Macquarie

Sydney Metro Martin Place integrated station development

South Tower, SSD DA Stage 2: Waste Management Plan

CSWSMP-MAC-SMS-WS-REP-999901

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1 Introduction

This report supports a State Significant Development (SSD) Development Application (DA) (SSD DA) submitted to the Minister for Planning (Minister) pursuant to Part 4 of *the Environmental Planning and Assessment Act 1979* (EP&A Act) on behalf of Macquarie Corporate Holdings Pty Limited (Macquarie), who is seeking to create a world class transport and employment precinct at Martin Place, Sydney.

The SSD DA seeks approval for the detailed design and construction of the **South Site** Over Station Development (OSD), located above and integrated with Metro Martin Place station (part of the NSW Government's approved Sydney Metro project). The southern entrance to Metro Martin Place station and the South Site OSD above are located at 39-49 Martin Place.

This application follows:

- Approval granted by the Minister for a Concept Proposal (otherwise known as a Stage 1 SSDA) for two OSD commercial towers above the northern (North Site) and southern (South Site) entrances of Metro Martin Place station (SSD 17_8351). The approved Concept Proposal establishes building envelopes, land uses, Gross Floor Areas (GFA) and Design Guidelines with which the detailed design (otherwise known as a Stage 2 SSDA) must be consistent.

- Gazettal of site specific amendments to the Sydney Local Environmental Plan (LEP) 2012 (Planning Proposal reference: PP_2017_SYDNE_007_00) permitting greater building height (over a portion of the South Site) and additional floor space (over both the North and South Sites).

Lodged concurrently with this SSD DA, is a Stage 1 Amending SSD DA to the Concept Proposal (Stage 1 Amending DA), which seeks approval for an amended concept for the Metro Martin Place Precinct (the Precinct), aligning the approved South Site building envelope with the new planning controls secured for the Precinct.

To ensure consistency, the Stage 1 Amending DA must be determined prior to the determination of the subject Stage 2 SSD DA for the South Site.
This application does not seek approval for elements of the Metro Martin Place Precinct which relate to the Sydney Metro City and Southwest project, which is subject to a separate Critical State Significant Infrastructure (CSSI) approval. These include:

- Demolition of buildings on the North Site and South Site;
- Construction of rail infrastructure, including station platforms and concourse areas;

- Ground level public domain works; and
- Station related elements in the podium of the South Tower.

However, this application does seek approval for OSD areas in the approved Metro Martin Place station structure, above and below ground level, which are classified as SSD as they relate principally to the OSD. These components are within the Sydney Metro CSSI approved station building that will contain some OSD elements not already approved by the CSSI Approval. Those elements include the end of trip facilities, office entries, office space and retail areas, along with other office/retail plant and back of house requirements that are associated with the proposed OSD and not the rail infrastructure.

This report identifies waste sources and proposes management measures for the project design, construction and operation. The format of this document can assist with the completion of a Construction Waste Management Plan (CWMP), which will be prepared prior to the construction of the development.

The key purposes of the Waste Management Plan (WMP), separate to the CWMP, are to:

- Address the waste management requirements for the proposal to a standard suitable for approval under the EP&A Act;
- Provide guidance for the project in waste minimisation from construction activities;
- Increase economic feasibility of the project through effective waste separation, recycling and re-use measures; and
- Identify waste management requirements for construction and operation

Context

The New South Wales (NSW) Government is implementing Sydney's Rail Future (Transport for NSW, 2012), a plan to transform and modernise Sydney's rail network so that it can grow with the city's population and meet the needs of customers in the future.

Sydney Metro is a new standalone rail network identified in Sydney's Rail Future. The Sydney Metro network consists of Sydney Metro Northwest (Stage 1) and Sydney Metro City and Southwest (Stage 2).

Stage 2 of Sydney Metro entails the construction and operation of a new metro rail line from Chatswood, under Sydney Harbour through Sydney's CBD to Sydenham and onto Bankstown through the conversion of the existing line to metro standards. The project also involves the delivery of seven (7) new metro stations, including Martin Place.

This step-change piece of public transport infrastructure once complete will have the capacity for 30 trains an hour (one every two minutes) through the CBD in each direction catering for an extra 100,000 customers per hour across the Sydney CBD rail lines.

On 9 January 2017 the Minister approved the Stage 2 (Chatswood to Sydenham) Sydney Metro application lodged by Transport for NSW (TfNSW) as a Critical State Significant Infrastructure (CSSI) project (reference SSI 15_7400). Work is well underway under this approval, including demolition of buildings at Martin Place.

The OSD development is subject to separate applications to be lodged under the relevant provisions of the EP&A Act. One approval is being sought for the South Site – this application – and one for the North Site via a separate application.

Site Description

The Metro Martin Place Precinct project relates to the following properties (refer to Figure 1):

- 50 Martin Place, 9 – 19 Elizabeth Street, 8 – 12 Castlereagh Street, 5 Elizabeth Street, 7 Elizabeth Street, and 55 Hunter Street (North Site);
- 39 – 49 Martin Place (South Site); and
- Martin Place (that part bound by Elizabeth Street and Castlereagh Street).

This application relates **only to the South Site**, being the land at 39-49 Martin Place (refer to Figure 1).

The North Site is the subject of a Stage 2 SSD DA.

Figure 1: Aerial Photo of the North and South Site of the Metro Martin Place Precinct

Background

Sydney Metro Stage 2 Approval (SSI 15_7400)

The Sydney Metro CSSI Approval approves the demolition of existing buildings at Martin Place, excavation and construction of the new station (above and below ground) along with construction of below and above ground structural and other components of the future OSD, although the fit-out and use of such areas are the subject of separate development approval processes.

On 22 March 2018, the Minister approved Modification 3 to the Sydney Metro CSSI Approval. This enabled the inclusion of Macquarie-owned land at 50 Martin Place and 9-19 Elizabeth Street within Metro Martin Place station, and other associated changes (including retention of the opening to the existing MLC pedestrian link).

Concept Proposal (SSD 17_8351)

On 22 March 2018, the Minister approved a Concept Proposal (SSD 17_8351) relating to Metro Martin Place Precinct. The Concept Proposal establishes the planning and development framework through which to assess the detailed Stage 2 SSD DAs.

Specifically, the Concept Proposal encompassed:

- Building envelopes for OSD towers on the North Site and South Site comprising:
  - 40+ storey building on the North Site
  - 28+ storey building on the South Site (see Figure 2)
  - Concept details to integrate the North Site with the existing and retained 50 Martin Place building (the former Government Savings Bank of NSW)
- Predominantly commercial land uses on both sites, comprising office, business and retail premises
- A maximum total GFA of 125,437m^2 across both sites
- Design Guidelines to guide the built form and design of the future development
- A framework for achieving design excellence
- Strategies for utilities and services provision, managing drainage and flooding, and achieving ecological sustainable development
- Conceptual OSD areas in the approved Metro Martin Place Metro station structure, above and below ground level[1]

[1] *Refers to those components within the Metro CSSI approved station envelope that will contain some OSD elements not approved in the CSSI consent. Those elements include the end of trip facilities, office entries, office space and retail areas, along with other office/retail plant and back of house requirements that are associated with the proposed OSD and not the rail infrastructure.*

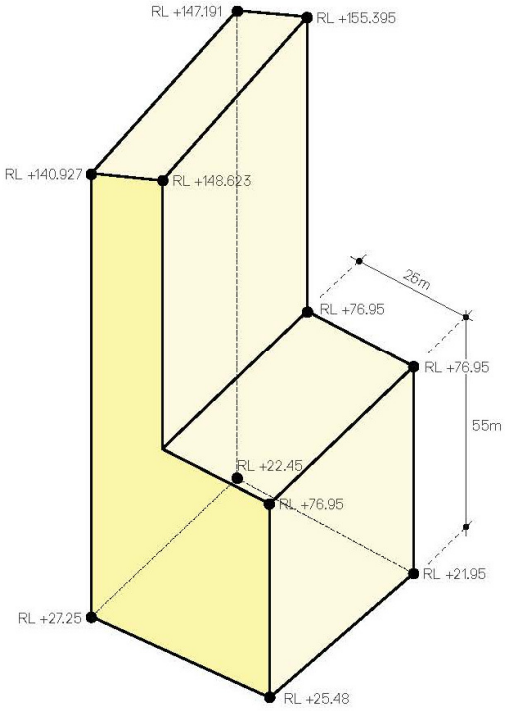
Figure 2: North Site and South Site Approved OSD Building Envelopes

Planning Proposal (PP_2017_SYDNE_007_00) - Amendment to Sydney LEP 2012

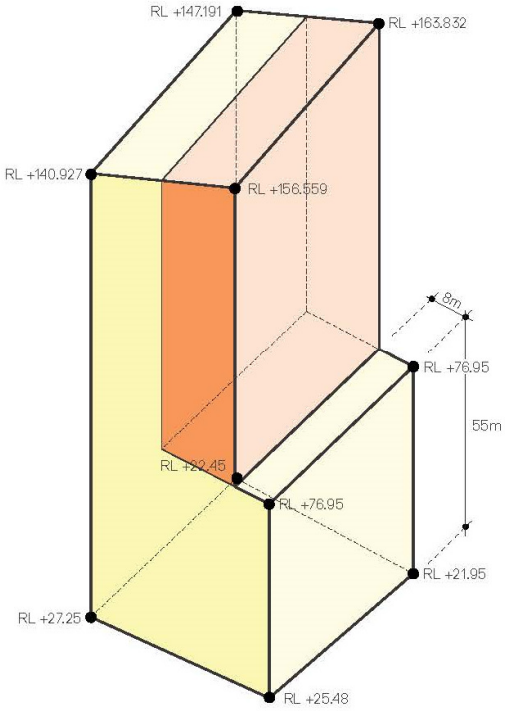
The Planning Proposal (PP_2017_SYDNE_007_00) sought to amend the development standards applying to the Metro Martin Place Precinct through the inclusion of a site-specific provision in the Sydney LEP 2012. This site-specific provision reduced the portion of the **South Site** that was subject to a 55 metre height limit from 25 metres from the boundary to Martin Place, to 8 metres, and applies the Hyde Park North Sun Access Plane to the remainder of the South Site, forming the height limit of the tower. It also permits a revised FSR of 22:1 on the South Site and 18.5:1 on the North Site. These amendments were gazetted within Sydney LEP 2012 (Amendment No. 46) on 8 June 2018 and reflect the new planning controls applying to the Precinct.

The Concept Proposal was prepared and determined prior to the site specific Sydney LEP 2012 amendment (PP_2017_SYDNE_007_00) being gazetted and was developed based on the height development standards that applied to the South Site at the time. As a result, the Concept Proposal allows for a tower on the South Site that is now inconsistent with the building envelope envisaged through the amendment to the Sydney LEP 2012. Accordingly, a Stage 1 Amending SSD DA to the Concept Proposal (Stage 1 Amending DA) has been lodged concurrently with this subject Stage 2 SSD DA, which seeks to align the approved Concept Proposal building envelope for the South Site with the revised site specific development standards applying under the Sydney LEP 2012, being increased FSR and building height. This Stage 1 Amending DA seeks to amend

the planning and development framework established under the approved Concept Proposal that is used to assess this Stage 2 SSD DA. The Stage 1 Amending DA is to be assessed concurrently with, and determined prior to the subject Stage 2 SSD DA, with the amended South Site building envelope setting the broad development parameters for the South Site (see Figure 3 below).



Approved South Site OSD Envelope



Proposed Amended South Site OSD Envelope (aligning with site specific amendment to Sydney LEP 2012)

Figure 3: Relationship between the approved and proposed amended South Site building envelope

Overview of the Proposed Development

The subject application seeks approval for the detailed design, construction and operation of the South Tower. The proposal has been designed as a fully integrated station and OSD project that intends to be built and delivered as one development, in-time for the opening of Sydney Metro City and Southwest in 2024. The application seeks consent for the following:

- The design, construction and operation of a new 28 storey commercial OSD tower (plus rooftop plant) within the approved building envelope for the South Site, including office space and retail tenancies.
- Vehicle loading within the basement levels.
- Extension and augmentation of physical infrastructure / utilities as required.
- Detailed design and delivery of 'interface areas' within both the approved station and Concept Proposal envelope that contain OSD-exclusive elements, such as office entries, office space and retail areas not associated with the rail infrastructure.

Planning Approvals Strategy

The *State Environmental Planning Policy (State and Regional Development) 2011* (SEPP SRD) identifies development which is declared to be State Significant. Under Schedule 1 and Clause 19(2) of SEPP SRD, development within a railway corridor or associated with railway infrastructure that has a capital investment value of more than $30 million and involves commercial premises is declared to be State Significant Development (SSD) for the purposes of the EP&A Act.

The proposed development (involving commercial development that is both located within a rail corridor and associated with rail infrastructure) is therefore SSD.

Pursuant to Section 4.22 of the EP&A Act a Concept DA may be made setting out concept proposals for the development of a site (including setting out detailed proposals for the first stage of development), and for which detailed proposals for the site are to be the subject of subsequent DAs. This SSD DA represents a detailed proposal and follows the approval of a Concept Proposal on the site under Section 4.22 of the EP&A Act.

Figure 4 below is a diagrammatic representation of the suite of key planning applications undertaken or proposed by Macquarie and their relationship to the subject application (the subject of this report).

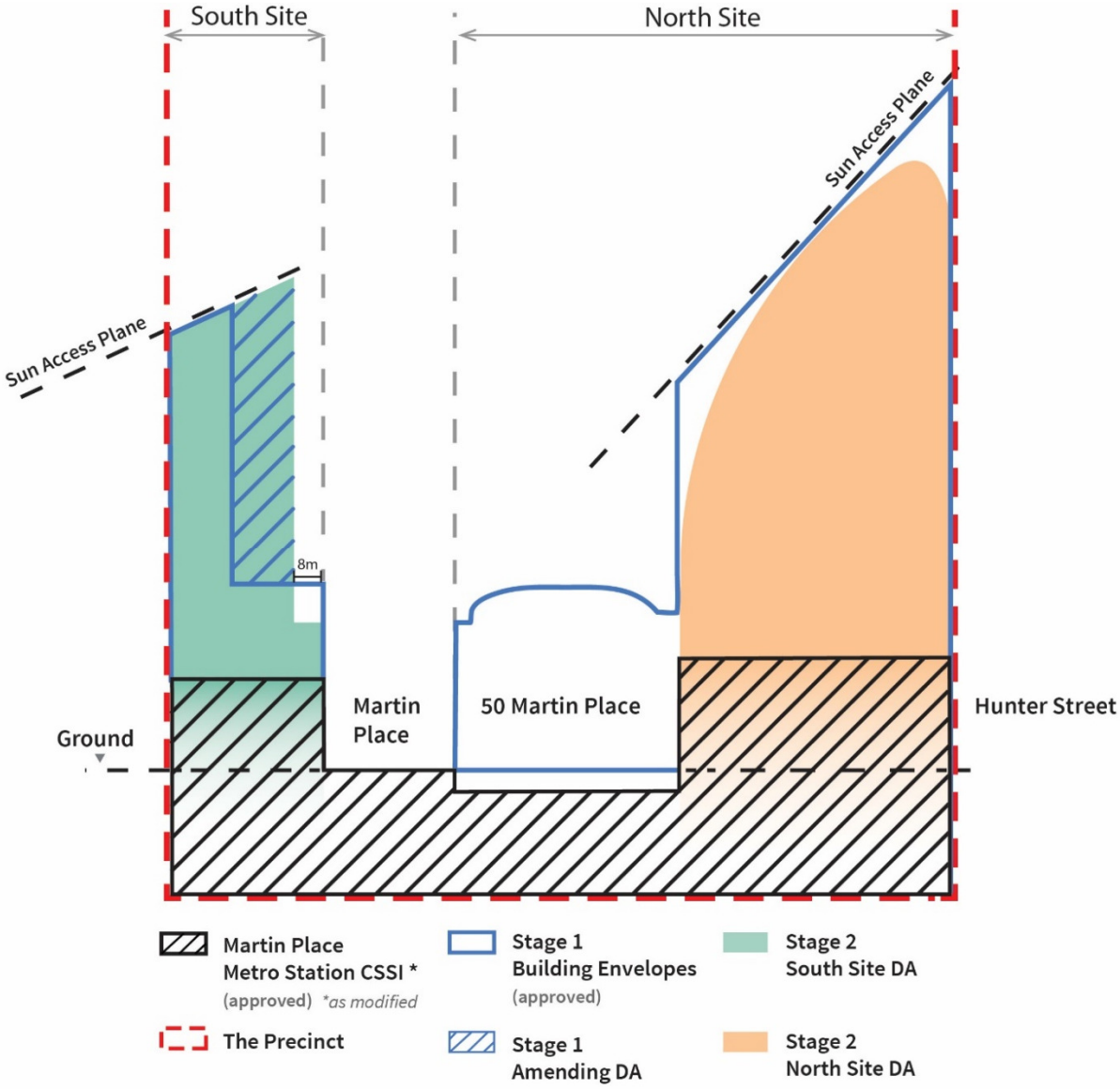


Figure 4: Relationship of key planning applications to the Stage 2 South Site DA (this application)

The Department of Planning and Environment have provided Secretary's Environmental Assessment Requirements (SEARs) to the applicant for the preparation of an Environmental Impact Statement for the proposed development. This report has been prepared having regard to the SEARs as follows:

The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the EP&A Regulation 2000. Provide these as part of the EIS rather than as separate documents.

In addition, the EIS must include the following:

- Waste management plan.

Additionally, the EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under clauses 6 and 7 of Schedule

2 of the *Environmental Planning and Assessment Regulation 2000*. For waste management, a waste strategy is required as part of the EIS.

This Waste Management Plan responds to the requirements outlined in the SEARs.

2 Policy and Targets

2.1 Protection of the Environment Operations Act, 1997

The *Protection of the Environment Operations Act* 1997 covers the requirements for waste generators in terms of storage and correct disposal of waste. The Act establishes the waste generator as having responsibility for the correct management of waste, including final disposal.

2.2 Waste Avoidance and Resource Recovery Act, 2001

Due to concerns about waste management practices and increasing volumes of waste, the NSW government introduced the *Waste Avoidance and Resource Recovery Act* 2001, superseding the *Waste Minimisation and Management Act* 1995 following its five-year review.

The objectives of the *Waste Avoidance and Resource Recovery Act* are as follows:

(a) to encourage the most efficient use of resources and to reduce environmental harm in accordance with the principles of ecologically sustainable development (ESD),

(b) to ensure that resource management options are considered against a hierarchy of the following order:

  i. avoidance of unnecessary resource consumption,

  ii. resource recovery (including reuse, reprocessing, recycling and energy recovery),

  iii. disposal.

(c) to provide for the continual reduction in waste generation

(d) to minimise the consumption of natural resources and the final disposal of waste by encouraging the avoidance of waste and the reuse and recycling of waste,

(e) to ensure that industry shares with the community the responsibility for reducing and dealing with waste,

(f) to ensure the efficient funding of waste and resource management planning, programs and service delivery,

(g) to achieve integrated waste and resource management planning, programs and service delivery on a State-wide basis,

(h) to assist in the achievement of the objectives of the *Protection of the Environment Operations Act 1997*.

A Waste Management Plan is a requirement for new developments in NSW and must be written with reference to the *NSW Waste Avoidance and Resource Recovery Strategy 2014-21*, made under the Act.

2.3 NSW Waste Reduction and Purchasing Policy, 2007 (WRAPP)

The *NSW Waste Reduction and Purchasing Policy* (WRAPP) requires all state government agencies and state-owned corporations to develop and implement a WRAPP plan to reduce waste in four scheduled waste sources:

- Paper products;
- Office equipment and components;
- Vegetation material; and
- Construction materials.

WRAPP is not directly applicable to the project, but has been used as a guiding document for waste initiatives.

2.4 Council of the City of Sydney Policy for *Waste Minimisation in New Developments*

The City of Sydney *Policy for Waste Minimisation in New Developments* ('City of Sydney Waste Policy') was developed in 2005 in support of the *NSW Waste Avoidance and Resource Recovery Strategy* (2003, now superseded by the 2014-21 Strategy). The City of Sydney Waste Policy is the guiding document for many of the waste initiatives and requirements for the proposed development.

The specific sections which pertain to the proposed development include:

- Section A – All developments; and
- Section C – Commercial Provisions.

Key requirements of the City of Sydney Waste Policy include:

- All commercial premises must have a dedicated and enclosed waste and recycling storage area which has adequate storage to meet generation rates;
- All businesses must have written evidence, held on site, of a valid and current contract with a licensed collector for waste and recycling collection and disposal; and
- All businesses are encouraged to include provisions within waste contracts that allow for the collection and recycling of significant waste streams.

Numerous other requirements are specified within the Waste Policy. These have been addressed throughout this Waste Management Plan (WMP) where applicable.

2.5 Green Star

The ESD requirements are multi-disciplinary and affect the works described in this specification. Refer to Table 1, to the ESD specification and to the Green Star matrix provided to understand the specific Green Star requirements as they relate to this Waste Management Plan.

Table 1: Performance pathway: Specialist Plan Green Star credit overview

Option 8A	Criteria	Requirements
Performance Pathway: **Specialist Plan**	**1 point is available where a waste professional specialist prepares and implements an Operational Waste Management Plan (OWMP) for the project in accordance with best practice approaches and this is reflected in the building's design.**	• **Identify the site boundary, the waste streams relevant to the project, and the individual roles responsible for delivering and reviewing 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.** • **Outline methods for encouraging the separation of waste streams, such as bins, storage areas or recycling facilities in public areas as required.** • **Identify storage areas for all waste streams and outline best practice safety and access requirements for their collection.** • **Identify safe methods for vehicle access and transfer of waste.** • **Incorporate a review process to assess the success of the OWMP and make improvements, based on operational experience.**

The design for the South Tower of the Metro Martin Place Precinct is targeting:

- A 6 star Green Star rating under the Green Star Design and As Built v1.1 tool.
- A 5.5 star NABERS Energy in operation rating for Office (Base Building).
- A 3.5 star NABERS Water in operation rating for Office (Base Building).

The waste management system has been designed to facilitate achievement of these ratings and this specification must be read in conjunction with the ESD Specification.

All necessary information and supporting documentation will be collected and compiled as required to achieve the As Built Green Star and WELL rating. All information requested by the Green Building Council of Australia (GBCA) and International Well Building Institute (IWBI) will be provided.

2.6 NABERS

All works will be constructed and documented in accordance with the design and ESD Specification to facilitate the nominated NABERS ratings for the design.

The construction works, including final selection, installation and commissioning of equipment, will be conducted in a manner which achieves energy and water efficiency targets. The construction works shall be completed to assure that the building systems operate and are commissioned in accordance with the design and has the potential to achieve the targeted performance in operation.

3 Construction

3.1 Waste Streams

Construction works for the Metro Martin Place Integration Station Development (ISD) are to take place with consideration of Green Star pathway objectives, particularly regarding the recycling of construction waste streams. The primary goal for waste management in the construction phase is to ensure waste is recycled or reused where possible.

An overview of the major waste streams resulting from construction is provided in . Waste streams which are predicted to generate the greatest volume are highlighted in orange.

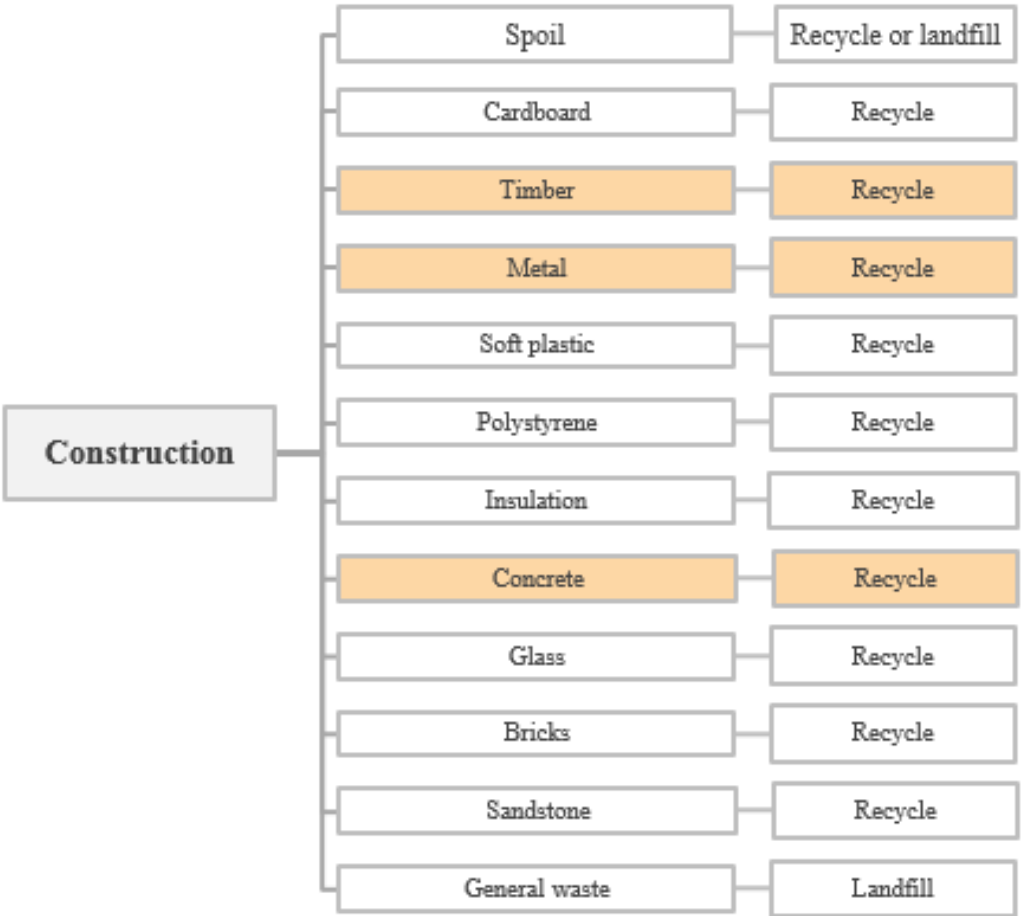


Figure 5: Overview of expected construction waste streams, with the highest volume streams highlighted in orange.

3.2 Management

Waste generation and management during the construction phase will be handled in accordance with the approved Construction Waste Management Plan (CWMP) as it relates to materials procurement, handling, storage, and use. Waste generated

during construction will be reused and recycled as a priority, and only disposed to landfill when unavoidable.

At least 95% (by weight) of inert and non-hazardous construction and demolition waste, excluding spoil, should be recycled or beneficially re-used.

During construction, suitable areas on site (or off site, if necessary), will be allocated which provide adequate space and access for:

- Separated storage of building materials;
- Separated storage of construction waste;
- Separated sorting of construction waste; and
- Removal of construction waste for recycling, re-use or landfill.

Waste that is unable to be reused or recycled will be disposed of offsite at an EPA-approved waste management facility following classification. Details of waste types, volumes and destinations will be recorded in recording and tracking schedules. Prior to transporting waste materials to offsite facilities, it will be verified that the transporter and facility is licensed to handle the material it is designated to carry.

As a requirement of Green Star, a CWMP will be developed prior to construction by the D&C Contractor to ensure that construction waste is minimised and diverted from landfill where possible.

4 South Tower

4.1 Waste Streams

The waste streams that will be generated during operation of the South Tower are identified below in Table 2.

Table 2: Waste generation streams per operational area

Waste streams	Operational area
General waste	Entire building
Food and garden organics	Commercial, retail, green spaces
Paper and cardboard	Entire building
Co-mingled	Entire building
Hard / bulky items	Entire building
Electronic waste	Commercial
Liquid waste	Retail
Sanitary waste	Commercial, retail

4.1.1 Waste Generation

Daily waste volumes for the South Tower have been estimated to determine waste storage and collection requirements. Waste generation is calculated from the appropriate City of Sydney waste generation rates and the gross floor area (GFA), according to the intended occupancy type, for example non-food retail, office, terrace, etc.

The South Tower waste generation was estimated using area schedule 'CSWSMP-MAC-SMS-AT-DRG-DA-909910E dated 15th August 2018', with the exception of the basement retail area information which was estimated using area schedule CSWSMP_MAC_SMA_AT_SCH_909900' dated 23 March 2018.

Daily waste volumes assume that waste will be collected five times a week.

4.2 Rates

For all commercial tenancies in the South Tower, City of Sydney Waste Policy (2005) generation rates in conjunction with the total GFA have been used to calculate daily waste volumes. The estimated volumes were cross-referenced with historical waste collection data provided by the current waste service provider for 50 Martin Place to ensure the model had provided reasonable estimations.

Table 3 identifies the appropriate generation rates for all spaces within the South Tower and the associated below ground retail areas.

Table 3 Generation types for each space use in the South Tower

Building space use	Applicable waste generation type	General waste generation rate	Recycling generation rate
Commercial / office / terrace	Offices	10 L / 100 m^2 / day	10 L / 100 m^2 / day
Retail (food and beverage)	Takeaway	80 L / 100 m^2 / day	120 L / 100 m^2 / day
Retail (non-food and beverage)	Generic non-food retail	50 L / 100 m^2 / day	50 L / 100 m^2 / day
Lobby / back of house	Offices	10 L / 100m^2 / day	10 L / 100m^2 / day
Exhibition/auditorium	Showroom	40 L / 100 m^2 / day	10 L / 100m^2 / day

It has been assumed that 70% of the allocated retail spaces can be classified as 'takeaway' to represent food and beverage retail, and 30% of the allocated retail spaces can be classified as 'generic non-food and beverage retail' until the retail mix can be confirmed. This is considered to be a conservative approach with regard to waste generation. The storage, loading and service areas of the buildings have been classified as 'showroom' to reflect the minimal generation of waste in these areas. Use of the terrace area has not yet been defined, and so the space was determined to have a minimal impact on waste generation.

The exhibition/auditorium has also been classified as 'showroom'. The showroom waste generation rates present a more conservative estimate of waste generation than 'office' generation rates. This means that should this area be changed to commercial office in the future it should not affect the waste storage design.

It is also assumed that any waste generated in the loading dock area may be transferred immediately to the central waste storage room for disposal or recycling, due to the close proximity of storage, loading and service areas to the waste and recycling storage room.

4.3 Volumes

Indicative estimates of the waste segregation and daily waste generation for the South Tower and the associated retail areas are summarised below in Table 4. The following assumptions have been made:

30% of all waste by volume is organic waste for food retail and offices.

- This assumption is based on professional experience and recent audit data collected from commercial and retail spaces within the Sydney metro area.

16% of all waste by volume is organic waste for non-food retail.

- Based on Encycle (2013) A Study into commercial & industrial (C&I) waste and recycling in Australia by industry division

50% of organic waste is captured in the organic waste bins (i.e. a capture rate of 50% for organic waste.) with the remainder entering the general waste stream.

- Based on Encycle (2013) A Study into commercial & industrial (C&I) waste and recycling in Australia by industry division

It has been assumed that 70% of the allocated retail spaces to be classified as 'takeaway' to represent food and beverage retail, and 30% of the allocated retail spaces to be classified as 'generic non-food and beverage retail' until the retail mix can be confirmed.

Table 4 Estimated waste generation (volume)

Source	Waste and recycling volumes (L/day)			
	General Waste	Food and Organic Waste	Co-mingled Recycling	Paper/Cardboard
Office[3]	2,574	454	113	2,915
Retail	1,558	244	1,086	1,427
Total	**4,132**	**698**	**1,199**	**4,342**

Please note that waste estimates have not been provided for other waste streams (e.g. hard / bulky waste, e-waste, sanitary waste etc.) due to their anticipated small volumes and a lack of metrics available. Further, waste generation will be more accurately estimated as the design of the Metro Martin Place development progresses.

4.4 Grease trap waste

Grease trap waste volumes have not been estimated due to lack of available metrics. The grease trap servicing point will be located adjacent to the turning table on the level LG loading dock for servicing by external contractors on an as needed basis.

4.5 Management System

A Waste Management System (WMS) will be developed which will identify the reticulation from the point of disposal to the central waste room and collection point.

The Loading Dock Management Plan (CSWSMP-MAC-SMA-OM-REP-999901) considers waste servicing requirements for the OSD in the context of all other loading requirements. On the basis that waste servicing will take place outside of operational hours there is minimal impact on the operation of the loading docks. This will also help avoid collections during peak hour traffic times.

High level responsibilities associated with day-to-day waste management are outlined below in Table 6. All contracts with building managers, tenants and cleaners should clearly outline the waste management and collection system for allocating waste management responsibilities. See Table 5 below for a breakdown of all waste storage arrangements, and Table 6 for the proposed waste management system.

[3] Waste generation figures for 'office' includes all commercial, lobby, back of house, exhibition/auditorium and terrace spaces.

There will be no allocated temporary waste storage rooms on each floor in the Towers, however this does not preclude a tenant from allocating space within their tenancy for temporarily storing waste and recyclables.

An emergency maintenance waste management system will be developed for situations where the loading dock may be temporarily unavailable as part of a broader precinct-wide logistics management plan. This includes a space provision for storage of excess or overflow waste and recycling.

Table 5 Waste storage arrangements

Area	Details	Storage Room
South Tower	Ground Floor to Level 27 commercial offices, BOH, lobby Lower Ground to Concourse retail, lobby and BOH spaces	South Tower Waste and Recycling Room on Level B1 – Upper Concourse

Table 6 Indicative operational waste management system

Space use	Local disposal	Transfer to central waste storage room	Storage facilities	Transfer to collection point	Collection point
Office	Bins / receptacles as needed in shared spaces	Waste is held within tenant spaces (retail/office) until such time when the individual tenants choose to have it moved it to the central waste management rooms. This is determined by what is agreed upon between the future tenant and landlord/building management as part of the concept of operations or facilities management strategy.	Central waste storage room for general waste and recycling on the Lower Ground Level. Food and organic waste is separated into dedicated food waste bins on the Lower Ground Level. Segregated cardboard is baled for compact storage in the Level B1 hard and bulky waste storage room Nominated cleaning staff/facilities management will be responsible for cleaning of waste storage room.	The Central waste storage room on the Lower Ground Level is the collection point. Waste stored here will be serviced by waste contractors on a daily basis. Nominated cleaning staff/facilities management transfer cardboard bales to the Central waste storage room on the Lower Ground Level using a pallet trolly on an as needed basis.	Waste contractors collect waste from the collection point (the central waste storage room) and transfer to waste collection vehicles. Collection vehicles will drive underground from Castlereagh Street before driving onto the service vehicle turning circle.
Retail	Bins / receptacles as needed in shared spaces				
Back of house	Bins / receptacles as needed in shared spaces				
Terrace	Bins / receptacles as needed in shared spaces				

4.5.1 Storage

Waste storage area requirements are calculated from the total volume of weekly waste generation, collection frequencies, and Australian Standard mobile garbage bin sizes.

All waste storage rooms will be designed according to the provisions stipulated by the City of Sydney Waste Guidelines (Section A, General and Reference B: Bin Bay/Bin Room Construction). All waste storage areas and bins will be provided with clear labels and directions for use to maximise appropriate separation of waste streams.

The waste storage area will house day to day required bins but also equipment essential to the operation of the waste room, including a cardboard bailer, bin lift, a bin wash area and extra space to accommodate for overflow bins when and as needed.

The recommended waste storage room requirements are outlined in Table 7 below.

Table 7 Recommended area requirements for central waste and recycling storage at South Tower

Component	Waste stream	Bin requirements	Area requirements
General waste storage	**General waste**	**4 x 1100L general waste receptacles**	
	Organic waste	**3 x 240L recycling receptacle**	
Recycling storage	**Co-mingled**	**2 x 1100L recycling receptacles**	
	Paper/card	**4 x 1100L recycling receptacles**	
Hard and bulky waste storage and e-waste storage	**Hard and bulky items**	**Caged section**	
	E-waste		
Equipment	**Cardboard**	**1 x Baler** and 1x **Bale** Trolley	
	All	**1 x Bin lift**[4]	
	All	**1 x Bin wash area**	
Overflow	**All**	**1 x 13 m² overflow aream²**	
	Total	**South Tower**	**77 m²**

[4] Area requirement based on Simpro Dumpmaster Standard Series 1500 http://mrwheeliebin.com.au/wp-content/uploads/Dumpmaster.pdf

A compaction ratio of 1:4 has been assumed for baled paper and card.

A bin scaling factor of 1.5 has been applied to account for compliance in receptacle manoeuvrability and accessibility. The waste storage room in the South Tower will be adequate for storing all waste generated by the South Tower.

There will be no allocated local waste storage rooms on each floor in the tower, however this does not preclude a tenant from allocating space within their tenancy for temporarily storing waste and recyclables.

The overflow area has been included in the waste room area requirements, which demonstrates that the waste room is highly constrained. However, the overflow area will not often be completely utilised, therefore it is likely that the space will be manoeuvrable.

The storage room for the South Tower requires a minimum area of 77 m^2. The current design allows for 81m^2.

4.5.2 Location

The central waste storage rooms will be located away from public access to minimise visual, odour, and safety impacts. The central waste and recycling storage room for the

South Tower will be located on the Lower Ground Level as shown in . The hard and bulky waste storage room will be located on Level B1 as illustrated in and Figure 7.

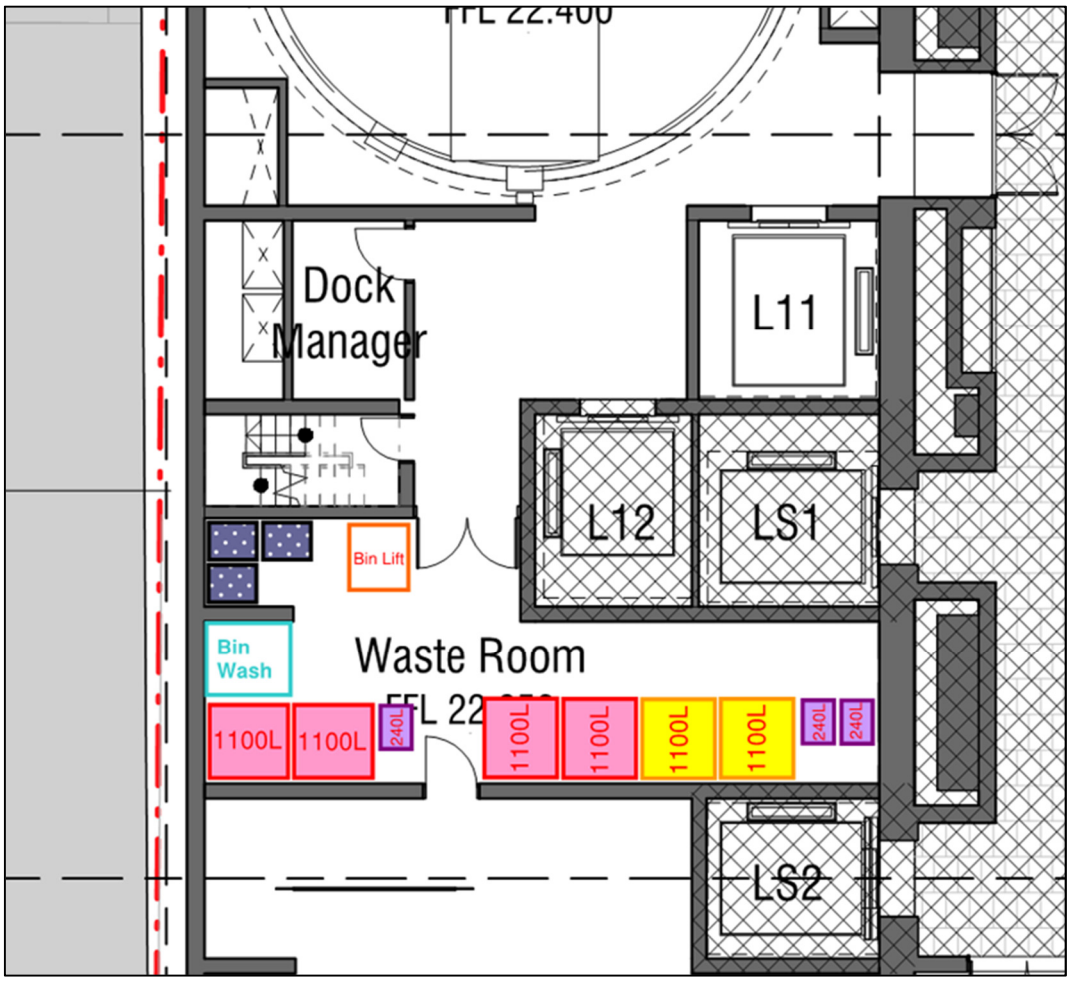


Figure 6: Location of South Tower central waste and recycling storage room, and proposed bin layout for lower ground level.

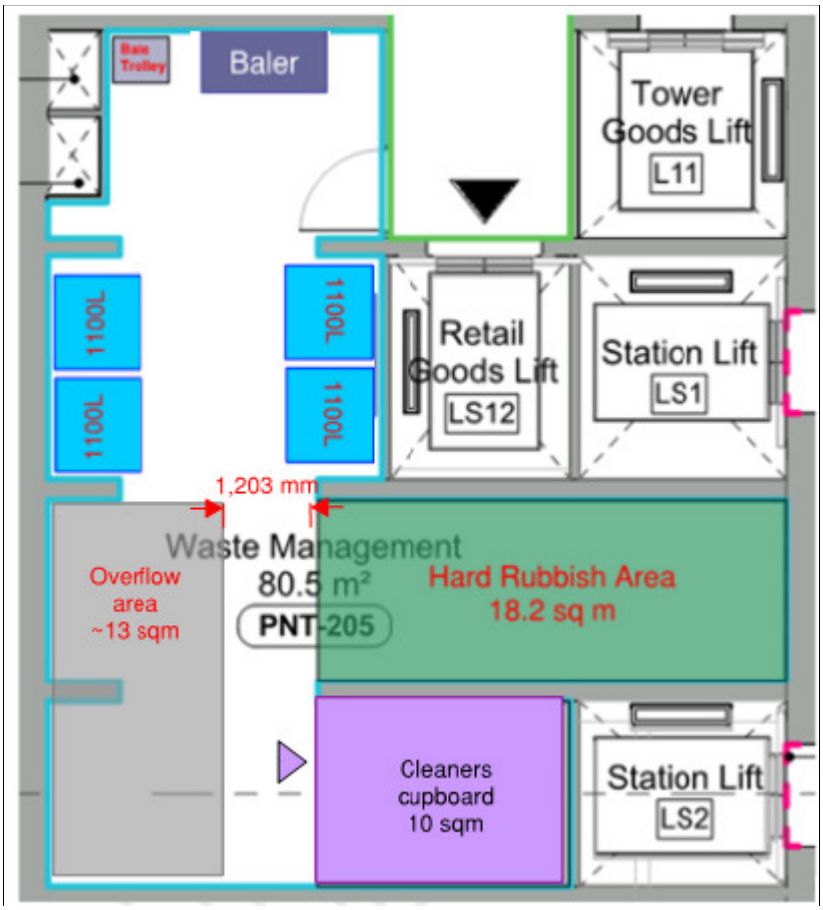


Figure 7: Location of South Tower hard and bulky waste storage room on Level B1.

Legend			
	General waste bins		Bin Wash
	Co-mingled recycling bins		Baler
	Paper / cardboard bins		Baled Paper/Cardboard
	Food waste		Hard Rubbish Area

4.5.3 Signage

Signage will be provided in all waste disposal, storage and collection areas demonstrating how to use the waste management system, including what materials are acceptable in each recycling bins. All waste streams will be stored in clearly labelled, colour coded bins as appropriate to ensure that waste streams are not inadvertently mixed.

The standard colours of each bin are outlined in Table 8, as per the City of Sydney Waste Guidelines. These measures are necessary to encourage the appropriate separation of waste streams and the recovery of resources.

Table 8 Standard bin colours

Bin	Colour
General waste	Red lid and dark green body
Co-mingled recycling	Yellow lid and dark green body
Paper / card recycling	Blue lid and blue body
Food organics	Maroon lid and dark green body

In addition, clear Occupational Health and Safety (OHS) signage must be provided as appropriate. In particular, appropriate OHS must be provided within each waste and recycling room.

4.5.4 Design

The central waste storage room will be designed generally according to the provisions stipulated by the City of Sydney Waste Guidelines (Section A, General and Section C, Commercial).

To comply with the above, the central waste and recycling storage room has been located in a position that is convenient for both users and waste contractors. The access pathway for wheeling bins between a central waste storage point and a collection point is free of steps or kerbs.

A detailed breakdown of all design requirements stipulated in the City of Sydney Policy for Waste Minimisation in New Developments has been attached to the back of this report to highlight all compliances. It can be found in Appendix A.

Table 9 below provides a summary of design requirements relating to the waste storage facilities.

Table 9 Waste storage design

Design aspect	Design provision
General	All waste management facilities will be compliant with the Building Code of Australia (BCA) and all relevant Australian Standards. The waste management system and storage areas will not be visible from the exterior of the building.
Surfaces	The floors of the waste storage rooms will be constructed of concrete of at least 75mm thickness and graded and drained to the sewerage system. The floors will be finished to a smooth, even surface, and covered at their intersection with walls and plinths. A ramp to the doorway will be provided if necessary.
Structure	The walls, ceilings and floors of the storage rooms will be finished with a light colour. The walls of the waste storage rooms will be constructed of approved solid impervious material and will be cement rendered internally[5] to a smooth even surface coved at all intersections. The storage area will be constructed and finished to prevent absorption of liquids and odours, and will be easily cleanable.
Doors	A close-fitting and self-closing door or gate operable from within the room must be fitted to all waste and recycling storage areas (rooms or bin bays). Doors/gates to the waste storage rooms must provide a minimum clearance of 1,200mm. At least one door or gate to the waste and recycling storage area must 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 storage area other than through the roller door or grille.
Water	Hot and cold water will be provided to the waste storage rooms. Water will be mixed through a centralised mixing valve with hose cock.[6]
Lighting	Adequate lighting will be provided for all rooms, controllable from a switch located both outside and inside the room. Lighting will ensure safe access to the area at night. Automatic light sensors may be installed for ease of manual handling during transfer of bins.
Pest control	The waste storage rooms, areas and containers will be constructed in a manner as to prevent the entry of vermin.
Ventilation	The waste storage rooms will be supplied with a mechanical exhaust ventilation system exhausting at a rate of 5L/s.m2 floor area, with a minimum rate of 100L/s min.

[5] Use of other equivalent surfacing such as off form concrete to be confirmed with Council during consultation
[6] It is expected that separate hot and cold water controls will be required. Detail to be developed with selected cleaning method and system.

Design aspect	Design provision
Safety	Smoke detectors will be fitted in accordance with AS1670 Automatic Fire Detection and Alarm Systems and connected to the fire prevention system of the building. The waste compactors will be fully fire proofed and child proofed. Only trained building management and waste contracting staff will have access to compactor equipment. All equipment will be protected from theft and vandalism.
Signage	Signs will be provided to demonstrate how to use the waste management system (including segregation of wastes for recycling, use of waste compactor), as well as appropriate safety signage. The different recycling and waste bins will be clearly identified and signed appropriately.
Refrigeration	Council may require waste storage to be refrigerated if sufficiently large quantities of food waste are generated on site and waste removal from this site is difficult due to location or long trading hours. Where a waste room is refrigerated the temperature must be maintained at or below at or below 50°C with all refrigeration equipment installed with sufficient space for cleaning.

4.5.5 Amenity

The management systems and constructed elements of this development will be designed and installed so as to enhance outcomes for building amenity. Any potential for noise and odour to arise will be minimised. Specifically:

- **Visual aspects:** Any facet of the waste management system that is visible from outside the building must be in keeping with the dominant design of the remainder of the development.
- **Noise:** The potential for noise must be minimised. Significant noise-generating waste management equipment will not be utilised in this development. Production of offensive noise will be avoided.
- **Odour:** The potential for odour must be minimised. Any putrescible waste awaiting collection will be stored in a Council approved container with permanently tight-fitting lids and smooth, washable internal surfaces. All waste storage areas will be fitted with mechanical vertical ventilation systems. Adequate mechanical ventilation and regular collection of waste will eliminate the risk of odour to building inhabitants and neighbours.

4.6 Temporary storage requirements

Temporary storage in the form of a waste service compartment will be provided on each floor of the development. The waste service compartment will have the capacity to store one day's worth of waste provisioned by waste stream (storage for general waste, organic waste, co-mingled recycling and paper and card). Daily generated waste will be stored in the waste service compartment before being transported to the central waste storage room on Level B1 for the nominated cleaning staff / facilities management to empty into the respective bulk bins each night. Once emptied, the waste service compartment bins will be returned to their respective levels. The temporary storage requirements for the South Tower are listed below in Table 10.

Table 10 Temporary storage requirements for the South Tower

Level	General waste	Organic waste[8]	Paper and card recycling	Co-mingled recycling	Total
Level B2	2 x 240 L	1 x 120 L	2 x 240 L	2 x 240 L	6 x 240 L, 1 x 120 L
	0.86 m^2	0.32 m^2	0.86 m^2	0.86 m^2	2.9 m^2
Level B1	3 x 240 L	1 x 120 L	3 x 240 L	2 x 240 L	7 x 240 L 1 x 120 L
	1.29 m^2	0.32 m^2	1.29 m^2	0.86 m^2	3.76 m^2
Lower Ground, Ground	1 x 240 L	1 x 120 L	1 x 240 L	1 x 240 L	3 x 240L, 1 x 120 L
	0.43 m^2	0.32 m^2	0.43 m^2	0.43 m^2	1.61 m^2
Mezzanine	2 x 240 L	1 x 120 L	2 x 240 L	1 x 240 L	5 x 240L, 1 x 120 L
	0.86 m^2	0.32 m^2	0.86 m^2	0.43 m^2	2.47 m^2
Level 1 – Level 27 (except level 10)	1 x 240 L	1 x 120 L	1 x 240 L	1 x 120 L	2 x 240 L, 2 x 120 L
	0.43 m^2	0.32 m^2	0.43 m^2	0.32 m^2	1.5 m^2

5 Collection

5.1 Location and access

The central room for storing waste and recycling in the South Tower is located below ground. This location will be accessed from Castlereagh St. Prior to collection, nominated staff/management will move waste and recycling receptacles from the central waste storage room to an area adjacent to the loading dock to await collection.

The South Tower waste storage room is one level below the loading dock. Therefore, a managed solution for transferring waste between the waste storage room and loading dock will need to be developed as part of the South Tower loading dock management plan.

Collection vehicles will enter and exit the South Tower loading dock via a turning circle, as illustrated in Figure 8.

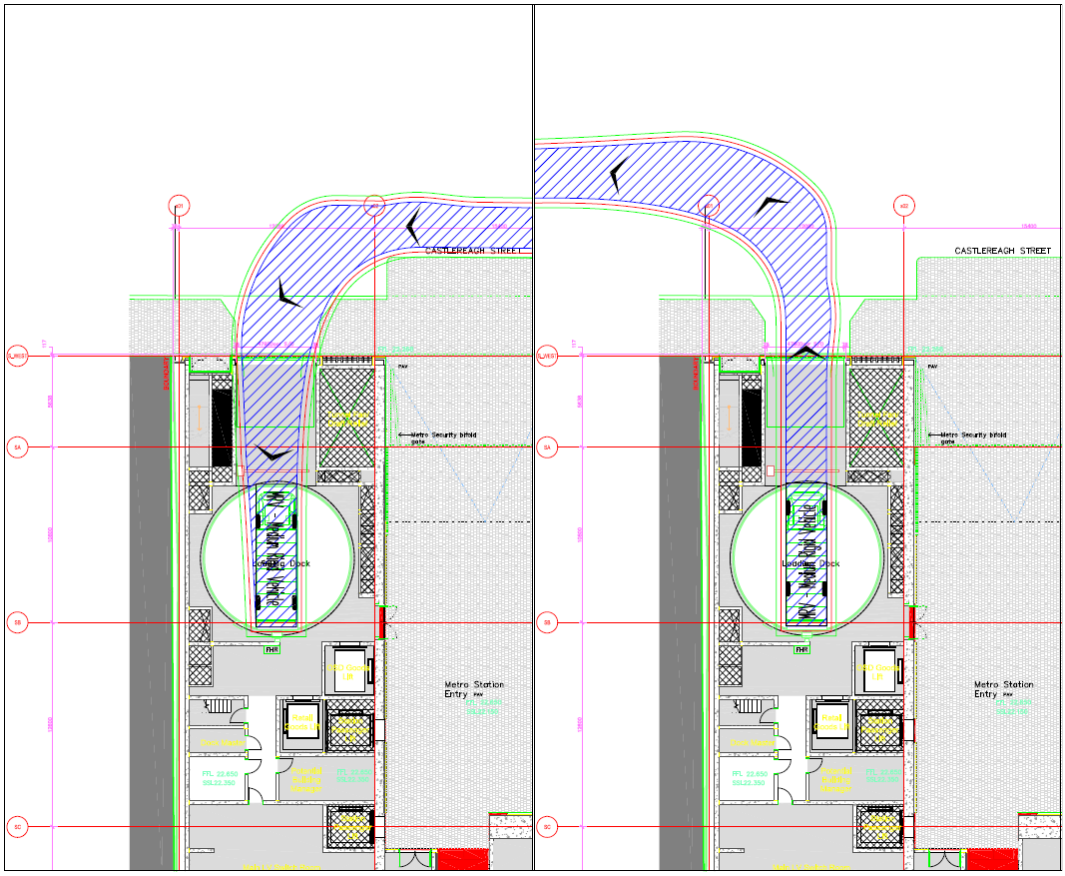


Figure 8: South Tower swept path analysis for the loading dock

The nominated collection point where the waste loading operations occur is on a level surface away from slopes or vehicle ramps. In addition to this, the path where the waste contractor will transport the bins from the central waste storage room to the collection vehicle is free of steps, kerbs and other uneven surfaces.

The maximum distance for the waste contractor to transport mobile garbage bins larger than 240L is 10 metres.

5.2 Frequency

Collection frequency assumptions are as follows:

- Collection of general waste, co-mingled recycling, paper/cardboard recycling, and food and garden organics is to occur 5 x per week (every working day)
- Collection of other waste streams (e.g. hard / bulky waste, e-waste etc.) would be less frequent, and arranged as required.

Collection frequency of hazardous waste and sanitary waste will be at the discretion of the separate waste service providers collecting and treating these waste streams, and can be arranged with facilities management as required.

As per the loading dock management plan (CSWSMP-MAC-SMA-OM-REP-999901) waste and recycling collections will take place outside of operational hours.

Note: Waste collection frequencies can be adjusted once the building is in operation and actual waste generation rates can be observed.

5.3 Vehicle

The route for waste contractor access to the indicative internal loading zone is from Castlereagh Street. Access will at no time cause the flow of traffic on Castlereagh Street to be blocked.

The South Tower loading dock is designed for use by waste service vehicles smaller than the 'standard waste collection vehicle' outlined in the City of Sydney Waste Policy.

The City of Sydney Waste Policy states the following:

> *"The size of vehicle varies according to the collection service. Thus, it is impossible to specify what constitutes the definitive waste truck. Developers must consult with Council regarding the type of vehicle used in that area."*

Future private waste service contractors may be procured based on the current loading dock design, and may be procured from the City of Sydney Council's nominated list of approved waste service contractors possessing CBD suitable fleets. Private waste collection contractors offer a range of collection vehicles, some specifically suited for collection within areas with limited access and space[9]. The waste collection contract can specify this as a requirement for service.

[9] An example of a restricted space vehicle with suitable dimensions for the loading bay design: http://www.sita.com.au/media/publications/REL_Fact_Sheet.pdf

The below vehicle specifications are the assumptions outlined in the City of Sydney Waste Policy and Macquarie Project Brief v3.7 for a standard Medium Rigid Vehicle (MRV), and the last column represents the specifications of vehicle used to design the South Tower loading dock. Collection vehicle specifications are presented in Table 11 below.

Table 11 Rear loading collection vehicle measurements

Vehicle Specification	City of Sydney Standard Collection Vehicle	Macquarie Project Brief v3.7	South Tower Design Allowance
Length overall	8.8 m	8.8 m	8.8 m
Width overall	2.6 m	2.5 m	2.5 m
Operational height	3.4 m	3.6 m	3.6 m
Travel height	3.4 m	3.6 m	3.6 m
Weight (payload)	26 tonnes	26 tonnes	30 tonnes
Turning circle	18.0 m	18.0 m	20 m

6 Agency consultations

The Metro Martin Place team met with the City of Sydney on 26 July 2018 to provide a brief on the upcoming SSD DA Stage 2 submission. The contents of this report were discussed, and all designs presented were agreed to in principle.

7 Conclusion and Next Steps

The design of the South Tower complies with Council, State and other requirements, including Green Star and NABERS requirements.

A review against the City of Sydney Waste Policy was undertaken, see Appendix A. All requirements have been reviewed and deemed compliant. Compliance with requirement A2 will be covered by the CWMP prepared by the D&C Contractor prior to construction.

This WMP forms a framework to implement waste management measures across all design and planning stages. The waste management approach supports the Green Star requirement for the project to enhance outcomes for waste minimisation, reuse and recycling.

Once planning approval is granted for the proposed development, this WMP will:

1. Form the basis for development of a detailed Waste Policy Design Compliance Certificate for the Construction Certificate application, which is to include details regarding disposal and recycling of different materials expected from construction, and the transport and destinations of these materials.
2. Form the basis for development of the relevant Green Star credit requirements
3. Ensure that detailed design and fit-out of the building is consistent with best practice standards and plans for waste management, and
4. Inform all plans and procedures for operational waste management.

Appendix A

City of Sydney Waste Policy Review

Policy Requirement No.	ALL DEVELOPMENTS	Stage 2 SSDA Compliance
A1	A general outline of the proposed waste management system for the development should be submitted to Council prior to submission of a development application. Submission may consist of discussion of the proposed system at the pre-lodgement meeting.	Yes, teleconference meeting held with CoS on the 26th July 2018. No queries raised by CoS.
A2	All applicants are required to submit a Waste Management Plan (WMP) as part of development application for any proposed development or alteration to land or building (Appendix A). A waste management plan must include the following: • Site plan showing: – Materials storage areas for reusable materials and recyclables during demolition and construction; and – Vehicle access to material storage areas; • Estimations of quantities and types of materials to be reused, recycled or left over for removal from the site; • Plans and drawings of the proposed development that highlight the location of and space allocated to the waste management facilities; • The nominated waste collection point must be attached to the WMP; • The path of access for both users and collection vehicles must also be highlighted; and • A single page summary for tenants and residents to inform them of waste management arrangements, (where appropriate).	The WMP does not include site plan of materials storage during demolition and construction. Estimations are provided for operational waste only, demolition and construction waste will be quantified in construction management plan. The CWMP will be developed by the Principal Contractor prior to construction works. All other requirements are provided in the WMP.
A3	WMPs require approval prior to issuing the construction certificate. For all development with a residential component, the WMP must be approved by Council. WMPs for development other than residential can be approved by the certifying authority	N/A for SSDA Stage 2
A4	A Waste Policy Design Compliance Certificate 1 must be submitted with the construction certificate application which certifies the construction certificate submission complies with: • This Policy; • The relevant development consent conditions. Waste Policy Design Compliance Certificate 1 also certifies that the WMP has included due consideration of disposal and recycling the different types of materials expected from demolition, excavation and construction; and the transport and destinations of those materials. Where appropriate, the principals of deconstruction must be applied and details provided.	To fall under responsibility of head contractor and construction management plan.
A5	A Waste Policy Management and Facilities Compliance Certificate 2 must be submitted prior to issuing the occupation certificate. This certificate certifies the constructed waste management facilities and waste management operations during demolition, excavation and construction comply with: • The approved Waste Management Plan and Drawings and as specified in Waste Policy Compliance Certificate 1; • This Policy; • The relevant development consent conditions.	To fall under responsibility of head contractor and construction management plan.
A6	Waste and recycling storage containers must be stored at all times within the boundary of the subject site unless formally approved by Council under a Local Approvals Policy (LAP) for the storage of waste in a public place	Compliant
A7	No waste incineration devices are permitted.	Compliant
A8	All waste management facilities must comply with the Building Code of Australia and all relevant Australian Standards	Compliant
A9	Heritage conservation considerations may alter some requirements of this policy for the refurbishment of existing building	N/A
A10	Sufficient space must be provided for equipment to handle or manage all waste and recycling likely to be generated on the premises between collections.	Compliant
A11	Space must be provided within the premises in close proximity to the vehicle entrance and no lower than one level below street level for the storage of waste and recycling. The space allocated must be sufficient to store, in separate containers, the volume of waste and recycling likely to be generated during the period between collections. Indicative waste and recycling generation rates for various commercial development types are listed in Appendix B – Waste and recycling generation rates for residential and commercial premises.	Compliant
A12	The room/s for storing waste and recycling must be located in a position that is convenient for both users and waste collection staff	Compliant
A13	Collection vehicles must be able to service the development efficiently and effectively, with limited need to reverse. If a vehicle turntable is used it must have a 30 tonne capacity	Compliant
A14	Residential development requires a minimum vertical clearance 4 metres. For all other development, if clearance proposed is less than 3.8 metres, then vehicle specification will be required from the waste provider that conforms with the proposed development.	Clearance is sufficient for a MRV collection vehicle, see section 5.3 of WMP.
A15	A suitable refuse collection point must be nominated where waste loading operations can occur on a level surface away from gradients and vehicle ramps. The path for wheeling bins between a central waste storage point and the collection vehicle must be level and free of steps or kerbs.	Compliant
A16	The maximum travel distance between the storage point and the collection point for bins is: • 10 metres – for bins including 240 litre, 660 litre & 1000 litre Mobile Garbage Bins (MGB's) • 3 metres – for both 1500L and 2000 litre bulk bins (also known as skips) • Any proposed variations require further assessment and discussion with relevant Council officers.	Compliant - location of loading dock to be more clearly outlined in GMP update
A17	Where collection vehicles are required to drive into a building to collect waste or recycling, adequate vehicle clearance is required. See Appendix C for typical dimensions of collection vehicles. Access to an approved collection point within a building must enable all collection vehicles to both enter and exit the premises in a forward direction	Clearance is sufficient for a MRV collection veh
A18	The potential for noise and odour must be minimised.	Compliant
A19	For multi-unit residential buildings and multi-storey commercial buildings, it is preferable for the collection point to be inside the building, for example in an underground carpark, as this reduces noise impact on surrounding residents.	Compliant
A20	All putrescible waste that is stored awaiting collection is to be stored in a Council approved container (such as a MGB or bulk bin). Waste containers will have a permanently, tight fitting lid and a smooth, washable internal surface.	Compliant
A21	*** A21 - A42 are predominantly construction material and design requirements, smooth finishes etc.***	Compliant, see section 4.5.4 of WMP
A43	Responsibility for cleaning of waste storage areas and service compartments must be determined when designing the system and clearly stated in the WMP	Compliant
A44	Responsibility for transfer of bins within the property and to the collection point must be determined when designing the system/s and clearly stated in the WMP.	Compliant - to be further detailed in Loading Dock Management Plan
A45	All waste containers left kerbside for collection must be taken back within the property boundary on the same day of service. Waste and recycling containers cannot be stored on the public way. Please see the Council's Local Approvals Policy – Waste Management for specific details.	N/A
A46	a) Standard signage (available from Council's Waste Services Unit for residential dwellings) on how to use the waste management system and what materials are acceptable in the recycling must be posted in all communal waste collection and storage areas. See Appendix E – Standard Signage for Waste and Recycling Bins for more information. b) Adequate signage identifying waste and recycling storage areas, as well as waste and recycling service compartments must be prominently displayed.	Compliant
A47	All waste and recycling receptacles must be clearly and correctly labelled to identify which materials are to be placed in which bin - refer to Appendix E.	Compliant
A48	For all properties that have a lockable street level storage area a council compatible (GAR) key system is necessary to allow access for collection staff. Please liaise with the Council's Waste Services Unit to arrange for installation of this system prior to occupancy. All costs for this system are to be borne by property managers.	N/A
A49	A Domestic Waste Management Charge will be levied on every residential rateable property in each new development.	N/A

Policy Requirement No.	COMMERCIAL DEVELOPMENTS	Stage 2 SSDA Compliance
C1	All businesses must have written evidence, held on site, of a valid and current contract with a licensed collector for waste and recycling collection and disposal. All businesses are encouraged to include in their waste contracts provisions that allow for the collection and recycling of high grade and low grade office paper, batteries, equipment containing printed circuit boards, computers, televisions, flourescent tubes, smoke detectors and other recyclable resources from the waste stream.	Compliant - E-Waste receptacle in hard/bulky waste storage
C2	All commercial premises must have a dedicated and enclosed waste and recycling storage area which has adequate storage area to meet their generation rates.	Compliant
C3	Sufficient space must also be allocated for the separate storage of recyclable electronic goods such as batteries, equipment containing printed circuit boards, computers, televisions, flourescent tubes and smoke detectors.	Compliant - E-Waste receptacle in hard/bulky waste storage
C4	Sufficient space must be allocated to store reusable items such as crates, pallets, kegs and other reusable items so that storage in a public place is avoided.	Compliant - Hard/bulky waste storage
C5	Space must be allocated for separate storage of liquid wastes (oils etc). These liquid waste storage areas must be bunded, and drained to a grease trap, in accordance with the requirements of Sydney Water	Compliant - Grease trap accounted for
C6	Liquid waste from grease traps must only be removed by licensed waste contractors approved by Sydney Water and the NSW Department of Environment and Conservation.	Compliant - Grease trap accounted for
C7	If clearance is less than 3.8m, then vehicle specifications will be required from the waste provider that conforms with the proposed development.	Clearance is sufficient for a MRV collection vehicle, see section 5.3 of WMP.
C8	For premises, • Whose waste generated contains 20% by weight or volume of fish, poultry or meat, OR • Which generates 50 litres of seafood, poultry, or meat waste in total per day. Waste must be collected daily or refrigerated whilst stored awaiting collection.	Compliant - waste will be collected daily
C9	Contracts with cleaners, building managers and tenants must clearly outline the waste management and collection system, and must clearly allocate responsibilities.	Compliant
C10	Businesses must have written evidence, held on site, of a valid and current contract with a licensed collector for waste and recycling collection and disposal.	Compliant
C11	A waste service compartment (waste and recycling area) must be provided on each storey of the building. The waste service compartment or waste and recyclables holding area on each floor must have the capacity to store at least one (1) days volume of waste and recycling likely to be generated on that floor. In particular, provisions must be made for the separation of cardboard for recycling on each storey and in the centralised waste storage area.	Compliant
C12	Waste and recyclables from the waste service compartment or waste and recycling holding area on each floor must be transferred to the centralised waste and recycling room or holding area daily or more frequently, as required.	Compliant - at least once daily
C13	If more than 10m3 (10 cubic metres) of uncompacted waste and recycling is likely to be generated per day, then the central waste and recycling room must be separate from the goods receival dock, and waste must be collected in a compaction unit.	N/A
C14	Where collection takes place inside a building, appropriate clearances need to be allowed for the collection vehicle to enter the premises, clear the waste container and exit the premises. It must be noted that some systems require the waste container to be lifted above the collection vehicle to be emptied (front lift-bulk bin) or loaded (waste compactor).	Compliant
C15	If clearance proposed is less than 3.8m, then vehicle specifications will be required from the waste provider that conform with the proposed development.	Clearance is sufficient for a MRV collection vehicle, see section 5.3 of WMP.
C16	For premises, • Whose waste generated contains 20% by weight or volume of fish, poultry or meat, OR • Which generates 50 litres of seafood, poultry or meat waste per day, Waste must be collected daily or refrigerated whilst awaiting collection.	N/A
C17	Storage of paper and cardboard must be in a dry, vermin-proof area. Paper and cardboard must not be stored for more than 2 weeks to prevent breeding of pests in the stored material.	Compliant
C18	Contracts with cleaners, building managers and tenants must clearly outline the waste management and collection system, and must allocate responsibilities. All businesses are encouraged to include in their waste contracts provisions that allow for the collection and recycling of high grade and low grade office paper, batteries, equipment containing printed circuit boards, computers, televisions, flourescent tubes, smoke detectors and other recyclable resources from the waste stream.	Compliant
C19	Businesses must have written evidence, held on site, of a valid and current contract with a licensed collector for waste and recycling collection and disposal.	Compliant
C20	Provision must be made on each floor, and in the central waste and recycling room or holding area, for the separation and storage of all recyclable cardboard, paper and paper products likely to arise on the premises.	Compliant
C21	Where collection takes place inside a building, appropriate clearances need to be allowed for the collection vehicle to enter the premises, clear the waste container and exit the premises. It must be noted that some systems require the waste container to be lifted above the collection vehicle to be emptied (front lift-bulk bin) or loaded (waste compactor). See Appendices C and E for more information.	Compliant
C22	If clearance proposed is less than 3.8m, then vehicle specifications will be required from the waste provider that conforms with the proposed development.	Clearance is sufficient for a MRV collection vehicle, see section 5.3 of WMP.
C23	Storage of paper and cardboard must be in a dry, vermin-proof area. Paper and cardboard must not be stored for more than two (2) weeks to prevent breeding of pests in the stored material.	Compliant
C24	Contracts with cleaners, building managers and tenants must clearly outline the waste management and collection system, and must allocate responsibilities.	Compliant - more details to be included in Loading Dock Management Plan