

# DRAFT CONSTRUCTION MANAGEMENT PLAN

State Significant Development Application

338 Pitt Street, Sydney

China Centre Development Pty Ltd

December 2019

Prepared by **Touchstone Partners**

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# 1. Introduction

This Draft Construction Management Plan (CMP) has been prepared by Touchstone Partners on behalf of China Centre Development Pty Limited (the Proponent) to accompany the submission of a State Significant Development Application (SSDA) to the Department of Planning, Industry and Environment.

This CMP addresses construction issues for the City of Sydney Council assessment of the Development Application. Our objective in producing the document is to communicate to Council that the project is well considered and will be undertaken in a manner that seeks to minimise disturbance and impact on the surrounding environment. Items contained in this CMP include:

- » Outline of major works
- » Public amenity, safety, and pedestrian management
- » Materials handling
- » Traffic management including public transport interfaces
- » Environmental management
- » Impact on adjoining and surrounding properties.

The Proponent is committed to engaging with the local community, the City of Sydney, Government Agencies and stakeholders as we plan and deliver the 338 Pitt Street project.

A major concern for the project is that it may have the potential to cause disruption to surrounding areas during the construction phase. However, the Proponent and the Contractor will work closely with the City of Sydney, neighbours, existing tenants, occupants, stakeholders and transport authorities to create plans that will ensure minimal impact and disruption to the surrounding area. Consultation will continue to be a key priority throughout the construction pre-planning and delivery process to ensure the community and stakeholders receive regular updates and have the opportunity to provide feedback.

The final version of the CMP will ensure all construction is properly facilitated, integrated and coordinated thus guaranteeing the Project's objectives are met.

It is intended that further detailed CMP's and works plans, for each phase of the project, as outlined in this plan, will be prepared and relevant approvals secured prior to construction commencement.

## 1.1 Plan Outline

This preliminary CMP has been formulated from the design developed for the DA submission and may require changes to meet stakeholder requirements, as detailed design progresses.

The scope of this report provides a holistic approach that:

- » Advises how the project management team will comply with the requirements of the contract relating to construction.
- » Defines the project objectives and targets of particular relevance to the construction phase.
- » Describes constraints specific to the construction phase and the project in general.
- » Describes the process for the identification and control of risks specific to the construction phase.
- » Details the proposed strategy for the construction phase, with particular regard to establishment resourcing, site organisation and construction controls.

## 1.2 Detailed Design Development Application

The project is described for the Development Application as follows:

State Significant Development Application for a mixed use development consisting of residential, hotel and retail on the site known as 338 Pitt Street.

## 1.3 Project Description

The State Significant Development proposal is for;

- » Demolition of 233 Castlereagh Street; 241 Castlereagh Street; 243-245 Castlereagh Street; 249 Castlereagh Street; 332 Pitt Street; 338 Pitt Street, 126, 128 and 130 Liverpool Street.
- » New podium buildings containing retail uses; hotel lobby, rooms and facilities; residential lobbies; services and plant and equipment.
- » Two slender towers of 80 stories each containing residential apartments and hotel rooms at the lower levels of the south tower.
- » A “bridge” connecting the two towers at levels 32 – 36 containing a restaurant and bar; hotel pool, spa and treatment rooms; and residential pool and common facilities.
- » 5 basement levels for loading dock, waste handling, plant, services, hotel port-cochere, bicycle parking and vehicle parking for residential, hotel and retail. The basement will include a loading dock to be shared by the building at 320 Pitt Street to the north.

### 1.3.1 Interface with 320 Pitt Street and 225-227 Castlereagh Street

The proposed development will be integrated with the existing adjacent buildings to the north to maximise operational and services efficiencies of existing sites. The areas of integration are;

- » The new basement and loading dock will be designed to service the adjacent building at 320 Pitt Street. An existing loading dock and access from Castlereagh Street will be demolished.
- » The existing fire egress (stairs and tunnels) easements from 225-227 Castlereagh Street will be maintained.

### 1.3.2 Key Consultation to Date

Prior to the lodgement of this Development Application, preliminary consultation has been held with Transport for NSW and the City of Sydney to discuss construction and operational traffic for the subject development.

## 1.4 Site Description

The site comprises part of a contiguous land holding bounded by Castlereagh, Liverpool and Pitt Streets in the southern portion of the CBD which includes:

- » 233 Castlereagh Street – a 24 storey office building with food retailers at the lower levels.
- » 241 Castlereagh Street – a 7 storey office building.
- » 243 – 245 241 Castlereagh Street – a 7 storey office building.
- » 249 Castlereagh Street “Stratton’s Hotel” – 4 storey consisting of hotel and accommodation.
- » 332-336 Pitt Street – 6 storey office building with food retailers at the lower levels.
- » 338 Pitt Street – a 20 storey office building with food retailers at the lower levels.
- » 126, 128 and 130 Liverpool Street – 2 storey buildings with ground floor shops.

The south east portion of the block consists of Dungate Lane, owned by the City of Sydney Council and 255 Castlereagh Street, a 5 storey office building owned by a separate entity.

Dungate Lane currently serves as vehicle access to basement parking in 338 Pitt Street and 255 Castlereagh Street, and for waste collection and servicing to the retail outlets that back onto the lane.

Pitt Street is immediately to the west of the site and is a major traffic and pedestrian route through the city. Pitt Street is one way for vehicles and runs south to north only. The lane adjacent to the site contains loading zone and short term meter parking. An existing driveway entry to the 233 Castlereagh Street basement crosses the footpath at the northern end of the consolidated site.

Castlereagh Street is immediately to the east of the site. Castlereagh Street is one way for vehicles and runs north to south only. This portion of Castlereagh St contains a bus lane. An extension of the Castlereagh Street separated bike lane is proposed from Liverpool Street north. Timing for this is unclear.

Liverpool Street to the south of the site is a key east-west connection through the CBD and forms a major arterial transport and pedestrian route from the eastern suburbs via Oxford Street to Darling Harbour and beyond to the western suburbs. Liverpool Street is one way for vehicle traffic in a westerly direction only. A separated bike lane runs along the northern side of Liverpool Street directly adjacent to the footpath bounding the site.

A diagram of the site is included below.



Figure 2 Site/Location Plan

The site has street frontages to Pitt Street (90m), Liverpool Street (60m), Castlereagh Street (84m) and Dungate Lane (23m). It is approximately 150m west of Muesum Railway Station and Hyde Park. The proposed Pitt St South CBD Metro station is located approximately 100m to the north on the same block. Future Light Rail on George Street will be located approximately 200m to the west.

Further details on the site and surrounds is provided in Section 3.

A detailed description of the current site is contained in the following table:

Address	Description	Area (m <sup>2</sup> )	Comments	Owner
229-239 (233) Castlereagh St 324 – 330 Pitt Street	Lot 3 DP 1044304	2637.8	24 storey office building with food retailers at the lower levels	Han's Group
332-336 Pitt St	Lot 1 DP 66428	485.2	Fortuna House 6 storey office building and restaurant at the lower levels	Han's Group
338-348 Pitt St	Lot 10 DP857070	1616.2	20 storey office building with retail at ground	Han's Group
126 Liverpool St	Lot A DP 44891	98.9	2 storey building, ground floor shop	Han's Group
128 Liverpool St	Lot B DP 44891	91.0	2 storey building, ground floor shop	Han's Group
130 Liverpool St	Lot C DP 44891	85.7	2 storey building, ground floor shop	Han's Group
249-251 Castlereagh St	Lot B DP 183853	231.5	Stratton's Hotel 4 storey building consisting of hotel and accommodation	Han's Group
245-247 Castlereagh St	Lot 1 DP 70702	266.3	ANZAC House 7 storey office building with retail at ground	Han's Group
241-243 Castlereagh St	Lot 1 DP 90016	499.3	7 storey office building with retail at ground	Han's Group
255 Castlereagh St	Lot 1 DP 706240	397.5	NAB Bank & Offices	Other
Dungate Lane	NA	NA		City of Sydney Council

## 1.5 Project Phasing

The proposed phasing for the construction of the development is in 2 Phases;

### Phase 1 » Phase 1 – Demolition and excavation

- Dilapidation survey of neighbouring properties and Sydney Metro assets
- Geotechnical and other on-site testing as required
- Progressive demolition of all buildings on the site including basements
- Excavation of additional below ground material to the extent required for new basement
- 

### Phase 2 » Construction of the proposed building including

- Basement levels
- Towers including connecting bridge
- Podium levels
- Reinstatement of public domain including footpaths and lane
- Fitout of retail outlets
-

## 1.6 Site Management – Organisations and Responsibilities

The Head Contractor for the proposed development has not yet been appointed.

An indicative organisational and responsibilities chart is shown below:

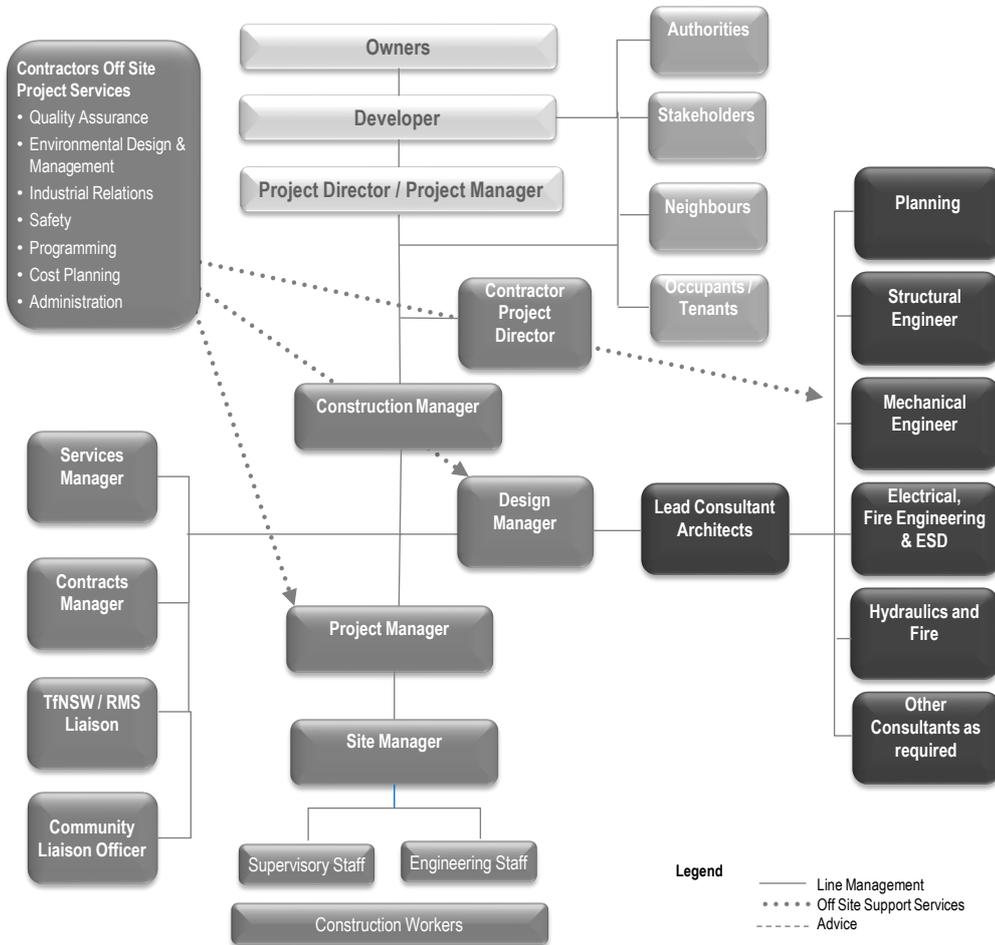


Figure 3 Indicative Organisational Chart

## 2. Physical Constraints of the Site

An understanding has been developed of the physical constraints that impact on the 338 Pitt Street site. A summary of these physical constraints follows.

### 2.1 Proximity to Transport Networks.

338 Pitt Street has significant subsurface infrastructure proposed adjacent to the site. Sydney Metro and Southwest is currently under construction with 2 single track running tunnels traversing under Pitt Street and Castlereagh Street. There is also a cross passage tunnel connecting the two running tunnels under Liverpool Street. These tunnels are closely adjacent to the proposed basement excavation.

It is anticipated that the Sydney Metro and Southwest will be fully constructed in the vicinity of 338 Pitt Street and possibly operational by the time demolition, excavation and construction commences on the development.

Consultation with Sydney Metro will continue to occur throughout the design and construction process to ensure that activities occur in accordance with Metro requirements and reserve zones are respected. Consideration of dilapidation reports, ongoing monitoring, use of retention, etc will occur at all times.

A separated cycleway runs east- west on Liverpool Street to the south of the site, immediately adjacent to the footpath. The cycleway will be considered during construction planning. This section of the east-west cycleway connects to an existing north-south cycleway on the western side of Castlereagh Street. Currently this north-south portion terminates at Liverpool Street however, there are plans to continue this further north past the site. If completed by the time that demolition and construction commence, careful assessment, design and management of the cycleway will need to occur.

The streets surrounding the site provide major pedestrian links both north-south and east-west. The management and protection of the general public around building sites is considered elsewhere in this document.

The Contractor will engage with Council and all other stakeholders to seek further understanding on the restrictions and parameters for construction works in proximity to these transport routes.

### 2.2 320 Pitt Street

320 Pitt Street is located directly adjacent to the site to the north-west. It is a 30 storey concrete and glass office building dating from 1985. The building has undergone various refurbishments including a major refurbishment of the lobby and end of trip facilities in 2019. The building has one level of basement that has a corridor connection to the basement of the existing 233 Castlereagh St forming part of the 338 Pitt St site. The basement appears largely set back from the boundary with 338 Pitt St. It is understood that tunnels exist under the building to carry communications cables to the Telstra Exchange on Castlereagh Street.

The works proposed include interface with the 320 Pitt St building, principally in relation to the basement proposed, interfacing with the loading dock, parking and fire egress pathways. Detailed planning of these interfaces shall be undertaken with the developing design.

### 2.3 Telstra Exchange 225-227 Castlereagh Street

Directly adjacent to the north-eastern portion of the site is the Telstra Exchange at 225-227 Castlereagh Street. This is a 8 level concrete building and remains an operational asset for Telstra.

There is currently a number of easements including for egress from the Exchange that burden 338 Pitt Street. These will be considered in the design and construction management and any egress paths will be maintained or rerouted during the construction works.

It is understood that tunnels exist under the building to carry communications cables from the Telstra Exchange to Pitt Street and Castlereagh Street. Detailed investigations will be required to determine the exact location and ensure that they are not impacted by the development or demolition and construction.

## 2.4 Telstra Buildings Loading Dock

At the north of the site is an easement that allows access to a loading dock serving 320 Pitt Street and the Telstra exchange on Castlereagh Street. Access to the loading dock is off Castlereagh Street via a vehicle crossover and a ramp up to the dock. It is proposed to relocate this loading dock for the neighbours into the new basement loading dock for the development. Alternative arrangements will be made with the neighbours during the demolition and construction period.

## 2.5 Site Access

The site currently has 3 street frontages which will be considered for demolition and construction access.

Liverpool Street lies to the south of the site with a 45 metre frontage. It is a key east-west connection through the CBD and forms a major arterial transport and pedestrian route from the eastern suburbs via Oxford Street to Darling Harbour and beyond to the western suburbs. Liverpool Street is one way for vehicle traffic in a westerly direction only. A separated bike lane runs along the northern side of Liverpool Street directly adjacent to the footpath bounding the site. Due to the above constraints, Liverpool St will provide limited opportunities for access, egress and loading during demolition and construction.

Pitt Street is immediately to the west of the site and is a major traffic and pedestrian route through the city. Pitt Street is one way for vehicles and runs south to north only. The lane adjacent to the site contains loading zone and short-term meter parking. An existing driveway entry to the 233 Castlereagh Street basement crosses the footpath at the northern end of the consolidated site. The site frontage on Pitt St is 90 metres long and provides the best opportunity for site access and egress during demolition and construction. Existing parking and loading bays may be required for construction zones. Full time managed traffic control will be utilised at any access points on Pitt St to protect ongoing pedestrian access along Pitt St.

Castlereagh Street is immediately to the east of the site. Castlereagh Street is one way for vehicles and runs north to south only. This portion of Castlereagh St contains a bus lane. An extension of the Castlereagh Street separated bike lane is proposed from Liverpool Street to the north. Timing for this is unclear. Opportunities for access, egress and loading exist on Castlereagh St at the northern portion of the site, and full protection will be considered if the cycleway is constructed.

To minimise construction vehicle traffic on surrounding streets, a through site vehicle driveway will be considered either entering from Pitt St and exiting Castlereagh or entering from Castlereagh Street and exiting via Pitt Street.

All vehicles will enter and leave the site in a forward direction through the use of through site driveways or turntables.

Throughout the demolition and construction period, access to 255 Castlereagh St via Dungate Lane will be maintained at all times or short-term alternative access arranged with the building occupants.

## 2.6 Existing Buildings Within the Site

All buildings on the site will be demolished for the proposed development. Depending on the demolition staging, some buildings may still be operational for short periods whilst neighbouring buildings are demolished. If this is the case, noise management and impact on these buildings will be studied and managed as required.

## 2.7 Adjacent and Neighbouring Properties

Refer **Figure 04 – Adjacent and Neighbouring Properties** overleaf outlining the relationship of adjacent and neighbouring properties to the 338 Pitt St site which is highlighted in pink.

### Adjacent Properties

*Adjacent properties are those properties which are not part of the Site and have a common boundary and will **not** be directly affected by the construction.*

The adjacent properties to the site are those noted in section 3.5 and highlighted in yellow on Figure 3.

- » 255 Castlereagh Street - commercial and retail. A four storey office building with retail (NAB Bank) on the ground floor. The building has one level of basement with limited parking with access off Dungate Lane. The driveway access is in the north-western corner of 255 Castlereagh St. Fire egress from the building also exits onto Dungate Lane. The building shares a common boundary with the site for a length of approximately 15 metres.
- » Dungate Lane. A council owned lane that currently provides access to basement parking at 338 Pitt and 255 Castlereagh St. The lane is used for service access to retail outlets on Pitt and Liverpool Streets including deliveries and waste collection.

### **Neighbouring Properties**

*Neighbouring properties are those which are not part of the Site and are in close proximity to the Site and will not be directly affected by the construction.*

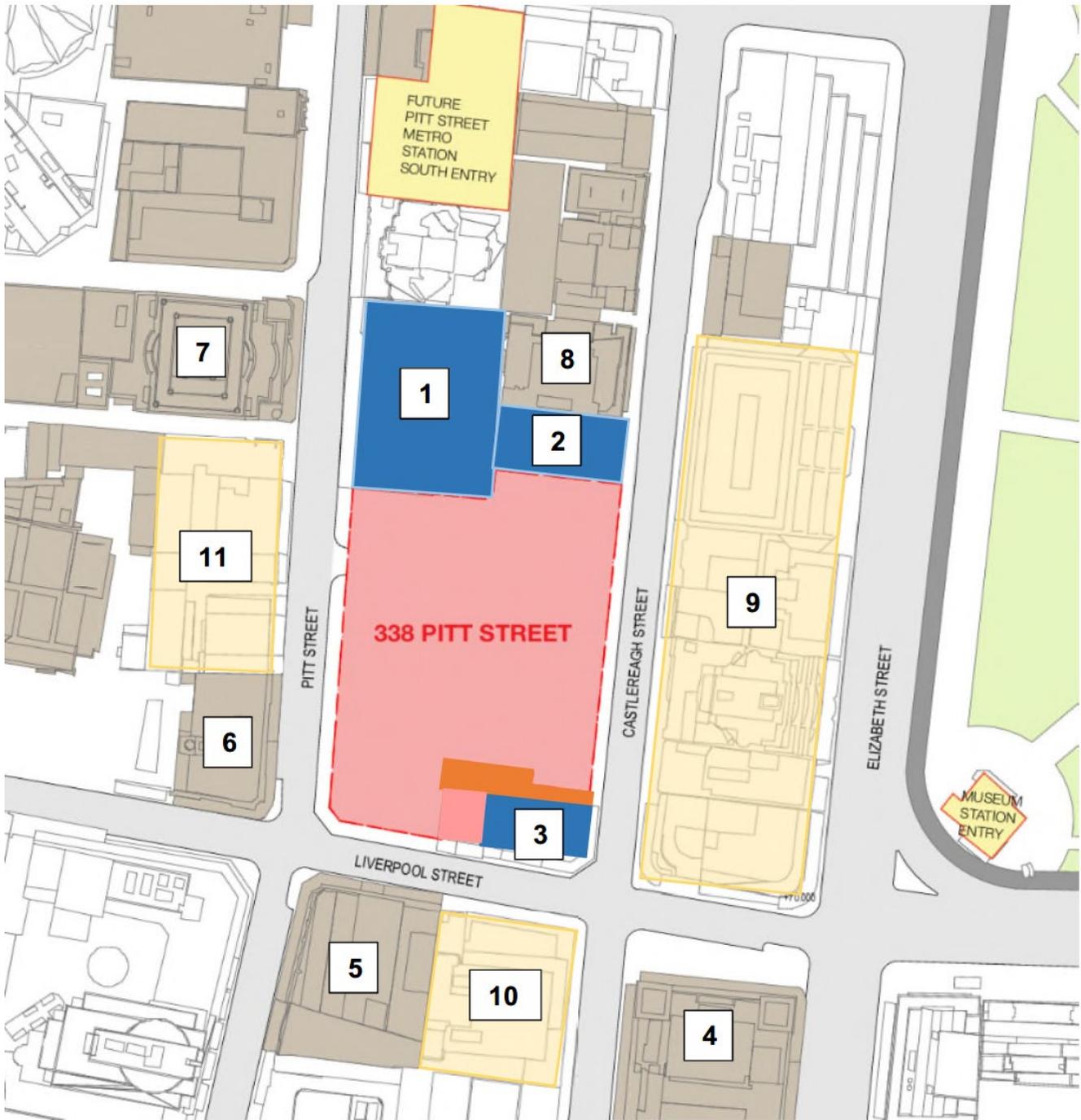
The neighbouring properties highlighted in green indicated include:

- » Various buildings between Elizabeth and Castlereagh Streets – a mix of office, retail and accommodation.
- » Downing Centre Local and District Courts – operational, heritage former Mark Foys Emporium.
- » Polding Centre 133-141 Liverpool Street - office and retail.
- » Former Snow's Emporium 127-131 Liverpool Street – heritage listed retail and office building.
- » World Square complex - a mix of office, retail and accommodation.
- » Fayworth House 379-383 Pitt Street – heritage listed retail and office building.
- » 371 – 377 Pitt St – various low rise retail.

## **2.8 Sensitive Receivers**

The most sensitive noise receivers in the vicinity of the site are as follows:

- » Downing Centre Local Courts.
- » Residential apartments and other accommodation between Elizabeth and Castlereagh Streets.
- » Residential Apartments located in World Square to the south west of the site.
- » Century Tower Residential apartments at 343 Pitt Street to the north west of the site.
- » 320 Pitt Street, Sydney, a commercial office building located to the north of the site.



**Adjacent Buildings**

- 1 320 Pitt St – office
- 2 Telstra Exchange
- 3 255 Castlereagh St – office

**Neighbouring Buildings**

- 9 Various fronting Castlereagh St
- 10 Polding Centre 133-141 Liverpool St
- 11 Various fronting Pitt St

**Heritage Buildings**

- 4 Downing Centre Courts
- 5 Former Snow’s Emporium
- 6 Fayworth House
- 7 Former Lismore Hotel facade
- 8 Former Sydney South Exchange

Figure 4 Adjacent and Neighbouring Properties

## 3. Major Work Items

### 3.1 Demolition and Excavation

Demolition on the site will be completed in a manner appropriate for its central, high traffic location. Noise, dust and vibration levels will be controlled in accordance with good practice for CBD construction and City of Sydney guidelines to minimise impacts to adjacent tenants and general public.

The buildings earmarked for demolition are

- » 233 Castlereagh Street – a 24 storey office building with food retailers at the lower levels.
- » 241 Castlereagh Street – a 7 storey office building.
- » 243 – 245 241 Castlereagh Street – a 7 storey office building.
- » 249 Castlereagh Street “Stratton’s Hotel” – 4 storey consisting of hotel and accommodation.
- » 332-336 Pitt Street – 6 storey office building with food retailers at the lower levels.
- » 338 Pitt Street – a 20 storey office building with food retailers at the lower levels.
- » 126, 128 and 130 Liverpool Street – 2 storey buildings with ground floor shops.

Detailed work methods are yet to be determined, however it is envisaged that excavators and pneumatic hammers will be employed as well as hand works to disassemble the buildings. Structural certifications need to be obtained for working machinery on the floors to be demolished.

To facilitate the work, construction hoardings will be erected on all street frontages. Due to the proximity of a number of buildings to the site boundaries, a heavy duty scaffold will be erected around the external walls and return walls of the existing structures being demolished. External scaffold with chain wire mesh and shade cloth will be erected on all exposed work faces to act as fall protection and provide visual amenity to the surrounding area. The heavy duty scaffold will be encapsulated by chain wire and shade cloth. The scaffold will be progressively stripped down as the external walls are demolished.

A hazardous materials survey will be undertaken to identify the location and type of hazardous materials on the site. In reviewing the approximate age of the existing buildings some hazardous material is to be expected.

A summary of the demolition methodology includes:

- » Class ‘A’ and ‘B’ hoardings to separate adjoining areas from the proposed demolition zone
- » Undertake services terminations and relocations
- » Install any necessary retention, stabilisation and protective measures
- » Hazmat removal and soft strip out
- » Commencing from top down with demolition of structural elements.
- » Metal, rubbish, concrete and masonry will be progressively loaded onto trucks for transport off site to the recycling depot.

Factors that will need to be further considered in the future development of the demolition plan include:

- » Minimisation of noise, dust and vibration.
- » Loading out of demolished and excavated material via Pitt and Castlereagh Streets.
- » Identification and removal of hazardous materials prior to demolition commencement.
- » Cranage requirements to assist demolition.
- » Traffic management plan.

The demolition methodology will be planned to deliver the maximum productivity for a CBD site such as this in order to minimise disruptions over an extended period.

The detail excavation plan is dependent on discussion with Sydney Metro. As identified earlier in this submission Sydney Metro and Southwest is currently under construction with 2 single track running tunnels traversing under Pitt Street and Castlereagh Street. There is also a cross passage tunnel connecting the two running tunnels under Liverpool Street. These tunnels are closely adjacent to the proposed basement excavation.

Geotechnical understanding of the site indicates a level of fill and loose material including under strength rock to about 8-10m meters below ground level.

Excavation will commence when demolition works are completed. Detailed work methods are yet to be determined, however it is envisaged that the Contractor will use a large bulldozer to rip the rock, excavator with diamond saw to provide separation to the surrounding area and additional excavators with buckets and hammers to remove the material off site.

The potential requirement for boundary walls to require temporary or permanent ground anchors and/or rock bolts as a method for retention has been identified. Where required, the Proponent along with the Contractor will seek the necessary approvals associated with temporarily anchoring under adjacent neighbouring private or public properties (including local authorities). These underpinning agreements will need to be sought prior to construction commencement to ensure there is not delay to the construction programme as the initial ground anchors/rock bolts would be installed at the commencement of demolition.

Where metro tunnels front the site on Pitt and Castlereagh Streets, an alternate shoring restraint system will be designed and engaged in lieu of anchors.

## 3.2 Structure

Once the excavation has been completed, the structure works will commence from the basement up. The structure works will require tower cranes to be erected to facilitate the safe construction of these works. Due to the large size of the site and the towers fronting Pitt Street and Castlereagh Street, it is proposed to utilise both Pitt and Castlereagh Streets for loading and work zones. We would seek to develop, through further stakeholder engagement, temporary modifications to the traffic arrangements on these streets that would facilitate these zones whilst minimising impacts to traffic flow.

The core raft and footings will be constructed first and closely followed by the vertical and horizontal elements.

A purpose built formwork system will be used for the core wall construction and large columns. The slabs will be a combination of reinforced and post tension slabs as designed by the structural engineer for the project. As the structural design is still in progress, detailed work method statements have yet to be finalized.

The floor structure above the street levels will most likely be erected behind the perimeter formwork screens or scaffold for OH&S reasons for site personnel and public, and will be progressed on a floor by floor basis.

## 3.3 Façade

New elements of the building will predominantly be clad with in a variety of materials, including stone, brick and other natural materials at the lower levels along with aluminium framed windows and screen elements, as represented on the architectural drawings. Upper levels of the towers will consist of curtain wall façade with screening and shading features. Facade will be installed on a floor by floor basis to create the building envelope.

## 3.4 Fit-out & Building Services

Once floors are stripped of formwork, the building services and fit out will commence on a floor by floor basis.

Service installation will be planned so that the works progress in a safe, tradesman like sequence to ensure that safety is preserved and abortive works are eliminated.

The fit out of the hotel and residential towers will be a structured approach with particular emphasis on acoustic and fire quality. Throughout the fit out duration and at various construction stages, testing of acoustic and fire quality will be undertaken to ensure the best result is achieved.

Fitout of retail spaces will occur at the end of the project.

### 3.5 External & Public Domain Works

Works external to the site will include the reinstatement of footpaths and possibly Dungate Lane. Any works will be developed in conjunction with the City of Sydney Council and other applicable authorities. This section will be developed in future CMP, site Layout, Logistics and Materials Handling.

### 3.6 Site Access and Egress

Site access and egress will be required for site personnel and materials. The site has four possible means of access and egress, which are:

- » Castlereagh Street – frontage
- » Pitt Street – frontage
- » Liverpool Street – frontage, although limited in use due to the existing separated cycle path.
- » Dungate Lane - Frontage

As Dungate Lane is a required access and egress for the tenants of 255 Castlereagh St as well as a fire escape for the building, it is the intention to minimize the use of this lane and use the other frontages as much as possible.

The Contractor will separate pedestrian activity from traffic using suitable hoardings and traffic control officers.

Hoardings established along the street frontages will have the appropriate dedicated pedestrian and traffic control gates.

Transporting materials to and from the site work face, in an efficient manner, is of fundamental importance to the success of the Project.

It is proposed that the Pitt and Castlereagh Street entries to site will be used for:

- » Demolition – delivery of all plant and loading of trucks within the site of rubble.
- » Excavation – delivery of all plant and materials as well as loading of trucks within the site of spoil. It is the intention to construct a material handling platform (which shall be strategically targeted as forming part of the final ground floor structure) within the site boundaries so all trucks can be loaded within the site for public safety and maintaining the amenity of the public areas. The platform will remain in place to facilitate the structure works delivery requirements.
- » Structure Works – the delivery of all concrete materials to be pumped within the site. Note, all other structure materials such as, reinforcement, stressing, formwork, structural steel will be lifted by the tower cranes and as such will be lifted from the street work zones.
- » Services and Finishes – the delivery of all materials that will be hoisted by hoists or builders lifts.
- » Rubbish bins – the delivery and removal of all rubbish bins.

A preliminary assessment of the precinct and the works has been carried out and Figure 5 shows a possible Traffic and Pedestrian Management.

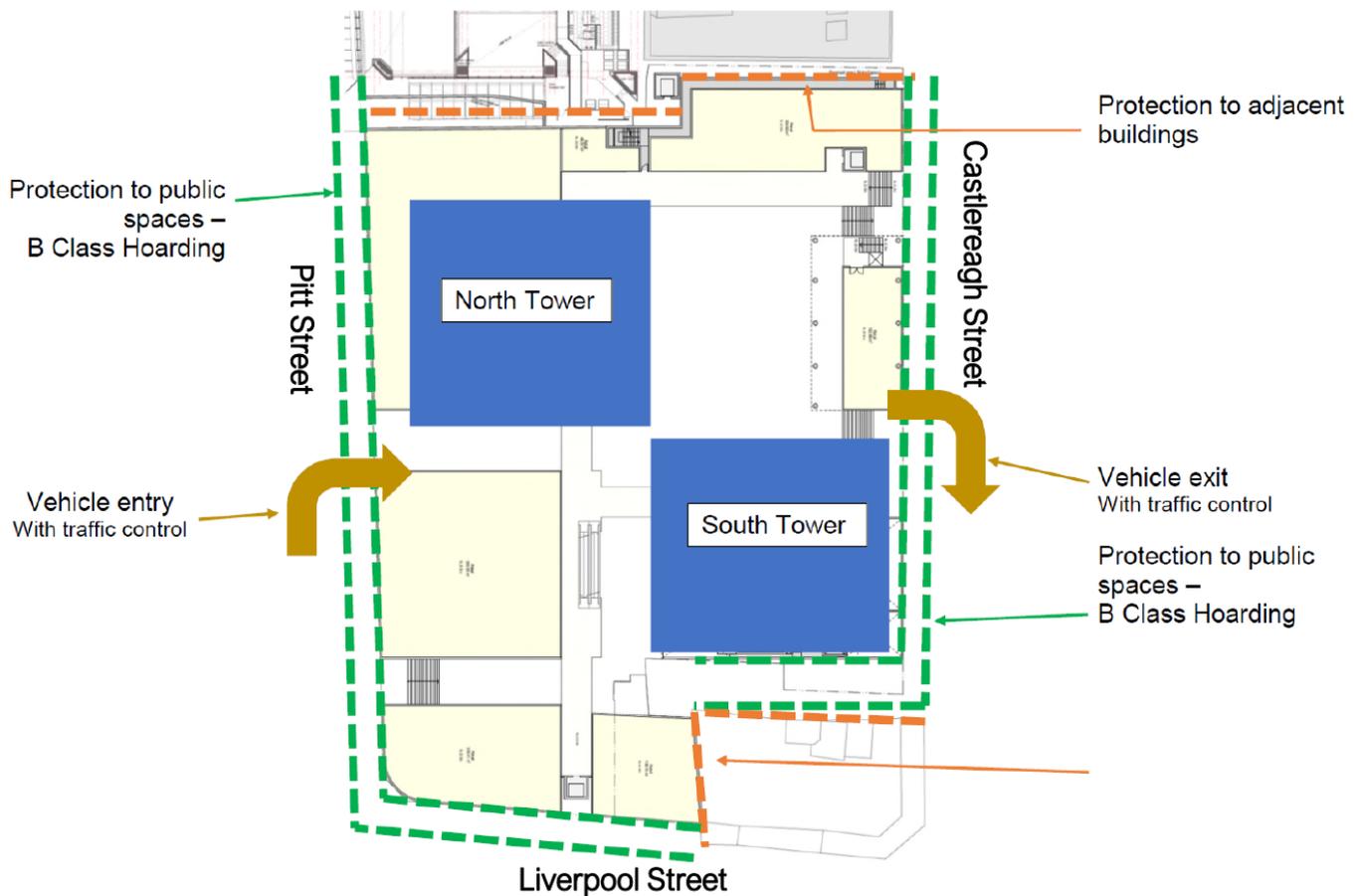


Figure 5 Proposed Construction Traffic and Pedestrian Plan

This scenario will provide the least impact to surrounding vehicular traffic as trucks are marshalled into the site instead of being attended to in the construction zones on street. Loading of trucks with demolition and excavation spoil within the site confines provides improved safety for the public.

The pumping of concrete within the site, is also a much better alternative for the public (noise and safety wise), than the use of a Construction zone on the street. Traffic flow on both Pitt and Castlereagh streets would also benefit from pumping concrete from within the site.

Trucks entering and exiting the site will do so in a controlled manner, which will be managed by accredited traffic controllers to ensure pedestrian safety whilst minimizing impact to traffic. The construction vehicle's path of travel to the site can be barricaded to further safe guard pedestrians. These barricades can be removed when this access is not being used for construction vehicle movements.

The ongoing coordination with the traffic consultant will provide further advice as well as early application and instigation of planning discussions with the Authority stakeholders.

### 3.7 Hoardings and Overhead Protection

Hoardings will be installed to establish a secure barrier between the construction site and the general public. Prior to the installation of hoardings onsite, the following will take place:

- » Services, particularly essential services and life safety systems will be protected or relocated where necessary
- » Routine maintenance will be completed and access provision made for emergency or maintenance access
- » Locations will be coordinated with City of Sydney Council, other relevant stakeholders, tenants and consultants
- » Final locations and wall types will be detailed on revised plans and approved
- » Disruption Shutdown Application (DSA) will be submitted.

## **External Hoardings**

During the site establishment and mobilisation period, external hoardings will be erected on the external street frontages of Pitt, Liverpool and Castlereagh Streets and Dungate Lane.

An “A” class hoarding, of standard plywood type construction, complying with the requirements of the City of Sydney Council hoarding policy, will be installed to establish a secure barrier between the construction site and external frontages.

Prior to the installation of tower cranes or major demolition works a ‘B’ class hoarding of structural steel construction, complying with all requirements of the City of Sydney hoarding policy, and the project specific requirements, will be installed to facilitate the protection of the general public. The extent of hoarding will mirror the extent of construction zone required.

## **Load Bearing / 10kPa Overhead Protection Structures**

Specialised overhead protection structures will be provided for either temporary structural support or for rated overhead protection of the public, tenants and work force.

The load bearing/overhead protective structures will be:

- » Designed and constructed using specialised modular scaffold type components.
- » Installed where appropriate to allow for aesthetic cladding if required.
- » Treated to accommodate acoustic requirements for the operational spaces.
- » Used on council property to protect pedestrians using the footpaths.

## **Internal Site Hoardings**

Internal hoardings will be installed taking into consideration:

- » Aesthetic suitability
- » Acoustic, vibration and dust nuisance
- » Operational requirements
- » Construction access for out of hours work
- » Customer and tenant access pathways
- » Existing structural capacities
- » Effect on surveillance
- » Compliance with BCA and fire engineering requirements
- » Temporary waterproofing from external and internal conditions.

Internal hoardings of various types will typically be used in:

- » Public street frontages
- » Street level Construction Zones
- » Separation between trades on specific levels where required
- » Dungate Lane – to protect access and egress to 255 Castlereagh Street.

## **Scaffold and Screens**

The form of edge protection, utilised for the structures above the ground floor, will be determined with further development of the façade design, however are anticipated to be a combination of perimeter screen system and scaffold. The screens will provide perimeter protection coverage for approximately 4 levels and will progress upward with the structure.

## **Crane, Hoists and Loading Platforms**

It is anticipated tower cranes will provide an efficient configuration for the site, with mobile cranes introduced to supplement cranes as required. The exact types and locations of the tower cranes are yet to be determined. Crane types will be selected due to their lifting capacity and speed. The tower cranes will be installed and removed via mobile cranes on Pitt or Castlereagh Street and will require Council approval at the time. Throughout the construction period tower and mobile cranes may have the capability to swing over adjacent properties. Suitable precautions will be investigated and implemented prior to this occurring.

The tower crane installation will provide safe:

- » Erection of new structure
- » Loading in of new structure and finishing materials required within the existing structure
- » Trade waste removal via rubbish skips
- » New plant installation.

Personnel and materials hoists will be required to service all levels of the new buildings. The exact sizes and locations of the hoists are yet to be determined.

Loading platforms will be progressively erected on each floor for the loading of materials, plant and equipment. These will be removed as façade works progress up the building.

### 3.8 Accommodation

In order to complete the construction workers, it is necessary to provide site amenities for the workers that include lunch, change, ablution, first aid and wash down facilities.

The construction of the new building extends to the street boundary and abuts the adjoining buildings. The site accommodation for the work force will be a staged approach. For the initial stages of the works, the B Class hoarding on George Street will be utilized. As the basement structure is constructed and formwork is stripped, more accommodation will be constructed to house the additional site personnel.

### 3.9 Site Induction

The Contractor will prepare and operate a specific site induction for all employees working on the project, and ensure that every individual on the project attends a site-specific induction before they are allowed to start work. This induction will be a requirement under the Occupational Health & Safety Plan to be formulated for the project. The site induction sessions will be held on a regular basis and where possible subcontractors will be requested to attend the week prior to the date they are due to start.

The site induction will include specific commentary on the Interface Works Application (DSA) and Permit to Work (PTW) processes.

All employees will be educated on the behavioural and security requirements for the project. Any employee found to be repeatedly disregarding these requirements will be removed from site.

### 3.10 Site Security

A licensed security provider will be engaged to provide security services on the project. Preliminary details of the proposed site security methodology for the project are detailed below:

- » **Static Guarding** – A fully compliant and professional static security officer will be located at all entry and exit points during construction working hours.
- » **Compliance Management** – The security contractor will provide a compliance operator to operate the electronic compliance system that will be commissioned onsite.
- » **Access Control** – Security guards stationed at the entry points to the site provide access control to the site. Each individual entering the site will have their ID card scanned by the electronic compliance system. This

system provides a record of every employee onsite and ensures that all subcontractors onsite have current and acceptable insurances, are bona-fide companies, and have all appropriate OH&S documentation in place.

- » **Occupational Health & Safety** – The security guards at the entry gate control the entry of subcontractors and check that those entering site are wearing the appropriate PPE for working on a construction site.
- » **Regular Patrols** - The security guards will also complete regular patrols of the site and will contact the Site Manager should any issues of concern be identified.

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## 4. Protection of Surrounding Developments

### 4.1 Dilapidation Survey

Prior to commencing work onsite, a full Pre-Construction Dilapidation Report will be completed by a Dilapidation Survey Consultant for adjoining buildings and infrastructure. This detailed survey will encompass current structural, architectural, services and heritage conditions of the existing adjacent neighbouring properties, construction zones, infrastructure and roads. The dilapidation report will cover all areas where construction works are occurring and to which the construction certificate applies. These surveys will be issued to all adjoining neighbours and a post completion survey will be compiled for comparison.

Given the adjacency of Sydney Metro tunnels, dedicated dilapidation surveys shall be undertaken of these elements, by experienced and authorised engineers, in accordance with the requirements of Sydney Metro.

### 4.2 Adjoining, Adjacent and Neighbouring Properties

Careful site management, which will minimise disruption and inconvenience to neighbouring buildings and their occupants, is of the highest importance. The Contractor will provide a Community Liaison Officer to work with neighbours, understand their needs and requirements, and, where possible, adjust construction works methodologies accordingly. The adjoining properties and neighbours specifically identified for consultation are identified below.

Properties that adjoin the development properties include:

- » Office building at 320 Pitt Street
- » Telstra Exchange at 227 Castlereagh Street
- » Office building at 255 Castlereagh Street

Details of the adjacent and neighbouring properties can be found in section 2.6.

As construction progresses, protection of adjoining building roofs may be required to the buildings directly adjacent to and within the development. The method of protection will vary and will be resolved with direct communication with each neighbour.

### 4.3 Adjoining Owners Management

#### **Communication**

Prior to commencement of works, the Contractor will undertake a communication meeting with the stakeholders and surrounding tenants. This briefing will involve an outline of the construction sequence, together with an overview of the staging and timing of the works. This initial meeting will provide an opportunity for input from the stakeholders and tenant before finalising methodology.

To ensure ease of communication between all parties, a protocol will be established to:

- » Define lines of communication and appoint a single point of contact for neighbours
- » Times for site inspections within the leased premises
- » Specific dates for regular communication meetings
- » Clarify the escalation process
- » Implement the Interface Works Application (IWA).

It is essential that the stakeholder team is aware of current and future activities within the premises and how these could impact on tenants and customers.

Points of contact between the Contractor's project team and stakeholders will be agreed for various scenarios, with stakeholders provided with 24 hour contact numbers.

Weekly and/or daily inspections of areas that interface with the tenant and customers will be organised so potential issues can be identified early and addressed.

Key personnel from the Contractor's project team will be available to attend stakeholder internal briefings if required to communicate details of the proposed works to their respective team members.

### **Services Interruptions and Impairment**

Prior to any services being impaired or work being carried out within an active operational environment an Interface Works Application (IWA) will be made. This process will be implemented on the project to provide advance agreement for specific work activities to be carried out. IWA's will typically be made a number of weeks in advance of proposed work and in line with the agreed project notification durations. Depending on the risk profile of the proposed work, the agreed notification durations may be required months in advance.

The IWA process will be of particular value on the project in relation to the following elements:

- » Works within a tenant area
- » Works that may affect the services to a tenant area
- » Activities in the general public realm
- » Works that may affect local traffic flow
- » Works that may exceed the agreed noise and vibration criteria
- » Major services changeovers or shutdowns.

The benefits to all parties of the IWA process include:

- » Proposed works are planned in detail
- » Stakeholders are briefed on the proposal
- » Stakeholders are empowered and become active participants in the project
- » Early dissemination of this information effectively to relevant team members
- » Works are undertaken in a more controlled and diligent manner.

### **Complaints Response Process**

The complaints response process for the project will be outlined in the Communication Plan when it is developed. This Plan will describe the Contractor's approach and procedures for communication with internal and external stakeholders, necessary territory authorities, and the public.

### **Emergency Contact**

The initial point of contact for the Project for complaints will be the Project Manager and the Site Manager.

**Project Manager:** TBC

**Site Manager:** TBC

As other key personnel commence onsite, further names and contact numbers will be issued and displayed prominently on sign boards.

## 5. Public Amenity, Safety and Pedestrian Management

### 5.1 Hours of Work

General demolition and construction works will be undertaken within the hours permitted under the development approval. In some cases after-hours permits will be sought from the relevant authorities where special requirements exist, for example oversized deliveries.

Working hours are foreseen as follows:

- » Between 7am and 7pm Monday to Friday
- » Between 7am and 6pm Saturday
- » No working Sundays or public holidays

### 5.2 Noise & Vibration Management

Particular care will need to be taken during the construction of the project to control noise and vibration. Work methodologies and plant selection for demolition and excavation will be reviewed to determine the most practical and programme-effective solutions for these works. This active approach will mitigate the potential for human discomfort and noise and vibration disruptions to surrounding key stakeholders.

Noise and vibration transfer from the construction process could potentially have an impact upon adjacent building tenants, the public and surrounding premises as well as the metro tunnels below Pitt and Castlereagh Streets.

Prior to the commencement of any works onsite a noise and vibration management plan will be developed by the Contractor in consultation with the Stakeholders to develop strategies for the mitigation of noise and vibration generated by the works.

In order to help meet the noise and vibration requirements of the site, baseline testing will be carried out and existing operational levels identified. Early identification of baseline levels will enable subcontractor methodologies to be specifically tailored to ensure the benchmarks are not exceeded.

Vibration and noise generating activities will be coordinated and undertaken in consultation with the appropriate parties and carried out during the subsequent agreed periods.

Vibration and noise will be minimised during the detailed excavation process by the use of saw-cutting of footings, which will reduce the amount of “hammering” required. Particular care will also be taken during the demolition and connection to the surrounding structures.

Work methodologies and plant selection will be reviewed to mitigate the potential for noise and vibration from the new works being loaded onto the surrounding structure.

Work practices that minimise noise and vibration will be used wherever possible. These include but are not limited to the following:

- » Flexible working hours avoiding noisy work during peak business operation times
- » Plant and equipment selection to reduce noise where possible
- » Plant and equipment fitted with silencers where possible
- » Acoustic testing of proposed methodologies prior to commencing work
- » Erection of temporary screens to encapsulate dust and noise
- » Diligent housekeeping to minimise the generation of dust
- » Methodology development aimed at finding alternatives capable of reducing noise and vibration where possible
- » Location of major plant such as cranes away from noise and vibration sensitive areas where possible.

The following items outline some of the Contractors key control measures which will be applied during the demolition and construction phase to assist with noise reduction:

- » Plant known to emit noise strongly in one direction would, where possible, be orientated so that noise is directed away from noise sensitive areas.
- » Machines fitted with engine covers would be kept closed when not operating.
- » The height materials are placed either into or out of trucks would be limited where possible.
- » Stationary and mobile equipment including offsite vehicles would be maintained regularly.
- » Operation would be limited to occur within the approved hours.
- » Continuous training through inductions and ongoing meetings would be provided for operators, labourers, subcontractors and supervisors, to keep minimal noise impacts on local residents and businesses top of mind.
- » Notifications of particularly noisy works would be undertaken prior to any planned works commencing. This would include either personal or community meetings with adjoining properties owners and/or tenants, this process will be undertaken in particular prior to Demolition and Excavation phase of the project.
- » Regular servicing of equipment , or when an individual plant item are identified as being particularly noisy, would be conducted.
- » A construction noise monitoring plan for the construction period prior to commencing works would be designed and implemented.
- » All complaints in relation to noise would be monitored and recorded.
- » An onsite person would be identified as the contact point in the event of noise complaints with contact details provided within the Construction Management Plan.

Where required, noise and vibration monitoring will be carried out during specific demolition and construction periods.

### **Public Safety**

Works will be undertaken with public safety as a significant consideration. Class A and B type hoardings will generally be erected around the site perimeter and where construction is occurring over or adjacent to public thoroughfares.

Formwork screens will be utilised to secure leading edges during construction of structural elements.

General safety measures will be undertaken as standard practice such as scaffolding around demolition works, adequate lighting, safety signage, provision of site security, flashing lights at vehicle cross overs, physical barriers between construction works areas, and public access areas.

Key elements of protection access provided to comply with the City of Sydney Hoarding Policy guidelines are:

- » Erection of an “A” class hoarding of standard plywood type construction
- » Installation of a “B” class hoarding where tower-crane-lifting is proposed to take place.

### **Pedestrian Management**

To allow for, materials handling and management of pedestrian safety, a site specific plan will be developed and implemented. The installation of way finding signage and lighting will be professionally managed to ensure clear pedestrian understanding and preservation of safety and amenity.

## 6. Traffic Management

A detailed Construction Pedestrian and Traffic Management Plan (CPTMP) shall be prepared and submitted prior to the issue of a Construction Certificate. Traffic will generally be managed in the following way:

- » Designated transport routes will be communicated to all personal, and enforced
- » Designated peak hour and non-peak hour delivery vehicle waiting areas
- » Strict scheduling of vehicle movement will occur to minimise off site waiting times
- » On-site parking will not be provided, and site personnel will utilise public transport and car sharing wherever possible
- » Vehicle movements will be compliant with conditions of Consent and broader road-use regulations, particularly with regard to hours of work, materials loading and unloading, and over size deliveries and installation
- » Stakeholder feedback.

### Traffic and Pedestrian Management

A site specific CPTMP will be produced for the project works to ensure vehicle movements to, around and from the site do not affect traffic arterials within the vicinity of the project or pedestrian movements around it.

The contractor will manage traffic associated with the site to minimise the impact on the local area. The CPTMP will be incorporated in subcontractor agreements and the key points communicated to the workforce through the site induction procedures.

### 6.1 Site Access

Access to the Site will be available at various times via the existing street frontage access ways and construction zones to be created.

For access reasons, and to minimise traffic disruptions to the surrounding road network, deliveries will be carefully controlled. Materials will predominantly be delivered via the construction zones.

Heavy and wide loads will be coordinated with the relevant authorities and stakeholders for approval, so as to minimise traffic impact during work hours.

Onsite traffic management will be finalised with each stage of the works, as appropriate. Ongoing liaison with the relevant authorities will occur throughout.

### 6.2 Street Closures

For works to be completed safely, some temporary street closures may be required. These closures will be well planned in advance, with approvals sought from relevant authorities. Activities that may require a street closure include tower crane erection and dismantling, and installation of major plant and structure. Wherever possible these closures will be scheduled for non-peak times. A specific management plan will be established to ensure the best possible outcome.

## 7. Environmental Management

### 7.1 Workplace Health & Safety

The Contractor will be the nominated “Principal Contractor” as required under the WHS Act. This role will require the careful and controlled management of worker and public safety. Detailed methodologies are yet to be developed, however typical approaches include job training, toolbox talks, and implementation of emergency management plans, safe work method statements, weekly WHS meetings and audits to confirm compliance.

The Contractor will be required to report on WHS on a regular basis.

### 7.2 Hazardous Materials

Consultant survey works have been undertaken to identify the potential for in-ground contamination and hazardous materials in the built-form elements. These surveys have been conducted through desktop studies and site inspections. Due to the limitations of access, further investigations shall be required in order to establish existing site conditions and identify any remediation works that may be required. This investigation would include:

- » Hazardous material (Hazmat) survey of the existing structures
- » Any additional requirements for soil classification, sampling and analysis works
- » Community liaison plan to be established and contact made with relevant authorities.

In the event that hazardous materials are uncovered once site works have commenced, the following procedures and principles will be followed; this would be consistent for expected and unexpected hazardous materials:

- » Notification to client and project stakeholders
- » The contractor to develop a remediation management plan
- » Advise the client of the most cost and time efficient solutions whilst adhering to industry best practice standards
- » Agree strategy and commence implementation.

With asbestos for example, all employees need to be trained in the recognition of asbestos and synthetic mineral fibre (SMF) as part of their employers Safe Work Method Statements (SWMS). Employees would cease work on discovering any Hazmat not identified in the report and then inform their supervisor who would arrange for the appropriate action to be taken.

General procedures for hazardous materials removal (including asbestos) will usually be carried-out as follows, but often specific details and procedures will be developed upon material identification. Detailed work method statements will be produced identifying processes such as:

- » The area to be decontaminated to be bunted off at a minimum 10 metre radius
- » Asbestos warning signage to be erected to inform people of the nature of the work being carried out
- » ‘No unauthorised access’ signage to be erected
- » Water points to be established
- » Personal Protective Equipment (PPE) including but not limited to Hard Hat, Safety Boots, Disposable Coveralls, Gloves, Masks and Glasses to be worn at all times when in the Hazmat removal zone
- » All personnel involved in the removal of asbestos to have attended and completed the approved Work cover courses and to be the holders of valid, Work Cover approved asbestos removal licenses
- » Tools and equipment appropriate to the type of asbestos containing material to be used for its removal in order to minimise the disturbance of the material thus preventing the release of fibres
- » Where appropriate, water to be used to keep the material slightly damp thus minimising the chances of dust and fibres being released
- » All asbestos waste to be wrapped in 200µm plastic and tightly secured
- » All asbestos waste to be removed from site and disposed at a licensed EPA asbestos disposal facility

- » Asbestos waste to be removed at the end of each shift. Stockpiling of asbestos will not be permitted
- » Clearance certificates to be provided on completion of Hazmat Removal.

The protection of all council infrastructure including trees, overhead cables, and existing services will be managed to ensure that all infrastructure is maintained, and in the same condition at the completion of the project.

The following protection procedure will be adopted:

- » Ensure all existing services are identified, and terminated or diverted as appropriate
- » Ensure movement or placement of construction plant does not damage infrastructure
- » At the beginning of construction we will advise adjoining and nearby properties of commencement date, possible disruptions and approximate construction time.

#### **Hazardous Materials used During Construction.**

Hazardous substances supplied to the project will be approved for use and accompanied by a current Material Safety Data Sheet (MSDS). All hazardous substances will be registered, correctly stored, decanted, used and disposed in accordance with the MSDS and regulatory requirements. Employees will be trained in the Safe Work Method Statement (SWMS) based on the MSDS and provided with the appropriate Personal Protective Equipment (PPE).

### **7.3 Archaeological**

The Archaeological assessment of the site suggests that the potential for significant features or artefacts on the site is nil to low, with some isolated areas with a medium potential of relics where basements do not currently exist.

The potential for discovery of relics or other items of historical significance will be communicated to all workers during inductions and appropriate procedures for retrieval will be outlined. Procedures are described in the Baseline Archaeological Assessment.

### **7.4 Site Discharge**

Any discharges from the site will be strictly controlled to ensure hazardous materials and contaminants are contained to authority requirements and do not pollute the council storm water system. The contractor will have within its standard procedures, the requirement of spill kits for hazardous materials also including environmental audits that review the usage and storage of hazardous materials onsite.

#### **Dewatering**

The Proponent and Contractor are committed to the management of water discharge from the site throughout the duration of the project. To ensure effective management, a 'Water Quality Management Plan' as a sub-plan to the Environmental Management Plan will be implemented.

Key management strategies include:

- » Objective – Avoid the release of contaminants to waterways / drainage systems
- » Target – All water discharged complies with the Healthy Waters State Planning Policy
- » Measure – Water Quality records confirming compliance with pre-discharge limits.

These and other water quality aspects at the site will be controlled by:

- » Weekly environmental inspections
- » Water quality recording
- » Training for responsible staff
- » Tool Box talks for trade staff
- » Subcontractor Environmental Work Method Statements.

## **Truck Wash Facilities**

This CMP has proposed that all trucks associated with demolition, excavation and concrete trucks enter the site via Pitt or Castlereagh Street onto the purposely constructed platform. The use of this platform will greatly minimize the possibility of debris being transferred onto public roads. A truck wash facility will be provided on this construction platform at all times. The construction platform will be maintained in a clean state.

Construction zones will be kept clean at all times to ensure tyres of trucks and vehicles exit in the same condition that they have entered.

## **Silt Protection Maintenance of Adjoining and Access Roads**

A stormwater and sediment control plan will be developed during the preferred contractor phase to ensure that stormwater from the project does not enter adjoining properties, access roads, etc. and that no water entering the council stormwater system contains silt or other contaminants.

The stormwater and sediment control plan includes but is not limited to providing further detail to the below key control measures:

- » Extent/location of silt protection to be installed
- » Extent/location of sediment basin to be installed
- » Regular weekly checks of silt fences, banks and the like
- » Specific checks after any significant storm event to ensure integrity and performance of silt protection
- » Sediment fences to be repaired as required and excessive sediment deposits should be removed
- » Water quality samples must be taken and analysed prior to the release of any water from the sediment pond/catchment
- » All water quality data including dates of rainfall, testing and water releases must be maintained in an onsite register
- » Maintenance and cleaning of adjoining/surrounding access roads.

## **7.5 Dust Control**

Dust control will be implemented in areas of all active demolition and construction. Dust control will also be implemented within the construction zone as determined by the Contractor, and as required for the health and safety of employees.

All works will be undertaken in accordance with a 'Construction Air Quality' sub-plan as part of the Environmental Management Plan. Dust control measures will be implemented as required, and in accordance with Protection of the New South Wales Environment Operations Act. Dust management will be most critical during the demolition and excavation phases of the project. All subcontractors involved with these works will be required to provide Environmental Work Method Statements that specifically address dust management.

Methods of reducing dust that will be implemented are:

- » Reduce quantum of demolition "breaker" work by cutting structural demolition elements into larger sections for removal by tower crane
- » Encapsulating work zones through the construction of engineer designed full height dust proof structures / hoardings
- » Reviewing tool and plant selection in an attempt to select plant
- » Utilising concrete saw cutting techniques to reduce dust generation
- » Continuous cleaning throughout dust generating work activities
- » Ensuring demolition debris skips are covered at all times.
- » Site perimeter – Solid panel hoarding will be provided on the boundary during the overall construction phase and perimeter scaffolds clad in shade cloth will be provided during demolition to minimise the escape of dust

- » Demolition and excavation – Working surfaces will be watered down as required with stock piling of material minimised
- » Plant movement within the basement will be minimised with all loads covered before exiting the site and a stabilised driveway maintained
- » Construction – A high level of housekeeping to minimise the likelihood of windblown dust and the banning any dry grinding will be maintained.

## 7.6 Waste Management

It will be part of the Contractor's philosophy that a tidy site is a safe site, and this principle will be maintained throughout the construction duration. Rubbish bins / skips will be provided at strategic positions around the site, where all subcontractors will be required to clear their rubbish as it accumulates. These bins will be brought down the building in the construction hoists / builders lifts and loaded via forklift into the large skips for removal from site.

A specific Waste Minimisation Plan will be developed in accordance with the Contractor's Environmental Management System to ensure optimum waste management initiatives are implemented.

The Contractor will develop a Waste Minimisation Plan that is included as a sub plan of the Environmental Management Plan for each the project. The aim of this plan is to work at best practice in minimising the amount of waste produced during the development and manage that waste in order to reduce the amount going to landfill.

The Waste Minimisation Plan (WMP) will exceed regulatory requirements and meet compliance with potential Green Star benchmarks set for the project.

In setting such high standards and to achieve waste re-use and recycling onsite, the site-specific Waste Minimisation Plan will be implemented. The Contractor's project team will be trained in the WMP and the subcontractors informed on variations to the required changes from the industry 'business-as-usual' approach.

Subcontract trade packages will be prepared and tendered to ensure optimum recycling through Waste Management achieves the required Green Star targets.

All rubbish will be removed from site on a daily basis via wheelie bins and deposited in bins/skips which will be provided at strategic positions onsite. Where space permits, the Contractor will also provide specifically labelled recycling bins for materials such as, cardboard and plasterboard to maximise the amount of material able to be recycled.

In addition, all subcontractors are responsible for removing their own packaging and other re-usable items such as pallets from site. Adopting this policy:

- » Promotes recycling by subcontractors and suppliers
- » Removes unnecessary packaging at the source rather than at site
- » Reduces the amount of rubbish being sent to land fill.

Monthly reports detailing the overall percentage of rubbish being recycled will be provided by the waste disposal contractor. This information will enable the effectiveness of the implemented waste management strategies to be monitored and appropriate steps to be taken if necessary to improve.

## 7.7 Recycling

Further to Section 8.5 Waste Management, detailed recycling programs will be developed for both demolition and construction phases of the works. The site subcontractors will be required to report on extent of recycling achieved and be subject to Environmental Audits.