ICC Hotel
Construction Management Plan

Rev. C
April 2015

Lend Lease

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1 OBJECTIVES

This report is a Construction Management Plan (CMP) for the ICC Hotel project works.
This report supports a State Significant Development (SSD) Development Application (DA) submitted to the Minister for Planning pursuant to Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

This SSDA follows the approval and current assessment of a number of SSDAs within the SICEEP site, including:

SSDA1 which secured approval for the core convention, exhibition and entertainment facilities of the SICEEP Project;
SSDA2, a staged application that established a Concept Proposal for a new mixed use neighbourhood at Darling Harbour known as Darling Square;
SSDA3, SSDA4, and SSDA5 which related to three detailed proposals for use of the development plots within Darling Square;
SSDA 6 which secured approval for the construction of the ICC Hotel; and
SSDA7 is currently under assessment and seeks approval for the construction and use of a mixed use development on the North-East Plot of Darling Square.

This Application (referred to as SSDA 8) seeks approval for the fit-out of the International Convention Centre (ICC) Hotel having now selected the Hotel operator, Accor, along with a façade lighting system and land subdivision.

The ICC Hotel forms part of the SICEEP Project, which will deliver Australia's global city with new world class convention, exhibition and entertainment facilities and support the NSW Government's goal to "make NSW number one again". On 15 June 2014, consent for SSDA6 (ICC Hotel), was granted by a delegate of the Minister for Planning for the:

- demolition of the existing buildings on site and associated tree removal;
- construction of a 35 storey building, for up to 616 hotel keys, and basement;
- maximum GFA of 37,090m^2;
- hotel use including ancillary guest and visitor facilities, restaurant and ballroom;
- replacement of a one-way access road;
- provision of short term and taxi/drop off car parking and coach parking;
- public domain works including integration with existing/proposed works; and
- building identification signage zones.

This consent did not include any approval for the fit-out of the Hotel building, as it was too premature in light of not having concluded the Hotel operator selection at the time of seeking approval for the base building. There was also no approval sought at the time for any feature external building lighting or subdivision of the land.

2 PROJECT OVERVIEW & DESCRIPTION

The proposal relates to a SSDA for the fit-out, façade lighting system and land subdivision of the ICC Hotel component of the SICEEP Project. The hotel is located at the northern end of the precinct and comprises a single building. The hotel is being developed by Lend Lease and is consistent with Darling Harbour Live's Preferred Precinct Plan.

More specifically, this SSDA seeks approval for the following components of development:

- The detailed fit-out of the ICC hotel building having now selected the Hotel Operator as Accor (Sofitel);
- Feature lighting of the hotel to reinforce the 'landmark' quality of the building and support its function as a 'beacon' for the broader SICEEP Project; and
- The subdivision of the site to facilitate separate leasehold title of the ICC Sydney Hotel site for the effective operation of the hotel.

Background

The NSW Government considers that a precinct-wide renewal and expansion of the existing convention, exhibition and entertainment centre facilities at Darling Harbour is required, and is committed to Sydney reclaiming its position on centre stage for hosting world-class events with the creation of SICEEP.

Following an extensive and rigorous Expressions of Interest and Request for Proposals process, a consortium comprising AEG Ogden, Lend Lease, Capella Capital and Spotless was announced by the NSW Government in December 2012 as the preferred proponent to transform Darling Harbour and create SICEEP.

Key features of the Preferred Precinct Plan include:

Delivering world-class convention, exhibition and entertainment facilities, including:

- Up to 40,000m^2 exhibition space;
- Over 8,000m^2 of meeting rooms space, across 40 rooms;
- Overall convention space capacity for more than 12,000 people;
- A ballroom capable of accommodating 2,000 people; and
- A premium, red-carpet entertainment facility with a capacity of 8,000 persons;
- Providing a hotel complex at the northern end of the precinct;
- A vibrant and authentic new neighbourhood at the southern end of the precinct, now called 'Darling Square', including apartments, student accommodation, shops, cafes and restaurants;
- Renewed and upgraded public domain that has been increased by a hectare, including an outdoor event space for up to 27,000 people at an expanded Tumbalong Park; and
- Improved pedestrian connections linking to the proposed Ultimo Pedestrian Network drawing people between Central, Chinatown and Cockle Bay Wharf as well as east-west between Ultimo/Pyrmont and the City.

3 SITE DESCRIPTION

The SICEEP Site is located within Darling Harbour. Darling Harbour is a 60 hectare waterfront precinct on the south-western edge of the Sydney Central Business District that provides a mix of functions including recreational, tourist, entertainment and business.

With an area of approximately 20 hectares, the SICEEP Site is generally bound by the Light Rail Line to the west, Harbourside shopping centre and Cockle Bay to the north, Darling Quarter, the Chinese Garden and Harbour Street to the east, and Hay Street to the south. The SICEEP Site has been divided into three redevelopment areas – Bayside, Darling Central and The Haymarket.

The ICC Hotel Site (refer to **Figure 1**):

- is located within the northern end of the SICEEP site;
- is bound by Harbourside Shopping Centre to the north and east, the International Convention Centre to the south and Darling Drive to the west; and
- occupies an area of approximately 3,600m^2.

Figure 1 – Aerial Photograph of the SICEEP Site

4 PLANNING APPROVALS STRATEGY

The SICEEP Project has resulted in the lodgement of numerous SSD DAs for the various components of the redevelopment project. Future applications will continue to be lodged in accordance with the Concept Proposal Stage 1 Approval and the Preferred Master Plan.

5 HOURS OF WORK AND SITE CONTACTS

The hours of works for the project have been defined by the SSDA6116 conditions of consent, and extract of the which follows:

All work including demolition, excavation and building work, and activities in the vicinity of the site generating noise associated with preparation for the commencement of work in connection with the proposed development must only be carried out;

- Between 7.00am and 7.00pm, Monday to Fridays inclusive
- Between 7.00am and 5.00pm, Saturdays
- No audible work is to be undertaken on Sundays and Public Holidays
- Works may be undertaken outside of these hours where;
    - It is required by a works authorisation deed executed with the RMS
    - The delivery of materials is required outside of these hours by the Police or occasional works are required outside of these hours by other authorities
    - It is required in an emergency to avoid the loss of life, damage to property and / or to prevent environmental harm
    - Variation is approved in advance in writing to the Department

Lend Lease Key personnel for this project is as follows;

- SITE MANAGER
  Glen Nash
  Mobile: 0421 052 142

- CONSTRUCTION MANAGER
  Fernando Casas
  Mobile: 0401 141 452

6 CONSTRUCTION PLANNING AND METHODOLOGY

6.1 GENERAL OVERVIEW

The overall Construction methodology has been assessed and planned considering the local site conditions and impacts on surrounding neighbours. Some of these items include but are not necessarily limited to the following;

- Existing road works and traffic flow
- Limited space for deliveries and set down areas
- Tower cranes and mobile cranes to conduct the majority of the materials handling
- Maintaining the public realm and public access to Darling Harbour
- Traffic alignments to Darling Drive.
- The introduction of a new slip Lane between the Hotel Development and Harbourside Shopping Centre
- Concurrent construction of PPP buildings.
- Minimal impact to Harbourside Shopping Centre

The basic construction planning methodology for this project has been developed and broken into 2 stages.

STAGE 1 WORKS (Enabling Works)

- Site Establishment including the installation of hoardings, traffic and pedestrian control measures
- Services relocation/removal

STAGE 2 WORKS (Construction & Fitout Works)

- Bulk Excavation for the basement
- Piling and Foundations
- Basement, podium and tower concrete structure (40 levels)
- Services
- Curtain Wall façade system
- Finishes
- Roof Plant Room
- Fitout of internal areas of the hotel

6.2 STAGE 1 WORKS (ENABLING WORKS)

To maintain safe public egress between the Light Rail Station and Darling Harbour during the enabling works, an “A” class hoarding will be erected to the perimeter of the site along Darling Drive and directly adjoining the Harbourside shopping centre.

Pedestrians will be directed to a new pedestrian crossing to the South of the existing roundabout and will be able to access Darling Harbour from the light rail station at this point. (Figure 3 and 3A).
Alternatively, pedestrians will be able to access Harbourside and Darling Harbour via the pedestrian bridge and overpass attached to the Novotel car park.

During the stage 1 works existing services will be diverted / relocated in preparation for the main works to commence.

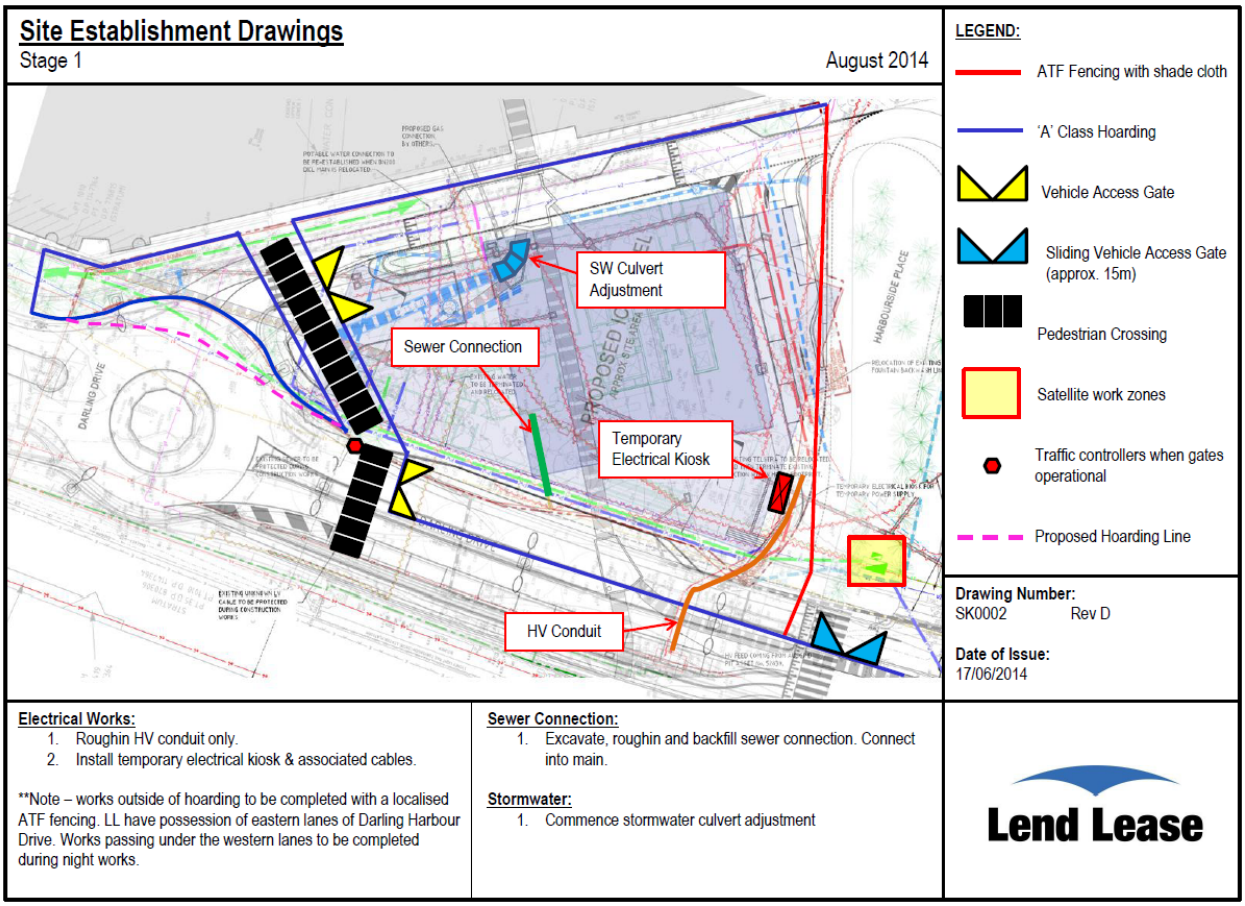


Figure 3 – Stage 1 Site Setup

Figure 3A – Examples of A Class Hoarding

6.3 STAGE 2 WORKS (CONSTRUCTION & FITOUT

Following the relocation and removal of existing services, a new site compound will be established (Figure 4). The new site compound will consist of the following elements;

- A "B" Class Hoarding will be established along Darling Drive providing pedestrians with overhead protection and separation from construction traffic (Figure 4A). The B Class hoarding will also extend into the PPP / PDA site compound and provide separation between the 2 building sites
- A Structural steel gantry will be installed adjacent to the Harbourside Shopping Centre allowing for double stacked site accommodation to be installed for construction personnel. The gantry will elevate the site accommodation to approx 5.4m above the existing road pavement to allow for the delivery of steel truss frames for the Convention Centre. This roadway will be accessed via a separate gate on Darling Drive and within the PPP site compound.
- A loading zone will be installed on Darling Drive with mountable guide kerbs installed to provide separation for general traffic. Swinging gates with flashing lights will be installed to notify traffic that the loading zone is in use and prevent general traffic from entering the loading zone area.
- Site access control will be via a swipe card gate (Figure 4B) on Darling Drive with direct access to the site accommodation.

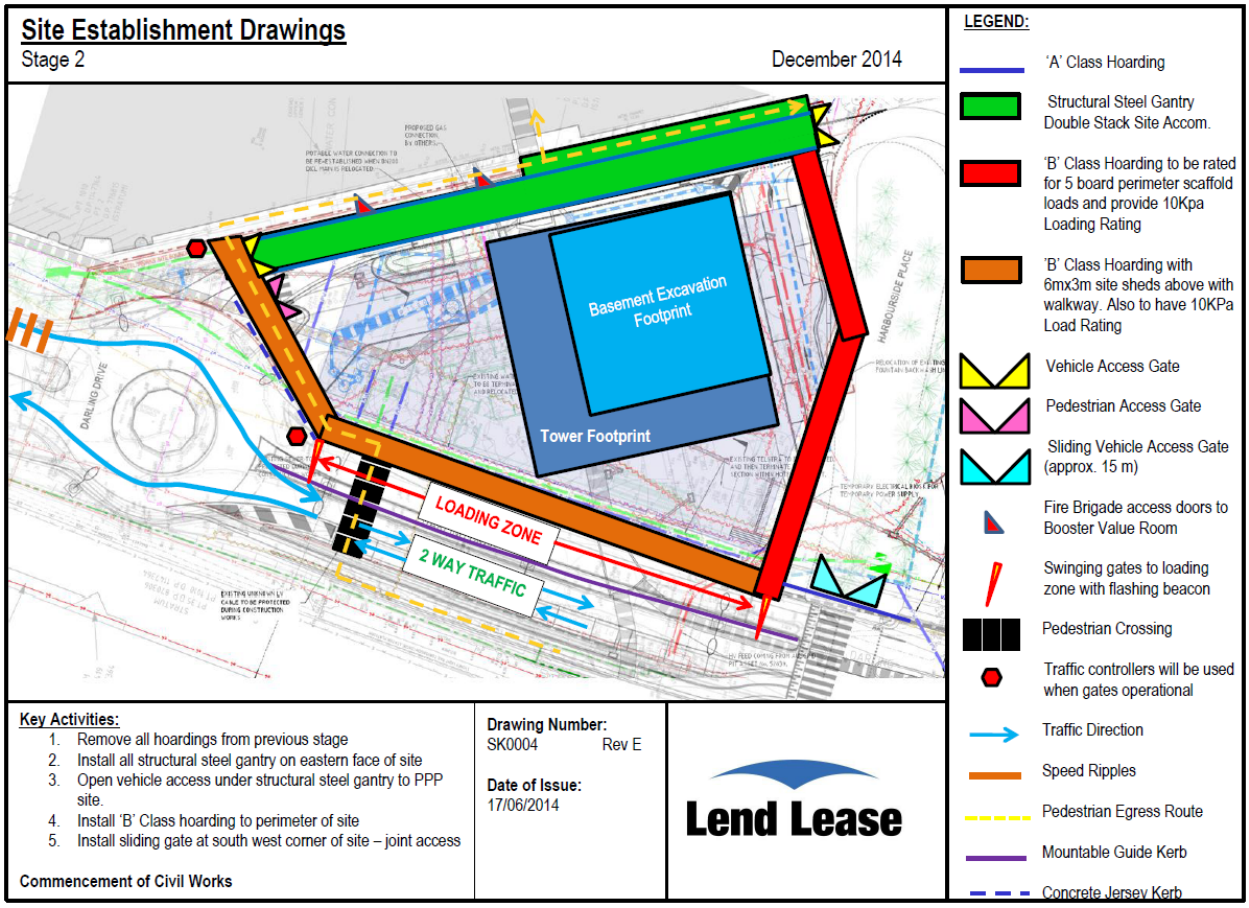


Figure 4 – Stage 2 Site Setup

It is intended that the Site Setup for Stage 2 works will remain in place for the full duration of the Fitout component of works.

Figure 4A – Example of B Class Hoarding

Figure 4B – Example of Swipe Card Entry Gate

6.4 OUTDOOR LIGHTING

All external lighting to the project will be installed in accordance with AS4282:1997 Control of the Obtrusive Effects of Outdoor Lighting. This will include the following principles;

- Switch off lights when not required for safety, security or enhancement of the night-time scene.
- Wherever possible, direct light downwards, not upwards, to illuminate the target area.
- Use specifically designed lighting equipment that, once installed, minimizes the spread of light near to, or above, the horizontal.
- Do not 'over' light. It is a cause of light pollution and a waste of money.
- To keep glare to a minimum, ensure that the main beam angle of all lights directed towards any potential observer is kept below 70°.
- Wherever possible use floodlights with asymmetric beams that permit the front glazing to be kept at or near parallel to the surface being lit.

6.5 SITE ACCOMMODATION

The site workforce is anticipated to peak at approximately 300 workers. In order to comply with the Code of Practice Requirements the following accommodation will be required on site;

- 17 x (6m x 3m) Lunch Sheds
- 15 x (6m x 3m) Change Sheds
- 4 x (3m x 4.8m) Male Ablution
- 1 x (3m x 4.8m) Female Ablution
- 1 x (6m x 3m) First Aid Shed
- 1 x Induction Shed

These sheds will be located to the Eastern side of the ICC Hotel construction site (Figure 4C) which is adjacent to the Harbourside Shopping Centre. The gantry will provide an approx 5.4m clearance from the road surface to enable the delivery of the steel roof structure.

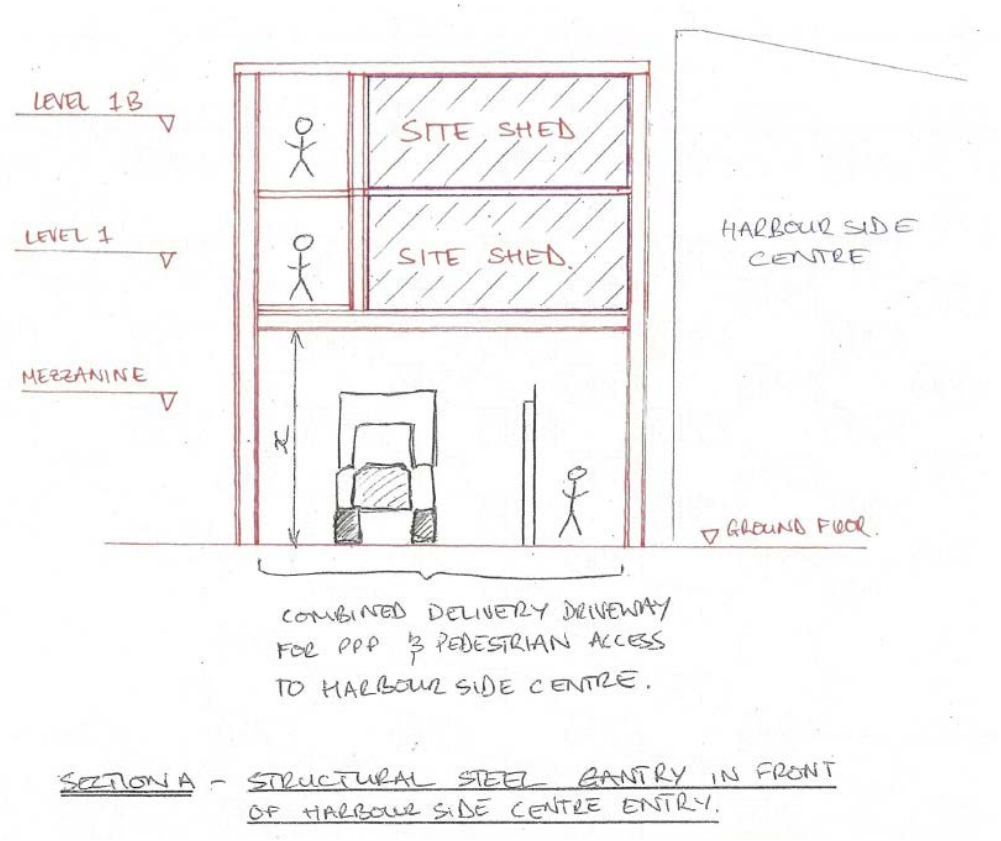


Figure 4C – Site Accommodation Gantry Structure

6.6 BASIC CONSTRUCTION METHODOLOGY

When the site has been established and is secure, piling to the perimeter shoring wall will commence along with the piling for the suspended ground floor structure to the north of the site. Once the retention system has been completed the basement excavation will commence. There will be a number of truck movements during the day to remove the rock from the site.

Following bulk excavation, the ground floor and basement concrete structure will commence, utilizing the tower crane to lift material to the floors. Once the structure reaches a certain height, a concrete pump will be set up to place concrete to the hotel tower structure.

Services and curtain wall installation will trail the structure. Loading platforms will be installed so that plant, materials and panels can be lifted by the tower crane to their designated floors.

Finishes to the inside of the Hotel will progress following the installation of the curtain wall. The Landscape surrounding the Hotel site will be completed in sequence with the Public Domain works to Harbourside Place.

7 TRAFFIC MANAGEMENT

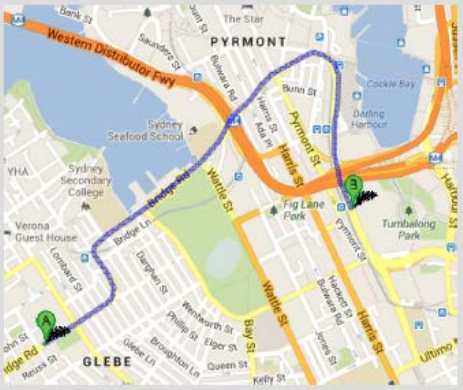
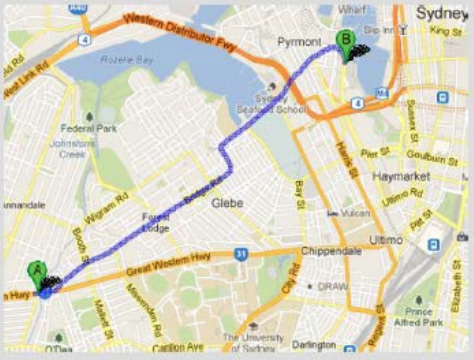
As part of the planning works for the ICC Hotel project and SICEEP precinct in general, Lend Lease engaged Hyder Consulting to prepare a Construction Traffic Management Plan. The plan has addressed both the individual impacts of the ICC Hotel development and the cumulative effects of the SICEEP precinct works overall. The report assesses the potential impacts from the proposed construction activities on the local road network and then outlines strategies in order to mitigate the potential impacts throughout the construction and operation of the Project.

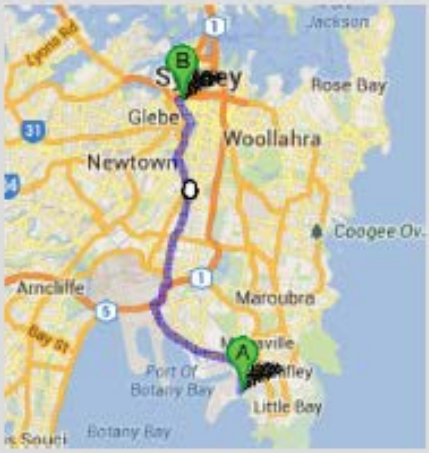
7.1 CONSTRUCTION VEHICLE ACCESS / ROUTES

Traffic to and from the site will generally be heading north (across the Sydney Harbour Bridge), west (across Anzac Bridge or Parramatta Road, and south (to Botany and Kurnell).
Construction vehicles likely to be generated by the proposed construction activities include:

- Articulated vehicles for the delivery of machinery and tower cranes;
- Heavy and medium rigid trucks for construction material removals;
- Mobile cranes and concrete pumps; and
- Delivery vans.

The general construction routes are shown in the diagrams following. Construction vehicles to and from Eastern Creek, Glebe, Parramatta and Victoria Road will access Darling Drive from the north while construction vehicles to and from Botany Bay, Moorebank, St George and St Peters will access Darling Drive from the south.

Eastern Creek	Via Great Western Highway – M4 Motorway – Parramatta Road - Wattle Street – City West Link – Western Distributor – Pyrmont Bridge Road – Darling Drive north	
Glebe	Via Bridge Road – Darling Drive north	
Parramatta	Via Great Western Highway – Bridge Road – Darling Drive north	

Victoria Road	Via Victoria Road – Western Distributor – Pyrmont Bridge Road – Darling Drive north	
Botany Bay	Via Foreshore Road - Botany Road - Gibbons Street – Regent Street – Lee Street – Quay Street – Ultimo Road – Darling Drive south	
Moorebank	Via Junction Road – Heathcote Road - M5 Motorway – Princes Highway - King Street City Road – Parramatta Road – Ultimo Road – Darling Drive south	
St George	Via Stoney Creek Road – Forrest Road – Princes Highway - King Street City Road – Parramatta Road – Ultimo Road – Darling Drive south	

St Peters	Via Botany Road - Gibbons Street – Regent Street – Lee Street – Quay Street – Ultimo Road – Darling Drive south	
St Peters	Via King Street City Road – Parramatta Road – Ultimo Road – Darling Drive south	

7.2 VEHICLE SITE ACCESS

Traffic movements and vehicles will conform to current Roads and Maritime Services (RMS) requirements and the Traffic Management Plan.
All vehicles accessing the site will conform to the “Traffic controls at work sites” manual, and Australian Standard 1742 – Traffic control, and only certified traffic controllers shall be used to direct vehicles outside of the construction boundaries.
Traffic movements and vehicles to the site shall enter the northern end of the site from Darling St. Vehicles will egress through the site and exit onto Darling Drive bound south only

Vehicle gates are to be manned so that there is no unauthorised access. At all other times they will be locked and monitored. All vehicle movements will be controlled through a notification procedure. All vehicles will use the entry and exit gates as detailed. Gates shall be monitored during the works to ensure safe access and egress is maintained for vehicles and pedestrians.

Figures 3 and 4 show vehicle gate entry points as well as Loading Zones for material drop off and pickups.

7.3 LOADING / UNLOADING MATERIALS

Management of the loading and unloading of materials will be through the following measures:

- All deliveries to site will be booked in with the Site Manager at least 24-48 hours prior with a nominated Gate for delivery and time for delivery. Any deliveries that fall outside the agreed times will not be permitted to enter the site grounds.
- gate personnel will stand guard at the site entrance gates, along with the relevant subcontractor's personnel to safely allow vehicles to enter and exit the site, and at the same time controlling pedestrian movement and traffic of other vehicles around the site. LL employees with traffic control licenses will manage this process.
- Relevant signage to manage the flow of traffic will be established as the site is set up and through progressive changes to suit the construction sequencing.
- Truck grid / wash facilities provided at the point where vehicles will exit the site perimeter, thus preventing materials being tracked off the site and onto roadways.

To facilitate materials handling during the construction of the project, 2 Tower Cranes will be provided for this project. The tower cranes will be located within the site boundary as indicated on the site establishment plan. These will be erected over a nominated weekend with the relevant TMP approval process. Any mobile cranage will be contained within the site perimeter fence where possible so that there is no impact on external stakeholders. Should mobile cranes be required outside the work zone, the relevant approvals will be sought through the relevant authorities.

7.4 FREQUENCY OF VEHICLES ACCESSING THE SITE

The following is an outline of the expected number of vehicles during the key phases of the project;

- Site establishment and Civil works (July 14 to November 14)
  7 trucks per day
- Structure / Façade / Fit-out Works (November 2014 to July 2016)
  18 trucks per day
- Fitout Works and Demobilisation (July 2016 to January 2017)
  14 trucks per day

The vehicle numbers outlined above have been averaged over a 6 day week. It is anticipated that on concrete pour days there will be up to 50 trucks / day.

7.5 PEDESTRIAN ACCESS

Pedestrian access around the site has been addressed in the Construction Traffic Management Plan.

8 NEIGHBOURS

8.1 DILAPIDATION REPORT

A detailed dilapidation report is to be prepared clearly outlining the condition of the surrounding infrastructure and the neighbouring Harbourside Shopping Centre (**Figure 5**). The façade directly adjoining the ICC Hotel site is to be included in the report as well as the retail outlets on the South West corner of the Centre (**Figure 5A**)

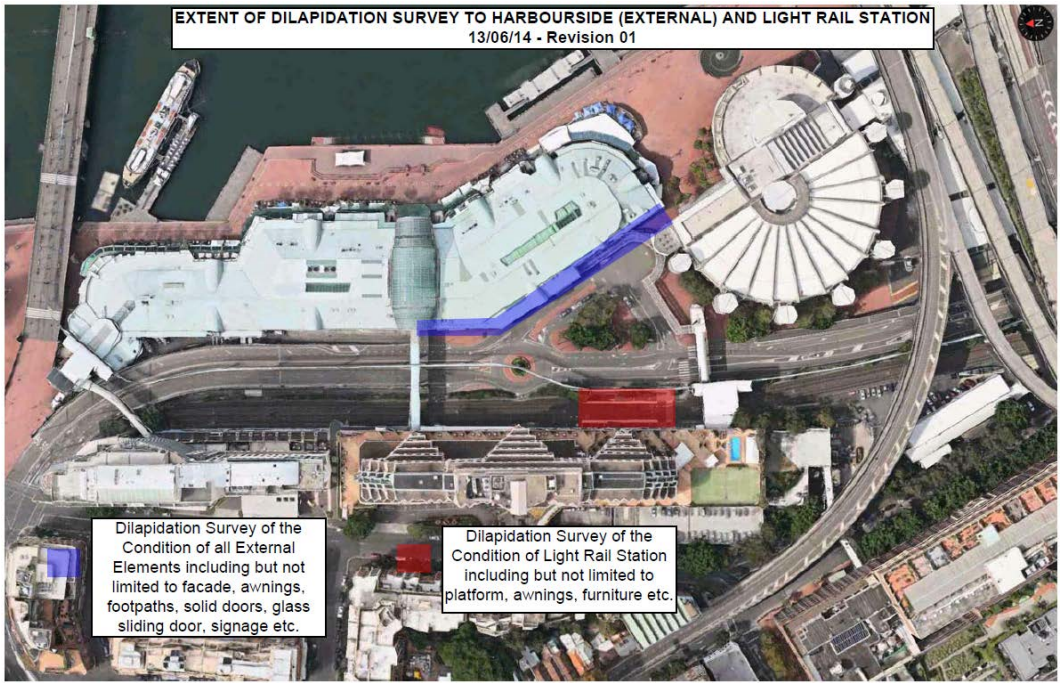


Figure 5 – Overall Extent of Dilapidation Report

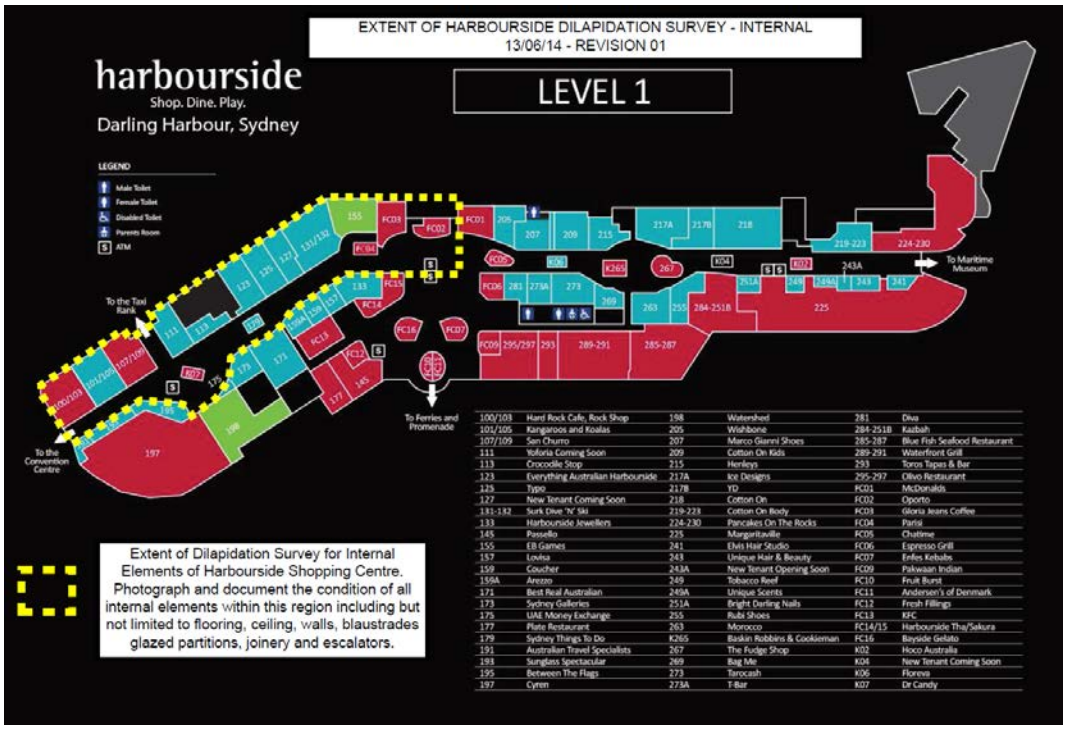


Figure 5A – Harbourside Shopping Centre Dilapidation Report

8.2 HARBOURSIDE SHOPPING CENTRE

As the Harbourside Shopping Centre will continue to operate while the hotel under construction, Lend Lease engaged RAWFIRE Safety Engineering to develop a Temporary Egress Strategy for the Centre during construction.

The Temporary Egress Strategy report dated 4 June 2014 addresses the opportunities for evacuation from the building during the period of construction where altered egress conditions are presented (Figure 6).

The report concluded that the temporary safety measures, egress provisions and management procedures as detailed were adequate to achieve an acceptable level of safety for the continued occupation of the Shopping Centre during the period of construction for the Hotel.

Figure 6 – Harbourside Shopping Centre Evacuation Routes

9 ENVIRONMENTAL HEALTH AND SAFETY (EHS)

The design and delivery phase of this project, presents many opportunities to contribute to Lend Lease Building and construction industry benchmarks for Environmental, Health and Safety (EHS) management through developing and implementing Occupational Health and Safety, and ecologically sustainable practices.

EHS management during construction is the responsibility of each and every member of the project construction team. Identification of potential EHS aspects and impacts is an ongoing activity. Potential impacts will be identified at both the design and construction phase via the project risk Assessment and safe work practices procedures.

This Project EHS Plan will maintain the requirements of the Lend Lease Building Bluebook and the forms, guides, policy's, etc are to be obtained from the related information in Bluebook. Where the Lend Lease Building forms are required to be amended altered or developed these shall be undertaken in consultation with appropriate Senior Management (ie EHS Manager, Operations Manager, Executive Project Manager or Management System Manager).

9.1 EHS PLAN

The Project Team has the following objectives with respect to Environmental Health & Safety (EHS):

- Identify and eliminate potential Class 1 and Class 2 incidents and occurrences;
- Maintain statutory compliance with respect to EHS;
- Conform to company EHS Management System, Standards, Instructions and EHS Business Plans,
- Provide, training, skilling, awareness and Best Practice to meet Legislative and Lend Lease Building requirement;
- Maintain accurate reporting and record keeping.
- Report, support and enhance Senior Management
- Undertake Positive Performance activities with the Project Team, Subcontractors, Client, Site personnel and other interested parties i.e. audits, tool box and neighbourhood consultation, PCG, etc
- Achieve the incident and injury free objectives for the project
- Ensure the effective management of environmental issues to reduce our impact on the natural environment.

An Environmental, Health and Safety Management Plan has been prepared to manage Lend Lease Building's EHS controls for construction activities.

The EHS Plan will ensure that any EHS commitments made and other requirements of the proposed development are identified and their incorporation in the works proposed is planned and implemented. The EHS Plan is a working document to be updated as necessary and forms part of the contract documentation for the project.

9.2 INCIDENT AND INJURY FREE (IIF VISION)

Lend Lease Building will operate Incident & Injury Free (IIF) and is committed to realising this wherever it has a presence.
We will:

- Invest in what it takes to achieve this vision
- As employees be empowered to lead in making this vision real
- Proactively work with all stakeholders, including clients, designers, contractors and the workforce to make this vision a reality and be prepared to walk away rather than compromise our commitment to safety
- Own and act on our vision.
- This requires a mindset intolerant of any injury regardless of frequency or severity.

We believe:

- That working Incident & Injury Free is a choice and a basic human right.

- The leaders in our industry will be those who succeed in the transformation to making an Incident & Injury Free industry a given

We recognise:

- That this vision is achievable if we are committed.
- This commitment to Incident & Injury Free requires taking a personal stand, great courage and trust.

10 WASTE MANAGEMENT PLAN

A Spoil and Waste Management Plan has been developed based on the hierarchy of avoidance/reduce, re-use, recycle, treat and dispose as outlined in the National Waste Minimisation and Recycling Strategy.
To re-use and/or recycle a minimum of 80% of all Hard Waste Material, and Soft Waste Material generated on the construction site, thus achieving up to 80% reduction/avoidance in waste to landfill.

Best Practice should be adopted wherever possible, to achieve waste minimisation and reduction. Key areas that will be targeted in the Waste Management Plan are:

- To avoid, whenever possible, the generation of wastes
- Demolition Materials (including hazardous building materials i.e. asbestos)
- Construction Materials
- Excavated Fill Materials
- Domestic & Human Waste
- Wastewater
- Litter generation due to construction activities

In addition the project will:

- liaise with Subcontractors to identify areas where they can reduce waste and reuse materials in their respective trades;
- meet local, state and federal waste minimisation legislation and environmental standards;
- prevent pollution and damage to the environment; and
- Protect the safety and health of our employees, site personnel and the public.

10.1 SITE CONTROLS

10.1.1 PLANNING

A Waste Management Contractor will be involved in the early stage of the project to ensure effective planning for the waste management.
Major Subcontractors will be asked to submit prior to commencement on site waste minimisation details including as a minimum the following:

- practical measures associated with their works to prevent waste entering on site;
- waste streams resulting from their works which can be recycled and will be actively managed as part of their waste reduction plan; and
- Alternative products containing recycled material that could be utilised in their works, in place of more traditional materials, which conform and meet with the design specification.

All suppliers of building materials will be encouraged to nominate packaging minimisation and reuse initiatives, which have been implemented, as part of product supply to the project.
Bulk handling and reusable/returnable transport containers will be encouraged.
Site set up should include measures to prevent litter entering the stormwater drains and waterways feeding to the adjacent stormwater systems and Darling Harbour.
Waste Management will be addressed at any or all of the design coordination meetings.

10.1.2 EXCAVATED FILL MATERIALS

Any fill materials identified as requiring excavation from within development footprints will, where suitable, be reused on the site as part of the site engineering or landscape works.
In the event that excavated soils are deemed unsuitable for re-use on site, the excavated fill materials will require initial waste classification testing in accordance with relevant authorities. Depending on the outcome of the waste classification, a suitably licensed landfill will be chosen to receive and dispose of the soils. Appropriate waste documentation and permits will be maintained throughout this process.
Options for either re-use or off-site disposal of excavated soil materials will be assessed throughout the project.

10.1.3 WASTE MATERIALS BIN SYSTEM

The demolition and construction waste management system to be adopted on site will be through the use of the separation bins for the various recyclable materials, and non-recyclable waste materials.
Signs will be located on each bin, indicating type of bin and what waste may be placed in that bin.
The Subcontractors will be responsible for the daily cleaning of their respective work areas and placing of their waste in the correct bins.
Additional bins will be provided where possible to further separate waste. Adequate number of litter bins will be made available within the construction site areas, including work and lunch areas. These bins must be regularly emptied.
The Subcontractors working on site will place all their waste in the correct bins on site.
If a particular bin is found to be "contaminated" by waste material from a subcontractor that particular Subcontractor will be liable for the cost associated with tipping or sorting of waste.

10.1.4 WASTE WATER / WASHOUT AREAS

Washout processes and facilities for paint and/or finishing trades are to be minimised and water recycling for these activities are encouraged where possible.
Utilisation of Lend Lease Building guidelines/management plan for disposal of paint and associated wastes are to be implemented.
Finishing trades washout facilities should NOT be plumbed to any building services and will be of a stand-alone nature. The maintenance of these facilities should be the subcontractor's responsibility and should comply with all appropriate Environmental Legislation and local authority guidelines.

10.1.5 PACKAGING

All suppliers of building materials will be encouraged to nominate packaging minimisation and reuse initiatives, which have been implemented, as part of product supply to the project. Bulk handling and reusable transport containers will be encouraged.

10.1.6 RECYCLED MATERIALS

Suppliers will be encouraged to nominate products that include a recycled component and ability/opportunity for recycling of unused components in accordance with the specified 80% waste reduction target. Product selection will include a selection factor associated with recyclability and percent of recycled product.

10.1.7 DOMESTIC & HUMAN WASTE

All domestic waste including litter will be managed via a similar bin system that will be provided in the vicinity of designated eating areas, change areas and amenities. Materials collected for recycling should include:

- Paper/Cardboard
- Food waste
- Aluminium Cans
- Drink containers: Glass & co-mingled
- General waste

Construction and demolition waste bins and domestic waste bins will be located in separate designated areas on the site to ensure appropriately safe storage and collection of waste. Waste areas will be clearly signposted and colour coordinated to define acceptable waste types suited for each bin and secured where required. The location of the waste bins and recycling areas will be marked on the site waste management plans.
All human waste and associated waste water will be collected via the provision of portable toilet and sanitary systems during the construction and demolition period. Where practicable, temporary connections will be made to the existing sewer services on site. Where these facilities are too remote to prevent connection, a licensed waste contractor will be appointed to manage the waste collection and disposal in addition to general maintenance and cleaning of the toilets.

11 STORMWATER & EROSION MANAGEMENT PLAN

A Water and Stormwater Management Plan has been developed with the aim of addressing the following objectives;

- To avoid erosion, contamination and sedimentation occurring as a result of the construction or demolition activities associated with the redevelopment.
- To control the quality of stormwater leaving the construction site such that no unacceptable impact occurs to adjoining natural watercourses or stormwater drains discharging into these water bodies.
- Minimise disturbance to the hydrologic regime of the surrounding landscape and maximise opportunities for stormwater recycling on the site.

The construction works have the potential to adversely impact ecosystems and water quality within adjacent surface water bodies via sediment loads and potential contaminants contained in runoff. Potential impacts to the site environment, including existing soils and groundwater also need to be considered as part of any stormwater and erosion management plan. Other physical impacts to be considered include the susceptibility of the site to potential flooding events.

The following activities are expected to be the key risk sources during construction:

- Site clearing, spoil and material stockpiling.

The following management issues have been identified:

- Sediment laden water from the construction site may potentially flow into the stormwater system and/or adjacent surface water bodies;
- Stormwater with excessively high or low pH values could run-off from the selected stockpiles stabilisation area;
- Stormwater collected in excavations and requiring disposal;
- Groundwater entering excavations and requiring disposal after dewatering.
- Site cut off drains eroding and increasing site water sediment loads;
- Vehicles leaving the construction site depositing dirt/mud on public roads after rain periods;
- Removal of bulk material off site escaping from vehicles and polluting roadways; and
- Debris and litter collecting along roads and in catch drains and consequently could affect nearby water bodies quality.
- Site contamination through the potential for an overflow of fuel/chemical storage containers and contamination from the equipment and plant repair area
- Stormwater runoff coming into contact with potential contaminated soils may potentially flow into the Stormwater inlets and natural water courses could be affected and consequently reduce water quality

11.1 SITE CONTROLS

11.1.1 PLANNING

The following initiatives will be considered when planning works on site;

- Locate all stockpiled soils away from surface waters, potential watercourses and flood prone areas.
- Limit land disturbance to the area needed, especially in the vicinity of existing stormwater drainage.
- Cease works if excess dust is being generated and resolves the problem prior to recommencing works.
- Restrict construction and demolition traffic to designated traffic routes that are well drained and all weather.
- Annual weather patterns to be taken into account when planning general site operations and in particular during planned excavations or land disturbance activities.
- Clearly identify, demarcate and fence off areas of vegetation or landscape on or near the boundaries of proposed excavation and demolition footprint to indicate these areas are not to be entered or disturbed.

11.1.2 CONTROLS

- Divert up slope runoff around disturbed areas;

- Construct earth bunds and similar diversion drains to divert surface water runoff around the perimeter of the proposed demolition or construction areas. Where possible, seed all diversion channels to dissipate water velocity.
- Install temporary sediment and erosion controls to prevent the erosion of soil from disturbed construction areas and stockpiles. Measures may include filter barriers (straw bales or silt fence), temporary covering or revegetation with hydro-mulching and native seeding.
- Control access to construction areas by limiting entry and exit points. Ensure all approved access points shall be marked prior to the commencement of construction within that area.
- Reduce the erosive energy (concentrated flow and velocity) of water using measures such as temporary storage, dissipaters, level spreaders and drain grass planting's.
- Prevent deposition of sediment on the public road network due to truck / equipment movements to and from the site via a purpose built truck/wheel wash facilities at site exit point.
- Collection of stormwater into temporary detention basins (refer to de-watering procedure)
- Progressive landscaping and rehabilitation of disturbed areas

12 NOISE AND VIBRATION MANAGEMENT PLAN

A Noise and Vibration Management Plan has been developed with the aim of addressing the following objectives;

- To minimise the generation of noise and vibration from construction activities occurring on site and its impact on site operations and workers.
- To minimise the generation of noise and vibration from construction activities occurring on site and its impact on the neighbouring residents, businesses and associated building structures.
- Establish and maintain good relations with community and neighbouring sites.

Noise generated during the demolition and construction works, will be primarily associated with vehicle movements, generators, heavy machinery (eg: Excavators) and hand-held machinery and tools. Some additional vehicle noise may be generated by the thoroughfare of vehicles using transport corridors to and from the site. As no blasting is proposed all the works will be conducted within the hours detailed by the condition of consent, potential noise impacts are predicted to be negligible and expected to pose a minor impact (if any) to the nearest residences to the west and north of the site. In view of this, the following management issues have been identified:

- Noise and vibration generated during construction and demolition works affecting nearby properties.
- Vibration generated during construction and demolition works affecting site structures, including western distributor and light rail.
- Establish and maintain good relations with community and neighbouring sites.

12.1 SITE CONTROLS

12.1.1 PLANNING & CONTROLS

All construction and demolition activities have been planned to be performed in accordance with the proposed hours as outlined below:

- 7:00am to 7:00pm on Mondays to Fridays, inclusive;
- 7:00am to 5:00pm on Saturdays; and
- No work on Sundays or public holidays.

Any noisy activities proposed outside the hours detailed above will require prior written consent from the nominated approval authority and subject to conditions of consent.
Noise limits during the demolition and construction works are to meet the Maximum Allowable Noise Contribution as specified in the conditions of consent.
No construction works shall commence unless the Subcontractor has submitted a Work Method Statement which details the schedule of demolition / excavation equipment which describes the equipment types to be used, noise levels these will generate, expected time and duration of use, and any measures required to ensure the noise levels are acceptable (such as screen mufflers).
The Major Subcontractors generating noise should consider engaging an acoustic consultant to monitor construction noise level during its identified noisy activities.
Ensure traffic access to and from the site will be via designated entry/exit points.
Fit and maintain appropriate mufflers on construction and earth-moving equipment as required.

13 AIR QUALITY MANAGEMENT PLAN

An Air Quality and Odour Management Plan has been developed with the aim of addressing the following objectives;

- To ensure construction and demolition must not prejudice air quality.
- To maintain the current levels of local air quality during construction activities.
- To minimise the generation of dust from the project site.
- To implement appropriate controls to suppress dust and other suspended particulates in accordance with the consent conditions and risk management requirements.
- To minimise all potential odour issues relating to contaminated soil or groundwater.

Major sources of air emissions from the proposed demolition and construction works at the site are primarily associated with traffic movements, minor excavation /stockpiling and handling of soils on site and the demolition of some existing buildings and structures. In addition, the likely presence of existing soils/groundwater on the site may give rise to potential odour emissions as a result of minor excavation or soil disturbance.
The generation of dust, air emissions or odours from the site can be a major nuisance to adjacent land users, create unsafe working conditions on site and result in environmental degradation via the loss of topsoil and placement of dust onto sensitive ecosystems and adjacent water bodies. In view of this, the following management issues have been identified:

- Dust/Odours generating from construction activities from the site affecting adjoining properties or public
- access.
- Dust generated on the construction site affecting site operations.
- Odours emitted from any disturbed soils/ groundwater affecting site workers or site personnel.

13.1 SITE CONTROLS

13.1.1 PLANNING & CONTROLS

The minimisation of air-borne pollution is a key component for this environment management plan for the site. Construction and demolition phase air quality impacts shall be minimised or avoided by incorporation of appropriate air quality control measures.
Air Quality Monitoring Equipment Diagram will be prepared prior to site activity, detailing the locations and type of equipment e.g. dust gauges or dust loggers to be installed and monitored.
The installation and application of air quality controls during the construction phase shall be in accordance with the following principles:

- Ensure that all equipment used and all facilities erected on site are designed and operated to control the emission of smoke, dust, fumes and any other air impurity into the atmosphere;
- Spray earthworks, roads and other surfaces as necessary with water;
- Seal temporary haul roads where appropriate which will be in use for prolonged periods;
- Schedule the civil works program in a manner to minimise the length of time that excavations and stockpiles are left exposed.
- Provide adequate truck wash-down and wheel washing facilities on site to preventing tracking of muds/sediment onto public roadways and generating dust.
- Transport routes and traffic areas shall be clearly defined by marker posts or other suitable barriers to prevent unnecessary vehicle movement onto other areas. These roads shall operate under defined speed limits.
- A water cart will be employed as required to dampen work areas and exposed soils to prevent the emission of excessive dust from the site.
- Trucks transporting material from the site shall be covered immediately after loading to prevent windblown dust emissions and spillages. The covering must be maintained until immediately before unloading the trucks.
- All access roads shall be surfaced in selected materials and where required, hard surfaced. Mud stone, clay stone and shale stone shall not be used.
- Subcontractors will maintain all construction equipment to ensure exhaust emissions comply with the relevant Air Regulations issued under State Legislation.

- All waste material will be removed from the site in a manner described in the Waste Management Plan.
- No cleared vegetation, demolition materials and other waste material shall not be burnt on the site.
- No excavation or similar works involving disturbance of large volumes of soil will be permitted during extremely windy conditions.
- Progressively revegetate and landscape disturbed areas to minimise long durations of soils exposed to weathering. Seed stockpiles with local grasses.
- Development and implementation of an Asbestos (& Hazardous Building Materials) Management Plan as part of the demolition phases.

14 STAKEHOLDER ENGAGEMENT MANAGEMENT PLAN

A Stakeholder Engagement Management Plan has been developed for this project.

15 COMMISSIONING

The project team will work closely with the service consultants to ensure that services can be tested against key design parameters. While certain systems can be commissioned prior to building completion, the majority of the balancing and performance testing will need to be conducted once the fit out works are complete.

With the detailed design of the building yet to be finalized, a detailed commissioning is still to be developed. Once the design has been completed the Services Manager for the project will develop the plan for review and approval by all parties ensuring that all consultant, statutory and end user requirements are satisfied prior to handover of the building.

16 DE-MOBILISATION & PROJECT COMPLETION

Site establishment will be removed as the project is completed:

- Tower Crane
- Environmental controls
- Office and sheds
- Fencing and Gates
- Material Storage compounds
- Temporary services
- Site communication systems including radio and emergency nurse call system