GUIDELINES FOR TEMPORARY PROTECTIVE STRUCTURES

Hoardings, Scaffolding, Shoring & Facade Retention



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These Guidelines have been developed from an amalgamation of Standard Building Conditions for Temporar Structures and the current Policy for the Design of Construction Hoardings. These Guidelines are likely to annually.					
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	Enquiries regarding this document sho The One Stop Shop Town Hall House 456 Kent Street SYDNEY				

SYDNEY NSW 2000 Tel: 02 9265 9255 Fax: 02 9265 9415 E-mail: publicaffairs@cityofsydney.nsw.gov.au Internet: www.sydneycity.nsw.gov.au

1 INTRODUCTION

1.1 **Purpose**

Temporary Protective Structures are necessary for the protection of public places during redevelopment of (or façade maintenance work on) city buildings, and for enclosing a work-site in the urban domain.

The aim of these Guidelines is to provide:

- practical guidelines for design and approval of Temporary Protective Structures within the City of Sydney.
- an Urban Design Approach to Hoardings, to improve the considerable impact that hoardings have on pedestrian amenity and spaces in the city. The structures are elements of the street which, when treated carefully, can make a positive contribution to the quality of urban life.

These Guidelines are to be read in conjunction with the relevant Acts and Regulations, WorkCover Authority requirements, the Conditions of Development Consent, and the relevant City of Sydney Policies and Codes of Practice. This includes the City of Sydney's Code of Practice for Construction Hours/Noise within the Central Sydney Business District.

1.2 **Application of these Guidelines**

Definitions

A Temporary Protective Structure is:

- A 'Type A' Hoarding [Site Fence] with or without scaffolding, located on or in close proximity to a public place, used to enclose the site.
- A 'Type B' Hoarding [Over Head Protective Structure (OHPS)] erected to provide overhead protection for the public and to enclose the site.
- > Scaffolding, 45-50 φ steel pipe sections and fittings often used to enclose the façade of a building.
- Temporary **Shoring**, for protection of the public/way and protection of property adjoining an excavation. Subject to a risk assessment by an appropriately qualified person, the shoring soldiers may also be extended upward to act as a lateral support for a traffic barrier and/or to support loads from a hoarding.
- A **Façade Retention Structure**, in the form of a new (or an altered existing) frame/structure, used to temporarily support a façade of a partly demolished building.

1 INTRODUCTION (cont.)

Area to which these Guidelines apply

These Guidelines apply to all of the Local Government Area under the jurisdiction of the City of Sydney, including Central Sydney (CBD), Millers Point and the Ultimo/Pyrmont precinct.

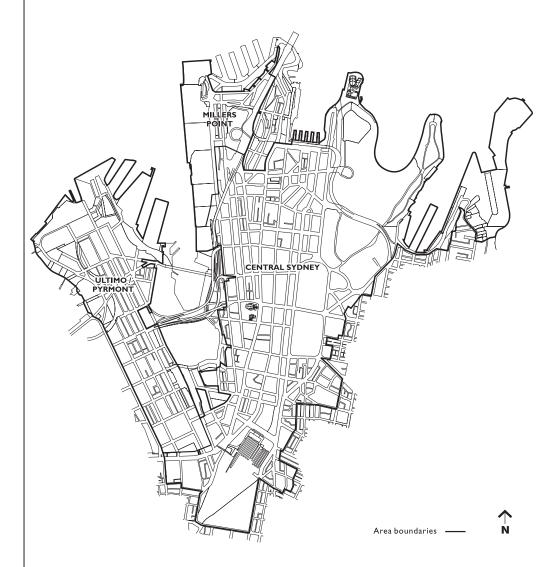


Figure 1

1 INTRODUCTION (Cont.)

1.3 Submission of documents to the City of Sydney

Where these Guidelines require that documents be submitted to the City of Sydney, the City, or to Council, the documents must be addressed to the General Manager, City of Sydney and submitted to the One Stop Shop, Level 2, Town Hall House, 456 Kent Street, Sydney.

1.4 Australian Standards and Codes of Practice

Temporary Protective Structures are to also be designed and constructed in accordance with:

- The relevant Acts and Regulations
- The WorkCover Authority Codes of Practice
- The relevant Australian Standards adopted by the Building Code of Australia (Specification A1.3), including but not limited to AS1170 Parts 1, 2 & 4, AS4100, AS1720, AS3600, AS2601, AS1725, AS1158, AS1742.3, AS1657, AS1576, AS/NZS4576
- The Guide to Traffic Engineering Practice.

2 HOARDINGS AND SCAFFOLDING (General)

GENERAL REQUIREMENTS

2.1 **Existing Relationships with:**

WorkCover Code of Practice - Overhead Protective Structures

The design, supply and installation of hoardings are presently guided by the Code of Practice – Overhead Protective Structures produced by WorkCover Authority of NSW. The Purpose of the Code is to provide practical guidance and set minimum safety standards for all overhead protective structures in New South Wales. The Code makes provision for any Council to review these structures "in public areas in addition to other requirements of this Code."

These Guidelines for Temporary Protective Structures are not a substitute for the Code prepared by WorkCover Authority, but rather a supplement to it. In addressing the visual appearance of hoardings and their impact upon pedestrians, this document covers subject matter that is important within the City of Sydney but not covered within the Code.

The City of Sydney Policy for the Design of Construction Hoardings

These Guidelines have incorporated the provisions of the **Policy for the Design of Construction Hoardings.** The urban design approach to hoardings is now combined with the technical/safety requirements, developed from previously applied standard building conditions for temporary protective structures. These Guidelines also set out the requirements for making an application to Council under amended legislation including Environmental Planning and Assessment Act and Local Government Act.

2.2 Relevant Legislation

For proposed demolition, construction or maintenance work, pursuant to the provisions of the relevant current legislation, including:

- Occupational Health & Safety Act "OH&S Act" and "OH&S Regulations"
- Construction Safety Act and Regulations
- Environmental Planning and Assessment Act (1979) as amended "EP&A Act (1979) as amended" and Environmental Planning and Assessment Regulation 1994 "EP&A Regulation 1994"
- Local Government Act 1993 "LGA (1993)" and Regulations,

Scaffolding, Fences, Hoardings (Type A and B Hoardings) and Overhead Protective Awnings must be erected to also comply with:

- The Building Code of Australia and adopted Australian Standards
- Relevant Policies of the City of Sydney (incl. Code of Practice for Construction Hours/Noise within the Central Sydney Business District)
- Relevant WorkCover Authority Codes of Practice, to provide enclosure of (and protection to) a public place.

2.3 Risk Assessment and Public Liability Insurance

An appropriately qualified person must assess the nature of proposed work and the associated risk to public safety (including public safety, vehicles, and a potential for fire on occupied hoarding). The certified design documents must incorporate the recommendations of this assessment, if applicable.

City of Sydney must be indemnified (during the period of construction until the removal of this temporary structure) against any claims for injury to persons, damage to adjoining properties and/or public way, or excess on the policy arising out of any claim. Such indemnity must be expressed in the form of a public liability insurance policy with the minimum amount of \$10,000,000 for any individual claim, which may be made. Such a policy must be specifically noted to include the interests of the City of Sydney.

The lessees/owner of the site must undertake, in the case of transfer, to obtain a similar indemnity from the purchaser or mortgagee and upon such indemnity being received and accepted by Council, the present lessees/owner is to be relieved of all liability under the indemnity.

HOARDINGS AND SCAFFOLDING (Selection)

2.4 Selection of Temporary Protective Structure/s for enclosing the site

Objectives

2

For demolition, construction or facade maintenance work, a temporary protective structure must be erected to provide protection to a public place in accordance with the relevant abovementioned legislation and WorkCover Authority Code's of Practice. Temporary structures must be removed when no longer required.

Deemed to Comply (Minimum) Provisions

a) For work adjoining a public place such as: <u>Demolition Work</u>, **OR** <u>Construction Work</u>, **OR** <u>Facade Remedial/Maintenance Work</u> (if adjoining a narrow <u>required footpath</u>):

A Type B hoarding is required along the full length of the common boundary between the work site and a public place, unless the vertical height of the proposed workplace:

- (i) Is less than 4.0m or;
- (ii) Is less than twice the setback distance from the public place.

An appropriately qualified person must assess the risk of the proposed work to public safety and must determine the extent of overhead protection required over a public place, within a radius of half the height of the proposed work above the adjoining public place. The recommendations of this Risk Assessment must be incorporated in Application documents (incl. certified structural documents).

Any scaffolding required to enclose an area of activity must be in accordance with the relevant Regulations, Australian Standards and WorkCover Authority Codes of Practice.

For Demolition Work adjoining a public place, any overhead protection must <u>also</u> comply with AS2601.

- b) <u>For light facade maintenance work</u> (eg. painting or cleaning, but not including spalling concrete repairs):
 - Where the building is accessible to public, overhead protection must be provided at the entrance of the building, AND
 - ii) For a building with or without an existing street awning:
 - any scaffolding standards/posts must extend down to footpath level and/or onto a Type B hoarding, OR
 - any needle beams or any platform/awning/deck (with or without scaffolding) over a public way must be certified as for a Type B hoarding by a practising Structural Engineer, OR
 - the footpath, subject to consent by City Care Unit of City of Sydney, is to be adequately barricaded to prevent pedestrian access under the workarea/awning.
- c) Any scaffolding to enclose area of activity must be in accordance with the relevant Regulations and Standards. <u>While scaffolding is being erected</u> on or adjoining a footway with no overhead protection, temporary barricades must be placed as necessary (and with the approval of City Care) to safely direct pedestrians during period of this work.
- d) A Type A hoarding must enclose any <u>scaffolding</u> adjoining a public way.
- At crane designated areas, a Type B hoarding must be erected to protect the entire width of the accessible public way (except for a 250mm setback from the kerb). Refer to Element 1: Structure (Skid Rails).
- f) A Type A hoarding must enclose any construction or maintenance work in or adjoining a public place.

2 HOARDINGS AND SCAFFOLDING (Eligibility)

2.5 Eligibility of Certifiers

Eligibility of Structural Engineer

An appropriately qualified practising structural engineer certifying by completing **Attachments TP1** or **TP2** must have:

- Tertiary qualifications in Civil or Structural Engineering; AND
- Appropriate current Professional Indemnity Insurance; AND
- Accreditation as a certifier for Structural Engineering issued by the Institution of Engineers Australia in accordance with the EP&A Act (1979) as amended, **OR**
- Corporate Membership of the Institution of Engineers Australia or equivalent; and
- Evidence of relevant experience in the form of a CV/Resume.

Eligibility of Scaffolder

A scaffolder who certifies a scaffolding structure in the form of **Attachment TP3** must hold a scaffolding license issued by WorkCover Authority (NSW).

Council reserves the right to randomly part audit certified documentation and to randomly inspect works.

2.6 **Application for Approval**

Prior to commencement of approved site work, a separate application must be submitted to Council for any temporary hoarding, awning or scaffolding to be used to enclose the site and protect a public place. Each application must be submitted to the City under Section 68 of the Local Government Act 1993 **AND**:

Documents required with the Application:

- A completed <u>Application for Approval</u> form.
- Architectural Plans, site plan at 1:100 scale, footpath details, existing building exits, sections and elevations.
- ➤ A <u>Lighting Plan</u> for any Type B Hoarding.
- A <u>Statement</u> regarding the length of time that the hoarding will be installed on the site as well as the nature of the works that are to be undertaken during this period.
- Structural Drawings (in duplicate) including:

A plan layout showing:

- Location of proposed temporary structure including any relevant items such as:
 - Hoarding Stairs,
 - Location of Site Sheds
 - Any Construction Equipment (scaffolding, mast climbers, etc.)
- Relationship to:
 - Adjoining Building/s (and associated exists)
 - Footpath Details (ie. location of structure in relation to distance from boundary and kerb, utility service access lids, stairs, and existing trees).

Typical Section/s, Details of connections/ties (incl. site fence, deck, vehicle access gate, etc.) and Elevation/s showing details of construction.

Structural and/or Scaffolding <u>Certification</u> for design.

Documents required prior to release of Approval:

- A <u>bank guarantee</u> or cash bond as a Security Bond/Deposit for a Type B hoarding (if required for more than 12 weeks), or any temporary structure if it is to be located on stone/granite paving in a public place). The amount must be in accordance with Council's Schedule of Fees and Charges. The funds must be available on demand for the following reasons:
 - Maintenance or Rectification of Hoarding
 - Removal of Hoarding
 - Cost of Restoring the Footway, Pedestrian Crossings and Ramps
 - Damage to existing Trees, Kerbstones and Gutters
- Evidence of a <u>Public Liability Insurance Policy</u> specifically indemnifying Council.
- Hoarding Application <u>Fee</u>.
- Long Service Levy, if applicable.

2 HOARDINGS AND SCAFFOLDING (Working Hours and Notification)

2.7 Working Hours and Notification

- For each hoarding or scaffolding Approval, the applicant must check the permitted working hours with the City Care Unit of the City of Sydney on 9265-9410 at least 48 hours prior to commencement of work.
- Persons undertaking the work in accordance with this Approval must hold this Approval/Permit on site for inspection.
- Approval for a Temporary Protective Structure does not permit use of the roadway for general loading and unloading from construction vehicles. This requires a separate Construction Zone Application.
- A crane must not be located on a public way unless consent is given by Council..
- > Builder's material must not be left or stored on the footpath or roadway other than the assembled temporary structure approved by Council.
- The footpath or roadway must not be used as a platform for construction, demolition or maintenance work on a building without prior approval from Council.
- The applicant must notify the City of Sydney, for an inspection at completion of erecting a hoarding. A minimum of 48 hours notice must be given to the Building Surveyor for the project prior to the commencement of approved site work.
- For temporary protective structures requiring a Structural Works inspection certificate in the form of Attachment TP1 (Section 2), the certificate must be submitted satisfactory to Council, prior to handover and commencement of approved (related) site work.
- A hoarding, fence, awning or scaffolding must be removed when it is no longer required for the purpose for which it was intended. Approval for dismantling must be obtained by contacting City Care on 9265-9410 at least 48 hours prior to dismantling. For settlement on fees, contact City Care on 9265-9739.

URBAN DESIGN Requirements for Hoardings

2.8 **Design quality**

These Guidelines establish a standard of design quality based on typical footpath/hoarding arrangements. It is expected that this quality standard will also be attained in the atypical circumstances of individual sites, when design solutions must also address the problems posed by narrow lanes, the monorail, site access difficulties etc. These Guidelines do not encourage multilevel hoardings, ie hoardings with vertically stacked decks and sheds, because of their visual impact and the difficulties associated with their installation in city streets.

2.9 Desirable Improved Features for Hoardings

A number of desirable features of hoardings are sought through these Guidelines and they are described as follows:

- Minimised obstruction of the footpath, eg through the siting of hoarding supports and site fence as close to site boundary as possible
- > Visual openness of footpath, eg through improved height clearance over footpath and non-continuous counterweights at the kerb
- Better standards of detailing design and finish, as appropriate within a central city location
- Masking of site sheds by facia from view from the street
- Coordinated information and integrated graphics on both facia and site fence
- Visibility of the in-ground site works for the city's pedestrians
- Creative use of colour, images and graphics
- ➤ High quality street lighting
- Water and weather protection above pedestrians
- ➤ Improved maintenance and use of durable materials
- ➤ Safety in accordance with the WorkCover Code of Practice

2.10 **Objectives**

- Maintain the highest possible standard of pedestrian amenity on city streets
- Provide hoardings that contribute as positively as possible to the streetscape
- Provide a high quality designed hoarding appropriate to its location in the city
- Inform pedestrians about proposed development
- Maintain materials, finishes, structure and graphics in a good condition
- Provide for a safe and structural adequate temporary protective structure in accordance with the relevant regulations, the Building Code of Australia and adopted Australian Standards, and WorkCover Authority Code of Practice – Overhead Protective Structures

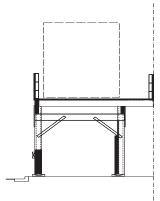


Figure 3 - Typical current practice

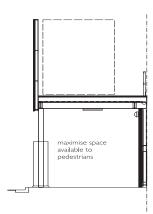
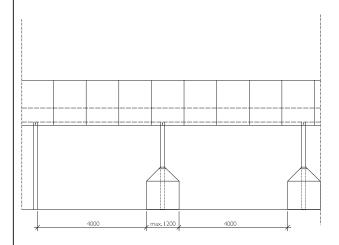


Figure 2 - Desirable improvements

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HOARDINGS (Urban Design Requirements for Hoardings)



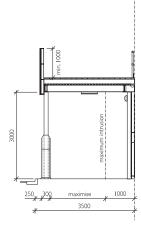
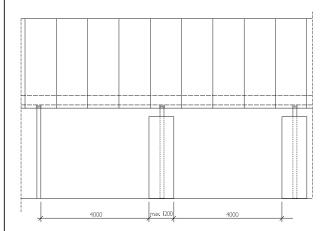


Figure 4 Construction hoardings: Example (Central Sydney)

Note – This example fulfils the Deemed to Satisfy provisions, pending site specific engineering design



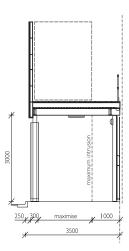
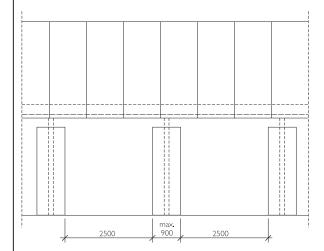


Figure 5 Construction hoardings: Example (Central Sydney)
Note – This example fulfils the Deemed to Satisfy provisions, pending site specific engineering design



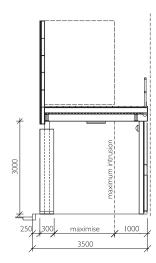


Figure 6 Construction hoardings: Example (Ultimo – Pyrmont)

Note – This example fulfils the Deemed To Comply provisions, pending site specific engineering design.

2.11 **Application**

Major works - All of the elements of these Guidelines apply to hoardings, which are installed for a period of 12 weeks or more.

Minor works – Where hoardings are necessary for minor works and maintenance and are to be installed for a <u>total period of less than 12 weeks</u>, then the following elements are to be applicable:

- Element 1 Structure, except for minimum column spacing and deck height
- Element 2 Traffic Barriers only (if adjacent to an excavation, the required traffic barrier is to be located between the site fence and the excavation)
- ➤ Element 3 Site Fence
- ➤ Element 4 Deck and Protection
- ➤ Element 7 Colour
- ➤ Element 8 Vehicle Access Gate and Traffic Signs
- ➤ Element 9 Lighting

2.12 'Kit of Parts' approach

Design requirements for the key elements of hoardings are described in this section.

These standard elements are to be assembled to suit specific site conditions. This approach encourages the use of systems that can be recognised to suit the circumstances of each typical installation.

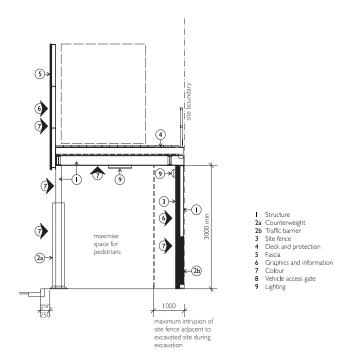


Figure 7 – Construction hoarding elements

2

Design Elements:

The key elements of hoardings are:

1. **Structure**

This element is the primary framework of the hoarding and consists of columns, beams and, if necessary, bracing.

2. Counterweights, column bases and traffic barriers

This element comprises the counterweights that are often necessary to stabilise the hoarding and the traffic barriers that protect pedestrians and motorists at deep excavation sites.

3. Site Fence

This element is required as a barrier between the street and the site and is located where possible on the site boundary.

4. Deck and Protection

This element is located over the footpath to protect pedestrians and to provide a platform for site sheds.

5. Facia

This element is constructed at the free edges of the deck: to screen site sheds, spandrel beams and any longitudinal knee bracing; to act as a vertical protective barrier; and to provide a surface for decorative graphics (that requires separate approval).

6. Graphics and Information

These are provided on both the site fence and facia. They may include an advertising component, subject to the approval of Council.

7. Colour

Standard colours or an approved graphic design are to be used on the facia, site fence and structure, to create a coordinated and integrated appearance.

8. Vehicle access gate

This element provides for an opening in the site fence for access by construction-related vehicles and machinery.

9. **Lighting**

This element provides lighting for pedestrians and is located on the site fence or deck soffit.

Element 1: Structure

Objectives

- > To maintain the openness and natural light to footpaths beneath hoardings
- > To maintain the physical encroachment on the footpath and obstruction of pedestrian movement and activity
- > To provide safe, well designed and well detailed structures
- > To maintain access to and egress from buildings
- ➤ To minimise risk to public safety



Figure 8 - Structure

Deemed to Comply Provisions

Solutions that comply with the following requirements are deemed to comply with the objectives for this element. Alternative solutions will be assessed in terms of their satisfaction to meet the objectives.

- The minimum height clearance to the underside of the deck structure is to be 3000mm wherever possible^(a). Height clearance to any knee bracing is not to be less than 2500mm and the size of braces are to be minimised.
- Columns and/or column/counterweight units^(b) are to be located/spaced with a minimum clear distance between of 4000mm along the footpath in Central Sydney, where possible^(c). Columns and/or column/counterweight units^(b) are to be located with a minimum clearance of 2500mm along the footpath in Ultimo Pyrmont and Millers Point, wherever possible^(c).
- Columns and/or column/counterweight units^(b) must be located at equal spacings wherever possible, ie unless this would be of detrimental impact upon significant features of the public domain^(c). Adequate provisions are to be made for these features^(c).
- > | Span across the footpath is to be maximised (e).
- The setback from the kerb is to be minimised, subject to there being a **minimum setback of 250mm** from the kerb face, vertically to any part of the structure (including any skid rails). Where the setback is greater than 400mm, screens must be securely fixed at each end of the hoarding to direct pedestrian traffic. Details must be included in application documents.
- Where parking meters are to be obstructed, removed or relocated, a separate Approval must be obtained from Council.
- The hoarding should not cause a required footpath width to become less than 2.0m to provide adequate pedestrian movement unless valid reasons are given with the application. This situation may require a Pedestrian and Traffic Management Assessment. Alternately refer to Section 2.22 *Hoardings over Roadways, and Awnings*.
- > Longitudinal cross bracing may be used to ensure the stability of the hoarding. The number of cross-braced bays is to be minimised and preferably located behind the site fence. Where longitudinal kerbside bracing is necessary, this bracing must be restricted to bays where pedestrian movement is not impeded.
- The size of all secondary members below deck level (excluding columns) is to be minimised.
- Access and egress from buildings, access to hydrants, other footpaths, manholes or surface fittings must not be impeded. If surface fittings or manholes are affected, the appropriate service authority must be notified and their requirements submitted to Council with the Application.
- For a hoarding deck extending in front of an adjoining building, or for a deck extending across a roadway to another building, consideration is to be given to the potential impact of the proposed hoarding on the adjoining property. Provision must be given for security, lighting, fire safety, access and egress to and from the affected building. Written consent from the owner of the affected building must be submitted with the application.
- The line of sight of traffic lights and signs for motorists or for pedestrians must not be obstructed at any time. Affected traffic lights and signs are to be remounted to maintain visibility to motorists and pedestrians, to the approval of Road Traffic Authority and Council.
- ➤ The design of a temporary structure must allow for existing trees and other physical constraints on site. Street trees must not be affected. For Security Bond, refer to Section 2.6

2 HOARDINGS (Urban Design Requirements for Hoardings - Element 1: Structure)

- Kerbstones and gutters must not be cut or damaged. Approval for removal of a kerbstone and/or part of a gutter must be obtained from City Care Unit, City of Sydney. The gutter must not be obstructed in any way and must be kept clean and free from debris. For Security Bond, refer to Section 2.6
- Pedestrian crossings and ramps must be clear and safely accessible at all times. For Security Bond, refer to Section 2.6
- For concrete pump crossings, a solid durable ramp must be provided in accordance with AS1428.1:
 - Maximum gradient of ramp:- 1:14
 - Minimum landing length:- 1200mm
 - Height of landing over pump crossing is to be minimised
 - Handrails (865mm to 1000mm high) and kerbs (75mm to 100mm high) are to be provided in accordance with AS1428.1
 - Edge thickness of ramp at footpath interface to be minimised (preferably steel plate).
- If **skid rails** (screening) are to be provided to protect pedestrians from crane lifts adjacent to an approved Construction Zone on the road, then the skid rail:
 - Must be designed to also be set back 250mm from kerb
 - Must not extend more than 1 truck-trailer length
 - Must not cover the hoarding facia
 - Must be painted all sides, the same colour as the site fence.

Notes

- (a) A lesser height clearance may be unavoidable in circumstances that could include demolition sites where there is a low first floor or an existing low footpath awning.
- (b) Refer to Element 2.
- (c) A lesser or irregular column span may be unavoidable in instances where the column setout must accommodate bus stops, trees, services, existing building features, footpath lightwells to basements, driveways, laneways and other features of the public domain. Hoardings may need to be stepped or notched to allow for existing trees.
- (d) The intent of the WorkCover Code of Practice is to provide a structure with the capacity to maintain the deck with reduced design load in the event of the removal of any one column.
- (e) Where narrow, busy footpaths are affected, Council may require that the site fence and columns be moved closer to the site alignment once the development has been constructed to first floor level.

HOARDINGS (Urban Design Requirements for Hoardings)

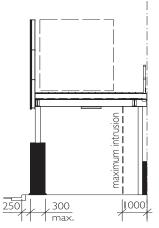
Element 2: Counterweights, column bases and traffic barriers

Objectives

- > To minimise the physical encroachment on the footpath and the obstruction of pedestrians.
- > To maintain the visual openness of the footpath.
- > To integrate counterweights, columns and traffic barriers within the design of the hoarding structure.

Deemed To Comply provisions

Solutions, which comply with the following requirements, are deemed to comply with the objectives for this element. Alternative solutions will be assessed in terms of their satisfaction of the objectives.



- > Structural stability is to be achieved with the least possible impact upon the width and openness of the footpath. Consideration is to be given to the suitability of potential alternatives to kerbside counterweights, eg stabilised by fixing to the shoring system, bracing to first floor of building structure, etc.
- Where <u>kerb-side counterweight units</u> (or <u>dummy units</u> (a) are necessary, ie to deal with the effects of wind, vehicle impact, or for concealment of soleplates (a) (likely to cause a trip hazard), then the preferred arrangement is the provision of isolated units, rather than continuous fences between the columns. These units are to be designed as architectural elements that are visually integrated within the hoarding design. The following requirements are applicable to kerbside column/counterweight (or dummy) units:
 - Maximum dimensions of the units in Central Sydney are 1200mm (length along footpath inclusive of columns and counterweights), 300mm (width across footpath), and height as required^(b).
 - Maximum dimensions of units in Ultimo, Pyrmont and Millers Point are 900mm (length along footpath), 300mm (width across footpath) and height as required^(b).
 - Where the tops of counterweights are located less than 2100mm above the ground, they are
 to be chamfered, or sloped, so as to avoid the collection of dirt and refuse.
 - Counterweights are to have a **high quality finish**, either an approved precast concrete finish or painted the standard colour (refer Element 7). Dummy Units must be of durable construction^(a) and also painted the standard colour.
 - Minimum set back from the kerb is 250mm vertically to any part of the structure.
- **Continuous counterweights** may be used adjacent to the site boundary, provided that they are screened from the footpath by the site fence.
- Columns are to contain a levelling device or must be cut to level. On site packing of the structure to level will not be accepted. Soleplates, of a durable material, may be provided only in order to spread the bearing pressure upon the pavement. They are to be of least possible length and width and are to be aligned parallel with the footpath to reduce their potential trip hazard for pedestrians. Refer to Sections 2.15 and 2.19 for 'Footing Design' and the requirements above for dummy units to conceal excessive soleplates^(a).
- Where the site is excavated, a **crowd and traffic barrier**^(d) is to be provided between the site fence^(c) and the top of the excavation. The barrier is to be of concrete or steel, designed to AS1170.1 & 2 and to the traffic risk assessment recommendations.
- Footings, bolts, rock anchors or spikes must not be inserted into the roadway or footway surfaces, unless separate Approval is given by City Care Unit, City of Sydney and the relevant utility services authority.
- The temporary structure, including **foundation blocks**, **anchors and piers must be removed** above and below the public way, prior to completion of the project, down to a depth of 2m. The voids must then be backfilled with stabilised sand (14 parts sand to 1 part cement). All timber must be removed.

2 **HOARDINGS** (Urban Design Requirements for Hoardings)

Notes

- Dummy counterweight units used to conceal excessive soleplates must be of durable construction. The following are (a) considered the minimum deemed-to-satisfy provisions:
 - Exterior Grade Plywood must be securely fixed to a light steel angle frame to form the dummy unit.
 - The unit must be 1m high minimum, with a sloped or chamfered top surface to avoid collection of dirt and refuse.
 - Any column element having a universal rolled beam or column section must have an infill gusset plate welded each side of web to form a flush bearing element to support the chamfered top plywood surface.

 Where vertically proportioned counterweights are used, the detail of the connection of counterweight to column is to
- (b) be designed to safeguard pedestrians against dislodgement due to vehicle impact.
- Other Reference Documents:

WorkCover Authority Code of Practice for Façade Retention Structures.

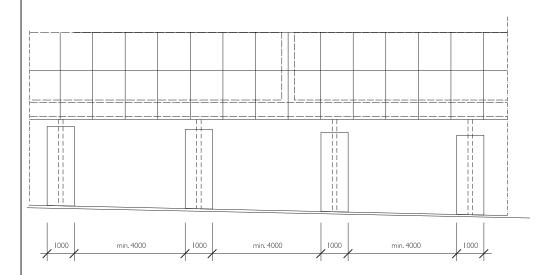


Figure 10 - Typical counterweight elevation

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Element 3: Site Fence

Objectives

- > To minimise the impact of hoardings upon pedestrian movement on the footpath.
- > To provide a surface for graphics (a).
- > To effectively screen the works from the street.
- > To provide pedestrians with a view of the site, when and where appropriate.

Deemed To Comply Provisions

Solutions that comply with the following requirements are deemed to comply with the objectives for this element. Alternative solutions will be assessed in terms of their satisfaction of the objectives.

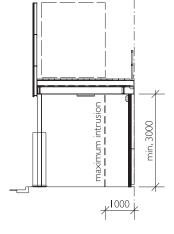


Figure 11 – Site fence

- > Site fence is to be located adjacent to the site boundary with least possible intrusion onto the footpath.
- Where there are reasonable constructional requirements, the site fence may intrude upon the footpath by up to **1000mm**. Intrusions of up to 1200mm may only occur in localised circumstances, eg for stair access where this cannot be accommodated within the 1000mm intrusion.
- The necessity for intrusion of the site fence onto the footpath is to be clarified in the application. Where narrow or busy footpaths are affected, Council may require that the site fence and support columns be moved closer to the site alignment once the development has been constructed to first floor level.
- > Site fence is to extend to the underside of the deck. Where there is no deck (ie in the case of a "Type A" hoarding), the fence must be a minimum height of 2000mm.
- > Site fence is to be neatly finished top and bottom. Where panel edges would be stepped due to the slope of the site, then the stepped edges are to be covered by facing/skirting boards.
- Site fence is to consist of regularly sized panels approximately 1200mm in width.
- Vision panels are to be located at approximately 20 metre spacings in locations to allow for visibility of works up to ground level. The vision panels are to be 600mm high x 600mm wide located from 1200mm to 1800mm above the footpath level. Vision panels are to be covered with perspex and wire mesh and maintained in a condition to provide site visibility and safety and may be removed once the development is constructed up to ground level.
- The toe of the fence is not to protrude onto the footpath (b), creating a hazard for pedestrians.
- The **site fence** (including any personnel access doors) is to be maintained throughout the life of the hoarding and is to be **constructed of solid durable material** (eg exterior grade plywood) that is capable of accommodating graphics.
- The **site-fence lining** (including access openings or gates) **must be securely fixed**, with no protruding bolts, nails, or wire; finished flush for pedestrians.
- Where an access opening is required, it must be constructed so as to swing inwards only, or slide parallel to the hoarding. Access openings must remain closed unless in use.

Notes

- (a) Refer to Element 6: Graphics and Information, for details on information panels to be located on the site fence and Element 7: Colour.
- (b) For proposed work that is at (or within 1.0m of) ground level and where the width that is remaining for public passage is not restricted by less than 2 metres, the above urban design provisions may be relaxed as follows:
 - Limited protrusion of footings may be permitted for temporary fences (approved for less than 12 weeks) provided provisions are made to prevent a trip hazard or pedestrian injury.
 - Chainwire/mesh infill panels may be permitted provided the proposed work would not significantly impact
 on public amenity. eg. Excessive dust, welding, angle grinding close to the fence, etc.

2 HOARDINGS (Urban Design Requirements for Hoardings)

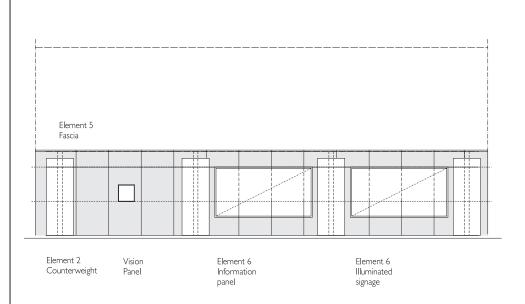


Figure 12 – Typical site fence elevation

Element 4: Deck and protection

Objectives

- > To safely contain items on the deck.
- > To protect pedestrians from weather.
- > To provide a cleanly detailed soffit.

Deemed to Comply Provisions

Solutions that comply with the following requirements are deemed to comply with the objectives for this element. Alternative solutions will be assessed in terms of their satisfaction of the objectives.

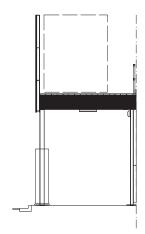


Figure 13 - Deck

- ➤ Underside of deck is to be lined or all structure, including deck joists, must be painted the standard colour. (Refer to Element 7: Colour)
- The deck is to be impenetrable to water and is to be combined with a drainage system that discharges to the site or road channel/gutter. Rainwater is to be collected and disposed of without impact upon pedestrians.
- Where site sheds are placed upon the deck of a 'B' type hoarding, **brickguards** must be provided on stairs and deck in accordance with the requirements of AS/NZS4576-1995.
- No superimposed loads are permitted on a hoarding unless shown on the certified structural plans submitted to Council.

Notes

(a) The deck is required to comply with structural requirements in accordance with the WorkCover Authority Code of Practice for Overhead Protective Structures and the relevant Australian Standards.

Element 5: Facia

Objectives

- To conceal the visual blight caused by construction sheds when viewed from the street.
- > To promote the use of coordinated and well-designed graphics and information.

Deemed to Comply Provisions

Solutions that comply with the following requirements are deemed to comply with the objectives for this element. Alternative solutions will be assessed in terms of their satisfaction of the objectives.

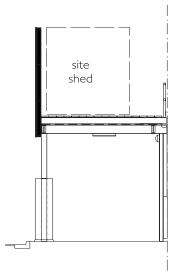


Figure 14 - Facia

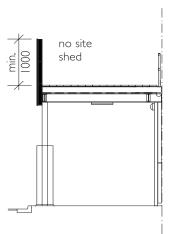


Figure 15 - Half facia

- A facia is required in order to **screen site sheds** and other materials and approved equipment located on the hoarding deck from the view of pedestrians in the street. The facia is to extend at least up to the top of the sheds on the deck and must fully cover the deck structure.
- 'Half facia' panels may be permitted in circumstances where site sheds are not located on the deck. They are to extend for a minimum height of 1000mm above the deck level and must fully cover the deck structure.
- Facia must be constructed from durable a material (eg exterior grade plywood) that is capable of accommodating graphics.

Notes

(a) Refer to Element 6: Graphics and Information and Element 7: Colour, for further provisions.

Element 6: Graphics and Information

Objectives

2

- > To provide high quality graphic and visual material and ensure that the hoardings are a source of visual interest.
- > To provide legible information.
- > To provide community information

Deemed to Comply provisions

Solutions that comply with the following requirements are deemed to comply with the objectives for this element. Alternative solutions will be assessed in terms of their satisfaction of the objectives.

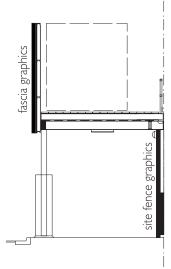


Figure 16 – Graphics and information

- Within Central Sydney, the **facia** is to be provided with a complete and coordinated **graphic design or be painted** the standard colours (refer Element 7). The facia must include a **depiction of the relevant elevation** on the relevant street frontage **and project/consultant information** in one location. It may also include the following:
 - Information of community interest.
 - Artwork and graphic material of visual interest (ie supergraphics, photomontage, decorative patterns, drawings, text and illustrations).
 - Other graphic material required or approved by Council.
- Within Ultimo/Pyrmont and Millers Point, the **facia** may either be provided with a graphic design (as above) or be painted the standard colour (refer Element 7)
- The extent of advertising panels on the **facia** is not to exceed either **15%** of the area of facia or **1800mm** in height and is to be part of a coordinated graphic design.
- The **site fence** is to be treated with graphics as part of overall design and must include required safety signage, builder and developer contact numbers, as well as other graphics approved or required by Council.
- Prominent signs must be displayed at the boundary to each frontage of the site in accordance with the relevant Regulations, Conditions of Consent and Code of Practice for Construction Hours/Noise within the Central Sydney Business District.

The visible waterproof signage must show:

- That Unauthorised Entry is Not Permitted
- The Name of the Builder and Responsible Person for the Site
- The After Hours Emergency Contact Name and Telephone Number
- The Street Number in accordance with Council's Street Numbering Policy.
- Within Central Sydney, the site fence may incorporate **illuminated advertising signs** (approximately **1800mm high x 1200mm wide**), where approved by Council. These may be located in groups of not more than three signs at approximately 20m spacings.
- The **site fence** must be maintained **free of bills and graffiti**. Chicken wire is not permitted. Areas of the site fence may be designated for the use of billposters, subject to the specific approval of Council
- ➤ Hoardings must not be used for advertising without the specific consent of Council.
- > **Illumination** is to be of no adverse impact upon residential buildings. The means of illumination is to be concealed. Flashing signs are not be permitted.
- > All surfaces, graphics and information must be well maintained throughout the life of the
- Where materials are to be **hoisted over a public way**, separate Council Approval must be obtained.

2 **HOARDINGS** (Urban Design Requirements for Hoardings)

- Element 6: Graphics and Information (cont)

Notes

- (a) (b) (c)
- All graphics on all surfaces require consent from Council.

 In approving graphics proposals, Council accepts none of the copyright responsibilities of the applicant.

 Where advertising will produce a financial return to the owner of the site, then Council, as landowner over which the hoarding is to be erected, will require the owner of the site to negotiate with Council an appropriate percentage distribution of the advertising returns.

2 HOARDINGS (Urban Design Requirements for Hoardings)

Element 7: Colour

Objectives

- > To establish a colour standard that evokes an image of Sydney.
- > To promote the creative use of colour as part of a graphic design concept for the hoarding.

Deemed to Comply provisions

Solutions that comply with the following requirements are deemed to comply with the objectives for this element. Alternative solutions will be assessed in terms of their satisfaction of the objectives.

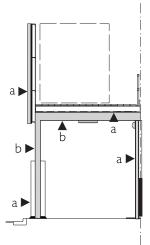


Figure 17 - Colour

- The standard colours are to be:
 - (a) **Sandstone**: general colour for facia, soffit of deck, counterweights (where painted), site fence and any crane skid rails (all sides) Dulux Master Palette 30YY65/171 or equal.
 - (b) **Ocean Green:** accent colour on the visible parts of the structure Dulux Master Palette 30B08/114 or equal.
- Other colours relating to corporate identity or site conditions may be approved where part of a graphic design concept.

2

Element 8: Vehicle Access Gates

Objective

To minimise impact of access gates on pedestrian movement on footpath

Deemed to Comply provisions

Solutions that comply with the following requirements are deemed to comply with the objectives for this element. Alternative solutions will be assessed in terms of their satisfaction of the objectives.

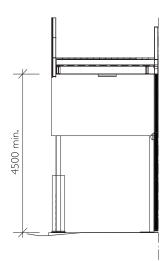


Figure 18 - Vehicle access gate

- Vehicle access gate must either slide or open inward and may incorporate pedestrian safety devices, such as retractable hazard arms, warning lights, etc.
- The height clearance of the gate opening is to be a minimum of 4.5m, or that of the nominated and approved design vehicle.
- Appropriate signage must be installed at a conspicuous location/s showing the minimum height clearance.
- **Vehicle Access Gate must:**
 - Be of solid durable material eg plywood or steel sheeting.
 - Be fixed to an adequate frame.
 - **Extend to the underside of the deck** (if construction/demolition work is proposed above top of site fence and within the 2:1 ratio referred to in Section 2.4).
 - Remain closed unless access is required.
- Provisions should be made for traffic control by referring to the Guide to Traffic Engineering Practice and to current AS 1742 Part 3 Manual of uniform traffic control devices - Traffic control devices for works on roads.
- Boomgates over roadways at Construction Zones, where required for safety during craning operations (with a truck parked in lane), must be fully manned and supervised. When not in use, boomgates must be closed and fully secured.

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Element 9: Lighting

Objective

> To provide effective illumination of the footpath, with a minimum of shadowed areas, for the safety and amenity of pedestrians.

Deemed to Comply provisions

Solutions that comply with the following requirements are deemed to comply with the objectives for this element. Alternative solutions will be assessed in terms of their satisfaction of the objectives.

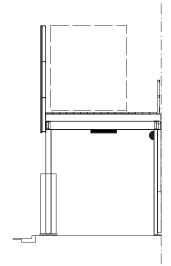


Figure 19 - Lighting

Lighting levels beneath the hoarding must at least equal the levels and distribution pattern (measured at footpath level) of the existing street lighting in the area. Where pedestrian hazards associated with the hoarding are present (eg: ramps over concrete-pump lines, projecting brackets from scaffolding, disrupted footpath paving), significantly higher lighting levels are required. In addition these hazards must be highlighted with durable colours and patterns generally recognised for identifying hazards.

Illustrations of a desirable hoarding design

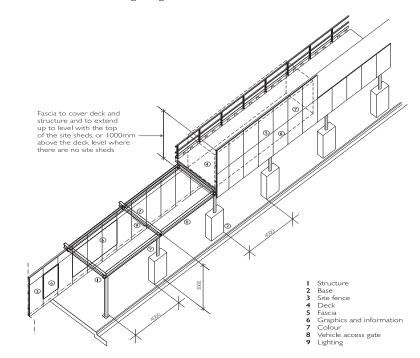


Figure 20 – Typical hoarding Central Sydney

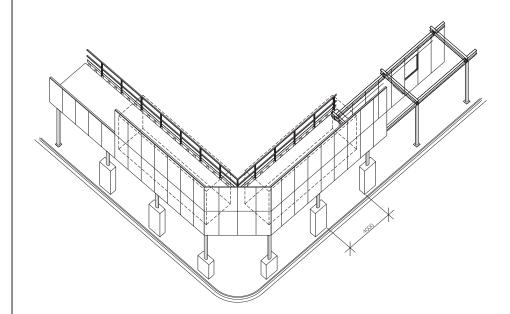


Figure 20 – Typical hoarding Central Sydney

2 | HOARDINGS (Type A Hoarding)

Structural Requirements for a TYPE A HOARDING

2.13 General

The 'Type A' hoarding must be designed in accordance with the relevant Australian Standards including AS1170 Part 1 Dead and Live Loads and Load Combinations, and AS1170 Part 2 Wind Loads.

Documents that are to be submitted to Council with the Application must include:

- Details of design (including details of connections, location plan and typical section)
- Structural certification for <u>design</u> in the form of **Attachment TP1** (Section 1), prepared by an appropriately qualified practising structural engineer.
- Other documentation in accordance with Section 2.6 Application for Approval.

2.14 Footing Design

For footings located on granite/stone paving, the footing must be separated from the paving with 12mm structural grade plywood on two layers of a heavy duty waterproof membrane, all cut flush with the footing. These measures must be maintained in a safe and tidy condition.

2.15 Adjacent to Excavations Greater than 1.5m Deep

- An appropriately qualified person must undertake a risk assessment of the proposed excavation work causing a potential hazard for pedestrians and traffic. A minimum provision for a hoarding adjoining a roadway must be that a continuous traffic barrier be located behind the site fence. The barrier is to be of concrete or steel, designed to the relevant Australian Standards and to the traffic risk assessment recommendations
- The protective site fence (Type A hoarding) must enclose the excavation site and must also be designed and certified to incorporate the recommendations of the risk assessment, comply with WorkCover Authority requirements and the relevant Australian Standards. (Including AS1170 Part 2 Wind Loads, and AS1170 Part 1 Section 4.7.1 for lateral loads to balustrades and railings. Crowd loading must be assessed).
- A Structural Works *Inspection* Certificate in the form of **Attachment TP1** (Section 2), prepared by an appropriately qualified practicing structural engineer must be submitted to Council **prior to handover and commencement of approved site work**.
- The owner of the premises must have <u>periodic inspections</u> undertaken by:
 - An appropriately qualified person (six monthly) from the Timber Inspection Branch of the State Forest of NSW (or equivalent) if parts of the hoarding are of timber construction, AND;
 - b) An appropriately qualified practising structural engineer. The attached *periodic* certificate in the form of **Attachment TP2** must be completed and submitted satisfactory to Council six monthly, after inspection after any required remedial work recommended in a).
- An internationally recognised warning sign must be securely fixed to the site fence at each end of each deep excavation frontage indicating "Danger".

2.16 | Certification by a Structural Engineer

A Structural <u>Design</u> Certificate in the form of **Attachment TP1** (**Section 1**) must be submitted to Council with each Application.

For a Type A Hoarding adjacent to a deep excavation, an <u>Inspection</u> Certificate in the form of **Attachment TP1 (Section 2)** must also be submitted to Council prior to commencement of approved site work. Refer to 2.6 for Eligibility of Structural Engineer.

2 HOARDINGS (Type B Hoarding)

Structural Requirements for a TYPE B HOARDING

2.17 General

The Type B hoarding must be in accordance with the relevant Acts and Regulations, the performance requirements of WorkCover Authority Code of Practice for Overhead Protective Structures, the relevant Australian Standards and the provisions of these Guidelines.

Where work is adjacent to a Monorail, a separate Approval must be obtained from WorkCover Authority and the relevant Monorail Authority/Owner (CGEA Transport Management Sydney Pty Limited).

For documents to be submitted to Council with the Application, refer to Section 2.7 Application for Approval.

2.18 | Footing Design

The developer is responsible for maintaining the condition of the footpath prior to commencement of work. An appropriately qualified person must assess the safe load capacity to prevent damage to the existing paving and utility services thereunder. The following are considered as minimum requirements:

- Thoroughly survey all utility services and underground structures in the area of the proposed hoarding. Utility service access points or lids must not be obstructed at any time. For location of utility services in Sydney, call *Sydney One Call* on 9806-0800 or fax 9806-0777 with UBD reference grid identification.
- Consult the relevant utility authority for design bearing pressure on or near any services likely to be affected by loads from the structure.
- Special consideration must be given to structures adjacent to demolition or excavation sites. Bearing pressures must allow for any likely ground disturbance caused by the proposed work.
- The maximum allowable design bearing pressure on to any compacted fill forming footpathsubgrade must not be greater than 100kPa (with dead load + 40% live load) unless certified by a competent person. For footways constructed as/on an unreinforced concrete base slab (min 75mm thick), an Equivalent Allowable Bearing Pressure may be calculated using the shear and flexural strength of the unreinforced concrete slab to the Australian Standard AS3600 - Concrete Structures.
- For footings located on granite/stone paving, the footing must be separated from the paving with a layer of high strength grout, or 12mm structural plywood (or equivalent rubber sheeting), bearing on two layers of a heavy duty waterproof membrane, all cut flush with the footing. These measures must be maintained in a safe and tidy condition.

2.19 Fire Safety on an Occupied Hoarding

The builder must assess the risk of a fire on an occupied Type B hoarding. The following are considered the minimum deemed-to-comply provisions:

- a) The hoarding must have at least one exit from an occupied deck. For a hoarding more than 30m long, two exits must be provided. The distance between alternate exits must not be more than 80m. The distance from the end of an occupied hoarding to a required exit must not be more than 15m.
- b) The width of the corridors, passageways or stairs must be at least 750mm +/- 50mm.
- c) At least one easily accessible fire extinguisher must be provided in the site office.

Refer to Section 2.16 Element 1 – **Structure**, for other general (fire) safety requirements.

2 HOARDINGS (Type B Hoarding)

2.20 **Periodic Inspections**

- The owner of the allotment must have *periodic inspections* undertaken by:
 - An appropriately qualified person (six monthly) from the Timber Inspection Branch of the State Forest of NSW (or equivalent) if parts of the hoarding are of timber construction, AND;
 - b) An appropriately qualified practising structural engineer. The attached *periodic* certification form **Attachment TP2** must be completed and submitted satisfactory to Council six monthly, after having incorporated and inspected any required remedial work recommended in a)

2.21 Adjacent to Excavations greater than 1.5m deep

- An appropriately qualified person must undertake a risk assessment of the proposed excavation work causing a potential hazard for pedestrians and traffic. A minimum provision for a hoarding adjoining a roadway must be that a continuous traffic barrier be located behind the site fence.
- A protective fence must enclose the excavation site and must be designed and certified to incorporate the recommendations of the risk assessment, and comply with WorkCover Authority requirements and the relevant Australian Standards. (Including AS1170 Part 2 Wind Loads, and AS1170 Part 1 Section 4.7.1 for lateral loads to balustrades and railings. Crowd loading must be assessed).
- An internationally recognised warning sign must be securely fixed to the site fence at each end of each deep excavation frontage to indicate "Danger".

2.22 | Hoardings Over Roadways and Awnings (Needle Beams)

- Where a footway is not sufficiently wide to erect a Type B hoarding on the footway, overhead protection may be provided by:
 - Spanning a protective deck across the roadway, OR
 - Providing an equivalent deck/awning supported by steel beams cantilevered from the building, OR
 - Spurring a deck off the building.
- A minimum clearance of 4.6m must be measured from the gutter or from any point on the roadway, vertically up to any part of the structure.

2.23 Certification by a Structural Engineer

- A Structural Certificate for <u>Design</u> (attached to the documents with the Application for Approval) must be in the form of **Attachment TP1** (Section 1) completed by practising structural engineer.
- A structural <u>Inspection</u> certificate in the form of **Attachment TP1** (Section 2) completed by a practicing structural engineer must be submitted satisfactory to Council **prior to handover and commencement of approved site work**.
- Refer to Section 2.5 for Eligibility of a Structural Engineer.

2 SCAFFOLDING

Structural Requirements for **SCAFFOLDING** on or adjoining a public place

2.24 General

For mobile scaffolding on a public place up to 3.0m in height, approval must be obtained from City Care Unit, City of Sydney, on 9265-9410. For all other cases, documentation for an Application for Approval for scaffolding on, over or adjoining a public place must be in accordance with Section 2.7

2.25 Certification by a Scaffolder

Certification by a licensed scaffolder in the form of **Attachment TP3** must be submitted with the Application.

2.26 Certification by a Structural Engineer

If an engineer designs scaffolding, a <u>Design Certificate</u> in the form of **Attachment TP1** must be completed and attached to the scaffolding application documents submitted to Council.

An <u>Inspection Certificate</u> in the form of **Attachment TP1 (Section 2**) must be completed and submitted to Council prior to handover (and commencement of approved site work).

Where scaffolding ties are required to be fixed to an adjoining structure, and if the structural element (eg. column or parapet) to which the scaffolding is to be fully engaged *is concrete*, then Council will rely on the certification from the scaffolder.

In all other cases, a structural engineer must certify the ties to the adjoining structure/building, including the following elements:

- a) Anchor fixings/bolts (to timber, masonry, stone or concrete).
- b) A platform of cantilevered steel beams supporting the scaffolding.
- Scaffolding and anchor fixings if fixed to a structure proposed for demolition (including procedures for dismantling during demolition).
- d) Scaffolding and soleplates, if it is proposed to be supported on a Type B hoarding.
 - i) The scaffolding must not exceed 40% of the rated load capacity of the hoarding.
 - ii) An engineer must certify the scaffolding similar to i), after having checked the hoarding engineer's loading allowance for the scaffolding.
- Refer to Section 2.5 for Eligibility of a Structural Engineer.

3 FAÇADE RETENTION

GENERAL REQUIREMENTS

3.1 Relevant Legislation

- For a **temporary** Façade Retention Structure (FRS), a separate application must be made <u>under</u> Section 68 of the LGA (1993).
- Where a Façade of an existing building is proposed to be **temporarily laterally supported by:**
 - A **combination** of existing/permanent structural elements AND
 - **Temporary elements** within the building, AND
 - With or without additional footings, then

a separate application must be made under Section 68 of the LGA (1993).

- Where a Façade of an existing building is proposed to be **temporarily laterally supported by staged construction of a new approved building**, then an application for a Staged Construction Certificate may be submitted to the Consent Authority for approval under **EPAA Act** as amended.
- ➤ All **Façade Retention Structures** must be erected to comply with:
 - The relevant Acts and Regulations (inc. OH&S and Construction Safety)
 - The Building Code of Australia
 - The relevant Australian Standards

The Structures must also comply with:

- WorkCover Authority (NSW) Code of Practice for Facade Retention.
- Relevant Policies of the City of Sydney including the Code of Practice for Construction Hours/Noise within the Central Sydney Business District.
- Conditions of Consent/s.

3.2 Risk Assessment and Public Liability Insurance

- An appropriately qualified person must assess the nature of proposed work and the associated risk to public safety (including vehicles and pedestrians). The certified design documents must incorporate any recommendations of this assessment, if applicable.
- City of Sydney must be indemnified against any claims for injury to persons, damage to adjoining properties and/or public way, or excess on the policy arising out of any claim. Such indemnity must be expressed in the form of a public risk insurance policy with the minimum amount of \$10,000,000 for any individual claim, which may be made. Such a policy must be specifically noted to include the interests of City of Sydney. A copy must be submitted to City of Sydney. The Indemnity must remain in force during the period of construction until the façade is permanently secured to the new building and until the removal of all temporary structure/elements

The lessees/owner of the site must undertake, in the case of ownership transfer, to obtain a similar indemnity from the purchaser or mortgagee and upon such indemnity being received and accepted by City of Sydney, the present lessees/owner is to be relieved of all liability under the indemnity.

3.3 Application for Approval

Documents to be submitted to Council <u>for Approval</u> under Section 68 of the LGA (1993) OR submitted to the consent authority <u>for Approval</u> of Construction Certificate under the EPAA Act as amended and a copy to Council:

- A completed <u>Application for Approval</u> form.
- <u>Architectural Plans</u> (in duplicate), site plan at 1:100 scale showing location of proposed temporary structure in relation to any adjoining building/s (and associated building exits), and any relevant footpath details (kerb, utility service access lids and existing trees).
- A <u>Lighting Plan</u> if the structure is located over a public way.
- An Application Fee.
- <u>Consent</u> from any affected <u>Public Utility Authority</u> if construction is likely to affect any services supplied by that Authority. Where work is adjacent to a Monorail, a separate Approval must be obtained from WorkCover Authority and the relevant Monorail Authority/Owner (CGEA Transport Management Sydney Pty Limited).

3 FAÇADE RETENTION (Application for Approval)

Further documents required to be submitted to Council with the application under Section 68 of the LGA 1993, OR to be submitted to the consent authority (where applicable), prior to release of the Construction Certificate under EP&A Act (1979) as amended, and a copy to Council.

- Evidence of <u>Public Liability Insurance Policy</u> specifically indemnifying the City of Sydney.
- <u>Structural Details</u> and Specifications (in duplicate) including Typical Section/s and connection details, etc., when application for approval is under **LGA 1993**.
- <u>Structural and Geotechnical Certification</u> for design, when application for approval is under LGA 1993. Refer to Section 3.12.
- <u>Long Service Levy</u>, if applicable.
- A <u>bank guarantee</u> or cash bond as a Security Deposit, if applicable. This must be in accordance with City of Sydney Schedule of Fees and Charges. The funds must be available on demand for the following reasons:
 - Maintenance or Rectification of Façade Retention Structure or Facade
 - Removal of Structure and Footings
 - Cost of Restoring the Footway, Pedestrian Crossings and Ramps
 - Damage to existing Trees, Kerbstones, Gutters
- A <u>letter of undertaking</u> by the owner of the allotment of land for periodic inspections in accordance with this Document, when application for approval is under **LGA 1993**.

Documents required for Approvals under EPAA Act to be submitted to the Principal Certifying Authority and a copy to Council <u>prior to commencement of work</u> under EP&A Act (1979) as amended.

- <u>Structural Details</u> and Specifications (in duplicate) including Typical Section/s and connection details, etc.
- <u>Structural and Geotechnical Certification</u> for design. Refer to Section 3.12.

Documents required <u>at completion of work</u> to be submitted to Council OR to the Principal Certifying Authority and a copy to Council if Approval is granted under EP&A Act (1979) as amended.

- Structural and Geotechnical <u>Inspection Certificates</u>. Refer to Section 3.12.

3 FAÇADE RETENTION (Location of Utility Services)

3.4 | Location of Utility Services

- All utility services and underground structures in the area of the proposed façade retention structure must be thoroughly surveyed. Utility service access points or lids must not be obstructed at any time. For location of utility services in Sydney, call *Sydney One Call* on 9806-0800 or fax 9806-0777 with UBD reference grid identification.
- No work is to commence in the public way until a copy of consent from each affected Public Utility Authority has been submitted to City of Sydney.
- No piers or rock anchors are to be drilled or installed until a test excavation has been carried out at all locations along the footway to determine the exact location and depth of any Public Utility Services.
- The developer is responsible for any damage caused to services of the Public Utility Authorities.

3.5 Working Hours and Notification

- For a Façade Retention Structure (FRS) erected on a public place, confirmation of the actual working hours and date of commencement of work must be obtained from City Care on 9265-9410 at least 48 hours prior to commencement of work.
- Persons undertaking approved work must hold the Approval/Permit on site, and produce it if required along with any other relevant authority documents relating to that Approval.
- On completion of the structural work on the FRS, the Building Surveyor for the project must be notified within 24 hours.
- A Structural Works Inspection Certificate in the form of a Compliance Certificate (in accordance with EPAA Regulation) submitted to the PCA and a copy to Council OR Attachment TP1 (Section 2) submitted to Council prior to hand-over or commencement of approved (related) site work/demolition.
- The façade retention structure erected in a public place must be removed when it is no longer required for the purpose for which it was intended. Approval for dismantling on a public way must be obtained by contacting City Care on 9265-9410 at least 48 hours prior to dismantling. For settlement on fees, contact City Care on 9265-9739.

3.6 Restoration of the public way

For a façade erected on a public way:

- The public way must be restored in accordance with the conditions of consent.
- The temporary structure, including foundation blocks, anchors, piers shall all be removed above and below the public way, prior to completion of the project, down to a depth of 2m.
- All timber must be removed.
- The voids must then be backfilled with stabilised sand (14 parts sand to 1 part cement).
- All costs for any subsequent reinstatement of the public way made necessary because of an unstable, damaged or uneven surface caused by the work must be borne by the owner of the property.

3 FAÇADE RETENTION

<u>URBAN DESIGN</u> Requirements for a Façade Retention Structure on a Public Way

3.7 **Design Quality**

For a façade retention structure (FRS) located on a public place, these Guidelines establish a standard of design quality for elements similar to that required for hoardings. (See Sections 2.9 to 2.12)

3.8 **Objectives**

The objective of Urban Design for a Façade Retention Structure is to align with requirements for hoardings. See Section 2.10.

3.9 **Application**

 $\begin{tabular}{ll} \textbf{Façade Retention Structure on a Public Way} &- \text{All elements of a façade retention structure located on a public way must apply with the Urban Design part of these Guidelines.} \end{tabular}$

3.10 **'Kit of Parts' approach**

Design requirements for the key elements of a Façade Retention Structure (FRS) located on a public way are described in this section.

Design Elements

1. Structure

This element is the primary framework of the FRS and consists of columns, beams, struts/ties and, if necessary, bracing.

2. Footings

This element comprises footings that are necessary to support and provide stability to the (FRS).

3. Site Fence OR Façade Wall Opening Infill Panels

This element is required as a barrier between the street and the site and is located where possible on the site boundary. Alternately, boarding up of openings in the existing wall with a durable solid material (capable of accommodating graphics) is deemed to enclose the site, provided the infill panels are certified as for a Type A Hoarding.

4. **Deck and protection**

This element is located over the footpath to protect pedestrians from falling objects and rainwater runoff.

5. Facia

Any required deck must have a facia fixed at the free edge/s of the deck, to act as a safety barrier and provide the opportunity for decorative graphics.

6. Graphics and Information

These are provided on the site fence and any facia. They may include an advertising component, subject to the separate approval of Council.

7. Colour

Standard colours or an approved graphic design are to be used on the facia, site fence and structure, to create a coordinated and integrated appearance.

8. Lighting

This element provides lighting for pedestrians and is located on the site fence or attached to deck soffit.

Element 1: Structure

Objectives

- > To maintain the openness and natural light to footpaths beneath the deck.
- To minimise the physical encroachment on the footpath and obstruction of pedestrian movement and activity.
- > To provide safe, well designed and well detailed structures particularly at street level.
- > To minimise risk to public safety

Deemed to Comply Provisions

Solutions that comply with the following requirements are deemed to comply with the objectives for this element. Alternative solutions will be assessed in terms of their satisfaction of the objectives.

- The minimum height clearance to the underside of the deck structure is to be 3000mm wherever possible. Height clearance to any knee bracing is not to be less than 2500mm and the size of any braces below deck are to be minimised.
- Columns or part of any exposed footings are to be located with a minimum clearance of 4000mm along the footpath in Central Sydney, where possible. Columns and/or exposed footings are to be located with a minimum clearance of 2500mm along the footpath in Ultimo Pyrmont and Millers Point, wherever possible.
- Columns must be located at equal spacings wherever possible, ie unless this would be of detrimental impact upon significant features of the public domain.
- The setback from the kerb is to be minimised, subject to there being a **minimum setback of 250mm** from the kerb face, vertically to any part of the structure. Where a required deck is provided, and where the setback is greater than 400mm, screens must be securely fixed at each end of the FRS to direct pedestrian traffic. Details must be included in application documents.
- > Where parking meters are to be obstructed, removed or relocated, a separate Approval must be obtained from Council.
- Longitudinal cross bracing may be used. At street level the number of cross-braced bays is to be minimised and preferably located adjacent to the façade wall, behind the site fence. Where longitudinal kerbside bracing is necessary at street level, this bracing must be restricted to bays where pedestrian movement is not impeded.
- The size of all secondary structures at street level (excluding columns) is to be minimised.
- Access to hydrants, other footpaths, manholes or surface fittings must not be impeded. If surface fittings or manholes are affected, the appropriate service authority must be notified and their requirements submitted to Council with the Application.
- The view of traffic lights and signs for motorists or for pedestrians must not be obstructed. Affected directional road signs are to be remounted to maintain visibility to motorists, to the approval of Road Traffic Authority and Council.
- The design of a temporary structure must allow for existing trees and other physical constraints on site. Street trees must not be affected. For Security Bond refer to Section 3.3
- **Kerbstones and gutters** must not be cut or damaged. If existing kerbstones need to be removed to construct column foundations for the frame, a separate approval must be obtained from the City Care Unit, City of Sydney. The gutter must not be obstructed in any way and must be kept clean and free from debris. For Security Bond refer to Section 3.3
- Where Overhead Protection is required for pedestrians in accordance with the relevant Regulations, decking equivalent to a Type B hoarding must be incorporated in the facade retention structure. The decking must be in accordance with WorkCover Authority Code of Practice for Overhead Protective Structures^(a).
- If a crane is used on the public way during the erection of the structure, permits must be obtained from the Police Traffic Authorities and the City Care Unit, City of Sydney.

- Work on the public way must only proceed in such a way to minimise inconvenience to road users
- and all necessary safeguards for the protection of road users and pedestrians must be provided.

 The façade retention structure must remain in place^(b) until the building façade is adequately fixed to the new permanent building and certified for design and inspection by the Project Structural Engineer, OR subject to Demolition Consent.

Note:

- The Façade Retention Structure must be designed, erected and maintained in accordance with WorkCover Code of (a) $Practice\ NSW\ Construction\ No\ 2-\textbf{Façade}\ \textbf{Retention}.$
- (b) The top of the wall may need to be sealed to prevent rainwater ingress. Details/Methodology for sealing top of a Heritage Façade wall must be forwarded to Council Heritage Planners for approval.

6 April 2001

Element 2: Footings

Objectives

- > To minimise the physical encroachment on the footpath and the obstruction of pedestrians.
- ➤ To maintain the visual openness of the footpath.

Deemed to Comply Provisions

Solutions that comply with the following requirements are deemed to comply with the objectives for this element. Alternative solutions will be assessed in terms of their satisfaction of the objectives.

- Structural stability is to be achieved with the least possible impact upon the width and openness of the footpath. Consideration is to be given to the suitability of alternatives to kerbside counterweights.
- For footings and temporary ground anchors to be located below a public way, a copy of the consent from any affected utility service authority must be submitted to Council prior to Approval. For the design of the footing, consideration should be given to removal of the footing after use. Refer to Section 3.6
- Where **kerb-side counterweights** are necessary, then the preferred arrangement is the provision of isolated column/counterweight units or an intermittent strip footing joining a maximum of two columns at a time, rather than a continuous barrier between all columns. Any column-counterweight units are to be designed as architectural elements that are visually integrated within the FRS design.
- **Continuous counterweights** may be used adjacent to the site boundary, provided that they are screened from the footpath by a site fence.

Element 3: Site Fence or Façade Wall Opening Infill Panel/s

Objectives

- > To effectively screen the works from the street.
- > To form an adequate safety barrier between the work site and pedestrians.
- To minimise the impact of the screen upon pedestrian movement on the footpath.

Deemed To Comply Provisions

Solutions that comply with the following requirements are deemed to comply with the objectives for this element. Alternative solutions will be assessed in terms of their satisfaction of the objectives.

- Any Site fence is to be located adjacent to the site boundary with least possible intrusion onto the footpath. Alternately, the façade wall openings below deck level may be in-filled. The infill panel material must be as required for a site fence and securely fixed.
- Where there are reasonable constructional requirements, the site fence may intrude upon the footpath by up to **1000mm**. Intrusions of up to 1200mm may only occur in localised circumstances, eg for stair access where this cannot be accommodated within the 1000mm intrusion.
- The reasons for the intrusion of the site fence onto the footpath by more than 1000mm are to be submitted with the application.
- Any Site fence is to extend to the underside of the deck.
- Any Site fence is to be neatly finished top and bottom. Where panel edges would be stepped, due to the slope of the site, then the stepped edges are to be covered by facing/skirting boards.
- Any Site fence is to consist of regularly sized panels approximately 1200mm in width.
- The toe of the fence is not to protrude onto the footpath, creating a hazard for pedestrians.
- The **site fence** (including any personnel access doors), is to be maintained throughout the life of the hoarding and is to be **constructed of durable material** (eg exterior grade plywood).
- The **site-fence lining** (including access openings or gates) **must be securely fixed**, with no protruding bolts, nails, or wire; finished flush for pedestrians.
- Where an access opening is required, it must be constructed so as to swing inwards only, or slide parallel to the hoarding. Access openings must remain closed unless in use.

Element 4: Deck and protection

Objectives

- > To provide over head protection to the public
- > To protect pedestrians from rainwater run-off from the over head protective structure
- > To provide a cleanly detailed soffit.
- To safely contain items on the deck.

Deemed to Comply Provisions

Solutions that comply with the following requirements are deemed to comply with the objectives for this element. Alternative solutions will be assessed in terms of their satisfaction of the objectives.

- Underside of deck is to be lined or all structure, including deck joists, must be painted the standard colour. (Refer to Element 7: Colour)
- The deck is to be impenetrable to water and is to be combined with a drainage system that discharges to the site. Rainwater is to be collected and disposed of without impact upon pedestrians.
- No superimposed loads are permitted on the deck unless shown on the certified structural plans submitted to Council.

Element 5: Facia

Objectives (If a deck is required)

- > To provide a safety barrier and handrail.
- > To promote the use of coordinated and well-designed graphics and information.

Deemed To Comply Provisions

Solutions that comply with the following requirements are deemed to comply with the objectives for this element. Alternative solutions will be assessed in terms of satisfying the objectives.

- Facia must extend for a minimum height of **1000mm** above the deck level and must fully cover the deck structure (including any knee bracing).
- Facia must be constructed from **durable a material** (eg exterior grade plywood) that is capable of accommodating graphics.

Notes

(a) Refer to Element 6: Graphics and Information and Element 7: Colour, for further provisions.

Element 6: Graphics and Information

Objectives

- To provide high quality graphic and visual material and ensure that the facia is a source of visual interest.
- > To provide legible information.
- To provide community information.

Deemed To Comply Provisions

Solutions that comply with the following requirements are deemed to comply with the objectives for this element. Alternative solutions will be assessed in terms of their satisfying the objectives.

- Within Central Sydney, where a deck is required the **facia** is to be provided with a complete and coordinated **graphic design or be painted** the standard colours (refer Element 7). The facia must include a **depiction of the relevant elevation** on the relevant street frontage **and project/consultant information** in one location. It may also include the following:
 - Information of community interest.
 - Artwork and graphic material of visual interest (ie supergraphics, photomontage, decorative patterns, drawings, text and illustrations).
 - Other graphic material required or approved by Council.
- Within Ultimo/Pyrmont and Millers Point, the **facia** may either be provided with a graphic design (as above) or be painted the standard colour (refer Element 7)
- The extent of advertising panels on the **facia** is not to exceed either **15%** of the area of facia or **1800mm** in height and is to be part of a coordinated graphic design.
- The **site fence** is to be treated with graphics as part of overall design and must include required safety signage, builder and developer contact numbers, as well as other graphics approved or required by Council.
- Prominent signs must be displayed at the boundary to each frontage of the site in accordance with the relevant Regulations, Conditions of Consent and Code of Practice for Construction Hours/Noise within the Central Sydney Business District.

The visible waterproof signage must show:

- That Unauthorised Entry is Not Permitted
- The Name of the Builder and Responsible Person for the Site
- The After Hours Emergency Contact Name and Telephone Number
- The Street Number in accordance with Council's Street Numbering Policy.
- Within Central Sydney, the site fence may incorporate **illuminated advertising signs** (approximately **1800mm high x 1200mm wide**), where approved by Council. These may be located in groups of not more than three signs at approximately 20m spacings.
- > The **site fence** must be maintained **free of bills and graffiti**. Chicken wire is not permitted. Areas of the site fence may be designated for the use of billposters, subject to the specific approval of Council.
- Facias must not be used for advertising without the specific consent of Council.
- > **Illumination** is to be of no adverse impact upon residential buildings. The means of illumination is to be concealed. Flashing signs are not be permitted.
- > All surfaces, graphics and information must be well maintained throughout the life of the hoarding.
- Where materials are to be **hoisted over a public way**, separate Council Approval must be obtained.

Notes

- (d) All graphics on all surfaces require consent from Council.
- (e) In approving graphics proposals, Council accepts none of the copyright responsibilities of the applicant.
- (f) Where advertising will produce a financial return to the owner of the site, then Council, as landowner over which the facia is to be erected, will require the owner of the site to negotiate with Council an appropriate percentage distribution of the advertising returns.

Element 7: Colour

Objectives

- > To establish a colour standard that evokes an image of Sydney.
- To promote the creative use of colour as part of a graphic design concept for the FRS.

Deemed to Comply Provisions

Solutions that comply with the following requirements are deemed to comply with the objectives for this element. Alternative solutions will be assessed in terms of their satisfaction of the objectives.

- The standard colours are to be:
 - (c) **Sandstone**: general colour for facia, soffit of deck, counterweights (where painted), site fence (and any infill panels) and any crane skid rails (all sides) Dulux Master Palette 30YY65/171 or equal.
 - (d) **Ocean Green:** accent colour on the visible parts of the structure Dulux Master Palette 30B08/114 or equal.
- Other colours relating to corporate identity or site conditions may be approved where part of a graphic design concept.

Element 9: Lighting

Objective

To provide effective illumination of the footpath, with a minimum of shadowed areas, for the safety and amenity of pedestrians.

Deemed To Comply Provisions

Solutions that comply with the following requirements are deemed to comply with the objectives for this element. Alternative solutions will be assessed in terms of satisfying the objective.

Lighting levels beneath the hoarding must at least equal the levels and distribution pattern (measured at footpath level) of the existing street lighting in the area. Where pedestrian hazards associated with the hoarding are present (eg: ramps over concrete-pump lines, projecting brackets from scaffolding, disrupted footpath paving) significantly higher lighting levels are required. In addition these hazards must be highlighted with durable colours and patterns generally recognised for identifying hazards.

3 FAÇADE RETENTION (Structural and Geotechnical)

Structural and Geotechnical Requirements

3.11 **Footing Design**

- For footings located below pavement level, consent from any affected Utility Authority must be submitted to Council with the application for approval under Section 68 of LGA (1979).
- For all Façade Retention Structures, an appropriately qualified geotechnical engineer must certify the Geotechnical Report and Inspection and Test Plan (ITP), AND
- The project Structural Engineer must certify the structure and facade for design and inspection, down to and including footings, prior to commencement of any related demolition work.

3.12 Certification for Approvals under Section 68 of LGA & EP&A Act (1979) as amended

Structural

- A Structural Certificate for <u>Design</u> (attached to the documents with the Application) must be submitted to Council in the form of **Attachment TP1** (Section 1), **OR a Compliance Certificate** (in accordance with EP&A Regulation) must be submitted to the PCA and a copy to Council, after structural drawings have been checked to comply with:-
 - (i) The relevant clauses of the Building Code of Australia (BCA);
 - (ii) The relevant current Codes of Practice of the NSW WorkCover Authority;
 - (iii) The relevant current Australian Standards;
 - (iv) Other documents listed. (eg Risk Assessment Recommendations).
- A Structural <u>Inspection</u> certificate in the form of **Attachment TP1** (Section 2) must be submitted to Council, **OR** a **Compliance Certificate** (in accordance with EP&A Regulation) must be submitted to the PCA and a copy to Council, **prior to commencement of related demolition work**.

Notes:

- An appropriately qualified practising structural engineer certifying by completing **Attachments TP1** or **TP2** must have:
 - Tertiary qualifications in Civil or Structural Engineering; AND
 - Appropriate current Professional Indemnity Insurance; **AND**
 - Corporate Membership of the Institution of Engineers Australia or equivalent; AND
 - Evidence of relevant experience in the form of a CV/Resume.
- An appropriately qualified practising structural engineer certifying by issuing a Compliance Certificate, must have accreditation as a certifier for Structural Engineering issued by the Institution of Engineers Australia, in accordance with EP&A Act (1979) as amended.

Geotechnical

- Prior to commencement of foundation/excavation work, the following documentation must be submitted satisfactorily to **Council**; **OR**, if the retention structure is approved under EP&A Act (1979) as amended, submitted to the **Principal Certifying Authority** and a copy of same to Council.
 - a) A Geotechnical Report, which must include the following information as appropriate:-
 - (i) Borehole/test pit logs or inspection records;
 - (ii) Field/Laboratory test results;
 - (iii) General geotechnical description of site;
 - (iv) Recommended safe bearing values and likely settlements of foundation material;
 - (v) Recommendations for stability and protection of excavations;
 - (vi) Opinion on the effect of the new works on existing buildings and recommendations for any underpinning or other measures required to maintain stability;
 - (vii) Method of proving and assessing foundations, underpinning and/or excavation stability in accordance with design.

3 FAÇADE RETENTION (Structural and Geotechnical)

- b) An **Inspection and Test Plan (ITP)** that reflects the requirements of the geotechnical report, project drawings and specifications;
- c) The completed Geotechnical Certificate for the **Report** and **ITP**, submitted in the form of **Attachment G1** completed by the Project/Principal Geotechnical Engineer **OR**, a **Compliance Certificate** (in accordance with EP&A Regulation) after satisfying a) and b).
- Prior to handover and commencement of approved related (demolition) work a <u>Geotechnical</u> <u>Inspection Certificate</u>:
 - In the form of **Attachment G2** must be submitted satisfactory to Council; **OR**
 - In the form of a **Compliance Certificate** for Inspections (under EP&A Regulation) must be submitted to the satisfaction of the Principal Certifying Authority (PCA) and a copy submitted to Council.

Notes:

- An appropriately qualified practising Geotechnical Engineer certifying by completing Attachment G1 and G2 must have:
 - Appropriate tertiary qualifications in Civil or Geotechnical Engineering, AND;
 - Corporate Membership of the Institution of Engineers Australia or equivalent;
 AND
 - Evidence of relevant experience in the form of a CV/Resume; AND
 - Appropriate current Professional Indemnity Insurance.
- An appropriately qualified practising Geotechnical Engineer certifying by issuing a
 Compliance Certificate must have accreditation as a certifier for Geotechnical Engineering
 issued by the Institution of Engineers Australia in accordance with EP&A Act (1979) as
 amended.

3.13 **Periodic Inspections**

Documents to be submitted to Council <u>prior to construction consent</u>:

- 1. The structural engineer engaged to design the façade retention system must also submit to the owner of the allotment of land (and a copy to Council) a <u>Facade Retention Monitoring Programme</u>, which includes the provisions for on-going maintenance in accordance with WorkCover Authority Code of Practice for <u>Façade Retention</u>. The Programme must be designed, assuming the façade retention system is to be relied on for a minimum period of 10 years. The Programme must include provisions for the assessment of:
 - (a) The <u>frequency of inspections and survey monitoring</u> required to reasonably assess any signs of distress early enough to undertake remedial action to prevent any increased risk to public safety and damage to adjoining property. (Minimum every three years)
 - (b) A <u>list of items to be considered/inspected/tested</u>, should include:
 - The durability of the facade components; mortar, masonry, render, attachments, etc..
 - The durability of any concrete, timber and/or steel attachments/components of the original facade lintels, window frames, etc.
 - The durability of bolts or any threaded rods
 - Compatibility of the facade and support frame foundations.
 - Packing between the frame and facade.
 - Façade movement
 - Ingress of water^(a)
 - Testing and corrosion of any ground anchors
 - Corrosion of steel components of the support frame.
 - Description and possible cause of cracks and their propagation.
 - Recommendations for any remedial works required.
 - Any other aspect the engineer considers relevant.
- A <u>letter of undertaking</u> by the owner of the allotment of land must be submitted to the City of Sydney with the application, accepting the recommendations of the *Façade Monitoring Programme*. The owner of the allotment must also undertake, in the case of transfer, to obtain a similar letter of undertaking from the purchaser or mortgagee.

Documents to be submitted after inspections in accordance with the Monitoring Programme:

- An Inspection Certificate in the form of Attachment TP2 must be submitted to Council, after the requirements of the Monitoring Programme have been satisfied and after any required remedial action is complete; OR
- An Inspection Certificate in the form of a Compliance Certificate (in accordance with EP&A Regulation) must be submitted to the Principal Certifying Authority and a copy to Council, after completion of any remedial work and the shoring has been checked to comply with:
 - i. The relevant clauses of the Building Code of Australia (BCA);
 - ii. The relevant current Codes of Practice of the NSW WorkCover Authority;
 - iii. The relevant current Australian Standards;
 - iv. The relevant risk assessment recommendations;
 - v. The provisions of the Monitoring Programme.

Note:

(a) The top of an exposed wall may need to be sealed to prevent rainwater ingress. Details/Methodology of any proposed work on a Heritage Façade must be forwarded to the Heritage Planners of Council for advice on whether a Development Application is required.

SHORING

General Requirements

All excavations and backfilling associated with the erection or demolition of a building must be safely executed in accordance with appropriate professional standards to protect the site and adjoining buildings from damage.

Adequate provision must be made for drainage. Drainage of the site must be in accordance with "Managing Urban Stormwater", issued by the NSW Department of Housing.

4.1 Relevant Legislation

- For <u>Temporary Shoring</u>, a separate application must be made <u>under Section 68 of the Local Government Act 1993</u>.
- For <u>Permanent Shoring</u>, a separate application must be made under EP&A Act (1979) as amended) **OR** may form part of the main Development Application.
- > Pursuant to the provisions of the relevant legislation, including:

Construction Safety Act and Regulations

Occupational Health & Safety Act "OH&S Act" and Regulations

Local Government Act 1993 "ACT (1993)" and Regulations

Environmental Planning and Assessment Act (1979) as amended "EP&A Act (1979) as amended" and Regulation 1994,

Shoring must be constructed to also comply with:

The Building Code of Australia AND

Adopted Australian Standards (Spec A1.3)

to maintain a safe site and to protect any adjoining property from damage.

Compliance must also be given to:

Relevant Policies of the City of Sydney including the Policy for the Design of Construction Hoardings and the Code of Practice for Construction Hours/Noise within the Central Sydney Business District.

Conditions of Development Consent.

4.2 **Public Liability Insurance**

> An appropriately qualified person must assess the nature of proposed work and the associated risk to public safety (including vehicles and pedestrians). The certified design documents must incorporate any recommendations of this assessment, if applicable.

City of Sydney must be indemnified against any claims for injury to persons, damage to adjoining properties and/or public way, or excess on the policy arising out of any claim. The City must remain indemnified during the period of construction until a permanent structure is built at ground level and any temporary shoring is removed. Such indemnity must be expressed in the form of a public risk insurance policy with the minimum amount of \$10,000,000 for any individual claim, which may be made. Such a policy must be specifically noted to include the interests of City of Sydney.

The lessees/owner of the site shall undertake, in the case of transfer, to obtain a similar indemnity from the purchaser or mortgagee and upon such indemnity being received and accepted by City of Sydney, the present lessees/owner is to be relieved of all liability under the indemnity.

4.3 **Application for Approval**

For Permanent Shoring (including permanent shoring temporarily restrained), approval is to be granted by Council <u>under EP&A Act (1979) as amended</u>.

For Temporary Shoring, approval is to be granted by Council <u>under Section 68 of **LGA(1993)**</u>. **For an Application under Section 68**, all required documents must be addressed to the General Manager, City of Sydney.

For Temporary and Permanent Shoring (if not included in the main Application for a Construction Certificate):

Documents to be submitted to Council for <u>Approval</u> under EP&A Act (1979) as amended OR under Section 68 of the LGA (1993):

- A completed <u>Application for Approval</u> form.
- <u>Architectural plan's</u> for bulk excavation (in duplicate) showing relevant details including location of proposed excavation, footprint, boundaries, utility services and levels of proposed excavation.
- An Application Fee.
- Consent from any affected <u>Public Utility Authority</u> if construction is likely to affect any services supplied by that Authority. Where work is adjacent to a Monorail, a separate Approval must be obtained from WorkCover Authority and TNT Harbour Link P/L.

Further documents required to be submitted to Council prior to release of Approval under Section 68 of the LGA 1993; OR

Further documents required to be submitted to the Certifying Authority prior to release of the Construction Certificate and a copy to Council if Approval is granted under EP&A Act (1979) as amended:

- Evidence of *Public Liability Insurance* specifically indemnifying City of Sydney.
- <u>Dilapidation Report</u> of adjoining building/s.
- <u>Long Service Levy</u>, if applicable.
- <u>Structural Details</u> and Specifications (in duplicate) including Typical Sections/s and connection details, etc., when application for approval is under LGA 1993
- <u>Structural and Geotechnical Certificates</u>, when application for approval is under **LGA 1993**. See Section 4.8
- A <u>letter of undertaking</u> by the owner of the allotment of land for periodic inspections in accordance with these Guidelines, when application for approval is under LGA 1993.
- A <u>bank guarantee</u> or cash bond as a Security Bond/Deposit, if applicable. This must be in accordance with City of Sydney Schedule of Fees and Charges. The funds must be available on demand for the following reasons:
 - Maintenance or rectification of shoring structure
 - Removal of the structure
 - Cost of restoring the public way
 - Damage to existing Trees, Kerbstones and Gutters.

Documents required for Approvals under EPAA Act to be submitted to the Principal Certifying Authority and a copy to Council <u>prior to commencement of work</u> under EP&A Act (1979) as amended.

- <u>Structural Details</u> and Specifications (in duplicate) including Typical Section/s and connection details, etc.
- <u>Structural and Geotechnical Certification</u> for design. Refer to Section 4.8.

Documents required <u>at completion of Shoring Work</u> to be submitted to Council OR to the Principal Certifying Authority and a copy to Council if Approval is granted under EP&A Act (1979) as amended:

- Structural and Geotechnical <u>Inspection Certificates</u>. See Section 4.8

4 SHORING

4.4 Location of Services

- All utility services and underground structures in the area of the proposed façade retention structure must be thoroughly surveyed. Utility service access points or lids must not be obstructed at any time. For location of utility services in Sydney, call Sydney One Call on 9806-0800 or fax 9806-0777 with UBD reference grid identification.
- No work shall commence in the public way until a copy of consent from each affected Public Utility Authority has been submitted to City of Sydney and requirements complied with.
- No piers or rock anchors are to be drilled or installed in a public way until a test excavation has been carried out at all locations along the footway to determine the exact location and depth of any Public Utility Services.

4.5 **Notifying Adjoining Owners**

At least 7 days prior to commencement of excavation below an adjoining building or installation of temporary ground anchors under an adjoining property, a Notice of Intention to do so, must be posted to adjoining owner/s and a copy of the same submitted to the City of Sydney. The Notice must include particulars of the excavation for the building being erected or demolished.

4.6 Working Hours

Refer to the conditions of consent.

4.7 Restoration of Public Way

- > The public way shall be restored in accordance with the conditions of consent.
- All ground anchors are to be de-stressed and isolated from the building prior to completion of project.
- The temporary structure, including foundation blocks, anchors and piers must be removed above and below the public way, prior to completion of the project, down to a depth of 2m.
- All timber must be removed.
- The voids shall then be backfilled with stabilised sand (14 parts sand to 1 part cement).
- All costs for any subsequent reinstatement of the public way made necessary because of an unstable, damaged or uneven surface, must be borne by the owner of land that engaged contractors to do the shoring work.

4 SHORING (Certification)

Structural and Geotechnical Requirements

4.8 Certification for Approvals under Section 68 of LGA (1993) & EP&A Act (1979) as amended

Structural

During demolition, existing basement walls, slabs, cellars and similar underground structures which support an adjoining property must not be demolished unless the supporting structure is certified by a Structural Engineer. The certificate must be in the form prescribed below.

- A Structural Certificate for <u>Design</u> (attached to the documents with the Application) must be submitted to Council in the form of **Attachment S1** (For Minor Works), **OR a Compliance Certificate** (in accordance with EP&A Regulation 1994) must be submitted to the PCA and a copy to Council, after structural drawings have been checked to comply with:-
 - (i) The relevant clauses of the Building Code of Australia (BCA);
 - (ii) The Construction Certificate Plans released for construction
 - (iii) The relevant current Australian Standards;
 - (iv) The design parameters given by the Geotechnical Engineer
 - (v) Conditions of Consent.
 - (vi) Other documents listed. (eg Risk Assessment Recommendations).

For shoring adjoining a public way, surcharge and lateral loads must also be:

- To the requirements of Road Traffic Authority
- To support loads from any hoarding and associated counterweights, traffic barriers, etc.
- To support any required loads determined by the risk assessment. (See Section 2.4 for Hoardings)
- A Structural <u>Inspection</u> certificate in the form of **Attachment S1C** must be submitted to Council, **OR** a **Compliance Certificate** (in accordance with EP&A Regulation 1994) that must be submitted to the PCA and a copy to Council, **at completion of shoring work**.

Notes:

4

- An appropriately qualified practising structural engineer certifying by completing **Attachments** S1, S1C or TP2 must have:
 - Tertiary qualifications in Civil or Structural Engineering; AND
 - Appropriate current Professional Indemnity Insurance; AND
 - Corporate Membership of the Institution of Engineers Australia or equivalent; AND
 - Evidence of relevant experience in the form of a CV/Resume.
- An appropriately qualified practising structural engineer certifying by issuing a Compliance Certificate, must have accreditation as a certifier for Structural Engineering issued by the Institution of Engineers Australia, in accordance with EP&A Act (1979) as amended.

SHORING (Geotechnical Certification)

Geotechnical

- > Prior to commencement of shoring work, the following documentation must be submitted satisfactorily to **Council; OR**, if the shoring work is approved <u>under EP&A Act (1979) as amended</u>, to the **Principal Certifying Authority** and a copy of same to Council.
 - a) A Geotechnical Report, which must include the following information as appropriate:-
 - (i) Borehole/test pit logs or inspection records;
 - (ii) Field/Laboratory test results;
 - (iii) General geotechnical description of site;
 - (iv) Recommended safe bearing values and likely settlements of foundation material;
 - (v) Recommendations for stability and protection of excavations;
 - (vi) Opinion on the effect of the new works on existing buildings and recommendations for any underpinning or other measures required to maintain stability;
 - (vii) Method of proving and assessing foundations, underpinning and/or excavation stability in accordance with design.
 - b) An **Inspection and Test Plan (ITP)** that reflects the requirements of the geotechnical report, project drawings and specifications;
 - c) The completed Geotechnical Certificate for the **Report** and **ITP**, submitted in the form of **Attachment G1** completed by the Project/Principal Geotechnical Engineer **OR**, a **Compliance Certificate** (in accordance with EP&A Regulation 1994) after satisfying a) and b).
- At completion of the shoring work a <u>Geotechnical Inspection Certificate</u>:
 - In the form of **Attachment G2** must be submitted satisfactory to Council; **OR**
 - In the form of a Compliance Certificate (in accordance with EP&A Regulation)
 must be submitted to the satisfaction of the Principal Certifying Authority (PCA)
 and a copy submitted to Council.

Notes:

- An appropriately qualified practising Geotechnical Engineer certifying by completing Attachments G1 and G2 must have:
 - Appropriate tertiary qualifications in Civil or Geotechnical Engineering, AND;
 - Corporate Membership of the Institution of Engineers Australia or equivalent;
 AND
 - Evidence of relevant experience in the form of a CV/Resume; AND
 - Appropriate current Professional Indemnity Insurance.
- An appropriately qualified practising Geotechnical Engineer certifying by issuing a
 Compliance Certificate (in accordance with EP&A Regulation) must have accreditation
 as a certifier for Geotechnical Engineering issued by the Institution of Engineers Australia
 in accordance with the EP&A Act (1979) as amended.

4 SHORING (Periodic Inspections)

4.9 **Periodic Inspections**

Documents to be submitted to Council prior to construction consent:

- The structural engineer engaged to design the shoring must also submit to the owner of the allotment of land (and a copy to Council) a <u>Shoring Monitoring Programme</u> which includes an assessment of:
 - a) The <u>frequency of inspections</u> required sufficient to reasonably assess any signs of distress early enough to undertake remedial action to prevent increased risk to public safety and damage to adjoining property. (Minimum every three years)
 - b) The <u>list of items to be considered/inspected/tested</u> should include:
 - Ground Anchors/Bolts
 - Stability of Backfill and Consolidation
 - Drainage
 - Corrosion of ground anchors, steel soldiers and waling
 - Timber elements
 - Connections
 - Movement/Alignment
 - Any other aspect the engineer considers relevant
- A <u>letter of undertaking</u> by the owner of the allotment of land must be submitted to the City of Sydney accepting the recommendations of the Shoring Monitoring Programme. The owner of the allotment must also undertake, in the case of transfer, to obtain a similar letter of undertaking from the purchaser or mortgagee.

> Documents to be submitted after inspections in accordance with the Shoring Monitoring Programme:

- An Inspection Certificate in the form of Attachment TP2 must be submitted to Council, after the requirements of the Monitoring Programme have been satisfied and after any required remedial action is complete; OR
- An Inspection Certificate in the form of a Compliance Certificate (in accordance with EP&A Regulation) must be submitted to the Principal Certifying Authority and a copy to Council, after completion of any remedial work and the façade retention system has been checked to comply with:
 - i. The relevant clauses of the Building Code of Australia (BCA);
 - ii. The relevant current Codes of Practice of the NSW WorkCover Authority;
 - iii. The relevant current Australian Standards:
 - iv. The relevant risk assessment recommendations;
 - v. The provisions of the Monitoring Programme.

Appendix A: Certificates

Attachment TP1

Structural Certification

				Hoardings	
				Facade Rei	ention
				Other (Spe	cify)
PRE	MISES:				
am a		qualified and co			at Act 1993 ⁽ⁱ⁾ , I hereby certify that I want field of structural engineering
1.*	(a) The rel(b) The rel(c) The rel	levant clauses of levant current Co levant current Au	the Building of the des of Practic stralian Stand	Code of Austra ee of the NSW lards.	ecked and comply with:- alia. WorkCover Authority. dations)
2.*		ctural Works ha		ected and are d	leemed to comply with the full set
	* Delete all o	f Section 1 OR 2	where not ap	plicable.	
Full 1	Name of Certific	er:			
Qual	ifications & Exp	erience ⁽ⁱⁱ⁾			
Addr	ress of Certifier				
Phon	e Numbers	Bus	N	Iobile	Fax
Signa	nture				Date
	e of Employer or Company)				
Cert	ified Structura	al Drawing num	bers and revi	ision list:	
Noto	n.				

- The Local Government Act 1993 absolves Council from liability by relying on this Certificate; Please submit Curriculum Vitae with your first Certification (i)

Attachment TP2

Comment:

Str	uctu	ıral C	Certific	ation		
					Hoarding (Six monthly inspection)	
					Facade Retention (Annual inspection)	n
					Other (Specify)	
SITE	E:					
am a	n approp		alified and c		overnment Act 1993 ⁽ⁱ⁾ , I hen the relevant field of structure	
That has b	the 'As leen inspe	built' Hoa ected by n	arding*/Faca ne and found	nde Retention*/ _ to comply with:-	* at the abover	nentioned address
	(a)	The rel	evant clauses	of the Building C	ode of Australia	
	(b)				of the NSW WorkCover A	uthority
	(c)			Australian Standa		
	(d)			sessment recomme		
#	(e)		e Instruction			
#	(f)				ber/steel* Condition Repor	t dated
#	(g)			e Monitoring Prog		t dated
	d # -		tems not appl		rannic dated	
Full N	Name of (Certifier: _				
Quali	fications	& Experie	nce ⁽ⁱⁱ⁾			
Addr	ess of Cei	rtifier				
Phone	e Numbe	rs	Bus	Mobil	eFax	
Signa	ture				Date	
	e of Empl or Compa					
Certi	ified Str	uctural D	rawing num	bers and revision	list:	
Notes						

The Local Government Act 1993 absolves Council from liability by relying on this Certificate; Please submit Curriculum Vitae with your first Certification

Attachment TP3

Scaffolding Certification – By Scaffolder

Site:					
		Contact Number :			
Name of Us		Contact Number:			
	se of Scaffolding:				
Maximum l	Number of Loaded Platforms:	Duty Loading/s:			
Pursuant to t	he provision of Section 93 of the Local	Government Act 1993 ⁽ⁱ⁾ ,			
I					
on behalf of					
	(Fir	rm)			
	(Add	ress)			
	and to adequately secure any require	ied and competent person to erect the proposed ed ties to the adjoining building/structure and as			
The Scaffol comply with		elow will be erected and checked at handover to			
a) b) c)	b) The relevant current Codes of Practice of the NSW WorkCover Authority, the Construction Safety Act and Occupational Health & Safety Act				
d)* e)*	d)* The Supplier's Specification e)* The Designer's Specification complying with a) to c) above. If applicable, the structure is to be separately certified. Print Designer's Name:				
* Delete Secti	on/s not applicable				
Certified Sca	affold Drawing number and revision list	:			
Signed:		Date:			
Print Name ((Project Scaffolder):				
Scaffolder L Notes:	Licence Number: 24	Hour Contact Number/s:			

- (i) The Local Government Act 1993 absolves Council from liability by relying on this Certificate;
- (ii) Certification is required for scaffolding more than 4.0m high

Attachment G1

Geotechnical Certification

ADDRESS:		
DEVELOPME	ENT APPLICATION NUMBER:	
CONSTRUCT	TION CERTIFICATE NUMBER:	
Pursuant to the	provision of Section 93 of the Local Government Act 1993 ⁽ⁱ⁾) <u>.</u>
	y that I am an appropriately qualified and competent person ngineering and as such can certify that:	n in the field of
includin i) Bo ii) Fi iii) Go iv) Ro wi v) Ro vi) Do re m vii) M	reviewed the Geotechnical Report No dang: orehole/test pit logs or inspection records ield/laboratory test results eneral geotechnical description of site ecommended safe bearing values and likely settlements naterial ecommendations for stability and protection of excavations iscussion of the effect of the new work on existing ecommendations for any underpinning or other measure naintain stability Iethod of proving and assessing foundation underpinning an ability in accordance with design.	of foundation buildings and es required to
	viewed the Inspection and Test Plan , Reference Number, in accordance with the requirements of the above geotechns attached) in relation to foundations and the support of	nical report (and
Full Name of C	Certifier:	
Qualifications	& Experience(ii)	
Address of Cer	rtifier	
Phone Number	rs: BusMobileFax	
Signature _	Date	
Name of Emplo (Self or Compa	•	
Notes:		

- (i) The Local Government Act 1993 absolves Council from liability by relying on this Certificate;
- (ii) Please submit Curriculum Vitae with your first Certification

Attachment G2

Geotechnical Certification

AD	DRESS:					
DE	VELOPMENT APPLICATI	ION NUMBER:				
CO	ONSTRUCTION CERTIFIC	ATE NUMBER:				
Pur	rsuant to the provision of Sect	ion 93 of the Local Govern	ment Act 1993 ⁽ⁱ⁾ :			
	nereby certify that I am an apotechnical engineering and as		competent person in the field of			
1.	Inspections have been undertaken in accordance with the above Inspection and Test Plan, reference No (Records are attached). The requirements of the Inspection and Test Plan have been met with the exceptions of the non-conformance shown on the attached records.					
2.	Corrective action has been undertaken as shown on the attached records in relation to the non-conformance noted.					
Ful	ll Name of Certifier:					
Qu	alifications & Experience(ii)					
Ad	dress of Certifier					
Pho	one Numbers: Bus	Mobile	Fax			
Sig	nature		Date			
	me of Employer					
Not (i)		3 absolves Council from liability	by relying on this Certificate;			

Please submit Curriculum Vitae with your first Certification

Attachment S1 Structural Certificate for Design – Minor Works

ADDRESS: _						
DEVELOPM	ENT APPLICATIO	ON NO:				
CONSTRUC	TION CERTIFICA	ΓΕ NO:				
	ately qualified and con		t Act 1993 ⁽ⁱ⁾ , I hereby certify that I want field of structural engineering			
The Structural	Drawings listed below	v have been checked and c	omply with:-			
a)	The relevant clauses of	f the Building Code of Au	stralia;			
b)	The Construction Cert	ificate Plans released for c	onstruction;			
c)	The relevant Australia (Specification A1.3)	n Standards listed in the B	uilding Code of Australia.			
d)	Any other relevant docu	uments. Specify				
Date/s of Devel	opment Consent (Comp	pulsory):				
Date/s of Const	truction Certificate/s (C	Compulsory):				
Full Name of C	Certifier:		_			
Qualifications	& Experience ⁽ⁱⁱ⁾					
Address of Cer	tifier					
Phone Number	s Bus	Mobile	Fax			
Signature		Date				
Name of Emplo (Self or Compa						
Certified Structure necessary):	ctural Drawing numb	er and revision list (atta	ch a separate referenced sheet if			
Note:						

- The Local Government Act 1993 absolves Council from liability by relying on this Certificate; Please submit Curriculum Vitae with your first Certification

Attachment S1A Structural Certificate for Design - Major Works

ADDRES	S:		
DEVELO	PMENT A	APPLICATION NUMBER:	
CONSTR	CUCTION (CERTIFICATE NUMBER:	
am an app	ropriately queh can certif	ion of Section 93 of the Local Government Act 1993, I hereby certify that I utilized and competent person in the relevant field of structural engineering fy that the Structural Drawings listed below have been checked and	
(a)		ant clauses of the Building Code of Australia (A2.3, Section B, Spec 2.3, 2.6), C1.11, D2.2, D2.3, H101.10(e), H101.7(v));	
(b)		truction Certificate Plans released for construction, for Fire Resistance Levels of structural elements and masonry walls.	
(c)	The releva	ant Australian Standards listed in the Building Code of Australia	
	(Specifica	ation A1.3).	
(d)	Any other	relevant documents. Specify	
Date/s of I	Developmen	at Consent (Compulsory):	
Date/s of (Construction	n Certificate/s (Compulsory):	
		r:	
Qualificati	ions & Expe	rience ⁽ⁱⁱ⁾	
Address of	f Certifier		
Phone Nur	mbers	BusMobile Fax	
Signature		Date	
Name of E			
•	• • •		
Certified S necessary)		Drawing numbers and revision list (attach a separate referenced list if	
(ii) Pleas Submit with	se submit Cur h Attachment		
	_	it S1B	
Struct	ural Ce	rtificate for Design - Major Works	
ADDRES	S:		

66
DEVELOPMENT APPLICATION NUMBER:
CONSTRUCTION CERTIFICATE NUMBER:
Pursuant to the provision of Section 93 of the Local Government Act 1993, I hereby certify that I am an appropriately qualified and competent person with a good working knowledge of the Building Code of Australia and Structural/Architectural drawing coordination and as such can certify that:
The Structural Drawings listed below have been checked and coordinated with the Development Conditions of Consent and Construction Certificate Drawings released for construction for: (a) Geometry and location of structural members, profiles, ducts, stairs and columns (b) Fire Resistance Levels of building elements that I have checked are in accordance with the Building Code of Australia
Date of Development Consent (Compulsory):
Date/s of Construction Certificate (Compulsory):
Full Name of Certifier:
Qualifications & Experience ⁽ⁱⁱ⁾
Address of Certifier
Phone Numbers Bus Mobile Fax
Signature Date
Name of Employer (Self or Company)
Certified Structural Drawing numbers and revision list (attach a separate referenced list if necessary):
<u> </u>
<u> </u>
Notes: (i) The Local Government Act 1993 absolves Council from liability by relying on this Certificate;
(ii) Please submit Curriculum Vitae with your first Certification. Submit with Attachment S1A
Attachment S1C
Structural Certificate for Inspection

ADDRESS:

DEVELOPMENT A	APPLICATI	ION NO:		
CONSTRUCTION	CERTIFICA	ATE NO:		
	appropriately	y qualified and co		nt Act 1993 ⁽ⁱ⁾ , I hereby in the relevant field of
That the Structural V of structural drawings			d are deemed to	comply with the full set
Full Name of Certifi	ier:			
Qualifications & Exp	perience ⁽ⁱⁱ⁾			
Address of Certifier				
Phone Numbers	Bus	Mobile	e	Fax
Signature			Date	
Name of Employer (Self or Company)				
Certified Structural list if necessary):	Drawing n	umbers and revis	sion list (attach	a separate referenced

Notes:

- The Local Government Act 1993 absolves Council from liability by relying on this Certificate; Please submit Curriculum Vitae with your first Certification.
- (i) (ii)