

CONSTRUCTION MANAGEMENT PLAN
Sirius Site

2-60 Cumberland Street, The Rocks

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DEDICO

LEADING PROPERTY DEVELOPMENT MANAGERS



Contents

1.0 Introduction	2
1.1 Project Description	3
1.2 Consultation.....	4
2.0 Works Description	5
2.1 Hoardings, Scaffolding, Artwork & Graphics	5
2.2 Excavation.....	6
2.3 Demolition	6
2.4 Structure	6
2.5 Façade.....	6
2.6 Fit-out and building services.....	6
2.7 Site accommodation and ablution facilities	6
2.8 Recycling	7
2.9 Traffic Management	7
3.0 Protection of Surrounding Developments.....	7
3.1 Adjacent buildings and structures	7
4.0 Public Amenity, Safety and Pedestrian Management	7
4.1 Hours of Work.....	7
4.2 Noise and Vibration Levels	7
4.3 Public Safety	11
4.4 Pedestrian Management	11
4.5 Community Management.....	11
5.0 Materials and handling.....	12
5.1 Material Delivery	12
5.2 Waste management	12
5.3 Crane, hoists and loading platforms	12
6.0 Traffic Management	12
6.1 Site Access	13
6.2 Ongoing Management.....	13
6.3 Streets Closures	13
6.4 Pedestrian Movement	13
7.0 Environmental Management.....	13
7.1 Workplace Health and Safety	13
7.2 Hazardous Materials.....	14
7.3 Dust Control.....	14
7.4 Site Discharge	14
7.5 Recycling	14

1.0 Introduction

This Construction Management Plan (CMP) has been prepared by Dedico Development Services (DDS) on behalf of Sirius Developments Pty Ltd to accompany a Development Application to City of Sydney Council for the redevelopment of 2-60 Cumberland Street, The Rocks; known as the Sirius Site.



Figure.1

This CMP addresses the construction related activities for the purpose of the Development Application. The CMP has been prepared at an early stage of the design and planning of the project with an objective to communicate to Council that the project is well considered and will be undertaken in a manner that seeks to minimize disturbance and impact on the surrounding environment.

The CMP outlines the method of construction that will be implemented in order to mitigate the risks and provide sensitivity to the environment and community during the works.

The CMP:

- Provides a methodology within which the demolition, excavation and construction activities will be completed in a manner which will not cause environmental or community disturbances above acceptable levels.
- Provides a framework for procedures to be adopted when monitoring the construction performance against agreed criteria, including but not limited to Sydney City Council Guidelines for construction, traffic and pedestrian management and the applicable DA conditions for the development.

- Implements statutory requirements in respect to environmental issues associated with the construction of the work.

The Proponent and the Contractor will work closely with the City of Sydney Council, neighbours, 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.

A final CMP version by the appointed construction Contractor will be prepared after the detailed design is complete and will incorporate the specific approved DA Conditions of Consent. This approach will ensure all construction is properly facilitated, integrated, and coordinated thus guaranteeing the project's objectives are met.

1.1 Project Description

The total site area is 3,664.5m². The site has a frontage of approximately 115m to Cumberland Street (west) and approximately 120m to Gloucester Walk (east).

The Sirius building rises from the north and south towards a central tower.

The existing building is proposed to be substantially retained and restored. New residential additions are proposed to be added to the existing structure and new structures for commercial uses are proposed to be added at the Cumberland Street and Gloucester Walk frontages.

Proposed works include:

- Alterations and additions to the existing building
- Provision of a through-site link between Cumberland Street and Gloucester Walk
- Upgrades to Gloucester Walk including landscaping and pedestrian access
- Improvements to Cumberland Street including landscaping and improved carpark entry
- Associated works include:
 - Minor demolition works
 - Earthworks
 - Structural upgrades
 - Services upgrades; and
 - Landscape works

1.2 Consultation

The planning and implementation of the construction works will be completed in consultation with the following statutory authorities where applicable:

- The City of Sydney Council
- Environmental Protection Authority (EPA)
- Sydney Water
- Roads and Maritime Services
- Ausgrid
- Telstra
- Optus
- NBN
- Sydney Metro
- Jemena
- Workcover Authority by NSW.

Excavation or the removal of any materials involving the use of machinery of any kind, including but not limited to compressors and jack hammers, will comply with the City of Sydney Building Sites Noise Code and Australian Standard 2436-2010 “Guide to noise and vibration control on construction, demolition and maintenance sites”.

2.0 Works Description

2.1 Hoardings, Scaffolding, Artwork & Graphics

The design, approval and erection of hoardings will be compliant with the Sydney City Council guideline and relevant policies for erection and design of hoardings, scaffold and associated artwork and signage.

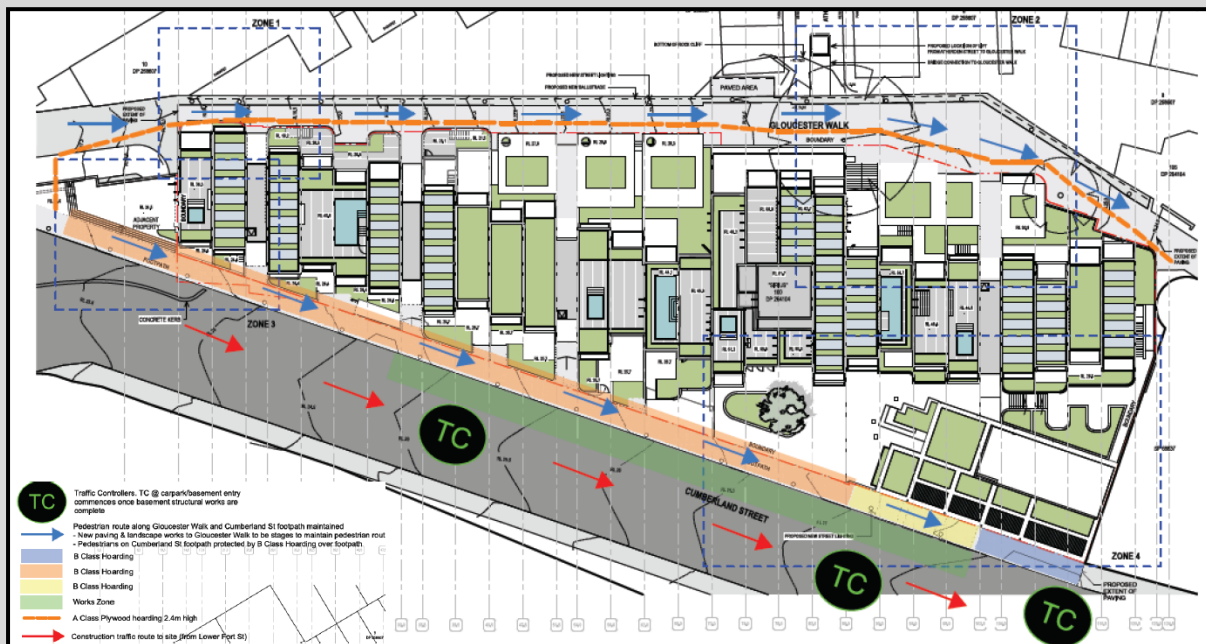


Figure.2

Perimeter scaffolding will be erected to all elevations of the building. Initially the scaffolding will be used for the demolition works and containment requirements. Following completion of the demolition works, the scaffold will be used for the structural works, façade works and installation of volumetric modular pods and prefabricated balconies.

A final hoarding design will be submitted as part of the detailed Construction Management Plan prior to Construction Certificate stage.

Figure 2 above shows a preliminary site set-up and management including proposed works zone.

It is proposed that the pedestrian route along Gloucester Walk and Cumberland Street footpath are maintained. Proposed paving and landscaping works to Gloucester Walk are to be staged to maintain pedestrian route. Pedestrian protection along Cumberland Street will be achieved with the proposed B class hoarding.

The installation of artwork, graphics and images will be displayed and set out in accordance with Council guidelines.

2.2 Excavation

Minor, internal excavation within the existing basement is proposed. The bulk excavation will be undertaken via specialist rock cutting and rock hammering machinery.

On completion of bulk excavation works, detailed excavation works for pad/strip footings, lift pits, turntable and the truck lift will commence.

2.3 Demolition

Initial works will include the isolation of services and removal of hazardous materials. As the building is cleared of hazardous materials the internal strip out of the existing finishes and removal of façade windows, doors, and pre-cast concrete window surrounds will commence.

The existing ramp down to the Basement will be demolished and replaced with vehicle lifts capable of carrying small trucks. Part of the existing B-01 slab sill also be demolished for the provision of a car stacker accessed from B-02

2.4 Structure

Structural strengthening works will commence with the strengthening of the existing foundations and construction of new lift core pits.

Strengthening works and the construction of new lift cores will then proceed up the building.

The new suspended basement slab (B1), podium slabs and Cumberland Street building will be constructed in a conventional formwork system.

2.5 Façade

Volumetric modular apartment PODS and prefabricated balconies are proposed in parts of the building. The PODS will be delivered to site and lifted via the tower crane into position. The balconies will be prefabricated off site inclusive of cladding and balustrading. They will be delivered to site and lifted via the tower crane into position.

2.6 Fit-out and building services

The new building services will be provided to adequate levels to ensure environmental performances to meet the client's targets and consultants' brief.

Major service plant rooms will exist predominantly in the basement, major mechanical equipment will be lifted by crane onto the roof of the Cumberland Building.

2.7 Site accommodation and ablution facilities

The Contractor will ensure that the project has appropriate site accommodation and ablution facilities. All facilities will at minimum adhere to the Work Cover Code of Practice for "Managing the Work Environment and Facilities" and will be located within the construction zone.

All site accommodation and ablution facilities will be located within the site with the main workforce entrance.

2.8 Recycling

For recycling information refer to the Waste Management plan submitted as part of the DA.

2.9 Traffic Management

Construction Traffic Management (TMP) will be described via the Traffic consultant's management report.

3.0 Protection of Surrounding Developments

3.1 Adjacent buildings and structures

Standard protection methods will be implemented to protect any other adjacent structure including hoardings, scaffold and traffic control. Dilapidation surveys before construction commence will be undertaken. Noise and dust monitoring measures will be implemented if required during construction. Localised protection systems such as scaffold will be employed during the roof top works to provide further protection and prevent damage.

4.0 Public Amenity, Safety and Pedestrian Management

4.1 Hours of Work

General demolition and construction works will be undertaken within the hours permitted under the development approval. If required, after-hours permits will be sought from the relevant authorities for specific tasks eg. for oversized deliveries.

4.2 Noise and Vibration Levels

CBD Rail Tunnel

Vibration monitoring shall be conducted on the rail corridor structure (including the future CBDRL if required) where required to ensure the vibration generated from the construction works complies with NSW Transport Asset Standards Authority Development Near Rail Tunnels version 2.0 dated 15 November 2018 as stated in Section 8.5.4 of the report. Where vibration generated during construction is within 20% of the allowable limits, the vibration generated will be monitored by an acoustic engineer on-site.

Impacts and Mitigation Strategy for Surrounding Developments (including 88 Cumberland St)

According to AS 2436 – 2010 *“Guide to noise and vibration control on construction, demolition and maintenance sites”* the following techniques shall be considered to minimize the spread of noise and vibrations to the potential receivers.

Noise

If a process that generates significant noise levels cannot be avoided, the amount of noise reaching the receiver should be minimized. Two ways of achieving this are to either increase the distance between the noise source and the receiver or to introduce noise reduction measures such as screens.

Physical methods to reduce the transmission of noise between the site works and residences, or other sensitive land uses, are generally suited to works where there is longer-term exposure to the noise. Practices that will reduce noise from the site include:

- Increasing the distance between noise sources and sensitive receivers.
- Constructing barriers that are part of the project design early in the project to introduce the mitigation of site noise.

Screening

On sites where distance is limited, the screening of noise may be beneficial, and this will be taken into account during the planning stages.

The usefulness of a noise barrier will depend upon its length, its height, its position relative to the source and to the receiver, and the material from which it is made. A barrier designed to reduce noise from a moving source should extend beyond the last property to be protected to not less than ten times the shortest measurement from the property to the barrier. A barrier designed to reduce noise from a stationary source should, where possible, extend to a distance beyond the direct line between the noise source and the receiver to a distance equal to ten times the effective barrier height, which is the height above the direct line between source and receiver.

If the works are predominately within nominally closed structures, careful consideration will be given to reducing noise breakout at any openings.

Reversing and Warning Alarms

Community complaints often involve the intrusive noise of alarms commonly used to provide a safe system of work for vehicles operating on a site. Beeper reversing alarm noise is generally tonal and may cause annoyance at significant distances from the work site.

There are alternative warning alarms capable of providing a safe system of work that are equal to or better than the traditional ‘beeper’, while also reducing environmental noise impacts. The following alternatives should be considered for use on construction sites as appropriate:

- (a) Broadband audible alarms incorporating a wide range of sound frequencies (as opposed to the tonal frequency ‘beep’) are less intrusive when heard in the neighbourhood.
- (b) Variable-level alarms reduce the emitted noise levels by detecting the background noise level and adjusting the alarm level accordingly.

- (c) Non-audible warning systems (e.g. flashing lights, reversing cameras) may also be employed, providing safety considerations, are not compromised.
- (d) Proximity alarms that use sensors to determine the distance from objects, such as people or structures, and generate an audible alarm in cabin for the driver.
- (e) Spotters or observers.

The above methods should be combined, where appropriate.

Noise & Vibration Monitoring Strategy

Noise and vibration levels will be monitored from time to time to ensure that noise generated as a result of remediation and construction activities does not disturb local businesses.

Monitoring will be in the form of regular checks by the acoustic consultant and in response to any noise or vibration complaints. Where noise and vibration criteria are being exceeded or in response to valid complaints, noise and / or vibration monitoring should be undertaken. This would be performed inside the premises of the affected property and on site adjacent to the affected receivers.

The results of any noise or vibration monitoring will be provided to the relevant party or person in a timely manner allowing the builder to address the issue and respond to the complaints.

Noise and vibration monitoring can take two forms:

- Short term monitoring
- Long-term monitoring

Short-term monitoring consists of attended monitoring when critical stages of the construction are occurring. This normally provides real-time assistance and guidance to the subcontractor on site letting them know when the noise and vibration criteria are exceeded allowing the selection of alternative method on construction or equipment selection in order to minimise noise and vibration impacts.

Similarly, long-term monitoring uses noise and vibration loggers providing real-time alerts to the builder / site manager when the noise and vibration criteria are exceeded.

Typically, the noise and vibration loggers stay on site for a period of several months for the critical construction stages of the project. Sometimes the period of construction noise and vibration monitoring is dictated by the state/local authorities through the DA conditions.

Both methods are complementary and normally used simultaneously providing a significant amount of data via the long-term monitoring but also providing information on the sources of noise and vibration generating exceedances via the short-term or attended monitoring.

Complaint Handling Procedures and Community Liaison

It is recommended that the builder directly contact adjacent noise sensitive receivers and provide them with the following information:

- The contact details for a nominated representative in order to make noise / vibration complaints.

- Explain the timeframe for the construction works and the proposed activities, i.e. the proposed start / stop dates of work and a description of the noise producing equipment that will be used.
- Notify the noise sensitive receivers and the state/local authority in a timely manner should there be any need for an extension to the proposed arrangements.
- Provide them with a copy of this report as approved by the state/local authority.
- The state/local authority should be notified of the nature and details of complaints received (time, complainant etc.) and what remedial action has taken place, if any.
- Where noise is demonstrated as being compliant with criteria, this should not limit the proponent in undertaking further additional reasonable and feasible steps to reduce noise emissions.

To assist in the management of noise and vibration complaints various procedures are to be followed. These include:

- Clearly visible signage identifying any key personnel along with their contact details to be erected along the perimeter of the building site including;
 - A 24-hour contact name, phone number and email address provided for the resident to address any complaint. The signage will declare; "For any enquiry, complaint or emergency relating to this site at any time please contact..."
- Give complaints a fair hearing.
- Have a documented complaints process, including an escalation procedure so that if a complaint is not satisfied there is a clear path to follow.
- Call back as soon as possible to keep people informed of action to be taken to address noise problems. Call back at night time only if requested by the complainant to avoid further disturbance.
- Implement all feasible and reasonable measures to address the source of the complaint.
- A register is to be kept by the contractor to keep a record of complaints and detail any information associated with them. The contents of the register will include:
 - The name and the address of the complainant
 - Time and date of the complaint
 - The nature of the complaint (Noise/Vibration)
 - Subsequent details
 - Remedial action undertaken

The contents of the register will be maintained and updated with any new complaint without delay. The complaints will be reported to both the state/local authority and the Contractor. The investigation of the complaint and any remedial actions will be performed by the builder and/or client representative.

In the event of noisy works scheduled, the builder will notify residents 5 business days in advance.

4.3 Public Safety

Works will be undertaken with Public Safety as a significant consideration. Class 'B' type hoardings will generally be erected along Cumberland Street.

General safety measures shall be undertaken as standard practice. These include scaffolding around construction works, adequate lighting, safety signage, provision of site security and controlled construction traffic crossings and general traffic control where required via a TMP.

4.4 Pedestrian Management

To allow for materials handling and management of pedestrian safety, some minor diversions from existing pedestrian routes will be required for small periods of the work. This will be managed with Council approval and adequate public notices and be shown on the TMP.

4.5 Community Management

Careful management of site to minimise disruption and inconvenience to neighbouring buildings and their occupants will be considered and implemented. 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.

Neighbours specifically identified for close consultation include:

- 3 Cumberland Street
- 86 Cumberland Street
- 1 Hickson Road
- 7 Atherden Street
- 25 George Street
- 29-41 George Street
- 55 George Street
- 70 George Street
- 80 George Street
- 88 George Street
- 4 Atherden Street
- 7-33 Playfair St
- 26 Playfair St

5.0 Materials and handling

5.1 Material Delivery

A detailed material handling strategy will be proposed by the successful building contractor. A construction zone to enable goods to be delivered to and removed from the site will be applied for.

This will be reviewed and agreed with Council and the Roads and Maritime by the appointed Contractor.

Certified traffic controllers will be used to ensure smooth operation of the construction zone and avoid truck queuing in surrounding streets.

To alleviate congestion to the construction zone and surrounding streets, where possible on-site storage will be used to reduce impact of deliveries.

5.2 Waste management

Demolished and excavated material will be removed in a manner that minimises impact on surrounding properties. In general, all demolition and excavation material will be loaded onto trucks within the site.

5.3 Crane, hoists and loading platforms

It is anticipated 1 tower crane will provide an efficient configuration to service the site. Exact types and location of the tower crane are yet to be determined and will be proposed by the appointed contractor.

It is anticipated that this crane will be used for unloading of trucks and this crane will be used to service the core structures and the facade. The crane will also be used for rubbish removal via loading platforms in conjunction with internal hoists.

Man and materials hoists may be required to service all levels of the new building. The exact location will be determined by the appointed contractor.

6.0 Traffic Management

The Contractor shall prepare a detailed Traffic Management Plan prior to issuance of a Construction Certificate. Traffic will generally be managed in the following way:

- Designated transport routes will be communicated to all personnel, and enforced.
- Strict scheduling of vehicle movement will occur to minimise off-site waiting times.
- On-site parking will not be provided, and site workers 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 installations.

6.1 Site Access

Access to the site will be as determined in the TMP and approval from Council. As the project proceeds access for personnel will be made available.

For access reasons, and to minimise traffic disruptions deliveries will be carefully controlled.

6.2 Ongoing Management

Heavy and wide loads will be coordinated with the relevant authorities for after-hours deliveries, thereby minimising traffic impact during working hours.

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

6.3 Streets Closures

For works to be completed safely, some temporary street closures will be required. These closures will be well planned 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

6.4 Pedestrian Movement

Pedestrian movement during the construction phase will not be significantly affected by the redevelopment. Pedestrian management considerations are detailed below including the following:

- Footpath along Cumberland Street will be covered by a B Class Hoarding.
- Traffic controllers for construction vehicles entering and leaving the site.
- Provision of night lighting, protective barriers, overhead protective structures if applicable and traffic barriers if applicable.
- Any diversion of the pedestrian paths will be agreed with Council prior to being implemented.

7.0 Environmental Management

7.1 Workplace Health and Safety (WHS)

The Contractor will be nominated as “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, alcohol and substance abuse checks, and implementation of emergency management plans.

The Contractor will be required to report on WHS on a regular basis as is required by the WH+S Act and regulations NSW 2011

7.2 Hazardous Materials

Any existing hazardous materials within the site will be removed in accordance with regulatory requirements. Prior to construction, full site investigations will be undertaken by an appropriately qualified consultant and required clearance certificates obtained. This includes identifying any contamination within the proposed excavation and removing off site as required by an appropriate qualified environmental consultant.

7.3 Dust Control

Appropriate mitigation and suppression techniques will be applied to ensure dust levels are compliant with relevant authority requirements.

7.4 Site Discharge

Any discharges from the Site will be strictly controlled to ensure hazardous materials and contaminants are contained to authority requirements. Any dewatering will be tested as compliant before discharging to approved authority systems.

7.5 Recycling

Detailed recycling programs will be developed for both demolition excavation and construction phases of the works. The Contractor will be required to report on extent of recycling achieved. An initial estimate of recycling during the demolition and construction phases is contained in the Waste Management Plan submitted with the DA application.