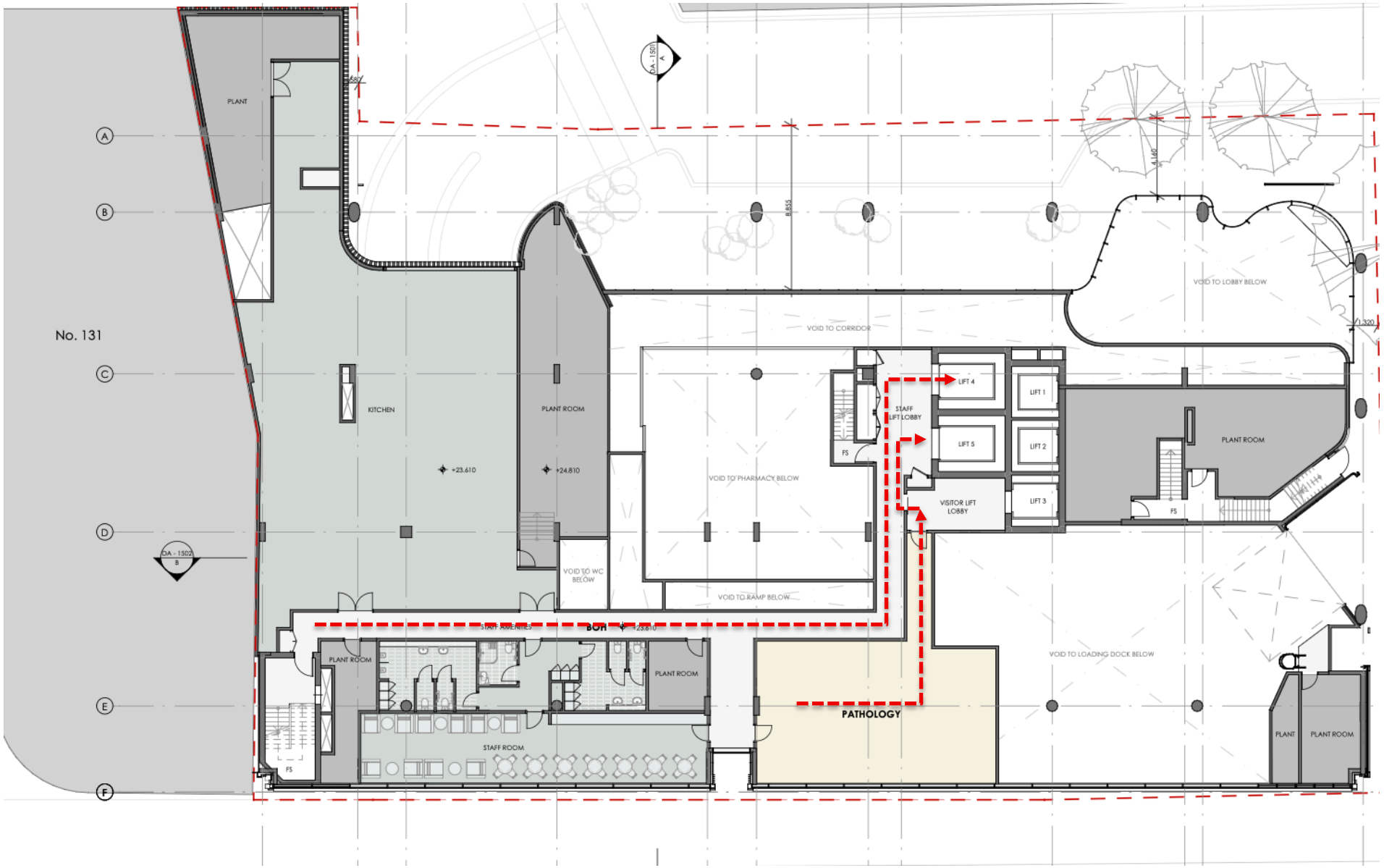
Appendix 5: Materials Movement, Storage & Collection

The drawing below shows the development's waste storage area. All materials will be collected from the loading dock by private waste contractor, on the schedule detailed in Table 4. The arrows show movement pathways from staff BOH lifts and ground level to the storage area.

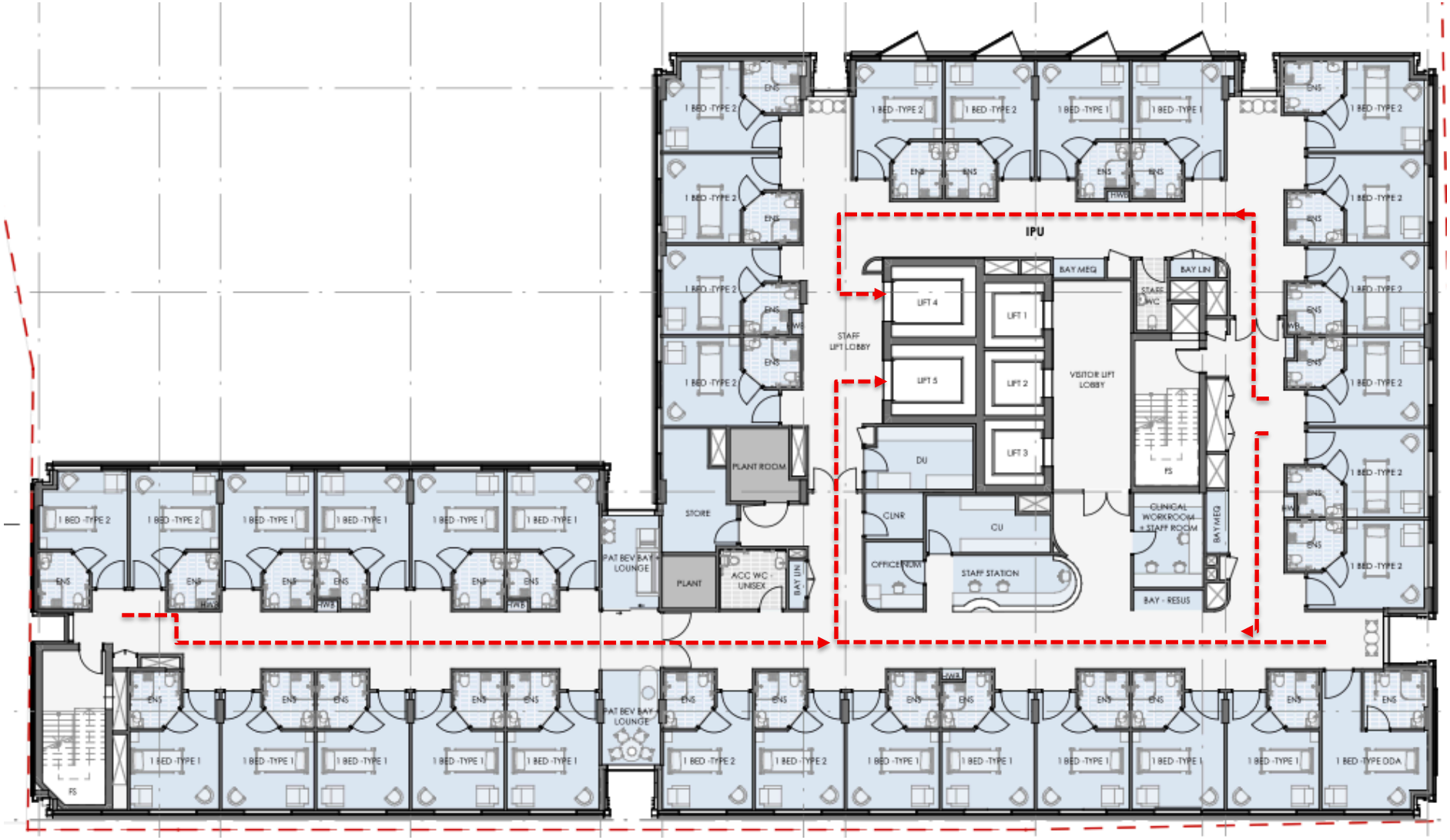
Ground Level



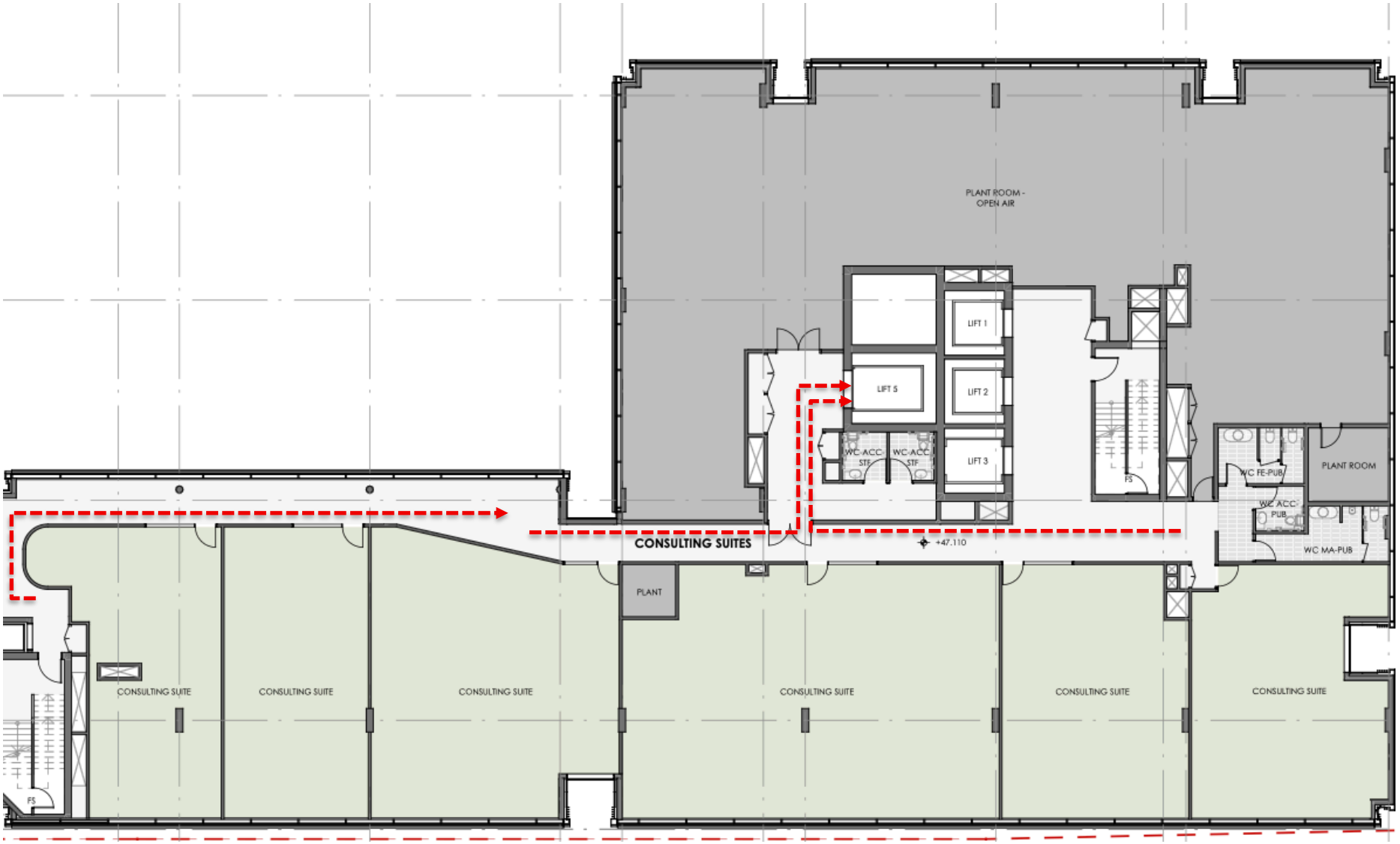
Mezzanine Level



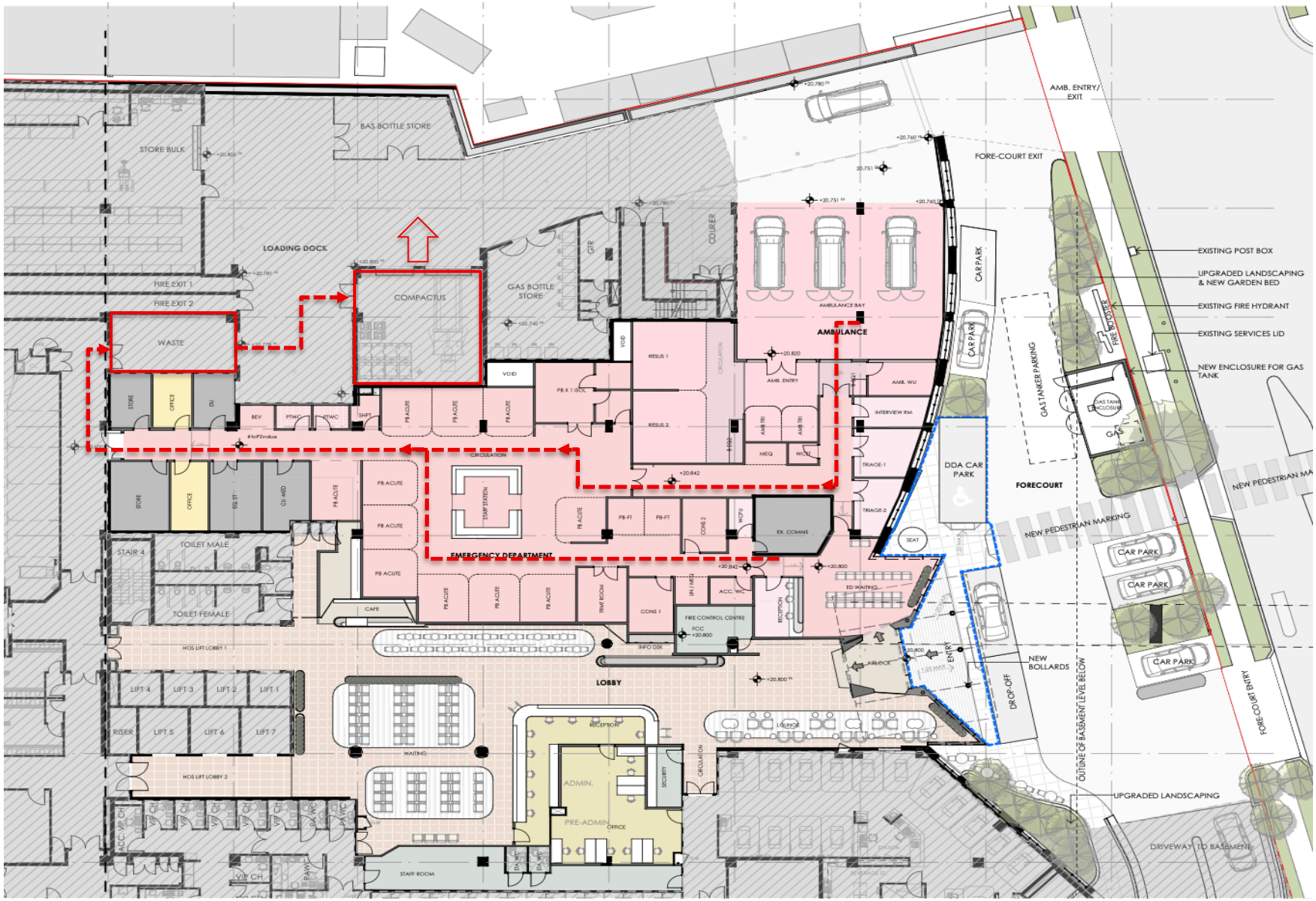
Level 3-5 – Typical IPU



Level 6 – Consultant Suites



Existing Hospital Alterations – Ground Floor



Appendix 6: Council Waste Management Controls

The relevant sections of the *Georges River Development Control Plan 2014* pertaining to the design of waste storage facilities and management of operational waste are reproduced below.

4.4.3.1 Bin and Bulky Waste Storage

a) Waste management requirements for the commercial component of development", including for the Change of Use applications, are to be determined based on the commercial tenancy type and relevant EPA regulations, such as the *Better practice guide for resource recovery in residential developments* or other regulatory body regulations applicable for the development type. If tenancy types are not specified, the waste requirements are to be calculated based on a tenancy with the highest generation rates and collection frequency approved by the Council.

b) There is to be space dedicated for storing bulky waste materials and problem waste for recycling of at least:
   i. 2m² for developments under 100m²;
   ii. 4m² for developments between 100m² and 2,000m²; or
   iii. An additional 4m² is required for each retail, accommodation or entertainment development over 2,000 m² and for every 20,000 m² of office space.

c) All businesses should include provisions in their waste contracts that allow for the collection and recycling of high-grade and low-grade office paper, cardboard packaging, paper from secure document destruction, soft plastics, food waste, medical or hazardous waste and other recyclable resources from the waste stream as relevant to the development.

d) Dedicated space (in or attached to the bin storage area) is to be provided for food/beverage retailers, cafes, restaurants and takeaway premises for the storage and recycling of food waste at each commercial premises.

e) Secure space is to be provided on-site in reasonable proximity to retail or commercial premises to store reusable commercial items such as crates, pallets, kegs, demolition waste and similar items so that storage in a public place is completely avoided. Storage of such materials in public places without approval is prohibited.

4.4.3.5 Health Care Facilities

a) Waste storage and handling must be in accordance with requirements of NSW Health and relevant Waste Management Guidelines for Health Care Facilities.

b) Waste storage facilities must allow for physically separated storage of:
   a. Clinical, hazardous and related waste
   b. Garbage and recycling

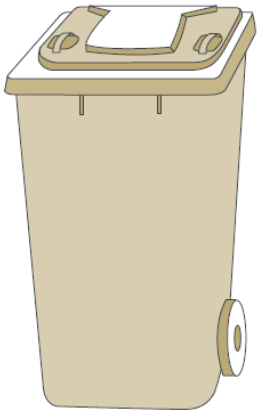
c) Clinical and hazardous waste must be clearly colour-coded and labelled as per NSW Health requirements

d) All waste generated from Health Care facilities to be managed in accordance with relevant NSW Health and EPA regulations.

Appendix 7: Waste Management Bins & Equipment

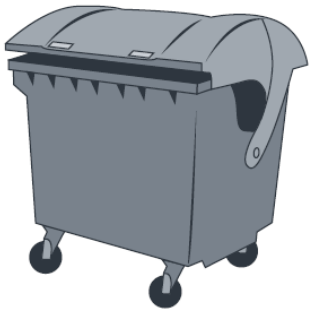
The dimensions shown below are indicative only and may vary from those provided by the development's contractor.

Mobile containers with a capacity from 80L to 360L with two wheels



Bin Type	80 Litre MGB	120 Litre MGB	140 Litre MGB	240 Litre MGB	360 Litre MGB
Height	870 mm	940 mm	1065 mm	1080 mm	1100 mm
Depth	530 mm	560 mm	540 mm	735 mm	885 mm
Width	450 mm	485 mm	500 mm	580 mm	600 mm

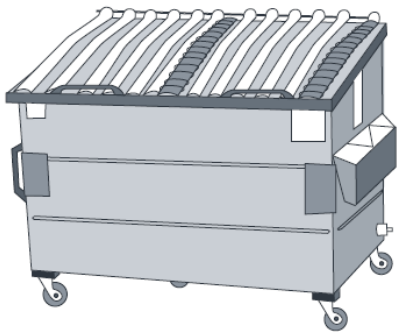
Mobile containers with a capacity from 500L to 1700L with four wheels



Dome or flat lid containers

Bin Type	660 Litre MGB	770 Litre MGB	1100 Litre MGB	1300 Litre MGB	1700 Litre MGB
Height	1250	1425	1470	1480	1470
Depth	850	1100	1245	1250	1250
Width	1370	1370	1370	1770	1770

The following bulk bin dimensions are a guide only and may differ slightly according to manufacturer. Not all available bulk bin sizes are shown.



Bin Type	2.0 m^3 Skip	3.0 m^3 Skip	4.5 m^3 Skip
Height	865 mm	1225 mm	1570 mm
Depth	1400 mm	1505 mm	1605 mm
Width	1830 mm	1805 mm	1805 mm

Bin Movers and Tugs:

Waste Oil Recycling Equipment: