

SYDNEY METRO MARTIN PLACE STATION – INTEGRATED
STATION DEVELOPMENT

CONSTRUCTION MANAGEMENT PLAN
SOUTH SITE STAGE 2 DA

CSWSMP-MAC-SMA-CM-REP-000110



REVISION STATUS

Rev	Date	Details / Description
00	26/05/17	Sydney Metro Martin Place Station Precinct – ECI Issue
01	20/09/17	Metro Martin Place – GMP Issue for Review
02	06/10/2017	Metro Martin Place – GMP Issue update
03	27/10/2017	Metro Martin Place – USP Issue update
04	22/08/2018	Metro Martin Place – Final DA Submission
05	03/09/2018	Metro Martin Place – Revised DA Submission

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1.0 INTRODUCTION

This Construction Management Plan 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.

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.

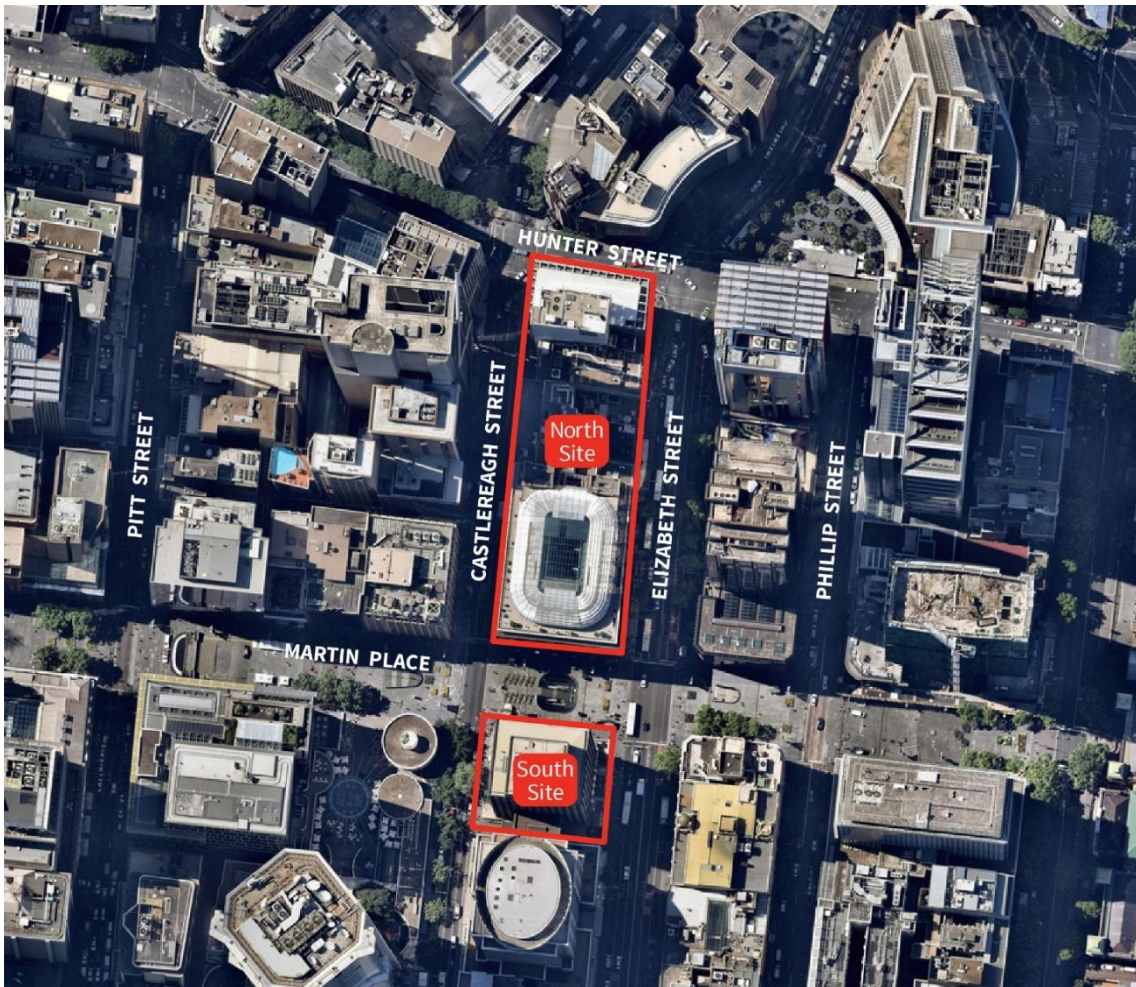


Figure 1 - Aerial Photo of the North and South Site of the Metro Martin Place Precinct

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); and

- 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 125,437m² 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; and
- Conceptual OSD areas in the approved Metro Martin Place Metro station structure, above and below ground level¹.



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

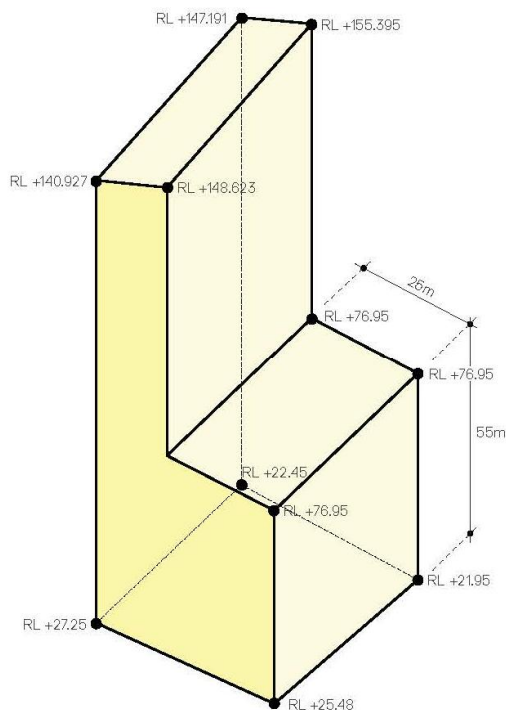
Planning Proposal (PP_2017_SYDNE_007_00) - Amendment to Sydney LEP 2012

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.

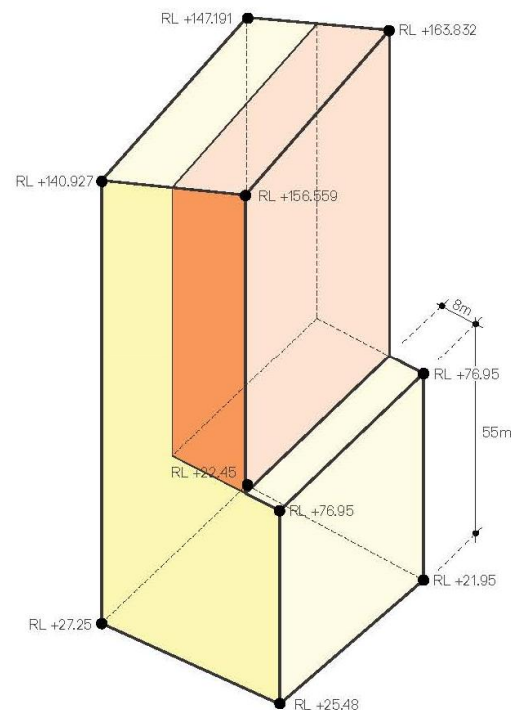
¹ Refers to those components within the Metro CSSI approved station envelope that will contain some OSD elements not approved in the CSSI consent. Those elements include the end of trip facilities, office entries, office space and retail areas, along with other office/retail plant and back of house requirements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

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 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).

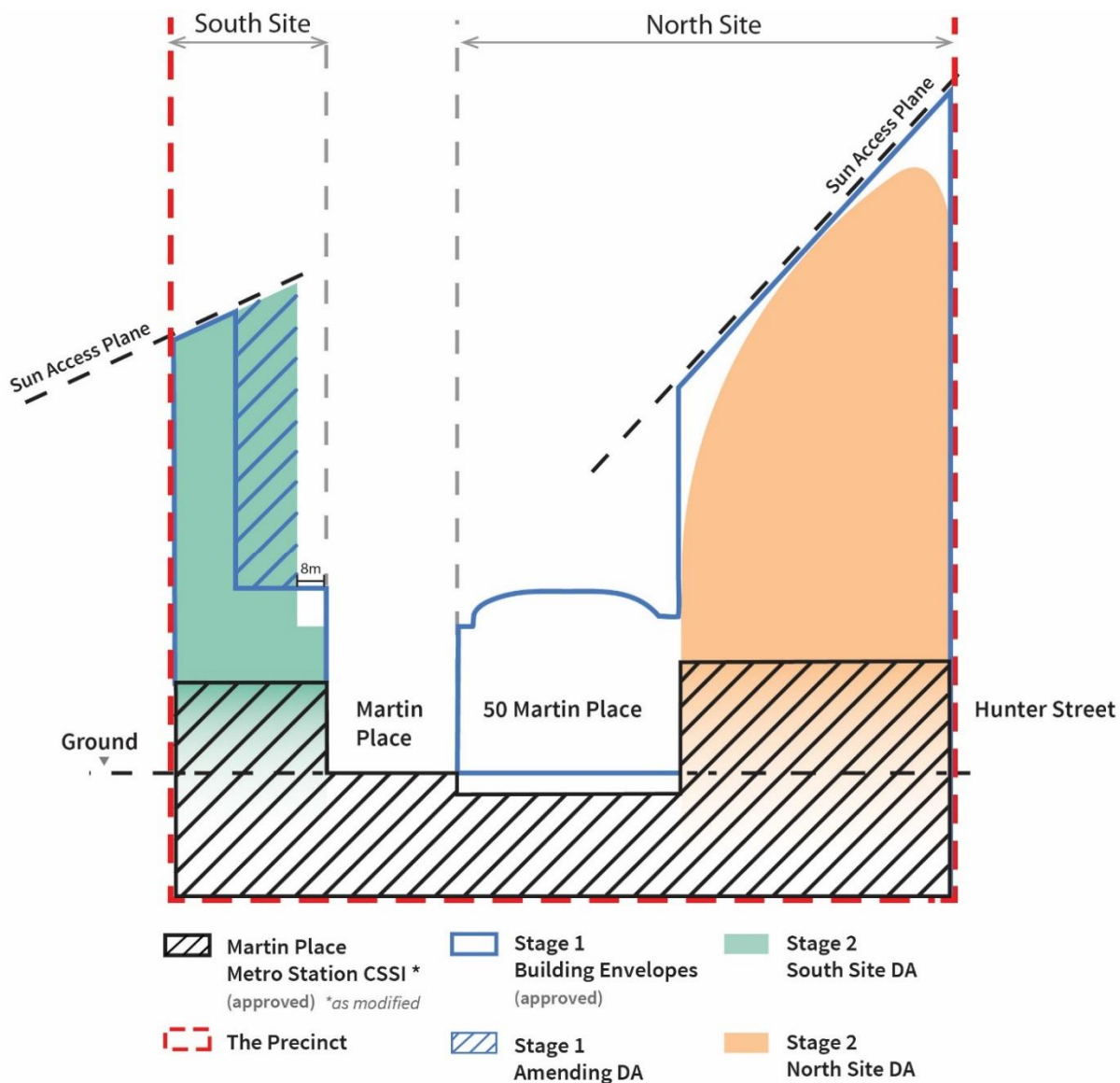


Figure 4 - Relationship of key planning applications to the Stage 2 South Site DA (this application)

This Report

This Construction Management Plan (CMP) details Lendlease's overall construction methodology for the delivery of South Tower. It is envisaged that this CMP will evolve during the detailed design phase and pre-construction phase. Please note the images and Figures contained herein are diagrammatic and indicative and subject to design development.






In the following sections, we have set out how we will construct the South Tower of the Metro Martin Place precinct including our processes and controls, management of the live interfaces and how we will finalise, commission and meet the required handovers for the South Tower and precinct as a whole.

This CMP also defines the impacts of the proposed South Tower construction activities on areas within the Metro Martin Place precinct. This plan details our construction methodology, sequence and logic mitigating potential construction risks to the South Tower of the Metro Martin Place precinct and its stakeholders.

Our proactive approach is underpinned by the following overriding and non-negotiable objectives:

- Maintain business continuity of adjoining properties;
- To deliver a flagship project for our client on time to the highest safety and superior quality;
- Communicate in a timely fashion with all relevant stakeholders what, when and how we are planning to undertake;
- Positive public perception of the project during the construction works;
- Use experienced and competent subcontractors with appropriate resources to deliver their works in the manner we prescribe; and
- Hands-on control of subcontractors from active Lendlease site supervision.

Macquarie will have five key outcomes from the Lendlease Construction Management Plan:

QUALITY	CERTAINTY	PARTNERSHIP	CAPABILITY	COMPLIANCE
				
<ul style="list-style-type: none"> • Comprehensive quality control system applied across all aspects of design, procurement and delivery 	<ul style="list-style-type: none"> • Robust management processes across all areas of the business • Demonstrated and strong delivery experience 	<ul style="list-style-type: none"> • Transparency of management processes • Shared responsibilities applied to the project team • Collaboration with Client and contractor market 	<ul style="list-style-type: none"> • Extensive industry experience of the project leadership in delivery 	<ul style="list-style-type: none"> • Processes that meet Macquarie, industry and company certification requirements • AEO accreditation aligned to QA performance

2.0 DESCRIPTION OF PROPOSED WORKS

2.1 PRECINCT DESCRIPTION

The Metro Martin Place precinct development consists of the Martin Place Metro station, Over Station Development (OSD) and the associated integrated civic, retail and commercial areas. This proposed redevelopment is to create a transportation metro precinct that offers mixed use space including commercial office space, modern retail outlets and civic space areas. The OSD comprises two commercial towers: the South Tower will be constructed over the existing Eastern Suburbs Line (ESL).

The Metro Martin Place precinct design proposal, indicated in figure 1 below, involves the redevelopment of the site to accommodate for the following:

- Integration of an underground pedestrian link tunnel under 50 Martin Place, new metro train station, associated tunnel fit-out and Retail and Public domain spaces to both North and South Towers. This is covered under the existing CSSI approval.
- Construction of the 39 story North Tower, comprising a reinforced concrete structure with a glass lift core on Castlereagh Street.
- Integration of the North Tower and 50 Martin Place with interconnecting bridges at nominated levels, and a link to the ground floor, which will form the basis of the Stage 2 North Tower DA application.
- Construction of the 29 story South Tower, comprising a rear core reinforced concrete structure with a podium level to 45 metres, which will form the basis of the Stage 2 South Tower DA application.

This report covers the South Tower only.

Condition B12 of the Stage 1 Consent notes that the following plans are required to be prepared under this Consent:

- a) Construction Pedestrian and Traffic Management Plan – *appendix to the Traffic, Transport, Pedestrian and Parking Report by Arup.*
- b) Cumulative Construction Impact Assessment – *Acoustic Report by Arup.*
- c) Noise and Vibration Impact Assessments - *Acoustic Report by Arup.*
- d) Community Consultation and Engagement Plans – Consultation Report by Ethos Urban
- e) Construction Waste Management Plan; and – *Waste Management Plan by Arup*
- f) Air Quality Management Plan - *Air Quality report by Arup.*

These plans are being prepared as part of an overall Construction Environmental Management plan, and further develop the strategies implemented for the CSSI delivery, including detailed impacts due to increased construction vehicles on traffic, pedestrian management, and interaction with surrounding receptors.



Figure 5 – Metro Martin Place Precinct Development

Site Description

The building located at 39 Martin Place is currently being demolished by the Tunnel and Station Excavation Works (TSE) Contractor prior to Lendlease commencing site establishment. The excavation in this plot will also be completed by the TSE Contractor and is not related to this application. The TSE subcontractor is currently demolishing 55 Hunter Street, 5, 8-10, and 8A-12 Castlereagh Street, which form part of the North Tower works, and 9-19 Elizabeth Street will be demolished by Lendlease as part of the North Tower works and as such are not part of this application.

The Station works which are approved under the CSSI will be carried out by a separate Lendlease construction team who will work closely with the North and South Tower construction team to ensure a seamless interface between the North Tower, South Tower and Station works as fitout works will be occurring on the station at the same time as OSD works. The station works are subject to a separate CMP.

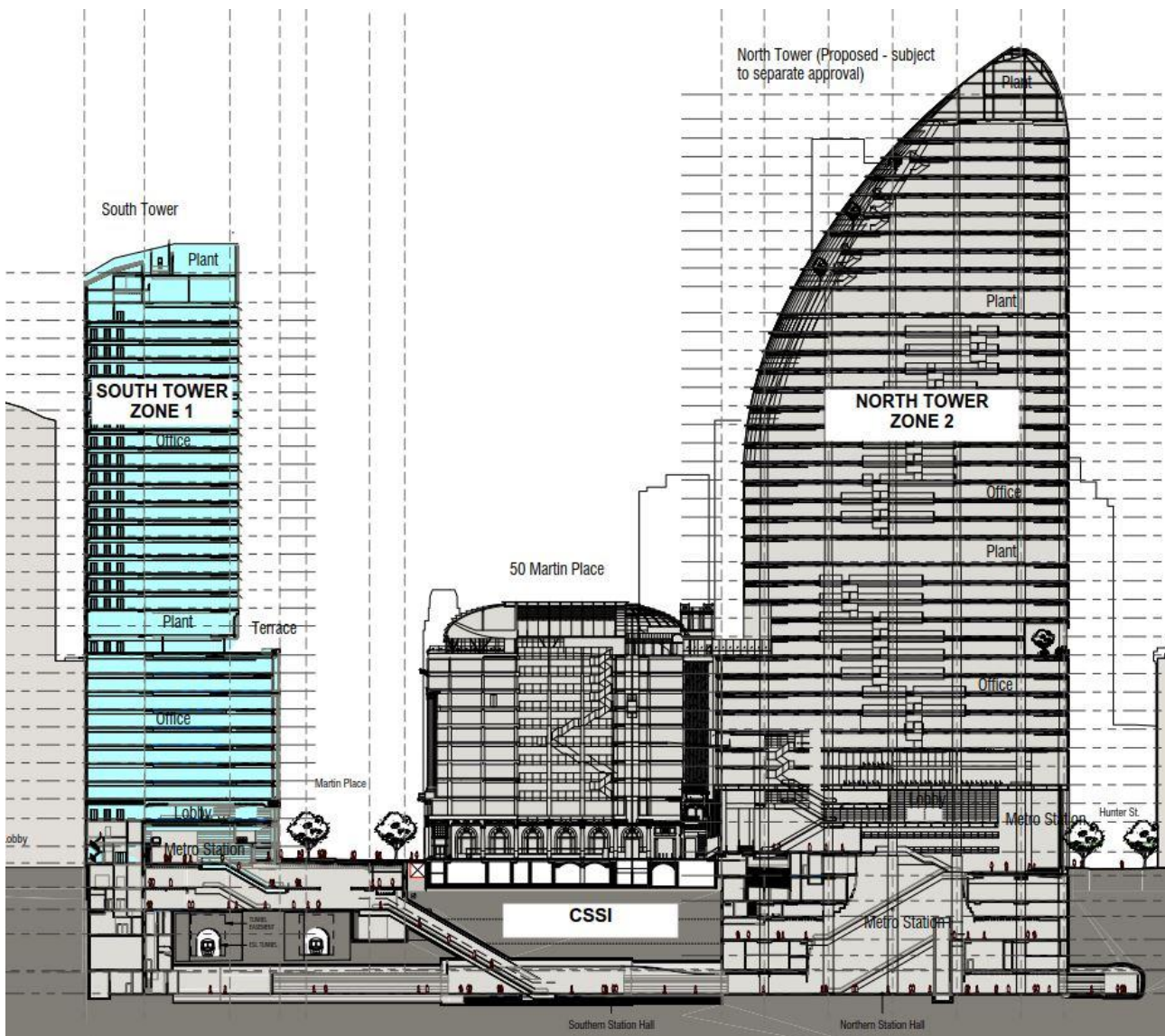


Figure 6 - Construction Zone Break Up

2.2 SUPPLY CHAIN PROCUREMENT

The precinct scale, technical complexity, programme challenges, and quality requirements of the South Tower, together with the Metro Martin Place precinct as a whole, dictate that the selection of the appropriate subcontractors will be critical in meeting the demands of the project. Lendlease will ensure that there is flexibility and redundancy in the supply chain procurement in the way in which the work activity packages are defined from an overarching scope of works and risk management perspective.

Lendlease has identified the below trades as critical to the success of the South Tower aspect of the project:

- Formwork - post-tensioning, concrete supply and place;
- Tower façade;
- Waterproofing; and

- Mechanical / Building Management Services, electrical, hydraulic, and fire services trades.

We will engage subcontractors and supply chain partners that have a proven track record on complex, precinct scale, rail infrastructure projects and CBD high-rise commercial projects.

Our procurement strategy and associated programme is derived from lead times determined from the overall construction program. Initial focus will be on the Design and Construct (D&C) services subcontractors, structure and façade contractors. We will utilise the pre-construction phase for procurement activities for all critical trade packages.

2.3 AUTHORITIES AND UTILITIES MANAGEMENT

At various stages, external approval of components of the works will be required, including:

- Transport for NSW (TfNSW) which incorporates:
 - Sydney Trains;
 - Sydney Metro; and
 - Roads Maritime Services (RMS).
- NSW Fire & Rescue;
- City of Sydney;
- CBD Co-ordinator Generals Office;
- Ausgrid;
- Sydney Water;
- Jemena; and
- Other relevant utility providers.

Our approach with these authorities will differ depending on the respective requirements, however fundamentally Lendlease will seek:

- Prior coordination with stakeholder and client partners to ensure all approaches are aligned;
- Early contact to mitigate potential delays and identify potential issues; and
- Establishment of common contacts that can provide continuity of service on the project. To this end, early introductory meetings will be appropriate (i.e. City of Sydney, TfNSW and Ausgrid).

Lendlease understands that Macquarie have commenced discussions with a number of Authorities, whilst others, such as NSW Fire and Rescue, are being retained by Sydney Metro for certain aspects of the project i.e. the below ground station works from a line-wide perspective. Lendlease will work closely with Macquarie's team to further develop the authority engagement and management strategy.

2.4 HOURS OF CONSTRUCTION

Main site working hours will be governed by the final State Significant Development Application (DA) consent conditions. For the purposes of initial construction planning we anticipate these to be:

Monday to Friday: 7am – 7pm

Saturday: 7am – 5pm

Sunday: No work

In addition to the above working hours, there will be occasional periods when out of hours works are required. Prior to scheduling any out of hours works, Lendlease will agree the process with City of Sydney, address the approvals and additional measures required. The nature of these works

would typically include erection of hoardings, erecting and dismantling tower cranes, works to footpaths, services connections and other works that interface with the surrounding ground plane.

2.5 HOARDINGS

Lendlease notes that the demolition / excavation contractor (TSE package) have established the site with various hoarding and gantries to carry out the work to ensure safety compliance in-line with the WHS Act and associated industry codes of practice.

Lendlease will utilise these existing A-Class hoardings and gate entries to ensure the site security is maintained at all times, and modify for B-Class hoardings as the building height extends to require overhead protection. Additional gates will also be installed as the construction progresses to facilitate access to loading docks and the building perimeter.

B Class hoardings will be erected to the Elizabeth Street, Castlereagh Street, and along the Martin Place frontage of the site in accordance with the Site Establishment Plans. The hoardings will require branding and signage as per the City of Sydney standards which may incorporate graphics as specified by City of Sydney guidelines.

B Class hoarding can incorporate City of Sydney, Macquarie and Lendlease co-branding and may be updated throughout the project in-line with the project requirements. Lendlease have assumed that hoardings can be erected 2 weeks prior to contract start date

The northern side of the South Station Box will be secured by a Class A hoarding, and once the Martin Place ground level podium structure has been constructed, this hoarding will be relocated southwards to allow 15m wide pedestrian access. The hoardings will require branding, graphics and signage as per the City of Sydney standards. B Class hoarding can incorporate City of Sydney, Macquarie and Lendlease co-branding.



Figure 7 – Proposed South Tower Design

2.6 SITE SECURITY AND GATES

The site perimeter will be secure at all times with no unauthorised access permitted. The site perimeter will be secured with full height plywood to the inside face of all B Class hoardings.

Out of hours security patrols will be utilised strategically during the project. The focus will be on the back end of the project, as the potential for theft and vandalism increases. Shutdown periods (Christmas and Easter) will also be monitored by external security services.

CCTV with active motion sensors will be used to track any unauthorised access to tower cranes, man and materials hoists, and site accommodation.

Construction worker access to the site will be strictly controlled through our secured gate system and individuals will require a personalised identity swipe cards. This creates a live record of the workers on-site at any given time, and in case of an emergency and during an evacuation.

2.7 SITE ACCOMMODATION / AMENITIES AND PROJECT OFFICE

Lendlease places emphasis on the quality and amenity of the project and accommodation facilities. Quality facilities set a standard and a level of expectation that we expect our staff and subcontractors to take with them to the workface on-site.

Accommodation and amenities for the construction workforce will be provided in stages. Initial site accommodation sheds will be erected on top of the Class B gantry hoardings, as previously mentioned, which will provide 10kPa capacity to the roof of the sheds.

As construction progresses and backpropping is stripped, the capacity of the on-site accommodation and amenities will be further expanded by constructing purpose built undercover accommodation. This will cater for the increase in workforce numbers and also facilitate dry access to various workfaces. The South Tower site accommodation will be relocated from the initial B Class establishment to L1 and L2.

The project office will be located in a commercial building within close proximity to the site.

3.0 SITE LOGISTICS

3.1 SITE ESTABLISHMENT AND LOGISTICS OVERVIEW

The planning and methodology assessment for the project has identified a number of key stages in the configuration of the site during construction. Please refer to detailed site establishment staging plans throughout this report.

The South Tower site is bounded by Class B hoardings to Castlereagh and Elizabeth St on the western and eastern elevations respectively. The north perimeter boundary is secured by a Class A hoarding maintaining a pedestrian access through Martin Place, as shown in Figure 8 & Figure 9 below. This Class A hoarding relocates further south and the width of the pedestrian access is increased to 15m once Station Tunnelling and subsequent structure and landscaping works are completed to Martin Place.

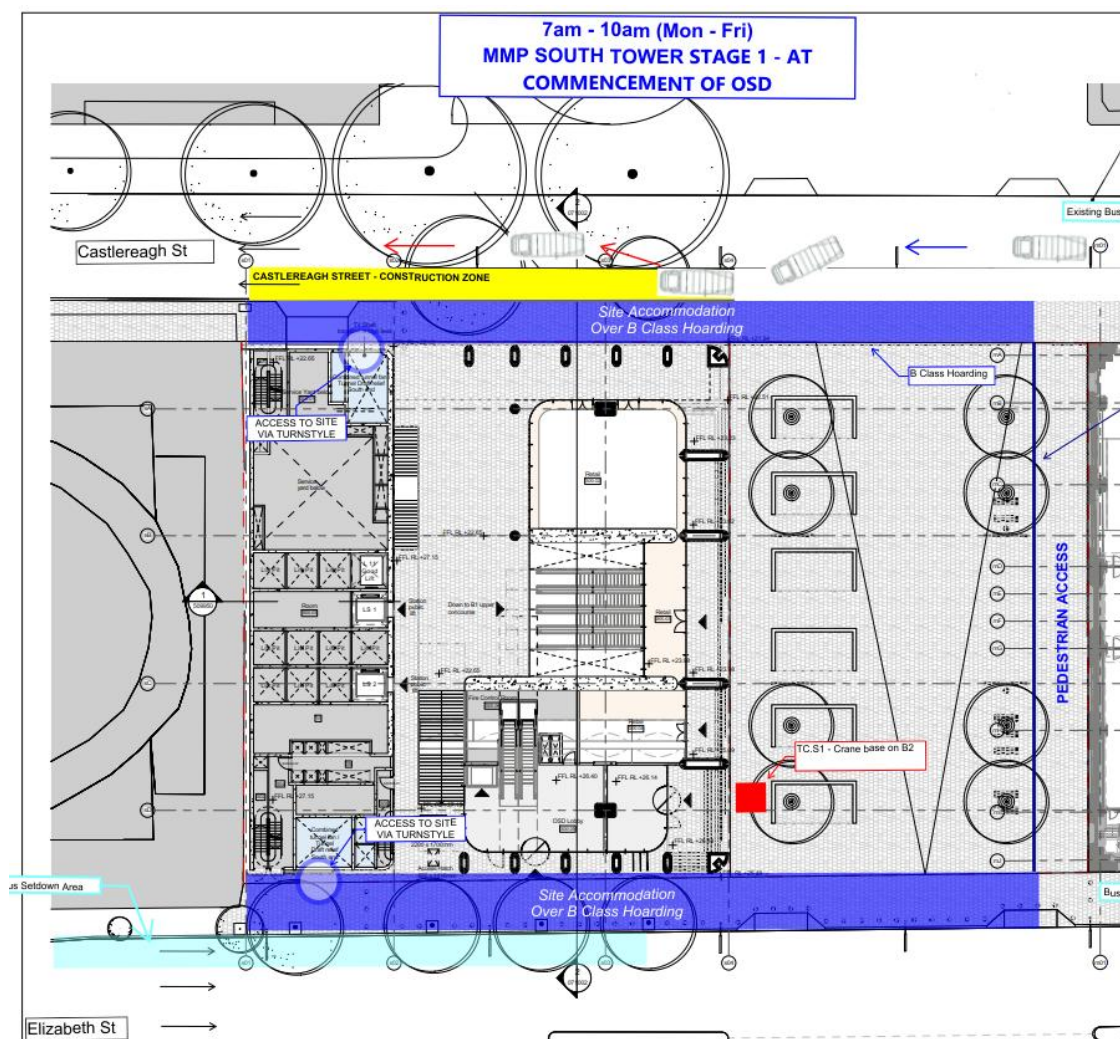


Figure 8 - Construction Zoning Stage 1 - 7am - 10am

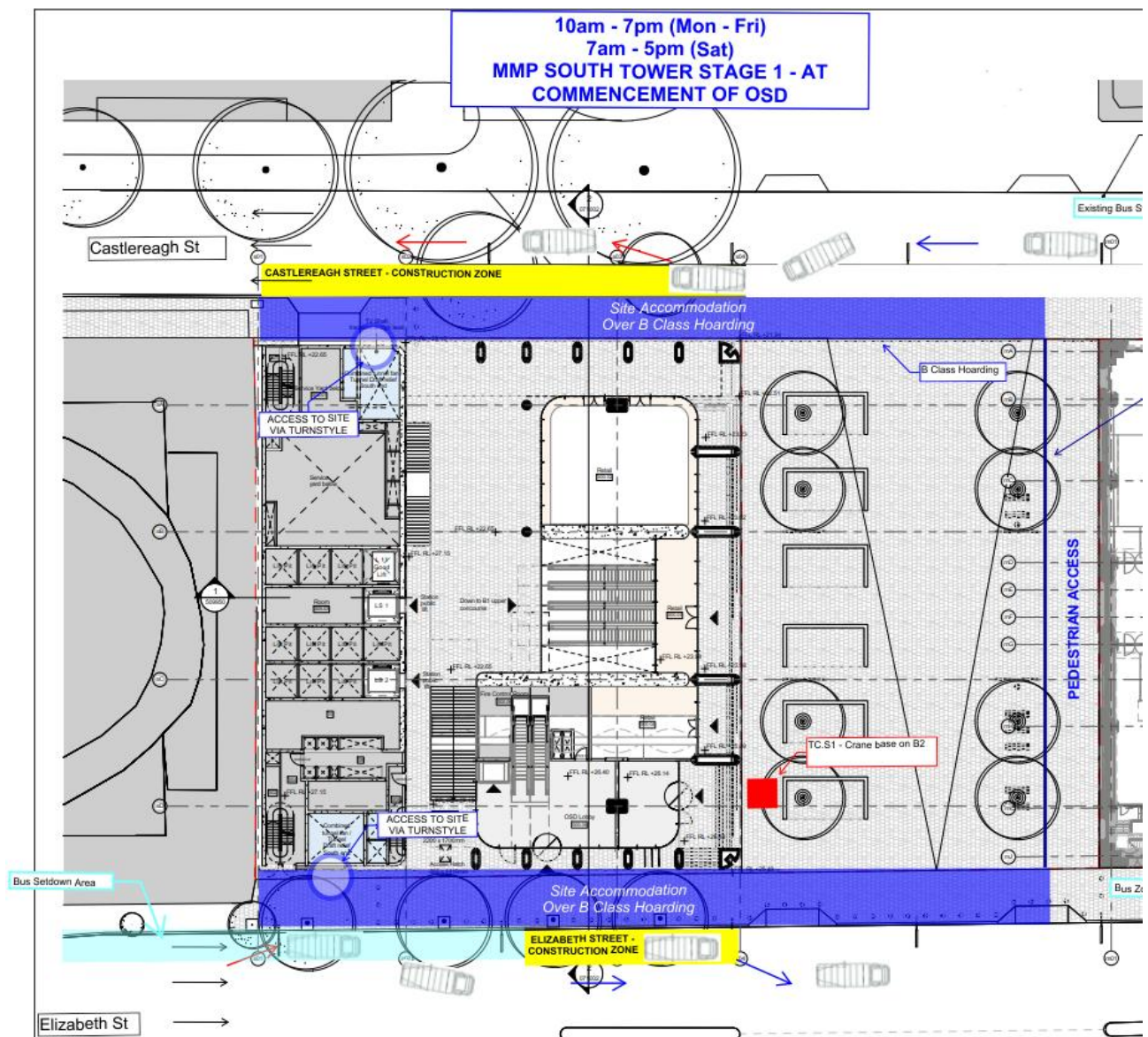


Figure 9 - Construction Zoning Stage 1 - 7am - 7pm

The South Tower site accommodation is staged to provide for a peak workforce of 400 workers as follows:

- **Stage 1 – AT THE COMMENCEMENT OF OSD** - Site Accommodation installed on B Class Hoarding.
- **Stage 2 - from 15mths onwards** – Once levels 1 and 2 are stripped of backpropping, site accommodation is relocated to L1&2. L1&2 accommodates 400 workers at peak of South Tower works.

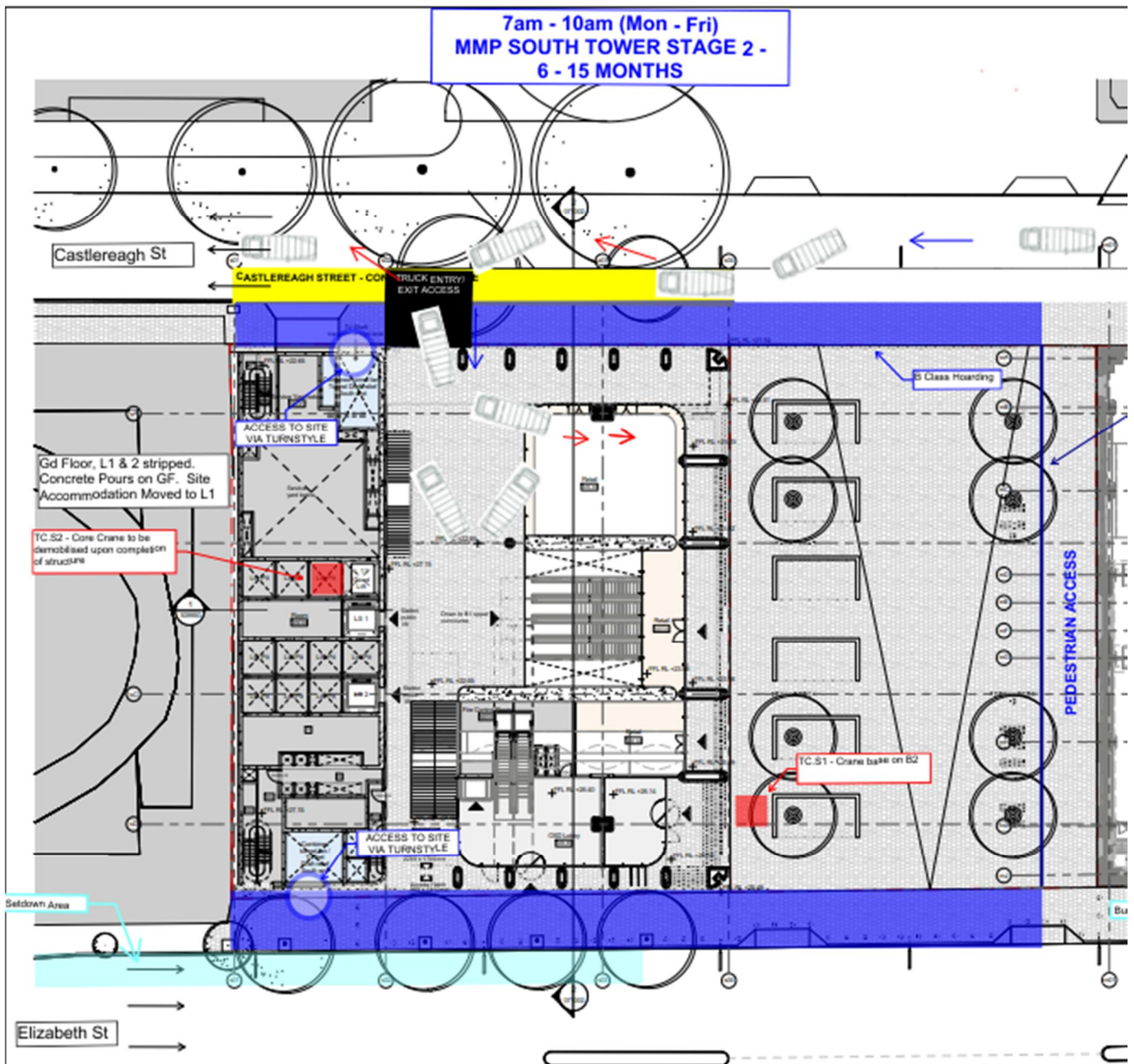


Figure 10 - Construction Zoning Stage 2 - 7am - 10am

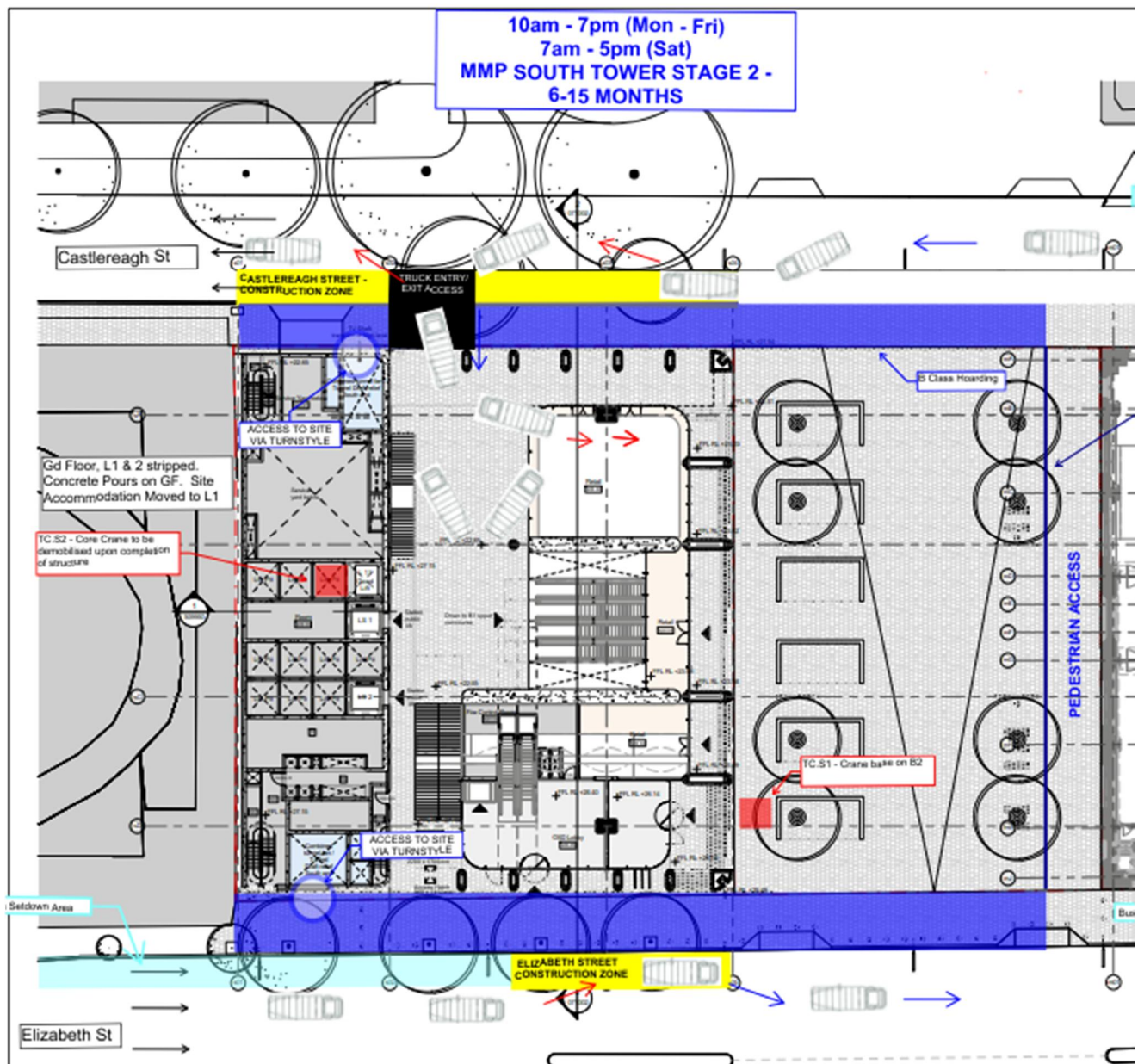


Figure 11- Construction Zoning Stage 2 - 7am - 7pm

Once the ground floor structure is stripped, materials handling and concrete pumping access is available from Castlereagh St. In turn, this allows a reduction in Elizabeth St Construction Zone to 20m, as shown in Figure 10. We have assumed the ground floor slab design will accommodate 20kPa live load for materials handling purposes.

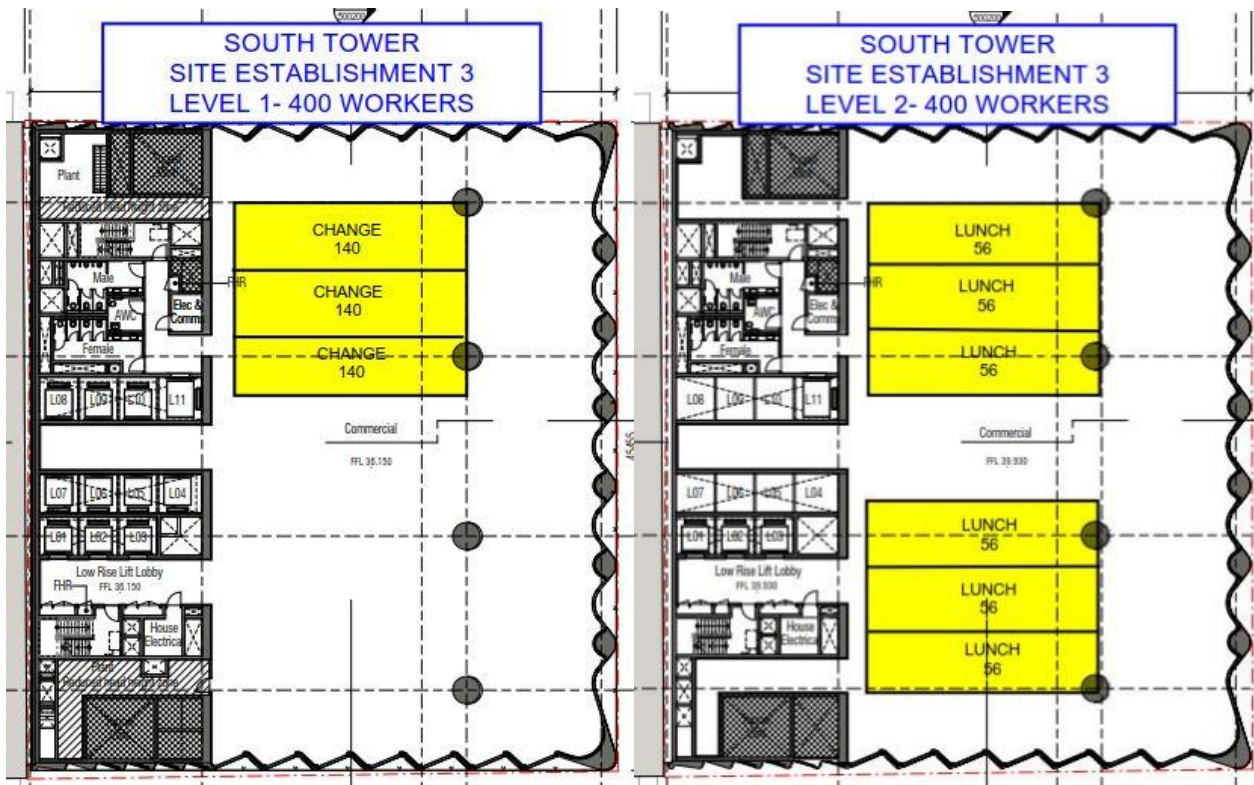


Figure 12 – South Tower - Internal Site Accommodation on L1 & L2 (IMAGE UNDER REVIEW)

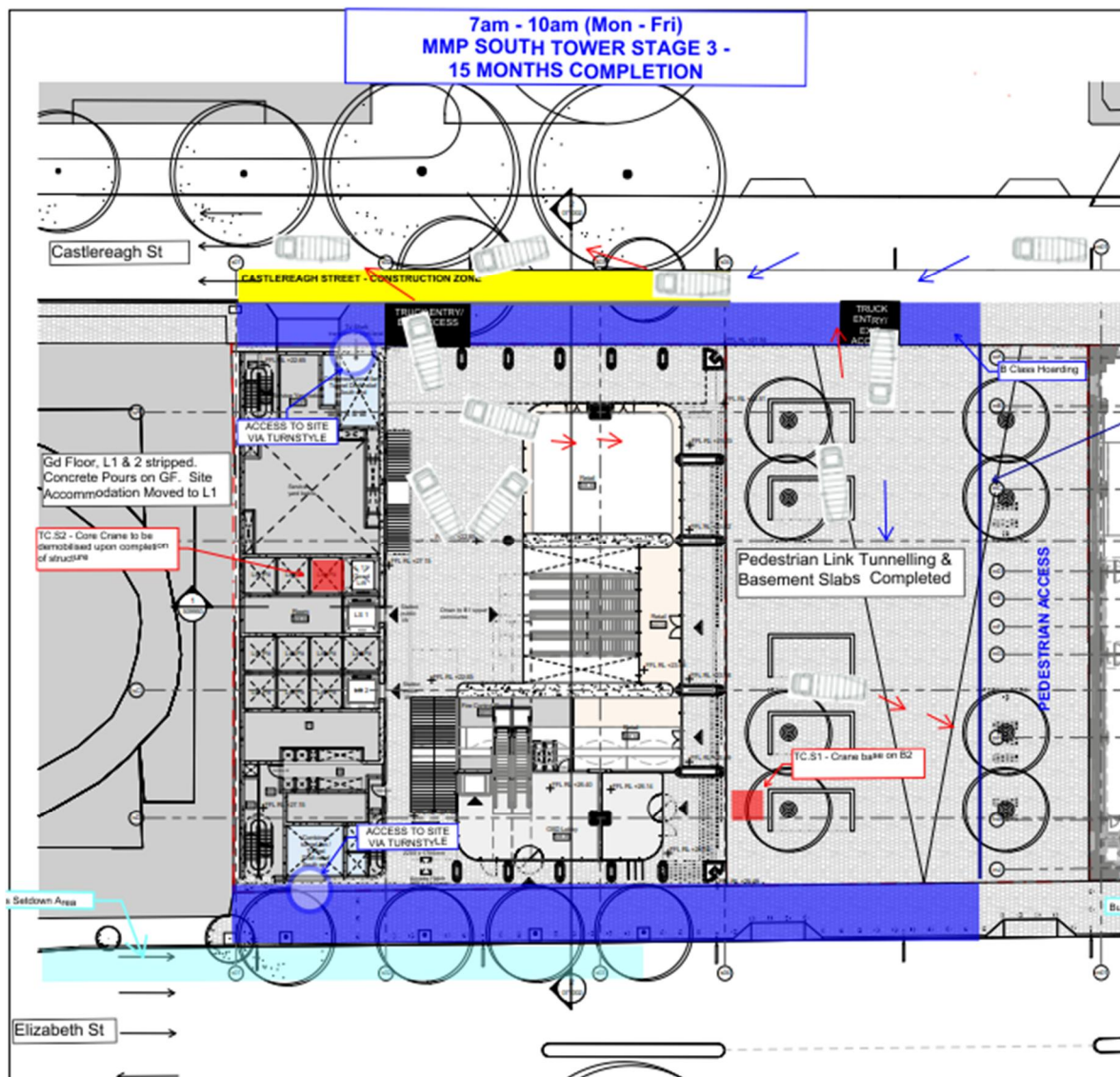


Figure 13 - Construction Zone Stage 3 - 7am - 10am

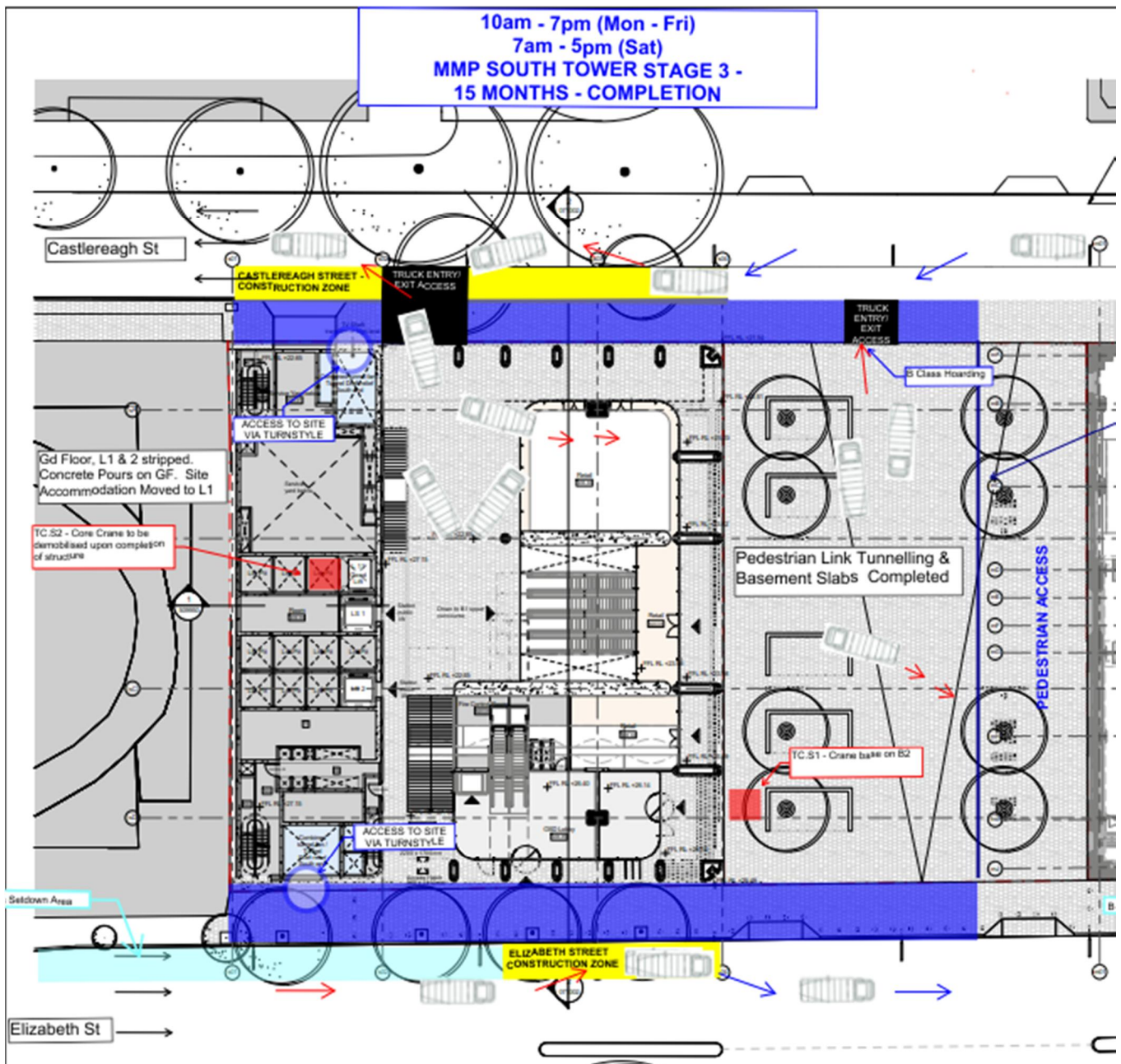


Figure 14 - Construction Zoning Stage 3 - 7am - 7pm

On completion of the tunnelling works, the basement and ground slab works are completed allowing the relocation of Class A and B hoardings along North, West and East elevations providing 15m wide pedestrian access to Martin Place, as shown in Figure 14 above.

3.2 MATERIALS HANDLING AND CRANAGE

3.2.1 CRANES

To determine the type, size, position and quantity of cranes required for the most efficient material handling solution for the project, a detailed craneage analysis has been undertaken. Our selected strategy will be the utilisation of two (2) tower cranes for the South Tower works.

The tower cranes in this CMP will be used for the OSD construction. Materials handling for the station fit out will be delivered using basement access routes, which will be already constructed.

Tower Crane 1 will be positioned externally to the floor plate in the north-east corner and will be founded in the excavated void at B5. This crane is proposed to be a Favelle Favco M630D tower crane with a 58m boom and a lifting capacity of 9.5t at the tip of the boom. This crane also has capacity to lift 32T at 25m from Elizabeth St construction zone. It will be uninstalled during the Station works.

It will be equipped with an external climbing frame and tied into the concrete structure. The central position provides crane hook coverage to the core area and the floor plate, lifting from construction zones on Castlereagh St and Elizabeth St. This crane has been sized for major lifts such as the generators and heavy plant.

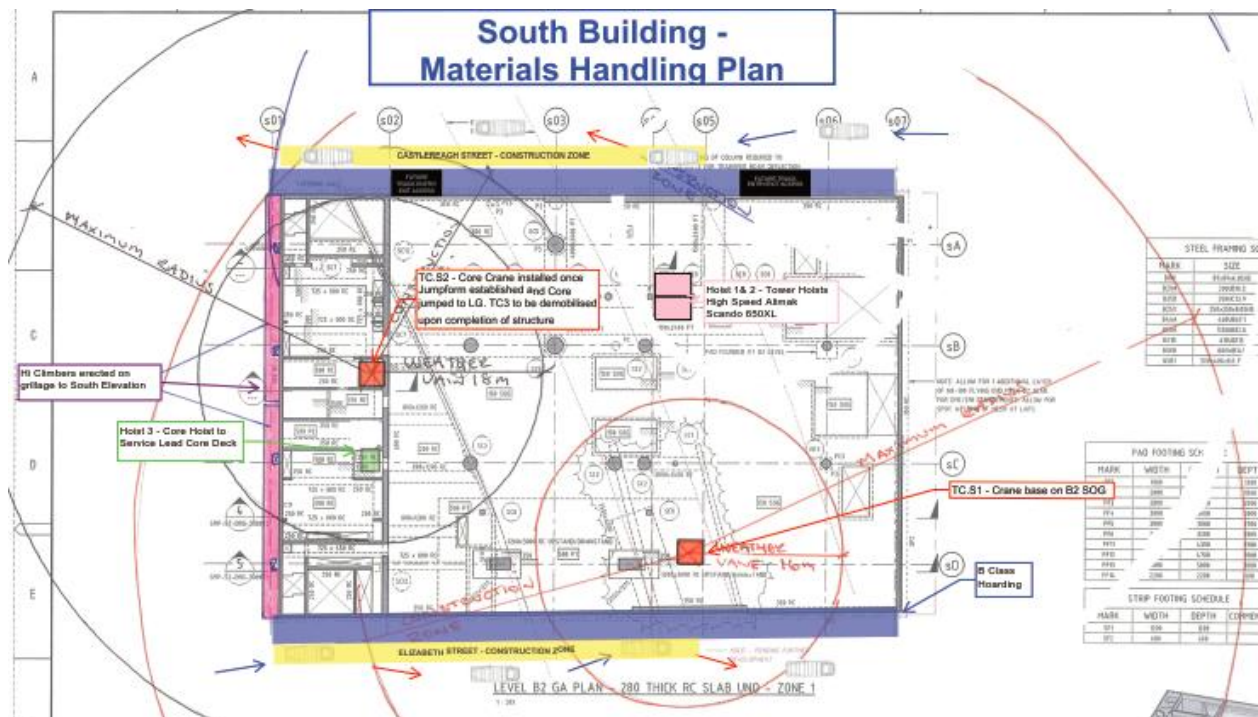


Figure 15 – South Tower –Site Establishment Plan 3b

Once the core Jumpform is established and jumped to LG level, Tower Crane 2 will be established internally to the floor plate in the high-rise lift core. This crane is proposed to be a Favelle Favco M390D tower crane with a 40m boom and lifting capacity 12.1t at the tip of the boom. It will be equipped with internal climbing frame & climbing pockets in the concrete structure. This position provides crane hook coverage to the entire site including the loading platforms, lifting from Elizabeth and Castlereagh St. Tower Crane 2 will predominately service the core, allowing the core to progress ahead of the floor structure. This tower crane will be erected and dismantled via Tower Crane 1 onto Castlereagh St or Elizabeth St.

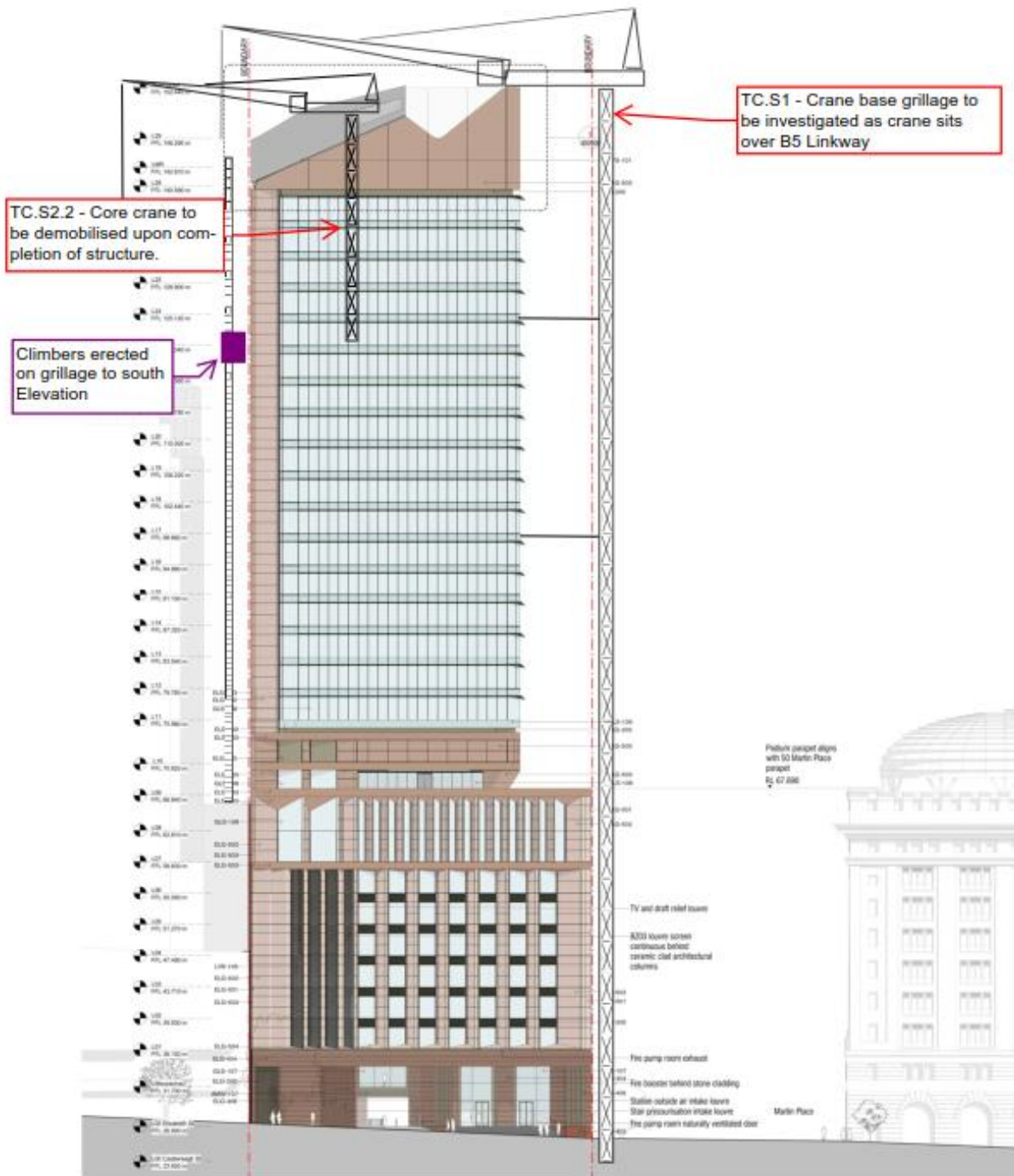


Figure 16 – South Tower – Materials Handling Plan – Cranes & High Climbers

3.2.2 MAN & MATERIALS HOISTS

Moving materials and workers up and down the structure will be by means of man and material hoists as follows:

- Single Jumpform core hoist will be installed to provide access from Basement 1 to the leading jump form level.
- Twin hoists will be installed to all levels from B2 – L28.
- Excavation hoist.

The hoists will be progressively removed once the temporary fit-out and commissioning of the internal builder's lifts are completed.

3.3 PERIMETER SCREENS

Perimeter captive screens will be erected to provide edge protection for the tower structure from L9 - L28. To reduce any programme risks associated with the crane being out of service due to weather conditions or having to be maintained, the North, East and West elevation screens will be self-climbing. Lendlease has assumed that the structure can take the imposed loads of the backpropped, self-climbing screens. These screens will also have small apertures on the cladding to reduce the risk of wind-blown materials penetrating the screen cladding.

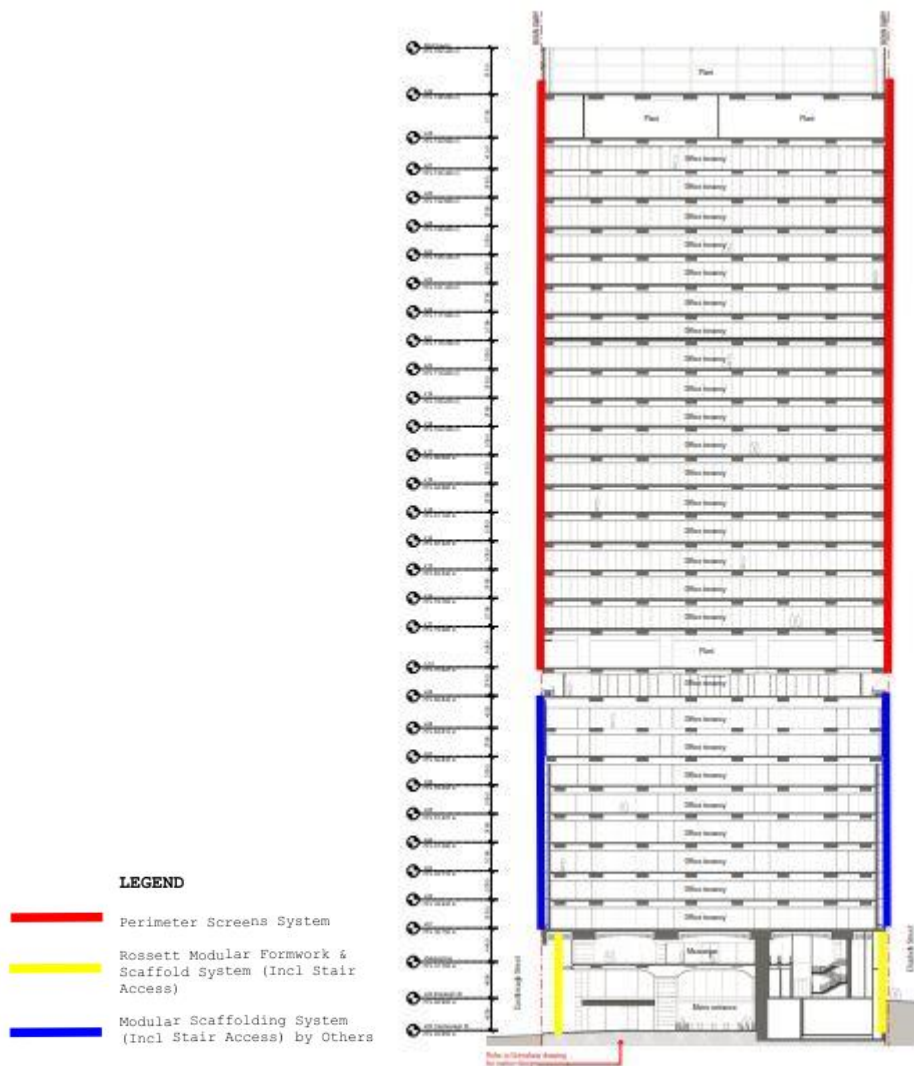


Figure 17 – South Tower – Perimeter Protection during Structure Phase

These screens will cover three (3) levels of the structure below the leading deck and half a floor height above the leading deck for reinforcement, post tensioning and concrete placement works prior to the screen jumping to the next level.

3.4 SCAFFOLDING

Scaffold will be required across the South Tower in various areas, the majority of the scaffold installation will occur in the following areas:

- Podium Façade L1 to L9 – as shown in Figure 17 above.
- Rooftop Plantroom.

3.5 TEMPORARY WORKS

At various stages of construction, a number of temporary work items will be required to support the South Tower works including:

- B Class Hoardings along site perimeter.
- Self-climbing Perimeter Screens.
- Self-climbing Jumpforms to cores.
- Loading bays.
- Placing booms.
- Man & Materials Hoists.
- Mast Climbers to Southern elevation.
- Structural Steel needles to support podium scaffold.
- Crane footings, climbing pockets in core and ties.

These items will be carefully planned, fully engineered, certified and EH&S compliant.

3.6 MAIN STRUCTURE

The fundamental strategy for the structure will be to maintain continuity for both subcontractor and materials handling resources. To achieve this, the typical structure above ground will be constructed using a two (2) pour sequence. We have also assumed the ground floor slab design will accommodate 20kPa live load for materials handling purposes.



Figure 18 – South Tower – Mid-Rise Structure

3.6.1 CORE STRUCTURE

The main core will be constructed with two jump form systems (low-rise and high-rise). The core will advance ahead of the suspended slabs below and will be serviced by Tower Crane 2, located in the high-rise lift core. A single man and materials hoist will serve the core Jumpforms. Access will also be provided internally to the leading deck via permanent fire stairs.

The core design will be reviewed during the detailed design phase to look at efficiencies that can be introduced to allow the Jumpform to be constructed as early and as typical as possible.

As currently documented, there are a number of transfers to core walls in the lower basement levels that prevent the Jumpform being established earlier than B1 level.

The following sequencing has been programmed in relation to Core Jumpforms:

- **Core 1** – South East corner – Jumpform commencing on B1, low rise lifts, lifts drop off L10, midrise lifts drop off L27, core finishing with lift overrun and motor room on L28.
- **Core 2** – South West corner – Jumpform commencing on B1, low rise lifts, lifts drop off L10, midrise lifts drop off L27, core finishing with lift overrun and motor room on L28.

3.6.2 PODIUM FLOORS

The podium levels from L2 - L8 incorporate saw-toothed concrete slab edges to the West and East elevations, with larger scalloped curved slab edges to north elevations as shown below. To form these curved edges, scaffold will be erected off ground floor. This will allow formworkers to overform these curved edges at every level off the scaffold.



Figure 19 - South Tower – Low-Rise Structure

3.6.3 TYPICAL TOWER FLOORS

On completion of the plantroom on L9, the tower structure steps in from Grid Line S04, necessitating a bridge platform to be installed to access the man and materials hoists set out off podium structure line along GL S04 as shown below.

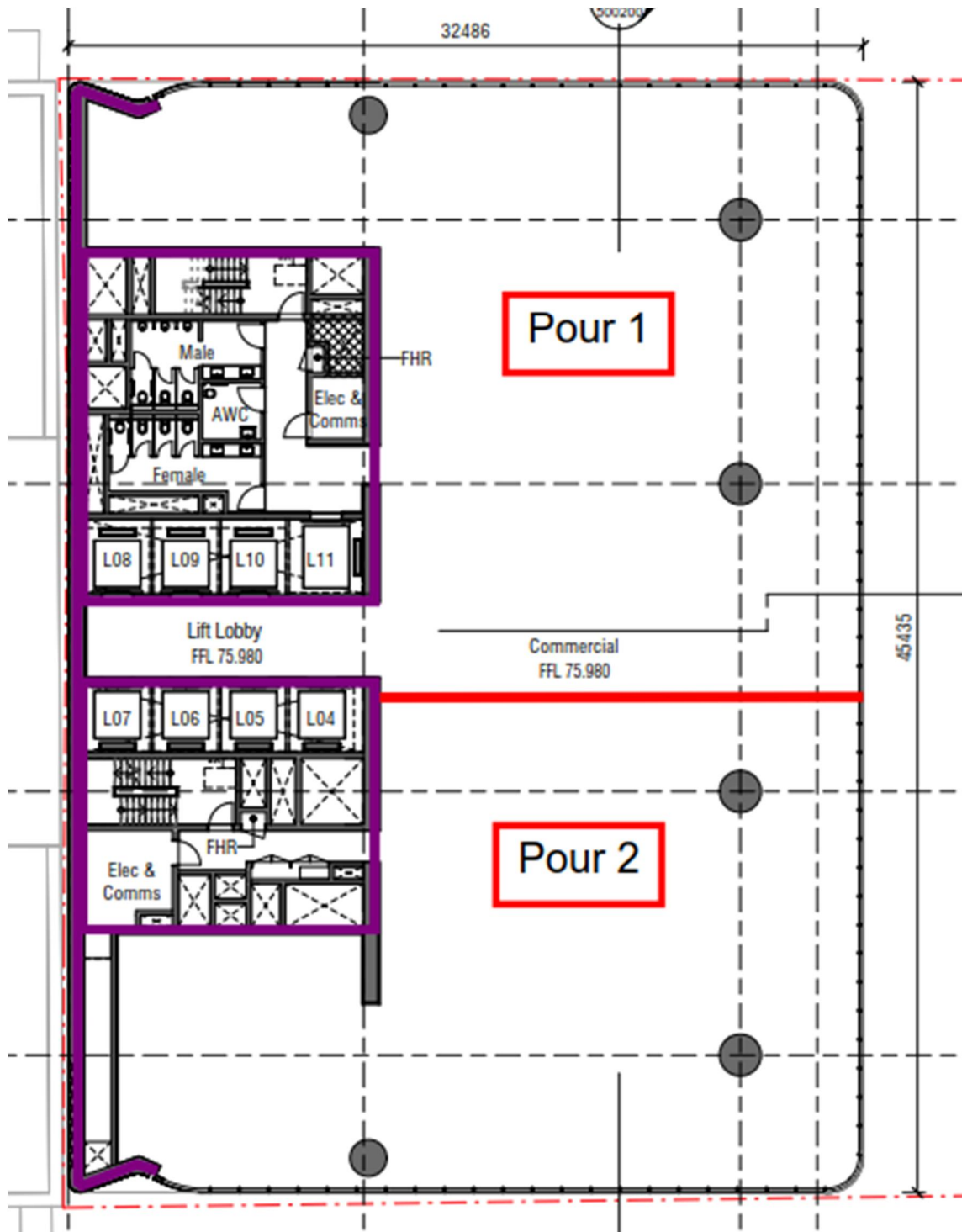


Figure 20 - South Tower – High-Rise Tower Structure (IMAGE UNDER REVIEW)

The above Figure 20Error! Reference source not found. shows the proposed concrete pour methodology, reduced core delineation, man and materials implemented on a typical tower floor.

3.6.4 FORMWORK

The structure will incorporate multiple formwork systems i.e. beam formwork using frames and tables, high strutting and intermediate props to metal formwork soffits, column forms and the like. The typical floors will see band beams and slabs formed using table Bondek formwork system. These formwork systems have been optimised and improved at Lendlease's Barangaroo project and will be further enhanced for Metro Martin Place. Columns will be formed using column tubes.

As a design option, the use of permanent metal form systems Bondek, Condeck, Kingflor or equivalent in lieu of table forms to floor slabs will be explored in the detail design phase to offer additional savings to the South Tower Structure.

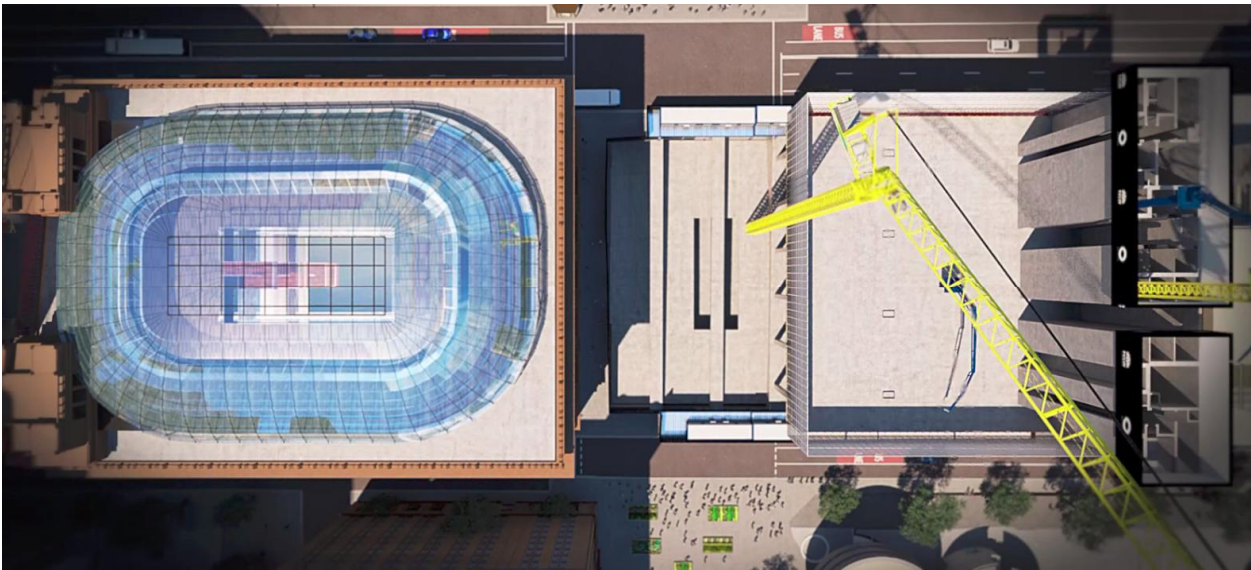


Figure 21 – South Tower – Extent of Structure

3.6.5 CONCRETE POURS

The South Tower's concrete pour sequence has been selected to maximise continuity of the structural trades, facilitating resource balancing of trades between multiple work areas and maintaining consistent cycle times. Pours have been sized to ensure pumping, placing and finishing will be completed within the nominated site working hours.

The initial concrete pours to the foundations, slab on ground, and initial pours to the main core and suspended basement slabs will be carried out with the use of a mobile concrete pump located on the Castlereagh St or Elizabeth St Construction Work Zones. Two (2) of concrete placing booms will be set up to provide concrete placement to both the main core and suspended slabs. The placing booms will be located on the core and the floor plate and will be climbed progressively, as the structure progresses.

Once the underside of level 1 is stripped, a static line and concrete pump will be located on ground floor, facilitating a two-truck feed and single truck access and egress onto ground floor via Castlereagh St.

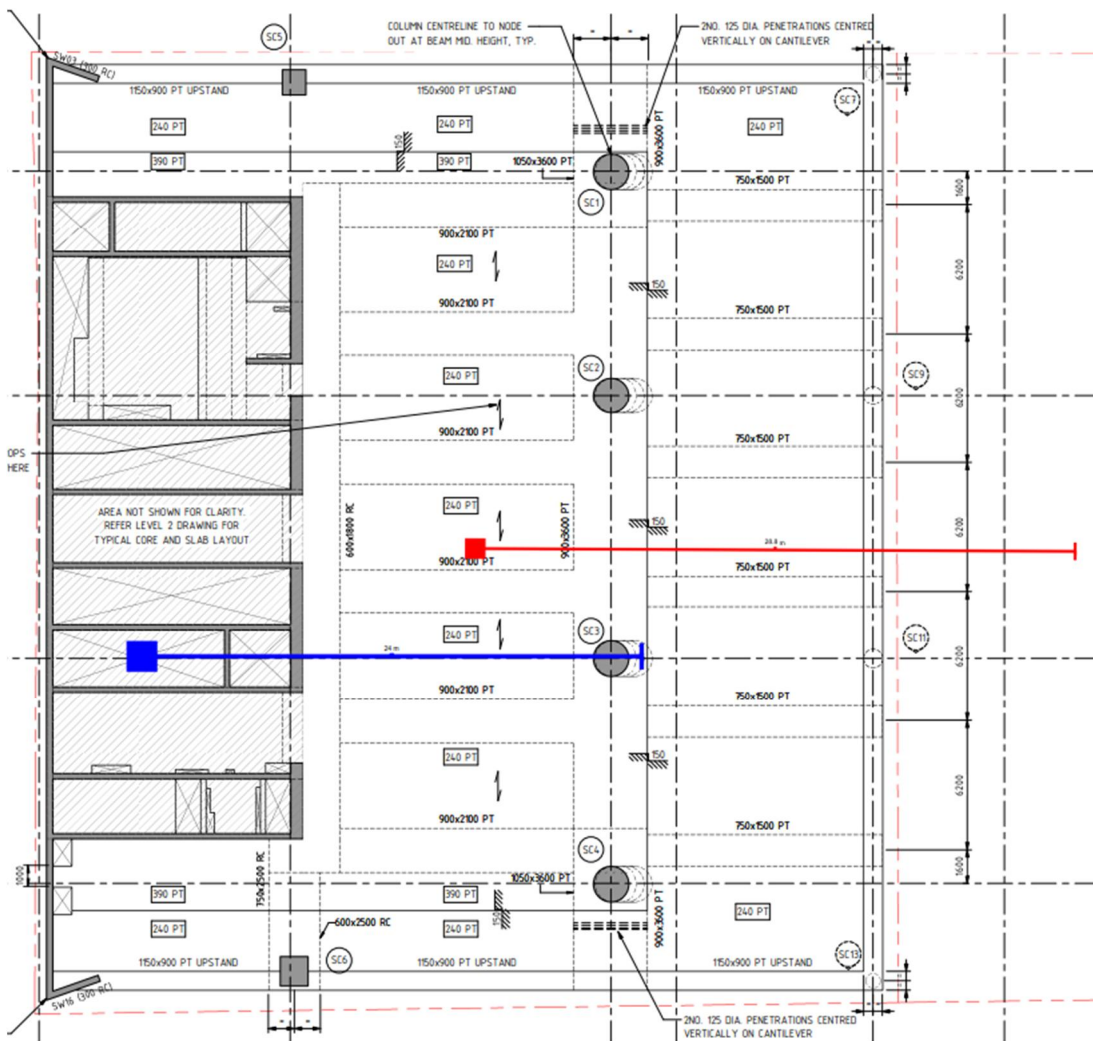


Figure 22 – South Tower – Concrete Placing Booms

As shown in Figure 22 above, two (2) of concrete placing booms will be set up to provide concrete placement to both the main core and suspended slabs. These booms will be climbed progressively with the structure.

3.6.6 STRUCTURAL STEEL

The most critical area of structural steel on the South Tower will be the rooftop plantroom on L28-29. Where possible, the structural steel will be installed by Maeda Crane.

3.7 FAÇADE

The façade types and detailing for South Tower façade is not fully developed at time of compiling this DA submission. For our GMP pricing, programming and planning purposes Lendlease have allowed to adopt a unitised panel system for façade types including:

- Low rise podium façade GF– L2.
- Low Rise Curved Façade L2 – L8.
- High Rise Tower Façade East, West and North elevations L10 – L28.
- Southern Elevation GRC.
- Louvres to Plantroom levels including; L10, L28, L29.
- Rooftop Façade L28 – L29.

3.7.1 LOW RISE CURVED FAÇADE

As noted above, we have assumed the curved glass to podium levels will be supplied and installed from Tower floors as a unitised panel system.



Figure 23 – South Tower – Curved Podium Façade High Rise Tower Façade

The tower façade (Level 10 - 29) consists of a unitized glazed curtain wall system. The installation of the tower façade unitized panels.

3.7.2 SOUTHERN FAÇADE - HIGH CLIMBER ACCESS SYSTEM

The southern façade of the tower is made up of Glass Reinforced Concrete (GRC) façade panels. The façade is on the boundary line of the neighbouring property. This situation will not allow traditional means of curtain wall façade installation to occur (i.e. launch panel with crawler crane from the floors above). Therefore, a high climber access system to the southern elevation will be installed. Figure 24 below shows a typical high-rise mast climber.



Figure 24 – High Climber Access System

3.8 BUILDING SERVICES

3.8.1 SERVICES OVERVIEW

The Building Services installation through to commissioning of all systems for the complete Metro Martin Place is critical for the overall successful delivery of the whole precinct. As such, the detailed design, installation, testing and commissioning of each of the building services installations will be undertaken by specialist subcontractors. To also ensure the requirements of the project are adhered to, the individual service installation will also be reviewed and approved by the Independent Commissioning Agent (ICA). The ICA will be involved in all stages of the project from initial design reviews, workshop drawing review / approval through to final witness testing of the installed systems.

The building services subcontractors will become integral members of our team, and will include but not be limited to:

- Mechanical Services.
- Electrical Services.
- Generator Services.
- Security Services.
- Communication Services.
- Hydraulic Services.
- Dry and Wet Fire Services.
- Vertical Transportation (Lift and Escalator).
- Building Management System.

3.8.2 SITE BUILDERS SUPPLY

Each floor will have a builder's supply that reticulates from a rising tee off box, three phase supply will be available in the core area, builders supply DBs will be positioned on the floors to ensure we comply with AS/NZS 3012, Electrical Practices for Construction work (COP) and the Lendlease GMRs. Lighting and Nurse Call systems will utilise a Low Voltage (LV) 24V Smart Safety Lighting system, the installation will meet AS/NZS 3012, Electrical Practices for Construction work (COP) and the Lendlease GMRs. Due to the size and duration of the project we will have a dedicated subcontractor team ensuring the builders supply is maintained throughout the construction programme.

3.8.3 PLANTROOMS

The installation of plantrooms will commence immediately after formwork is stripped to these levels. Where possible, major Plant and equipment i.e. chillers and gensets, will be procured early, installed, and formed around with the structure. This is preferred to avoid unnecessary access penetrations in the structure to be infilled at a later date; thereby delaying the services rough-in, plantroom fit-out and commissioning works.

Services plantroom components can be fabricated and prepared off-site such as risers, plantroom sections, and at times above ceiling corridor services. Pre-fabrication significantly reduces the raw materials, waste and contaminates on-site. Experience detailed planning is required and we have demonstrated improvements to timelines and especially quality.

3.8.4 SERVICES RISERS & ROUGH-IN

Within the main works, the services installation will be carried out over a number of stages and across numerous work faces, all under the guidance of the specialist subcontractors' supervision, Services Project Managers, Services Engineer and Services Supervision.

Services rough-in will commence once back-propping is removed and floor areas become available. The trade sequence will follow through as indicated in the construction program on a trade-by-trade, area by area and level-by-level basis. The installation of main plant, vertical services risers and lift installation works will be completed in parallel with the works on each floor.

Areas requiring particular attention will be those associated with the services infrastructure, risers, plant rooms, HV substations, LV switch rooms, fire control rooms, etc. These rooms will be prioritised for completion to allow for the individual services subcontractors to commence their detailed installations. Early access to these critical services rooms will allow for the commencement of pre-commissioning and testing works prior to the final individual system commissioning.

Lendlease will also ensure that deliveries are minimised and optimised on-site to reduce the amount of truck movements in and around the CBD. To reduce the amount of deliveries related to the services installation Lendlease propose to maximise the amount of pre-fabrication opportunities of all services installation. This will include business as usual prefabricated main services risers and where the opportunity exists, individual services risers. This will reduce site movements and achieve a factory grade quality for all major services components.



Figure 25 – Pre-fabricated Ductwork to Services Risers

Figure 25 above, shows the pre-fabricated mechanical duct risers being installed, this technique minimises site congestion, has a high degree of quality control as it is produced offsite, is productive and safer to install.

The main challenge initially with the services works will be the accurate coordinated rough-in. The installers will benefit from fully coordinated construction documentation generated through the digital engineering / co-ordination process. Individual services to each area must be completed and pre-tested prior to proceeding to the next area.

3.8.5 SERVICES FIT-OFF

Services fit-off will follow once the sequence of internal fit-out works has progressed. The challenge at this point in the project is to ensure work sequences are maintained and clearly defined including adequate resourcing so that final testing and commissioning periods are not compromised

Externally, all utility incoming house service connections i.e. permanent power, water, gas and communications connections will be completed on program to ensure commissioning and testing can commence as scheduled.

Plant and equipment to be installed on the Martin Place Metro Project will be supplied by recognised and reputable manufacturers and leaders in providing high quality solutions. Careful consideration will be given to the sustainability and energy efficiency requirements of the equipment to ensure the whole of life (WOL) and ESD requirements are achieved.

Plant and equipment will also be installed to achieve ease of access for maintenance in accordance with best practice and WH&S guidelines, thus ensuring safety of all facility, operations and service personnel

4.0 COMBINED TRAFFIC AND PEDESTRIAN MANAGEMENT

4.1 TRAFFIC MANAGEMENT OVERVIEW

Lendlease understand one of the keys to the successful delivery of Metro Martin Place will be managing the flow of materials and equipment into and out of the construction site whilst maintaining a continuity of business for the CBD – Keep the City Moving. We believe it is imperative that our planning considers and successfully manages the maintenance of pedestrian and traffic flow to the surrounding buildings and roads.

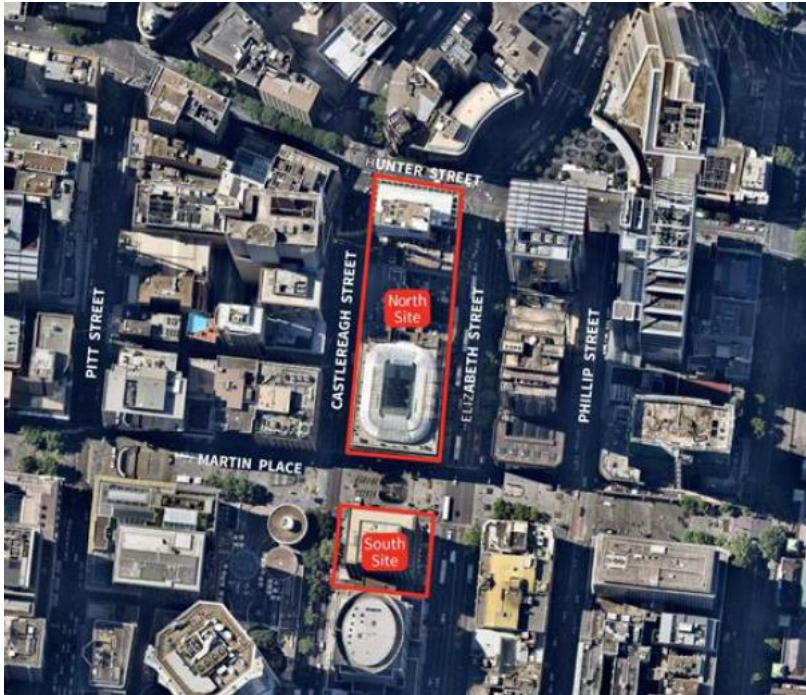


Figure 26 – Metro Martin Place Surrounding Road Network

To do this Lendlease will be adopting a number of key traffic management strategies to minimise and mitigate Metro Martin Place's effects on the surrounding CBD:

- Engagement of Traffic Management Consultant to compile an overall Traffic Management Plan, specific Traffic Control Plans detailing each management of pedestrian, vehicular construction and operational traffic at each stage of works;
- Encouraging staff, consultants and subcontractors to adopt a Green Travel Plan for this project with use of public transport to and from site.

4.2 EXISTING TRAFFIC MANAGEMENT AND CONTROL

The existing site has a number of trafficable street frontages. The South Site has two as follows:

- *Castlereagh Street – Hunter to King St* – is a one-way street southbound and consists of one bus lane and one traffic lane. On both sides of the road, there are designated parking lanes, loading bays or bus zones during weekdays. This should facilitate construction zone access to the South Building for the duration of the development pending approval by the relevant authorities.



Figure 27 – Existing Vehicular Access Points

- Elizabeth Street – Hunter to King St – is a two-way street consisting of one traffic lane and bus lanes in each direction. Northbound, north of Martin Place, there are three traffic lanes and no bus lanes.
- On both sides of the road, there are parking lanes which are mainly designated as loading bays or bus zones on weekdays, with on-street parking permitted at weekends (apart from the western side of the road, north of Martin Place which is mainly ‘no stopping’).

We have identified the existing kerbside uses along Castlereagh St and Elizabeth St with the weekday daytime uses of these streets shown in Figure 28 below. As indicated by City of Sydney, it is expected that the volume of buses on Elizabeth St will be significantly reduced with the opening of the Sydney Light Rail. On this basis, we have assumed that a construction zone on Elizabeth St will be permitted, out of peak hours (10am – 3pm).

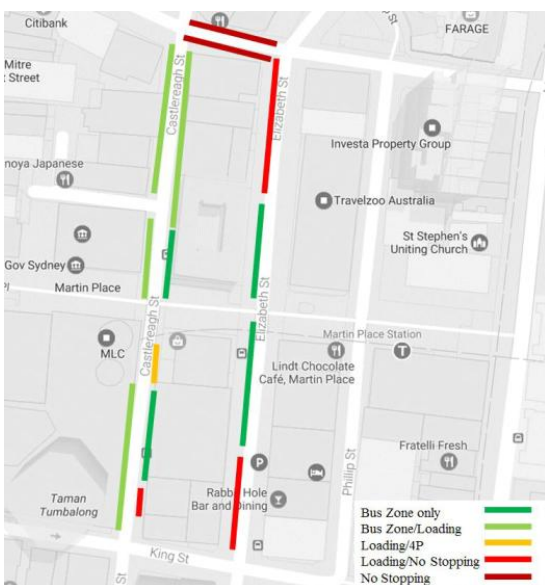


Figure 28 – Existing Weekday daytime kerbside uses

4.3 EXISTING PEDESTRIAN MANAGEMENT AND CONTROL

The TSE Contractor's planning for pedestrian management and access across Martin Place is not yet known. We appreciate the TSE Contractors approach to pedestrian management over the preceding 3years, prior to OSD works commencing in May 2020, will largely dictate future pedestrian patterns and influence our approach to pedestrian management in and around Martin Place.

During the detail design phase, we will review the TSE Contractor's approach and develop our Pedestrian Management Plan to best accommodate the changing pedestrian flows and patterns to Martin Place in conjunction with our construction staging for the precinct.

4.4 PROPOSED CONSTRUCTION ZONES

See below the proposed construction zones for the South Tower we are proposing Construction zones to both Castlereagh St and Elizabeth St. Ground level structure is completed and stripped, facilitating concrete to be delivered and pumped from within site footprint on ground level as shown below.

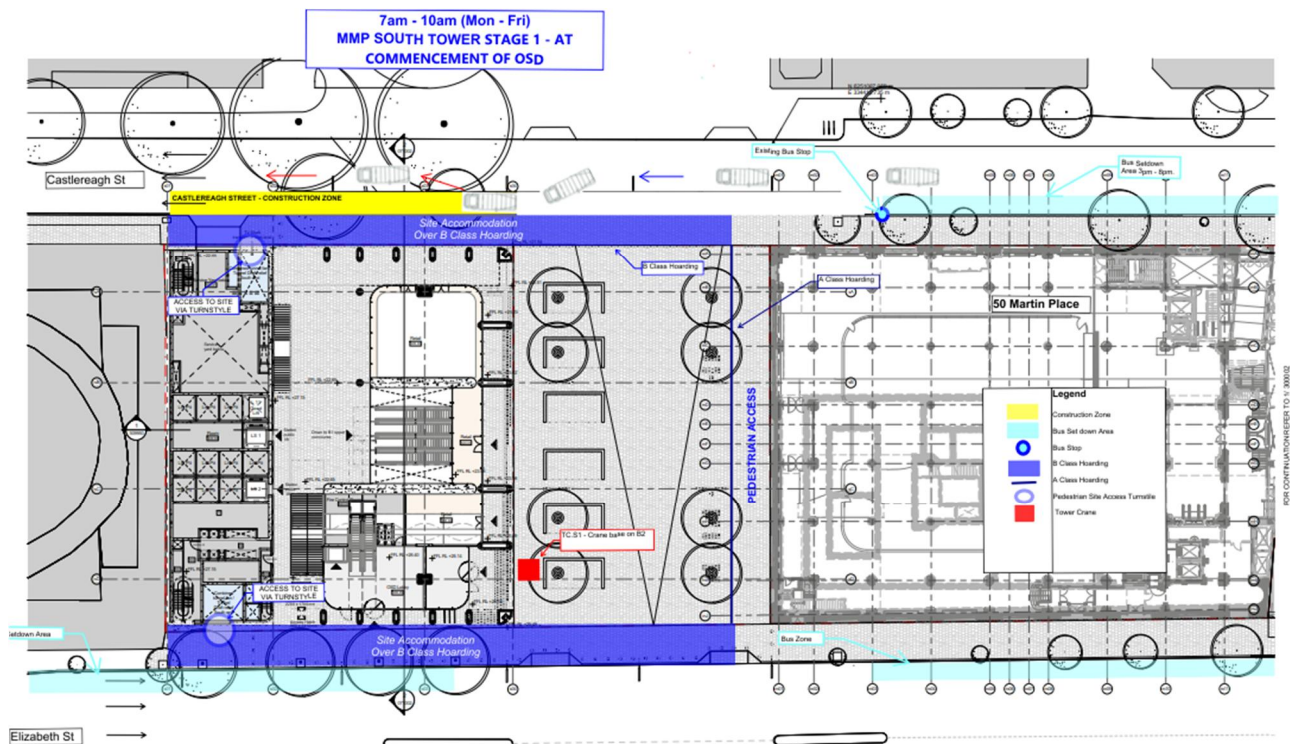


Figure 29

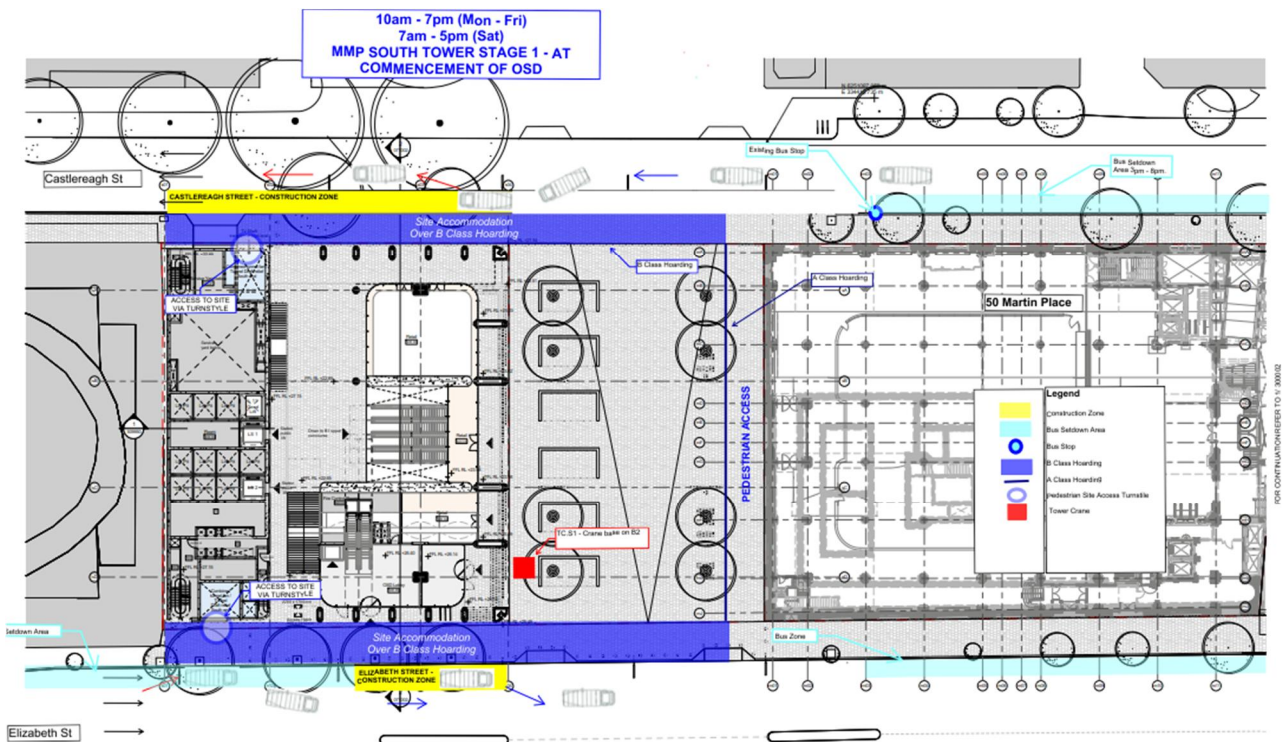


Figure 30

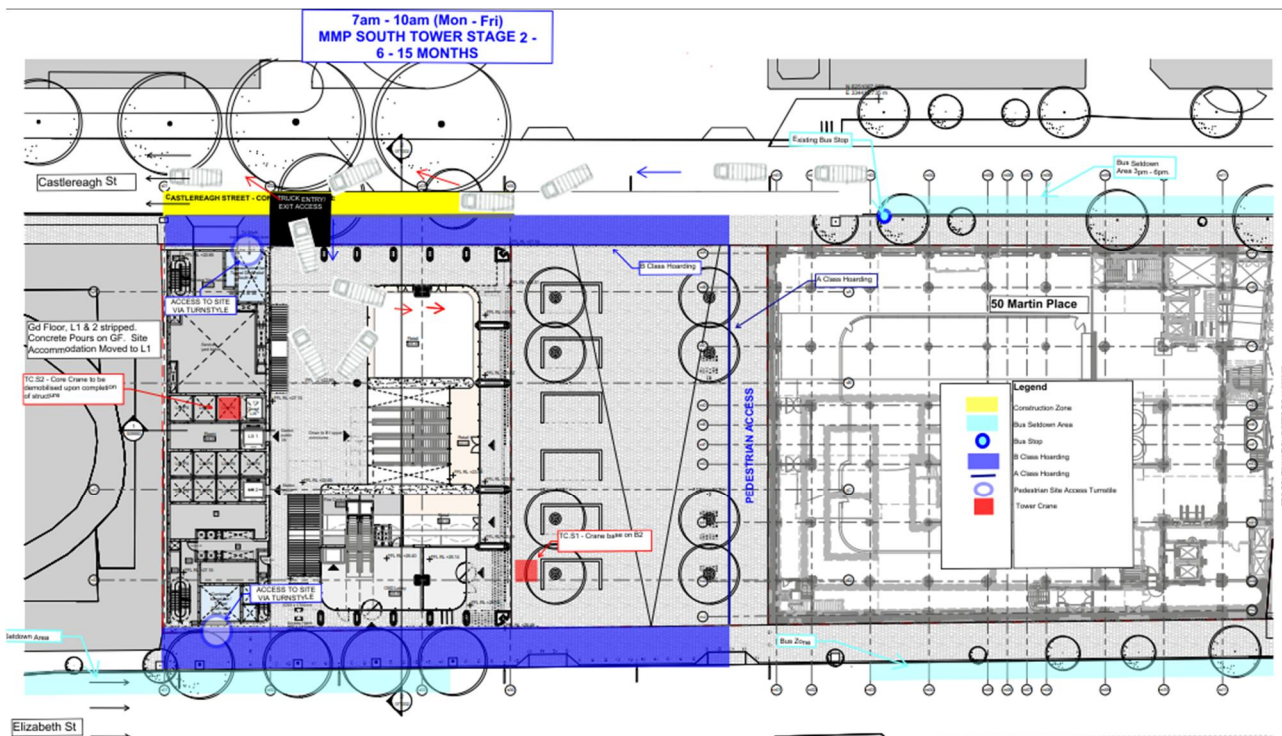


Figure 31

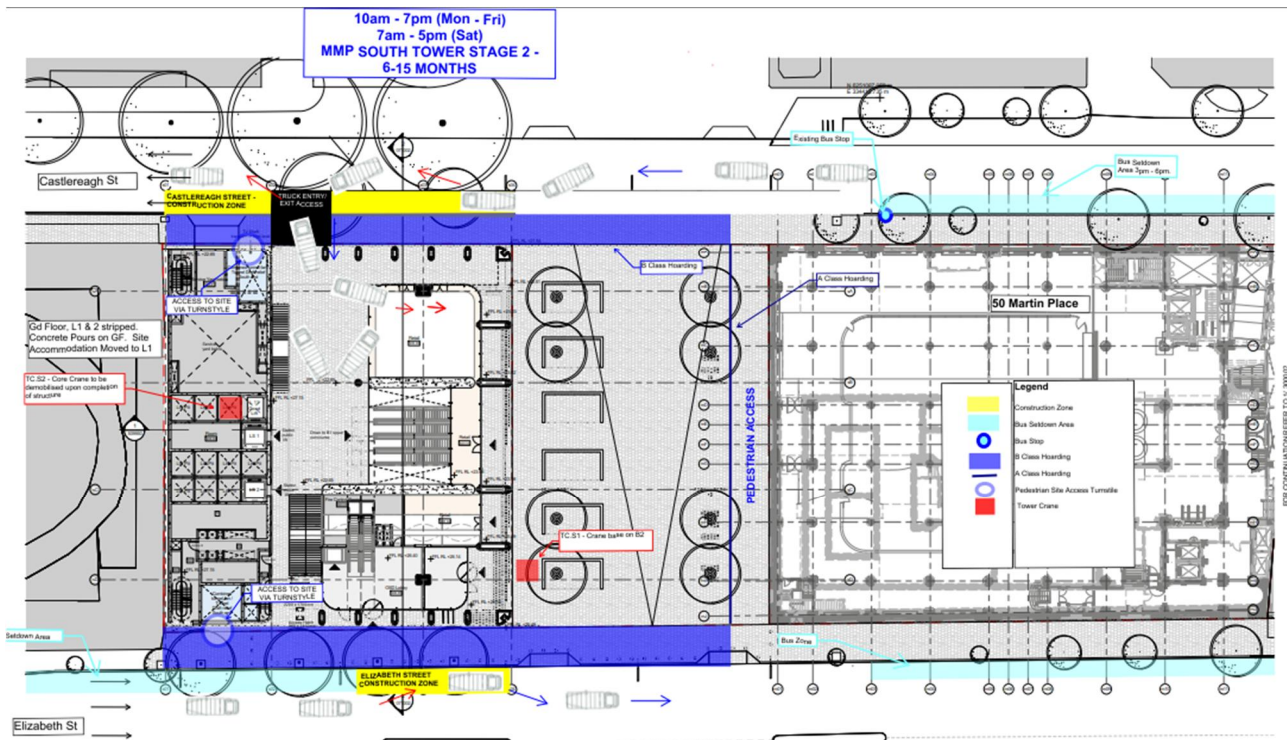


Figure 32

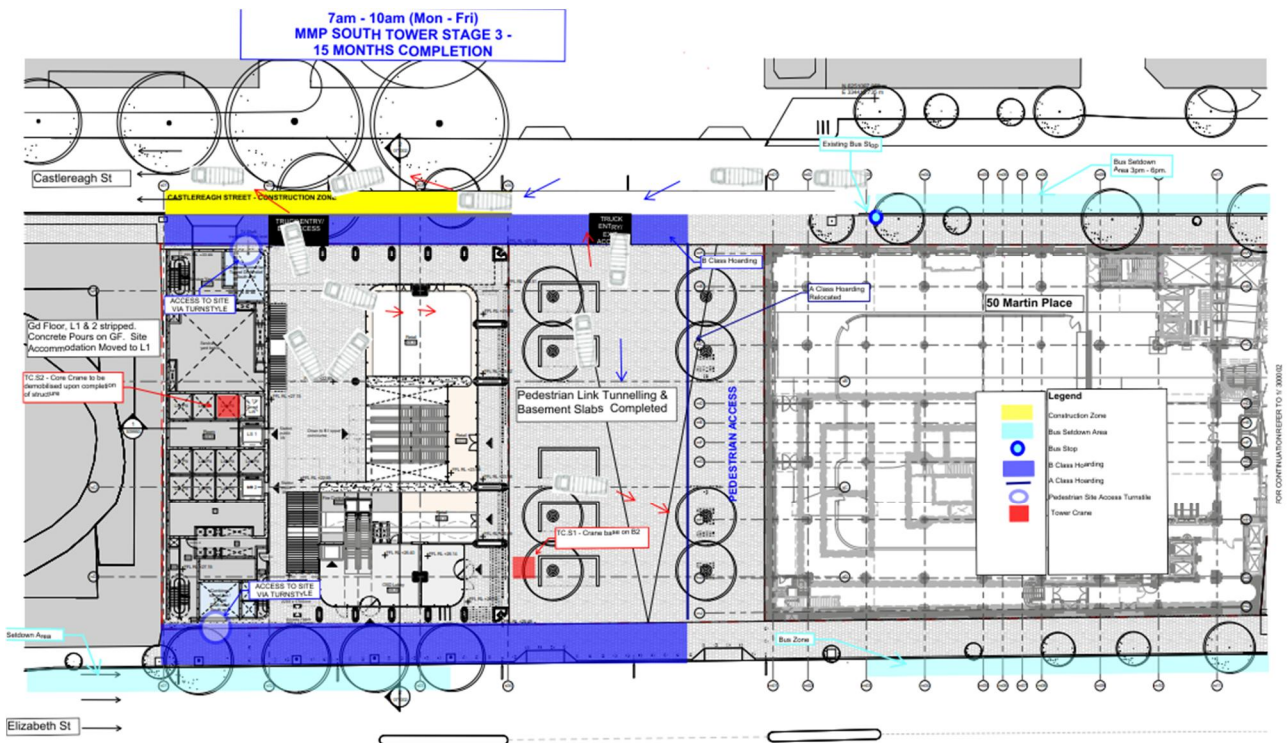


Figure 33

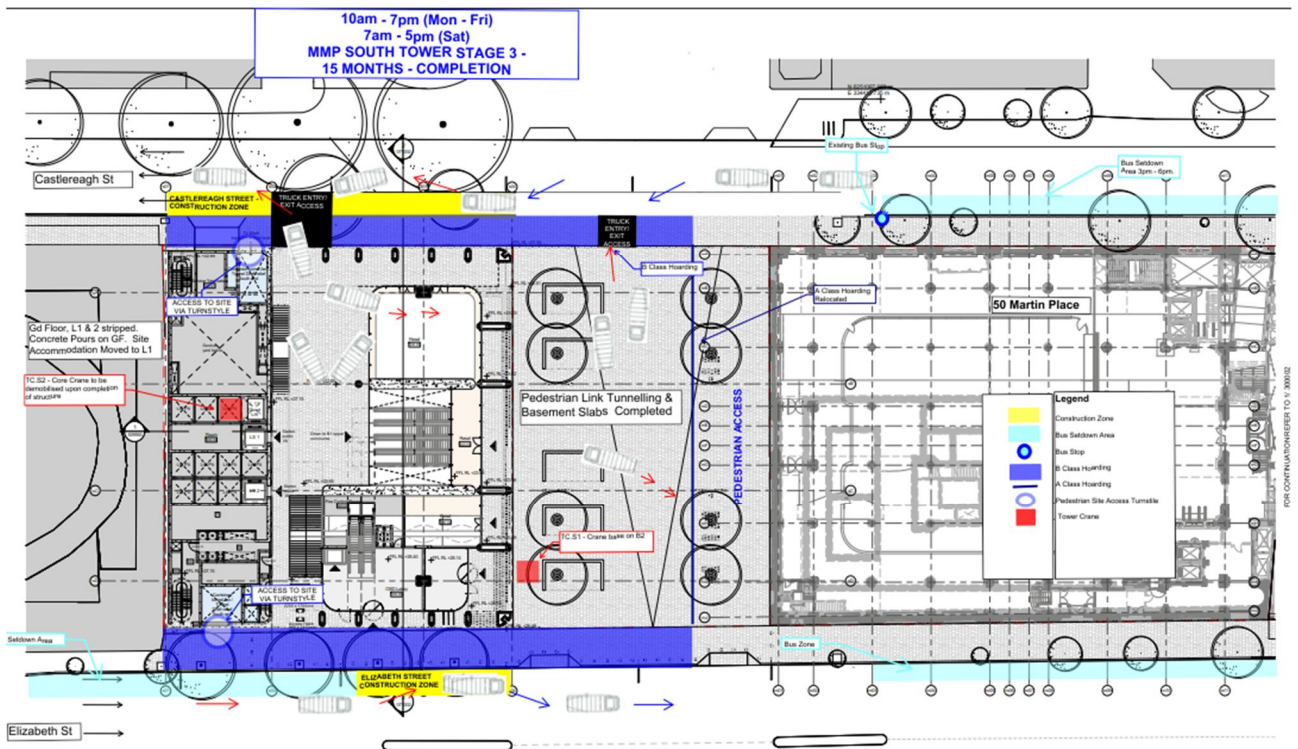


Figure 34

4.5 PROPOSED CONSTRUCTION TRAFFIC MANAGEMENT AND CONTROL

During the detailed design phase Lendlease will develop, in conjunction with the relevant authorities, a detailed Traffic Management Plan to identify, document and implement the strategy for managing pedestrian and traffic construction movements for the precinct. This TMP will also include a Traffic Control Plan for each stage of construction works, across all key work areas - in particular the services infrastructure and public domain works outside of site footprint.

Traffic management and control will be established across all major roads and interfaces across the project. Traffic control in the form of traffic controllers, warning lights and pedestrian boom gates will be in place at all site access/egress and construction zones to ensure:

- Segregation of the general public from truck movements in and out of the project.
- Segregation of construction worker access from construction vehicular access in and out of the project.
- Materials and deliveries do not impede public roadways or footpaths.
- Streamlining of time taken for truck movements in and out of the project.
- For access details to the station refer to the station CMP.

4.6 CONSTRUCTION DELIVERIES

It is imperative that our planning considers and successfully manages the maintenance of pedestrian and traffic flow to the surrounding buildings and roads.

To do this Lendlease will consider adopting a material booking system called the virtual superintendent on this project. This system allows the external supply chain to book a delivery to the project through an online portal which can be live streamed to the Crane Co-ordinator, Materials Handling Foremen and Site Managers via computer or field device.

Booking delivery times can be allocated to each on-site construction / loading zone and each mode of materials handling; Tower Crane, Man & Materials Hoist, Builders Lifts, Gantry Crane. This online system will provide a means of:

- Booking, reallocating deliveries in 'real time';
- Controlling and prioritising deliveries to site based on critical path activities;
- Ensuring materials are delivered to work areas as they are needed – minimising materials stored on-site;
- Ensuring cranes, hoists, builders lifts are fully utilised; and
- Formal allocation of construction and loading zones for Metro deliveries.

This daily information can then be printed out or sent electronically to the team, RMS, City of Sydney as required to ensure that effective just in time deliveries occur on-site and traffic congestion around construction loading zones are avoided.

Lendlease has used this system at Barangaroo and at the North Connex Project with great success, and will adopt it on this project given the CBD location constraints.

4.7 CONSTRUCTION WORKER ACCESS TO SITE

With no parking available on-site, all subcontractors and construction workers will be encouraged to use public transport via nearby train stations, buses and ferry networks.



Figure 29 – Main Public Transport Nodes Surrounding the Project

5.0 SUSTAINABILITY IN DELIVERY

5.1 INTRODUCTION

Sustainability has been an integral part of our culture for more than 50 years. Making a difference in our communities, improving health and safety standards and reducing our environmental impacts are central to our business strategy. We believe it's the right thing to do. But it's also the smart thing to do, because it creates long-term value and reduces operational and financial risk.

Lendlease has a group-wide Sustainability Framework in place to provide discipline and focus for all our efforts and activities on what matters most to Lendlease and our stakeholders. At the core of this strategy remains the recognition that people are at the heart of why, how and what we do. We have adopted an integrated approach that encompasses environmental, social and economic performance.

This framework encompasses 12 elements with long term goals, as well as nearer 2020 targets for energy, water and waste. Our sustainability commitment and capability is unrivalled in Australia as evidenced by more than 120 Green Star, Infrastructure Sustainability, LEED and WELL ratings across our Australian projects.

Our commitments to Sustainability through the Design of the Metro Martin Place project are detailed elsewhere but the following pages outline our approach to Sustainability with regards to the Construction Management Plan.

5.2 OSD - SUSTAINABILITY IN DELIVERY

Lendlease has set some exciting and ambitious targets for the over station development of Metro Martin Place. These targets include:

- 6-star Green Star for the South Tower.
- 90% construction waste diversion targets.
- Commitment to a healthy workforce with our high-performance site sheds.
- 60% of reinforcement steel to be recycled.
- 30% by mass of Portland cement in all concrete with supplementary cementitious material.

5.3 CONSTRUCTION CARBON AND ENERGY MANAGEMENT

To forecast and track Carbon and Energy performance, Lendlease uses an online aggregation platform that site engineers and construction managers complete monthly. Primarily this is about meeting our obligations under the National Greenhouse and Energy Reporting (NGERs) legislation but it also assists us in managing project costs and ultimately about reducing our environmental footprint. This platform can be used to provide timely performance metrics that can be communicated to all stakeholders in digestible form; reporting at project reviews, digital tracking displays on site, equivalency to everyday metrics such as distances driven in a car, number of swimming pools of water saved, 'elephants-worth' of waste etc. It also allows our teams an opportunity to demonstrate the carbon impact of the efficiency initiatives that we may deploy at various stages of our projects through our Site Sustainability Standards, for instance:

- LED temporary lighting.
- High efficiency air conditioning units in site accommodation.
- Improved site metering and load switching.
- Electric tunnelling machines in-lieu of diesel.
- Biodiesel and ethanol fuel mixes for all external plant and equipment.
- Use of non-potable stormwater and groundwater capture for dust suppression.

As well as tracking and minimising our energy consumption for the project as a whole, this process will be used to quantify and demonstrate our obligation to offset carbon emissions required for the delivery of the South Tower.

5.4 WASTE MANAGEMENT AND RECYCLING

Trade subcontractors are encouraged to consider initiatives that reduce waste across the whole lifecycle of material procurement from sourcing raw materials, production, manufacturing, packaging, distribution, potential for reuse and recycling, operation, maintenance or disposal of the products being provided. Our EH&S Delivery Standards require that all projects minimise Construction and Demolition (C&D) waste with many CBD projects achieving reported recycling rates of more than 90% via the off-site sorting capabilities of our waste contractors.

Lendlease ensures all waste is correctly handled by utilising only experienced third party waste disposal contractors who are selected to ensure compliance with all legislative requirements in handling, transport and disposal of waste. The Green Building Council of Australia has developed guidelines for sustainable waste management that our waste contractors must verify compliance with through independent certification. In addition to C&D waste, as a part of the Lendlease Site Sustainability Standards all sites must provide:

- Paper, bottle, plastic (co-mingle) and printer cartridge recycling.
- 80% recycled paper for photocopiers with default B&W, double-sided printing.
- Reusable cups, utensils and plates to eliminate plastic and paper kitchen supplies.

These mandatory initiatives lead to high recycling rates from our site offices.

5.5 MATERIALS MANAGEMENT

The construction industry is becoming increasingly aware of non-financial risks in the supply chain, leading to a common commitment to engage more closely with suppliers to increase environmental and social awareness and drive innovation. In some cases, this also means better understanding the capacity and capability of local suppliers to prioritise their participation where possible.

Traditional 'tender review management systems' that mechanically collect safety, environmental and quality criteria from suppliers can be very inefficient if the same supplier is being asked the same questions by many different project teams. Further, the assessment of the responses can be inconsistent, depending on the level of experience or knowledge of the assessor.

In early 2016, Lendlease invested in a supply chain prequalification system called Browz that requires suppliers and subcontractors to answer a range of questions around quality, safety, sustainability and workforce management before they can tender on Lendlease projects. Questions cover off legal and compliance requirements as well as allowing companies to demonstrate differentiation particularly in the area of safety and sustainability, typically driven by a broader organisational purpose and values. This framework is also used to identify suppliers and subcontractors in high impact categories that may consistently have non-compliances and offer them training and assistance to improve.

Lendlease will build on our experience and knowledge of Browz to develop a supply chain pre-qualification process for the Metro Martin Place project that simplifies the collection of important non-financial information about our suppliers and subcontractors. Browz is particularly useful in identifying risks associated with country-of-origin, high impact materials and how companies address human rights for their employees and their suppliers.

Lendlease will ensure adequate training is available for suppliers and where appropriate, we will share experiences through appropriate industry channels, like the Australian Supply Chain

Sustainability School, the ISCA and the GBCA to fast-track industry capability and capacity within the supply chain.

5.6 STAKEHOLDER MANAGEMENT

5.6.1 MANAGING ENQUIRIES AND COMPLAINTS

Lendlease's approach to managing enquiries for Metro Martin Place is to create a strategic framework which enables a consistent and transparent guide to engaging stakeholders throughout both the initial project engagement and Delivery Phase. The key principles which underpin our proposed approach are:

- Establish and maintain transparent and consistent communication channels which enable geographically dispersed and diverse stakeholders to engage with the project as required;
- Respect, involve and engage stakeholders to ensure their needs are recognised and considered throughout all phases of the project;
- Ensure a proactive, rather than reactive approach to all potential stakeholder related issues and engagement; and
- Tailor communications to provide the right information, to the right people at the right time.

As detailed in our Stakeholder Engagement Strategy to be issued upon request, we understand that due to the number of stakeholders on this project, a tailored approach to each individual stakeholder is not necessarily practical, or appropriate. As such, we have segmented these stakeholders into the following six key groups and tailored the communication activities in response to their respective levels of interest in the project:

- End Users.
- Authorities / Service Providers / Utilities.
- Invested Parties.
- Impacted Parties (Primary).
- Impacted Parties (Secondary).
- Interested Parties.

5.6.2 EVENTS MANAGEMENT

The contractor will coordinate with key stakeholders regarding events occurring within Martin Place to prevent potential conflicts. It is expected that the majority of events will occur outside of the nominated work hours, either being held at night or on weekends.



Figure 30 – Shows the draft community engagement template that will be applied to Metro Martin Place.

5.7 MANAGING HOMELESSNESS IN THE VICINITY OF THE PROJECT

Lendlease recognises that homelessness is a complex and growing issue for the City of Sydney. Lendlease’s experience and track record of interacting with the homeless community in many parts of Sydney provides a solid basis to mitigate any impact on the local homeless community ensuring at all times they are treated with empathy and dignity.

Building on our experiences in the delivery of 60 Martin Place and the resources summarised in the Sydney Metro Interim Strategy for Management of Homeless People During Construction (July 2017), we will develop a Homeless Community Plan (“HCP”) that outlines Lendlease’s approach to managing interactions, mitigating impacts and supporting programs for the benefit of the homeless community in Martin Place. Lendlease will consult and partner with not-for-profit organisations with the appropriate skills and connections, such as the City of Sydney Homelessness Unit, Salvation Army, Whitelion, St Vincent de Paul and Wesley Mission, to further our understanding of the particular issues at Martin Place. The plan will address key factors in the homeless community including cultural diversity, mental health, domestic violence, asylum seekers, juveniles and minors.

Lendlease HCP will be based on a progressive refinement and focussing of activities that balance the depth of support against the breadth of stakeholders.

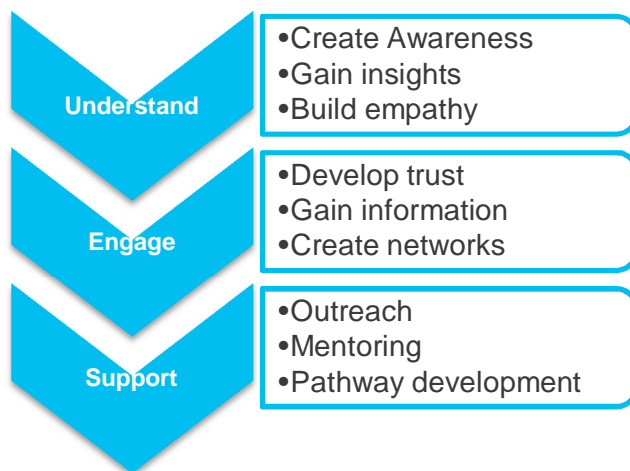


Figure 31 – Approach to a Homeless Community Plan

5.7.1 UNDERSTAND

The HCP starts with gaining a much deeper understanding of the homeless community in the vicinity of Martin Place beyond the high-level statement of needs. This will be undertaken with specialist partners well known to Lendlease, who already have many insights to inform a plan. A widespread understanding of the needs of these key stakeholders will be promoted by including awareness training, messaging and protocols in site inductions undertaken by all construction staff.

5.7.2 ENGAGE

Lendlease's HCP will frame engagement strategies for the homeless community as a whole, to build trust and establish an information flow that keeps the community safe, informed and treated with respect. Working with specialist partners our Stakeholder Manager will facilitate effective and efficient implementation of activities and engagement. This will include site walks to engage with the homeless community, sharing important delivery information and identifying the needs of individuals, refining the engagement strategy within the HCP as necessary.

5.7.3 SUPPORT

Addressing homelessness takes more than the offer of some food and a chat. To break the cycle a deeper approach is necessary, where individuals who are at-risk of spiralling further into homelessness and/or drug abuse, have access to and are encouraged to make use of services and opportunities that can create positive change in their lives – outreach.

Working with Partners like City of Sydney, Salvation Army, Vinnies and Whitelion, we will link homeless people to services that can help them develop a pathway suitable for their needs. This could include crisis support and services such as housing, health, drug and alcohol programs, family counselling, legal services, re-engagement back into school, or assisting young people to find suitable work.

Support typically requires 'case management' to provide specific strategies and action plans for supporting the homeless including targeted outreach. This case management will be provided by industry providers with support provided by Lendlease where appropriate.

6.0 PROJECT COMPLETION

6.1 OVERVIEW

Lendlease understands that the success of Metro Martin Place will be determined by the efficient completion, commissioning and handover of the Station, North and South Tower works respectively.

Over the many years in operation, Lendlease has developed a number of succinct processes and systems to manage and coordinate a seamless project completion, commissioning and handover. We will work closely with the Independent Commissioning Agent to develop a Commissioning Management Plan during the detailed design phase.

The purpose of the Completion Management Plan is to set out and establish the activities that will be undertaken by Lendlease and all its sub-contractors in order to achieve completion. This plan outlines the methodologies to ensure that the building works, inclusive of testing and commissioning are completed to the satisfaction of all stakeholders. The Handover and Completion Management Plan will be structured to meet the following objectives:

- Providing a consistent and systematic approach to the delivery, testing and commissioning of the building works.
- Providing a seamless move of the Principal / tenant into their new building.
- Providing effective communication to the Principal of all relevant information relating to the establishment, commissioning and transition of Facility Manager / Maintenance staff.
- Providing timely and sufficient training, education for the effective use of the equipment and systems.

Below are the fundamental steps that will be implemented to deliver on these project completion objectives:

- Identify the key contractual dates and Principals requirements to successfully complete the Project.
- Identify all the key stakeholders associated with commissioning, completion and transition.
- Establish key representatives of the wider project team that will be the completion committee.
- Organise and participate in project completion meetings.
- Appreciate the importance of planning for completion and prepare a completion program.
- Prepare tools for the various components of Project Completion.

Lendlease will utilise a series of methodologies as a subset of each of the required steps. These include:

- Managing, coordinating the preparation and implementing each of the subcontractor's and suppliers' commissioning and handover plans with the others, including identification of all acceptance criteria, with the subcontractors and suppliers.
- Preparing and implementing coordinated commissioning and handover plans for parts of the works as part of the Project Plan with the applicable subcontractors and in liaison with other stakeholders.
- Ensuring and verifying with the subcontractors and suppliers that all necessary acceptance tests and demonstrations of commissioning are carried out in preparation for handover.
- Inspecting subcontract works prior to progressive completion and final completion under the subcontracts.

- Preparing lists of defective work and reviewing those prepared and certified by the subcontractors and suppliers in accordance with agreed Defects Management and Rectification procedures to be agreed with the Principal.
- Ensuring that defect completion is achieved in accordance with the program and where practical be “defect” free at practical completion.
- Ensuring that sufficient training is provided for the Building Management resources in the operation of the works in accordance with the requirements of the subcontracts and the contract and the specifications.
- Responding to, and ensuring the rectification of, identified defects within the required time.
- Obtaining and verifying the subcontract ‘Certificates of Compliance’ and completion certificates for the works.
- Proposed Tools and Techniques to be utilised as part of the Completion and Handover Plan for the Project include the following:
 - Cause and effects integrated testing matrix. Lendlease will produce test methodologies to validate the fire system in fire mode.
 - Subcontractor commissioning interface matrix.
 - Subcontractor inspection test plans.
 - Defect registers will be implemented to record and close out defects.
 - Ongoing reporting of O&M Manual status.
 - Commissioning Managers roles and responsibilities to include verification and checking the Operation Maintenance Manual documentation including test data and asset registers.
 - Drafting and implementation of a Completion program.
 - Checklist of deliverables necessary for completion.
 - Handover sign-off.
 - Training signoff.

6.2 COMPLETION OF WORKS

Prior to the initiation of any commissioning or testing regimes the elemental QA inspections will be completed to ensure that the systems have been installed in accordance with the requirements of the project specifications. The review of works prior to technical completion tests will ensure that all systems have been prepared to enable a successful test to be completed.

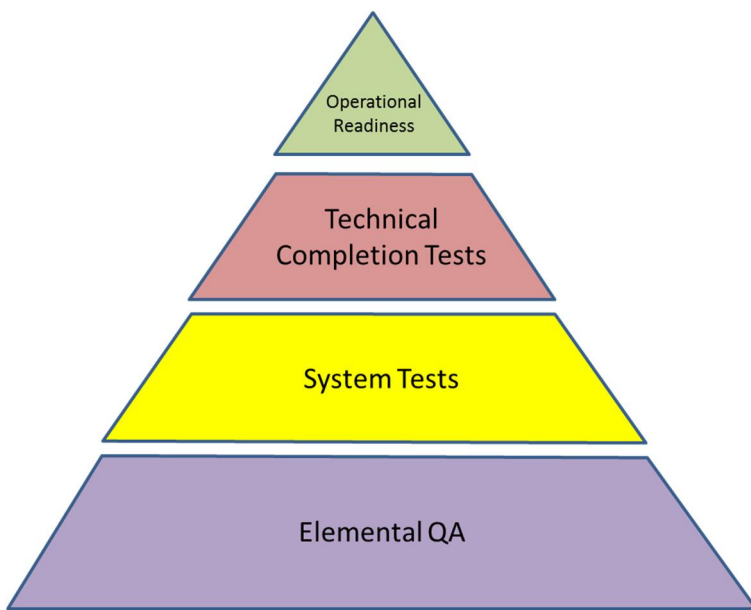


Figure 32 – System Testing Hierarchy

The Figure 32 above shows the general relationship between the various stages of the works during the development phase and their progressive refinement. Each stage is reliant on the successful completion of the previous stage. The phases noted can be generally defined as follows:

Elemental QA – Quality Assurance that record compliance of the completed works to the applicable specifications, codes and standards.

System Tests - Completion Tests that relate to a single Service discipline that confirm the service meets the Design Requirements and performance criteria.

Integrated Tests - Completion Tests that span across more than one Service discipline and are performed to confirm correct function and that transfer of data is achieved.

Operational Readiness - Completion Tests that are required to be undertaken to test the operational performance of the Facility ensuring that the Facility is fit for the intended purposes.

6.3 QUALITY MANAGEMENT

A Metro Martin Place Quality Management Plan (QMP) will be developed during the detailed design phase. The QMP will provide the framework for managing and monitoring delivery quality on the project. Specifically, the following areas will be addressed in the QMP:

- Setting and monitoring document control processes across the project including require control documents and tracking of construction documentation;
- Setting out individual responsibilities for quality management on the project: people and roles including competencies;
- Determining level of QA documentation required from subcontractors and consultants which will be incorporated in respective packages;
- Set out ITP process and requirements of submitted and approving ITP forms;
- Management of Project internal administration documentation;
- System and subcontractor audit process and timetable;
- Corrective Action procedures and Non-Conformances;
- Running the QA system on the Aconex; and
- Compliance with Lendlease certifications including AS/NZS ISO 9001:2008.

This QMP is a management tool and control measure, however the real driver for delivering high quality on the project will be the culture driven through the project by the Lendlease Project Team with their subcontractors working collaboratively in setting and maintaining standards.

6.4 DEFECT MANAGEMENT

Lendlease has a sound understanding of the high-quality focus required on commercial projects, in particular 'Premium Grade' projects where attention to detail and a methodical approach are critical. A pivotal component of the overall quality management system implemented on our commercial projects is the defect identification and rectification process.

The formalised defect control process begins, with a systematic inspection, record and issue of base defects and incomplete works for each level at completion of base build fit-out trade works. This is carried out by the finishes foreman and respective site engineer, and is utilised to ensure early capture of defective works, and incomplete items that will impact the finalisation of the level finishes, and subsequent final defect inspections.

This also serves as a hold point to ensure subcontractor resources are controlled and directs focus back to completing works to the highest quality and restrict the tendency for works to proceed up the tower despite incomplete works being left behind. These items are recorded and issued utilising the defect management system which is internet based, mobile, automated and tailored action lists are issued directly to the relevant trade.

6.4.1 CONSULTANT DEFECT INSPECTION

The Consultants will be invited to inspect a suitable number of floors at a time. As for the previous stage, wherever there are items identified, they are logged on the defect management system and issued to the responsible party for action. Lendlease views this process as a collaborative process that has been productive on a number of previous projects in establishing clear expectations in relation to quality and detailing at an early stage.

6.4.2 PRINCIPALS REPRESENTATIVE DEFECT INSPECTION

At this point, the floors will be ready for presentation to the Principal's Representative for inspection. Lendlease has found it is often advantageous to combine this inspection with the previous stage with the architect and expedite the inspection process, where consistent positive results are being achieved. Defects from the result of these inspections will be rectified and second inspections will be arranged to close out these items.

6.5 PRE-COMMISSIONING DUST CONTROL AND BUILDERS CLEAN

The initial Builder's clean will be undertaken progressively as areas are completed and locked off. This will be completed prior to testing of any mechanical duct work to avoid intrusion of dust into the mechanical system. This will facilitate final defect rectifications and include the removal all protection and general construction dirt and dust from the building.

Then, shortly before handover and in parallel to final testing and commissioning of the building, a final clean will commence and work progressively through the levels. It is critical at this stage to programme and maintain a works sequence to systematically work area by area and level by level. This will achieve a better final result than working on a large number of concurrent workfaces. External façades will be cleaned using the BMU with common areas and entrances being the final areas to be cleaned. The façade final clean will occur post completion for a period of 6 months.

Critical in achieving a satisfactory final clean is having works areas locked down and secured. To this end we will designate one of our Senior Engineers to manage the completion works and employ additional security staff during this phase of the Project. Access will be controlled by temporary construction cylinders, and protocols restricting access to authorised site personnel will

be put in place. Temporary access cards will be circulated to utilise the security system once this is commissioned.

7.0 COMMISSIONING, TESTING AND WITNESSING

Lendlease's demonstrated expertise in commissioning complex large scale developments and holistic approach to the commissioning process will achieve the mutual goal of a maintainable, sustainable, safe functional clinical environment.

We plan to engage with the project Stakeholders and Principal early to ensure transparency in planning of the commissioning process for both Station and Over Station Development Works respectively. This will ensure completion will be defect free and ready for operation, by fully informed and trained building management personnel and User Groups.

7.1 COMMISSIONING STRATEGY

The commissioning strategy involves clearly defined planning and processes. There are three planned stages of completion; firstly, to achieve substantial completion, secondly the commencement of the mandatory validation period, and finally project completion. The Independent Commission Agent will be engaged during construction to assist with defining these outcomes, adding value to the installation and familiarising themselves with site prior to practical completion. The Commissioning Management Plan will identify:

- Scopes of work and deliverables;
- Programme of works (critical adequate testing and commissioning durations are maintained);
- Roles and responsibilities including additional specialist commissioning consultants;
- Lines of communication and reporting; and
- Approvals, sign-offs, witness testing.

Comprehensive checklists will be prepared for each system, area and stage of the project. The commissioning requirements and activities associated with the following building services will be fully detailed within the Commissioning Management plan:

- Mechanical;
- HV, LV electrical and lighting;
- Security;
- Building Management and Energy Monitoring Systems;
- Hydraulics;
- Fire protection systems;
- Essential systems;
- Vertical transport; and
- ICT, communications systems & AV.

Lendlease Technology will be responsible for managing the ICT Integration Requirements for the project and in supporting the integration testing and commissioning process for each of the ICT systems across the following stages of integration:

- ICT infrastructure;
- Message integration; and
- Systems integration.

The proposed methodology for commissioning of all services on the project follows the process shown in the diagram below, and is based on iterations with witness testing at key stages to ensure operational requirements are being met. This process will follow completion programme which will ensure timely completion of milestones.

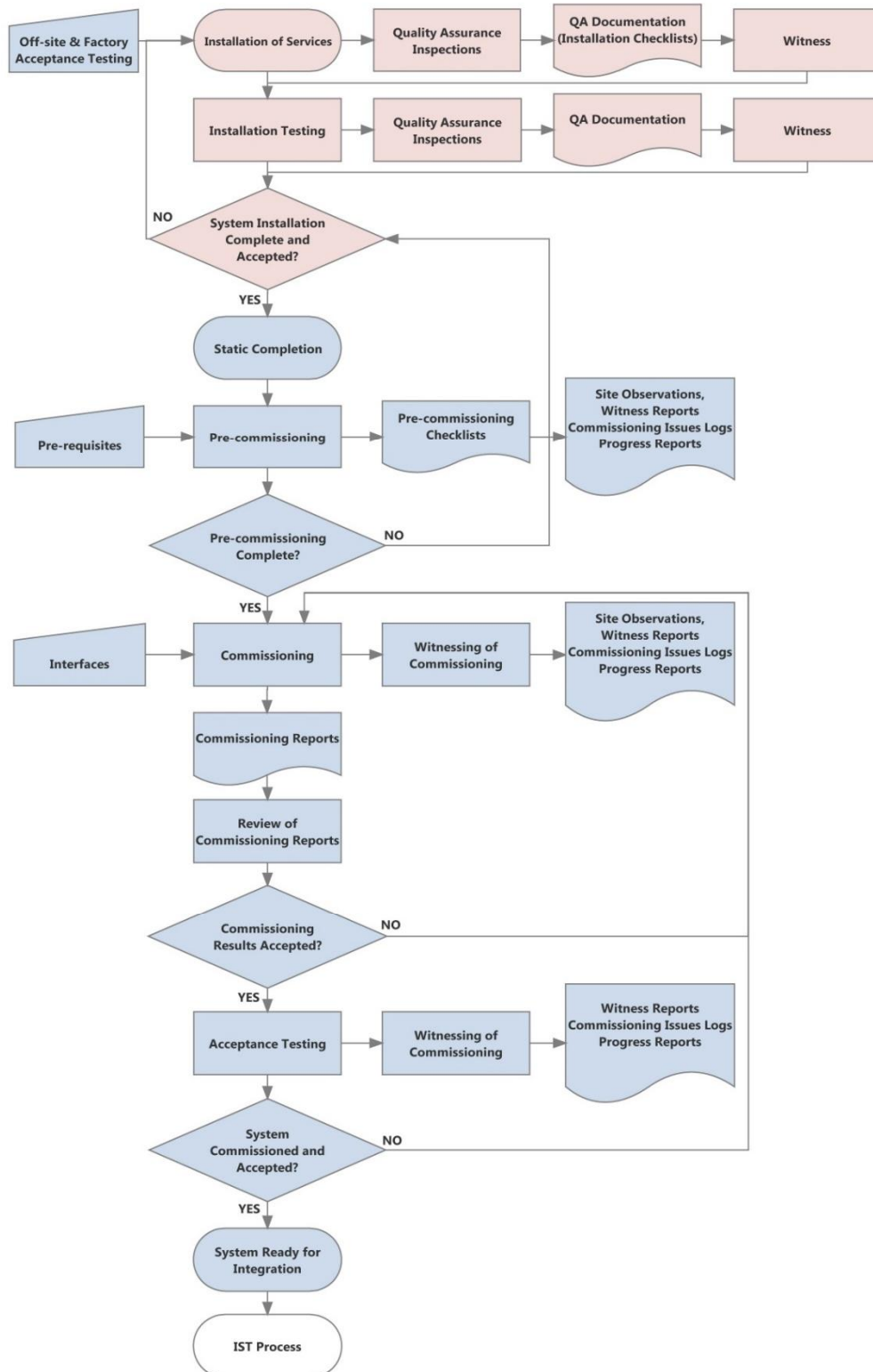


Figure 33 – Services Installation, Testing and Commissioning Process

Figure 33 above defines the commissioning and testing workflow from; the respective service installation; to completion of system tests; finally progressing to an overall integrated buildings system test.

7.2 OSD COMMISSIONING AND TESTING PROCEDURES/METHODOLOGY

Robust commissioning and testing procedures will be developed during detailed design phase to ensure that all functional components of Metro Martin Place have been tested, commissioned to ensure that the Facilities are operating as intended and to confirm that the facilities have been constructed in accordance with the applicable standards and codes. ICA will produce a detailed commissioning plan. It is noted that this document does not cover all systems but does adequately establish a procedure to be applied for all systems.

In order to satisfy the requirements of the commissioning plan, a commissioning manual will be produced for each of the key services/system disciplines on the project. The manual will contain a summary of scope, details of commissionable systems, list of applicable technical procedure tests, detailed procedures for each test, and sections to record results.

The manual will be updated to record changes to procedures, and for inclusion of results so that there is a complete record for each discipline of all commissioning and testing. As a minimum commissioning and testing procedures will be developed for the following services:

- Electrical distribution network;
- Electrical services;
- Mechanical services;
- Central plant system;
- Power generation systems;
- Fire services;
- Evacuation systems;
- Duress systems;
- Security and access control services;
- CCTV systems;
- Hydraulic services;
- Audio visual systems;
- Communications systems;
- Integration between systems;
- Telephony systems;
- Building envelope performance;
- Building management system; and
- Asset management system.

8.0 PROJECT FINALISATION AND HANDOVER

8.1 OCCUPATION CERTIFICATE

Once services commissioning is significantly complete, essential services certification will commence system by system, including Consultants sign-offs and NSW Fire & Rescue inspection. Building areas will be inspected by the PCA, fire engineer, access consultant and other relevant consultants. These inspections will typically identify any defects or remaining works which Lendlease will then execute to enable issuing of the Occupation Certificate (or SSD approval equivalent).

Our Design Managers with support from our Services Managers will oversee the final certification process. The preparation will commence six months prior to completion with discussions with the Principal Certifying Authority (PCA) and a list of deliverable documents will be agreed upon. Compilation of the documents from subcontractors and consultants will provide the basis for draft and final submissions to the PCA.

During the latter part of construction Lendlease will lead interim PCA and fire engineer inspections to ensure these consultants inspect the works in progress and are given the opportunity to identify any potential installation non-compliances. We will also track compliance with any open DA conditions in our monthly reports.

8.2 OPERATION AND MAINTENANCE MANUALS

Operations and Maintenance (O&M) documentation will be recorded in the O&M Track - WebFM system (or equivalent). The operations and maintenance manuals will be progressively completed. The WebFM system is an online database system. The system enables users to access the information at any time to validate progress. It also has detailed workflow control to track the formal submission of sections as they are completed. The O&Ms will be submitted in draft form prior to practical completion.

The contents of the O&M Manuals will include:

- Introduction - Section to define the scope of works and general information about the project.
- Assets – Information that describes the equipment, building elements and assets that are completed during the works.
- Maintenance – Information that defines the relevant schedule of tasks required to periodically inspect and maintain the building components described in the Assets Section in order to ensure design life and to comply with the manufacturer's recommendations.
- Operations – Information that describes the operation of building systems including key instructions, methods and tools that may be required to ensure that systems perform as specified. It should also provide the user with sufficient information to trouble shoot minor problems without the need to engage with third party suppliers.
- Warranties and Certificate – Reference information that outline specific certifications and warranties relating to the assets. This section also includes for the results of commissioning and verification.
- Spares – Information relating to spare parts including details of suppliers.
- Contact – Information relating to organisations or individuals who should be contacted to offer assistance with the completed project.
- Drawings and References – Information relating to as built documentation, specifications, supplier documents and the like that will assist in the operations and the maintenance of the project works.

The structure of the O&M manual is divided along building system demarcations such as electrical, hydraulics, mechanical etc. This will be reviewed as the manuals progress to ensure that the content is easy to navigate and concise.

8.2.1 AS BUILT DRAWING SCHEDULES AND TRACKING

All as built documentation will also be recorded in the O&M Track – WebFM system (or equivalent). Drawings will be progressively uploaded as the works are completed. Records will also be maintained within the Aconex systems until they have reached as – built status. At this point the drawings will be uploaded into the WebFM system to record the as built drawing.

8.2.2 ACCEPTANCE OF MANUALS: SUBMISSIONS AND APPROVALS

The subcontractors and suppliers will create the relevant content for the O&M manuals and upload this documentation. When the subcontractor/supplier is satisfied the content is suitable for review, they will submit to Lendlease and Consultants for review, using the internal work flow system within O&M Track. Review and comments will be recorded and provided to the author of the manual via the WebFM system. Following the closeout of the Lendlease and Consultant comments the O&M manuals will be submitted to the consortium for review using the same workflow process. O&M track provides graphical reporting tools that will be used to report on the progress of completion of the manuals including the progress of all review workflows.

8.3 TRAINING

The final aspect of commissioning is the training of and handover to the building operators. This will incorporate final services commissioning and operator training activities. The main focus will be on the various building services operations and the presentation of the electronic O&M information. Other operational and handover issues, such as key systems, façade cleaning, maintenance of finishes and the like, will also be covered. Draft O&M documentation will be issued to the building operators prior to completion of the construction works.

We will provide the Metro Martin Place facilities Managers with open site access during the final six months of construction and commissioning, in agreement with the Principal. We encourage early involvement of the building operators as this creates a familiarisation and technical understanding of the operating building services which is invaluable post-handover.

Earlier User Group consultation will have established the key personnel required to be trained in the new building systems. A series of comprehensive one-on-one training sessions will be conducted prior to handover to provide a 'Soft Landing' for the building users, and to ensure the building operators are fully trained and appropriately prepared to run and manage the facility from day one.