

CONSTRUCTION MANAGEMENT PLAN FOR 83-123 Eveleigh St, Redfern, Precinct 3 Pemulwuy

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1 Introduction

This report has been prepared as an indicative outline of the proposed construction methodologies for Precinct 3 Pemulwuy Project, Redfern NSW

Site address: 83-123 Eveleigh St Redfern

1.1 Development Description

Design and Construct of:

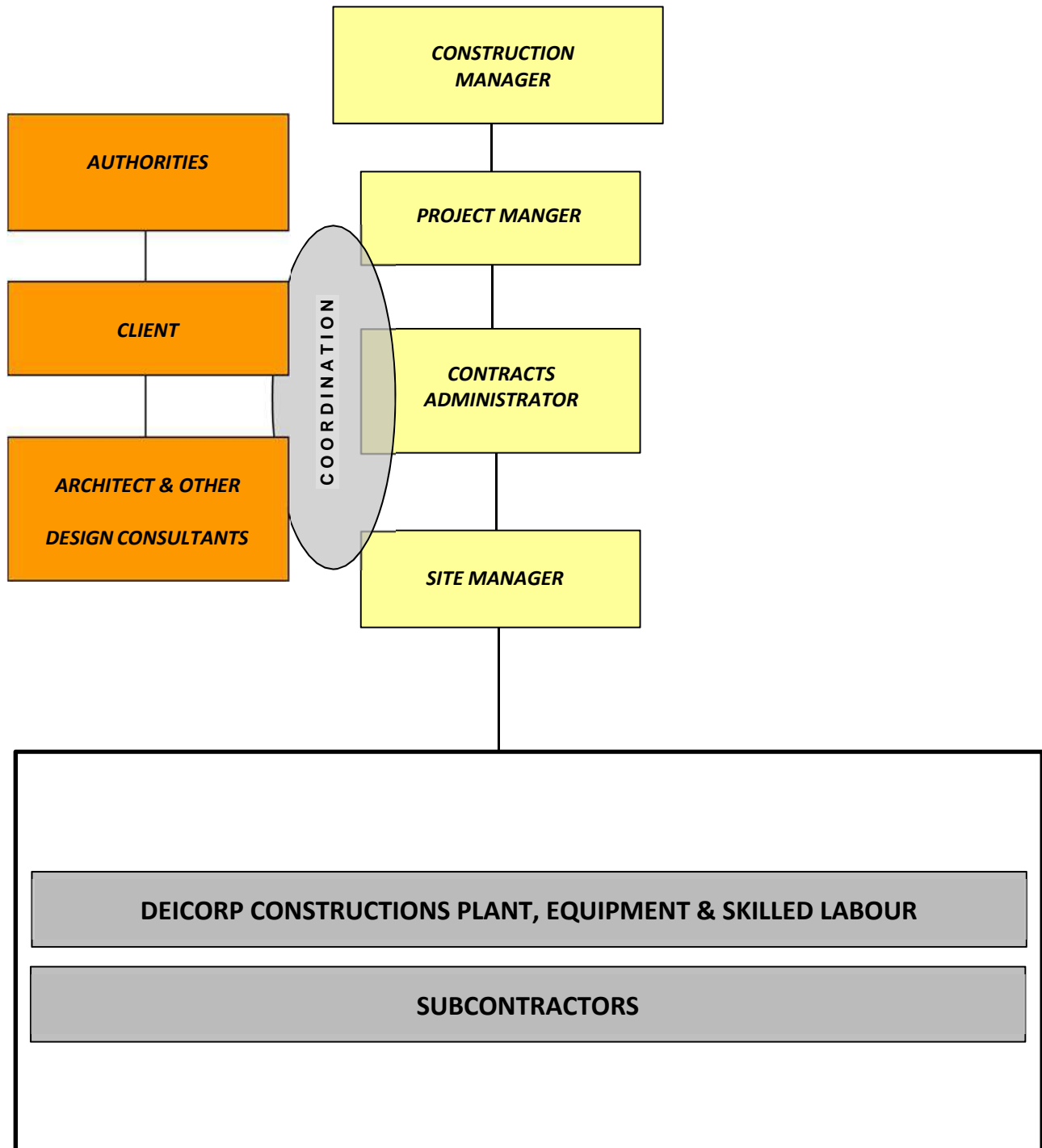
- Total Site Area
 - 2380 sqm
- 1 tower consisting of 522 rooms and a total of 596 beds
 - Tower consisting of 23 stories to a height of RL96.570m
 - Note no provision of carparking no underground basements
 - Level Lower Ground common area facilities
 - Level Ground to level 21 student accommodation
 - Level 22 Plant room
 - Level 23 Roof level



Figure 1.1.1 Structural Impression of 83-123 Eveleigh St

2 Project Organisational Chart

Project Organisation Chart



3 Site Context

Precinct 3 is one of the three Precinct which form the Pemulwuy Project for the Aboriginal Housing Company. Precinct 3 is located between the addresses of 83-123 Eveleigh St, Redfern NSW. Figure 3.1.1 "Site Location" shows the site location

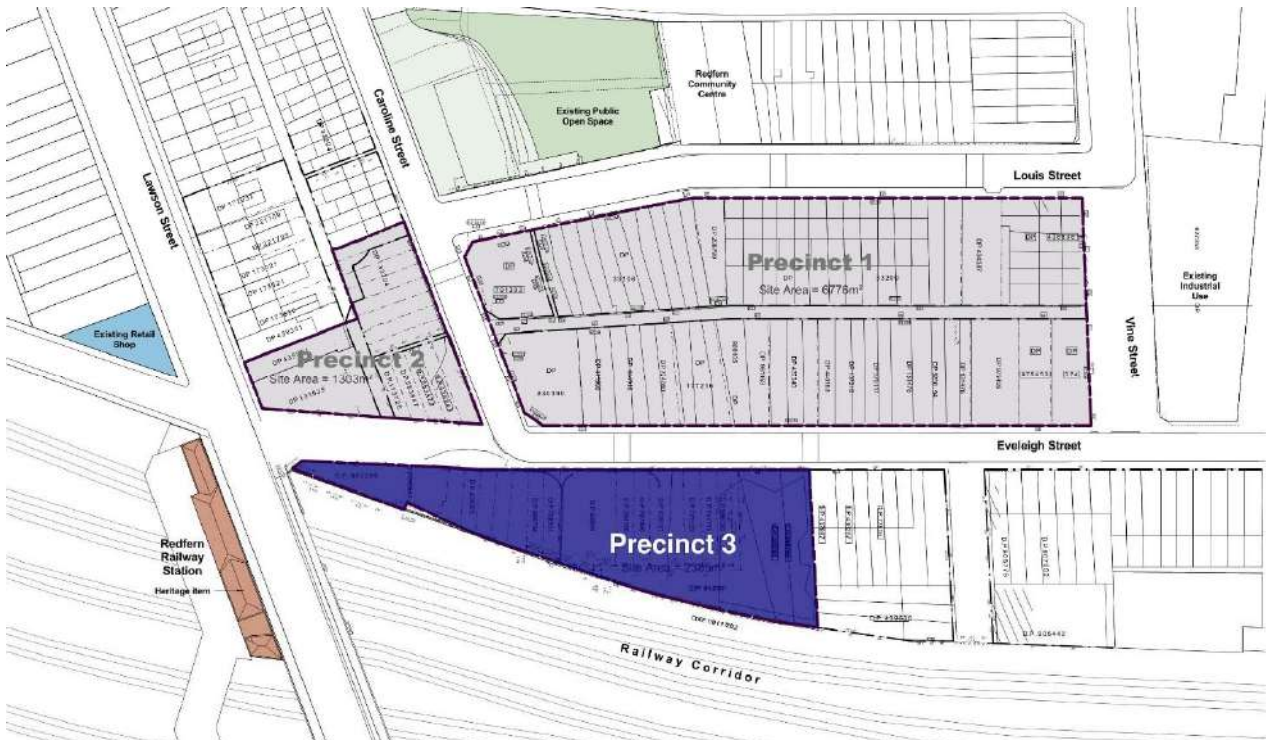


Figure 3.1.1 Site Location

Precinct 3 is bounded by Eveleigh St on the West, the city rail corridor on the East, Residential housing to the North and Lawson St to the South.

The existing site does not have any above ground structures with the exception of a disused 2 story concrete structure which was once a childcare centre. This building has been stripped back to its concrete structure. The rest of the site is covered by grass or asphalt and has a disused playground on the site. Figure 3.1.2 is an aerial photo showing the condition of the existing site.



Figure 3.1.2 Aerial Photo of the Existing site

4 COMPANY

4.1 Environmental Overview

Deicorp Constructions is concerned with the Environmental Protection of all projects. Regardless of their role within the Company structure, all employees will be made aware & responsible for safe environmental work practices. In order to achieve adequate “environmental protection”. The below principles shall be adopted by all parties.

Prior to commencement, Deicorp Constructions will develop and implement a comprehensive Project Environmental Plan which will include as a minimum the following (the implementation of this plan will be audited by an audit and inspection plan):

- Deicorp Constructions require that all employees actively work towards achieving Work Procedures which achieve Environmental Protection;
- All work will be carried out in a manner which will cause the least possible disturbance to the environment;
- An awareness of surrounding businesses and the general public has been taken into consideration in relation to noise, dust and water pollution ensuring minimal disruption to the day to day uses of the development surroundings and residents.
- A site-specific Erosion and Drainage plan will be devised with adequate drainage and erosion control measures put in place to prevent damage to the environment and compliance to authorities;
- Constant monitoring of all Environmental Controls will be made with ongoing improvements phased into work procedures;
- Where fitting, signs and barricades will be established to isolate specific areas which do not require demolition activity and/or possess environmental significance;
- It is the responsibility of every person on site to ensure the safe work practices are carried out on site in achieving environmental protection. Company management will ensure that adequate supervision and support are given to the Site Manager and Foreman and all employees; and
- Deicorp Constructions acknowledges and actively encourages the right of any employee to report situations with which concerns are raised as to protection of the environment.

4.2 Statutory Requirements

The following legislation will be complied with during the demolition, excavation and construction processes:

- Occupational Health and Safety Act 2000
- Occupational Health and Safety Regulation 2001
- Construction Safety 1912 and Regulations
- Environmental Planning and Assessment Act 1979
- Environmental Hazardous Chemicals Act 1985
- Waste Disposal Act 1970
- Roads Act 1993
- Heritage Act 1977
- Noise Control Act 1975
- Clean Waters Act 1970
- Clean Air Act 1961
- Code of Practice: Safe Removal of Asbestos 2002
- Code of Practice: Demolition

4.3 Permits, Approvals and Licences

The following is applicable:

- Workcover notification to commence work, to be developed at the appropriate time
- "Notice of Intention to Commence Construction Work"
- Any applicable local License / Permit that maybe required.

4.4 Erosion & Sediment Control Strategy

Erosion onsite will be controlled incrementally as the ground level is reduced by excavation. This system will ensure erosion is mitigated and controlled through tested methods and procedures. **Refer to annexure E for full details of the Erosion & Sediment control plan**

Sediment will be controlled through use of Geotextile fabrics (sediment fence) to site perimeters.

Mitigation of soil contamination to public roads will be undertaken through the use of a shaker grid to the site entry.

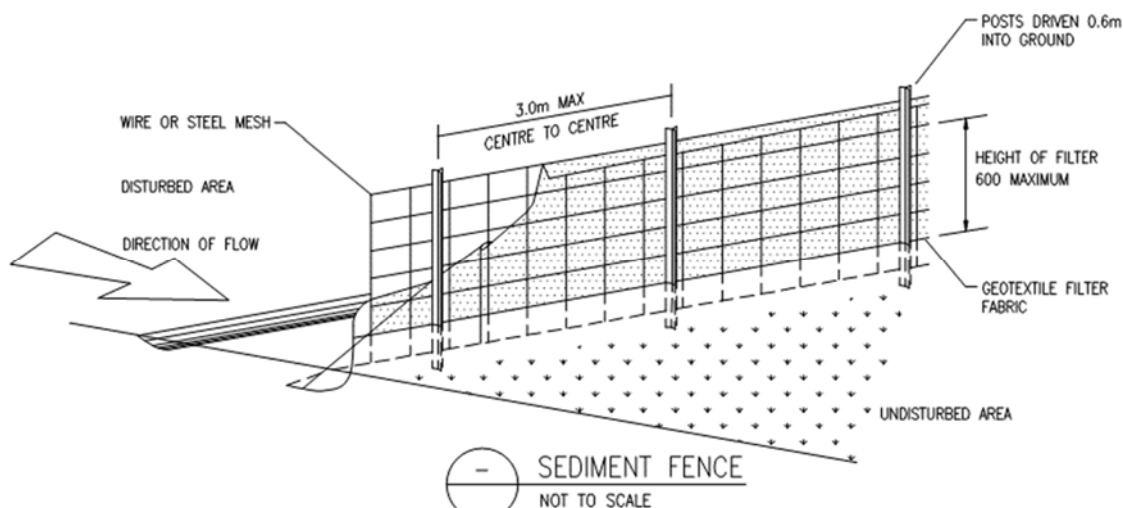


Figure 4.4.1 Sediment Fence Diagram

Sediment Fence to Site Boundary

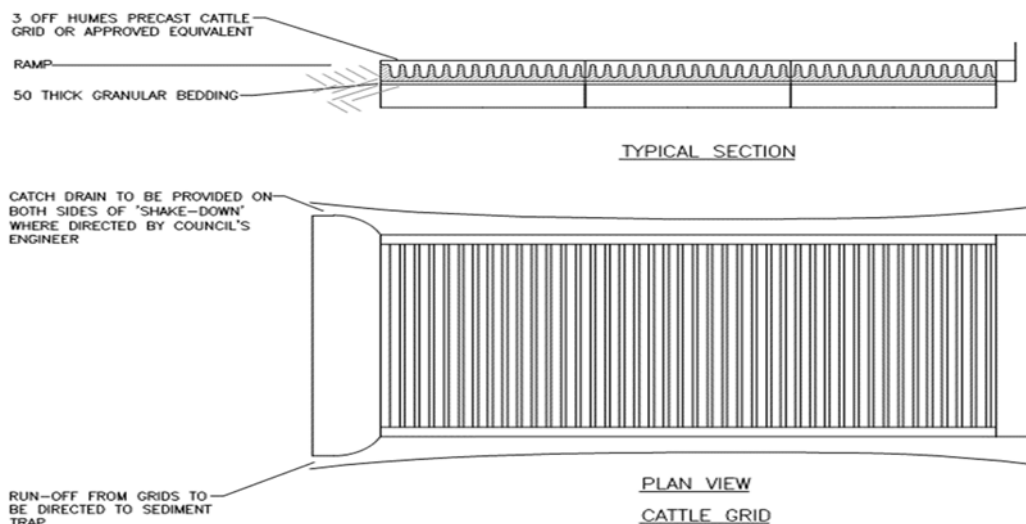


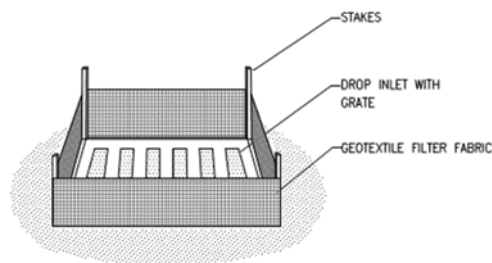
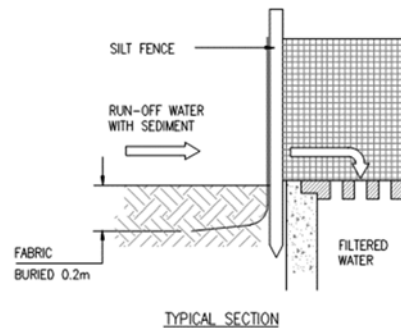
Figure 4.4.2 Shaker Grid to site entry/exit

4.5 Drainage Strategy

All run-off generated on-site during excavation and demolition will fall to a temporary pump out pit situated at the lowest area on site until final levels are achieved. When the basement level is reached the water will then be re- directed into the stormwater sump pit, which will act as a sediment pond where if necessary flocculation of the contaminated water will take place. The pits will be continually tested prior to pumping out the sediment free water into the stormwater system. The site will be continually cleaned of rubble and excavated materials to minimise possible sediment flow during high rainfalls periods.

Given the nature of the excavation material (effectively OTR) we do anticipate the majority of the water will not contain sediments. Deicorp Constructions will ensure that the water being pumped off site (if any) will be sediment free and within the parameters set by the EPA.

All drainage outlets at Street level will be covered in geotextile fabric and drainage socks with blue metal will be placed in the kerb and gutters. However, close monitoring of the site will be according to our EMP



SILT TRAP TO STORMWATER SUMP
NOT TO SCALE

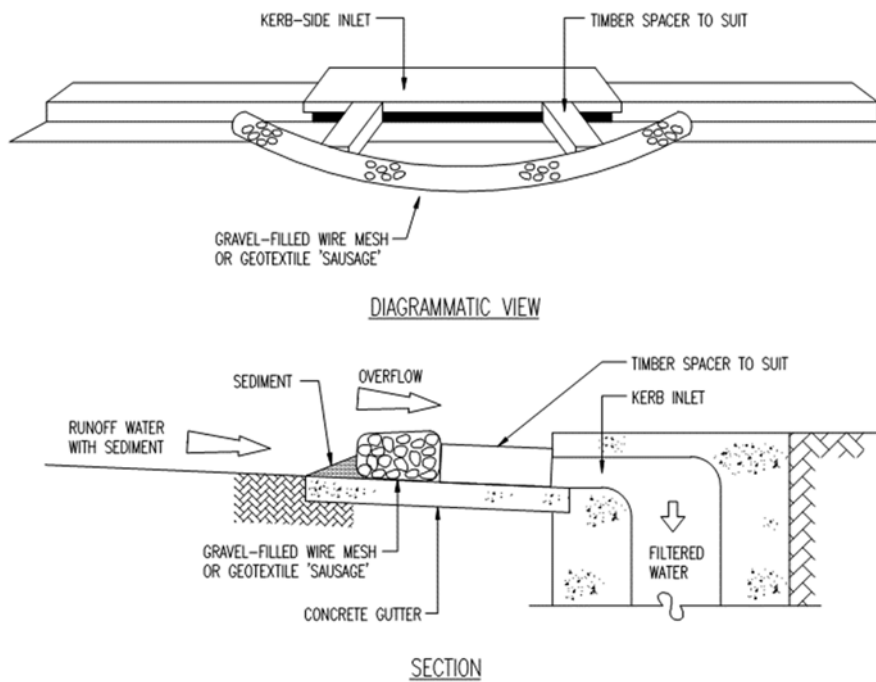


Figure 4.5.1 Kerb and gutter drainage control

4.6 Archaeological Discovery

The discovery of historical artefacts is not expected. However, if any historical artefacts are discovered, works will cease to the vicinity of the area. Deicorp Constructions will contact the Archaeological consultant as described in Archaeological Assessment.

5 Construction Processes

5.1 Demolition

The demolition of the existing 2 story Childcare centre will be carried out in accordance with the existing approved DA, MP11_0093 as issued by the Department of Planning & Infrastructure which will involve the following

- 1) Site survey of existing rail infrastructure within the proximity of the to be demolished building
- 2) Dilapidation Survey of the condition of existing rail infrastructure within the proximity of the Precinct 3 **(Refer to Annexure F for Detailed Rail Dilapidation Survey)**
- 3) Specific demolition methodology to be reviewed and accepted by RailCorp/Sydney Trains **(refer to annexure H for proposed demolition methodology)**
- 4) Entering into a formal access agreement between Deicorp Construction and RailCorp/Sydney Trains

Figure 5.1.1 and Figure 5.1.2 shows the relationship of the existing 2 storey concrete structure and the rail infrastructure

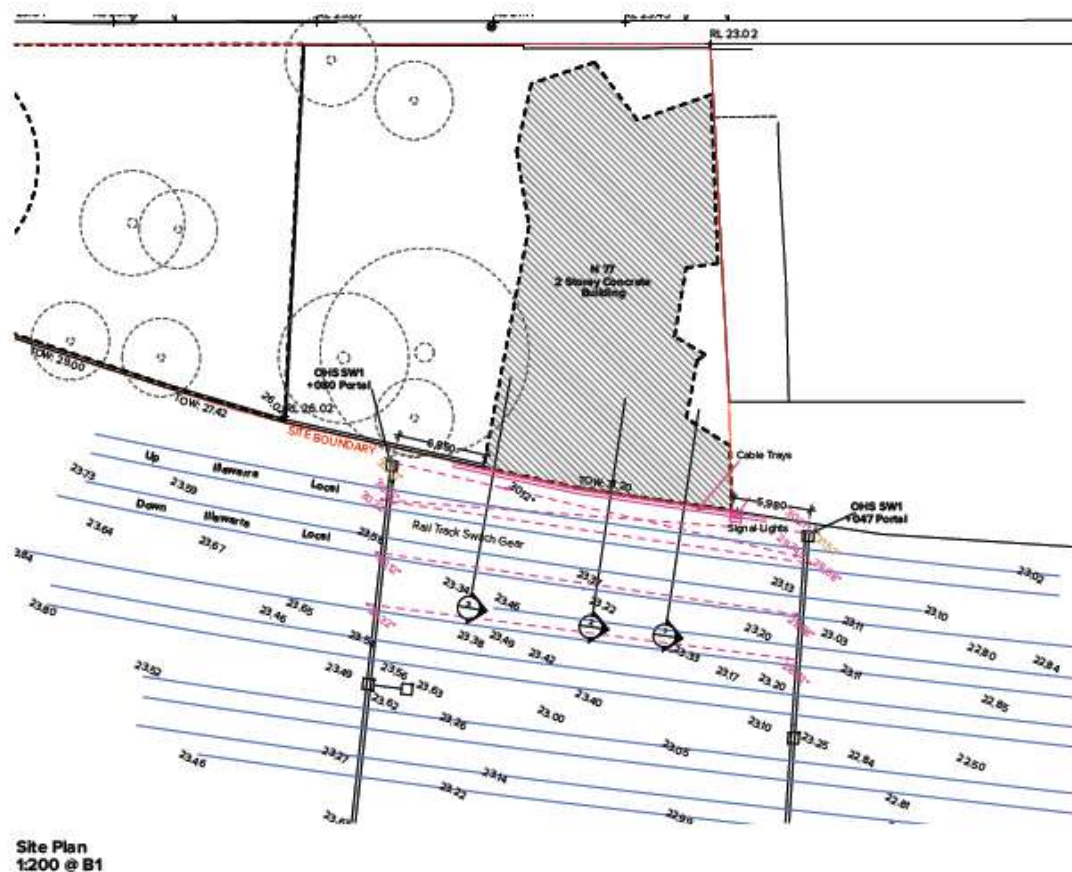
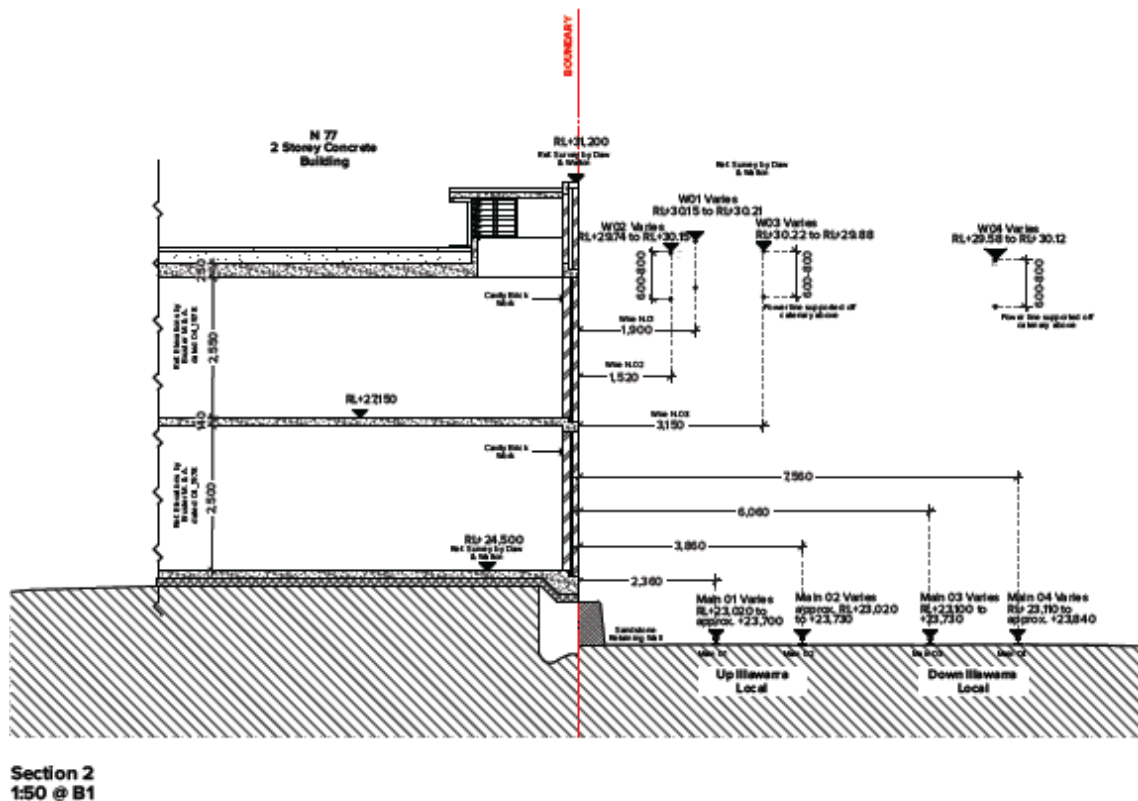


Figure 5.1.1 Plan of relationship of existing building to be demolished and existing rail infrastructure



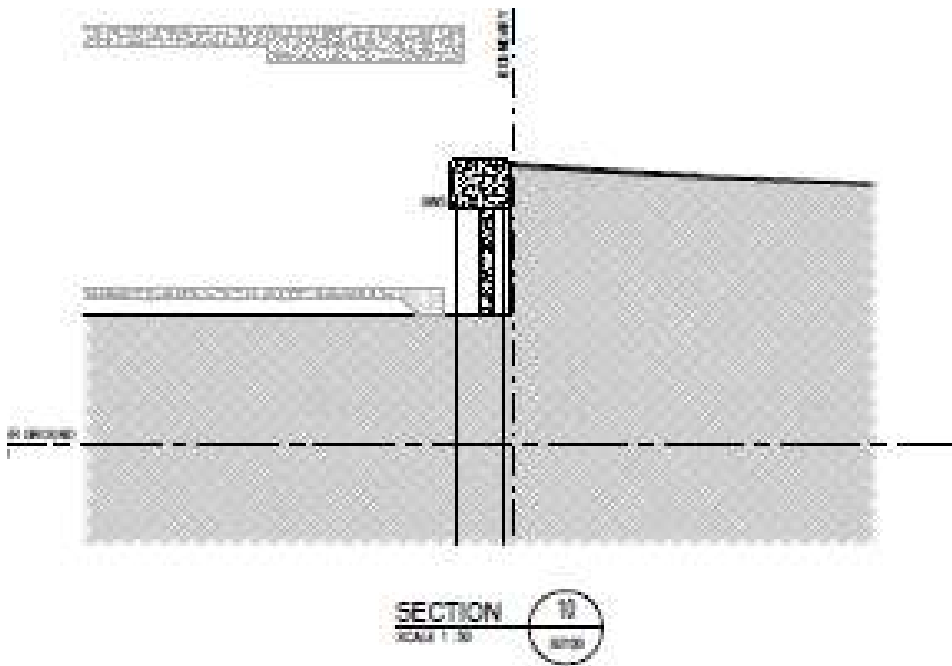


Figure 5.2.2 “Section of Piled shotcrete wall retaining wall along Eveleigh St” Extract from drawing S0101 P1

Once the areas which have pile retaining walls have been excavated to a level underside of capping beam the retention piling will be installed to allow further excavation of these areas.

All other areas of the site will be excavated to the required bulk excavation levels of the site. As the project does not have any basement carpark the bulk excavation across the site is shallow and ranges from 0.5m to 1.8m respectively.

With regards to excavating along the RailCorp eastern boundary Deicorp Constructions has undertaken preliminary investigation along this boundary by way of test pits. Using this information Deicorp's consultants have designed a temporary batter along this boundary which is summarized in Figure 5.2.3 “Section of excavation and piling in close proximity of Eastern RailCorp retaining wall” which shows the prescribed batter being undertaken as part of the excavation phase. Due to the use of the temporary batter there is no requirement to rock anchor along the eastern RailCorp boundary.

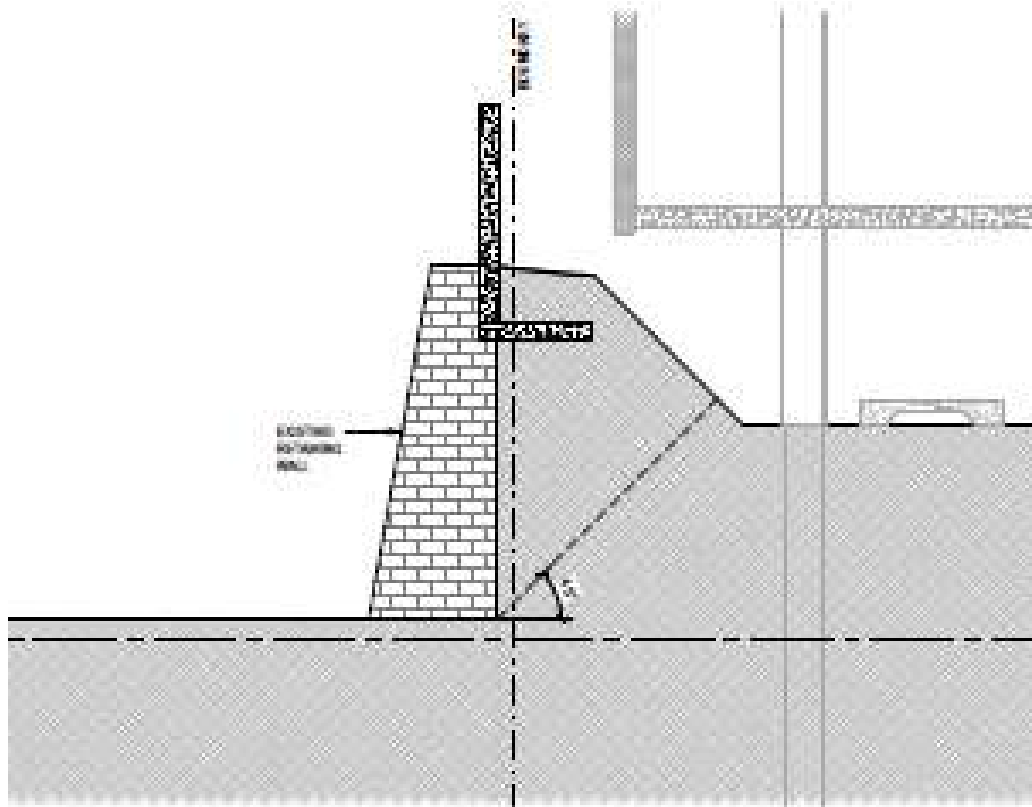


Figure 5.2.3 “Section of excavation and piling in close proximity of Eastern RailCorp retaining wall” Extract from drawing S0101 P1

Due to the shallow nature of the excavation, rock will not be encountered during the excavation phase. As such excavation will be carried using a 35 tonne excavator with bucket. Refer to Figure 5.2.4 showing the typical specifications of a 35 ton excavator.

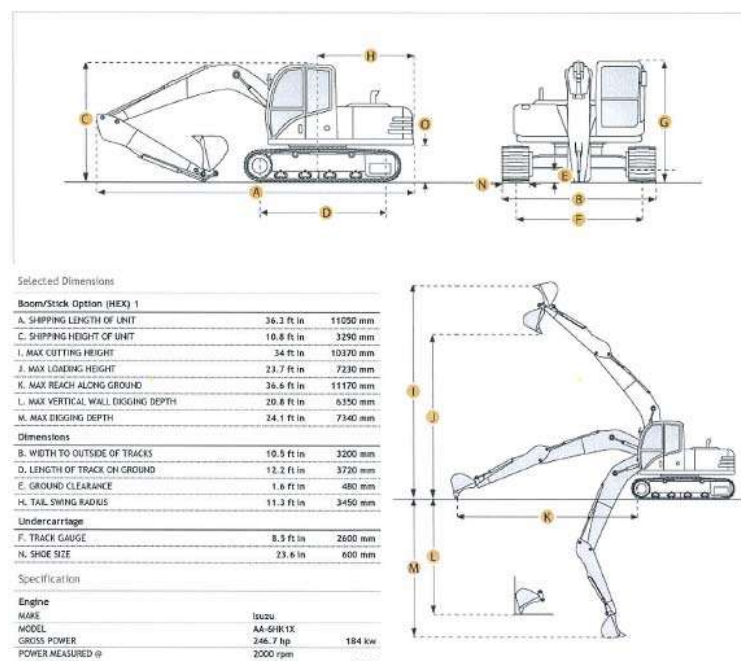


Figure 5.2.4 Specification of 35 tonne Excavator

5.3 Piling

Once the bulk excavation levels and the underside of capping beam levels have been achieved Deicorp will commence the piling. The piling will be undertaken using a Soilmech SR30 piling rig. Refer to figure 5.3.1 “Soilmech SR30 Piling Rig”



Figure 5.3.1 “Soilmech SR30 Piling Rig”

The Soilmech SR30 will install bored piles to the extent as shown of figure 5.3.2 “Extent of piling Extract from drawing S0105 P1”

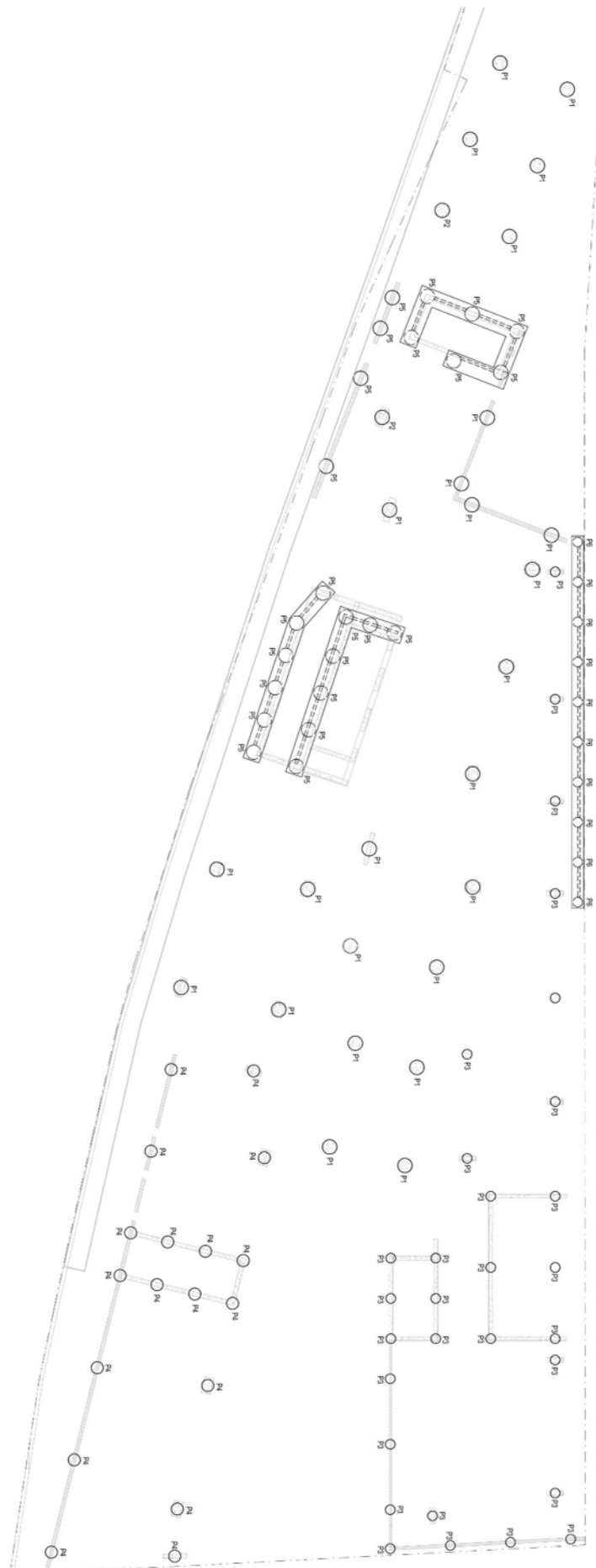


Figure 5.3.2 “Extent of piling Extract from drawing S0105 P1”

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The Geotechnical Consultant Environmental Investigations Australia has advised that there is no issue with any of the piles providing any lateral load to the existing Eastern RailCorp retaining wall. As such there is no requirement to sleeve the piles with in the zone of influence of the existing RailCorp Retaining wall.

All piles to be drilled down to below the zone of influence of the Railcorp eastern retaining wall and will be socketed into class 2 sand stone with all bearing capacities being certified by a Geotechnical engineer.

The size of the bored piles range from 600mm to 900mm in diameter.

5.4 Vibration Minimisation

Due to the shallow nature of the excavation It is expected that the excavation and piling works will create very small vibrations. Deicorp will undertake spot vibration testing the machinery on site to ensure that equipment employed does not create any harmful vibrations. In the event that hydraulic rock breakers are required for part of the excavation then a vibration monitoring plan is required to be adopted. .

5.5 General Building Envelope

Overview

The building structure and envelope of 83-123 Eveleigh St is as follows.

Retaining walls

Piled retaining walls with shotcrete infill required at the a section of Eveleigh St and at the detailed excavation levels for the lift pits and bottom level of the fire stairs

Building Foundations

Bored piles ranging from 600 to 900mm in diameter with pile caps. All piles to be socketed into class 2 sand stone below the zone of influence of the existing Railcorp Eastern retaining wall

Building Structure

Building structure to be a concrete reinforced/post tensioned structure to a building height of 23 levels to be conventionally formed with the exception of the lift core and fire stair cores which is to be formed using a jump form

Building façade

The building façade will comprise of external precast panels, curtain wall and floor to soffit glazing and feature screen. Figure 5.5.1 shows the extent of precast for a typical level

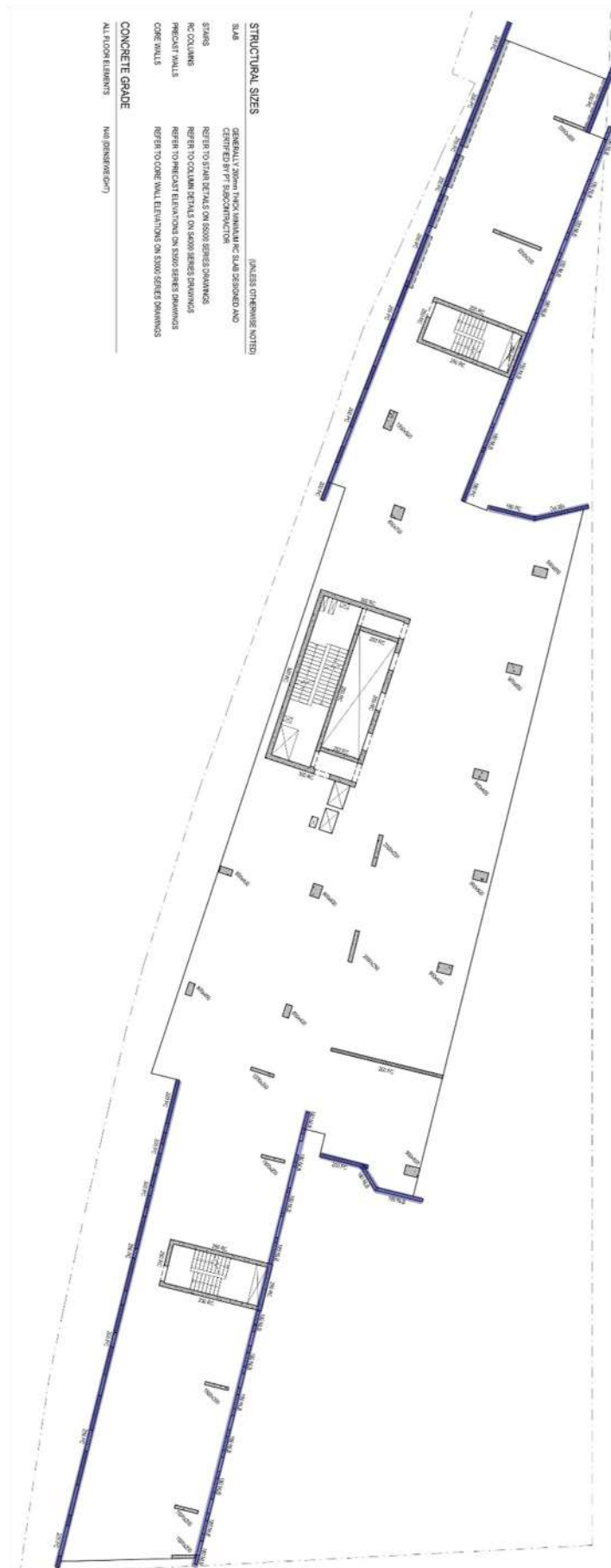


Figure 5.5.1 Extract of drawing S1080 rev P1 showing extent of precast on typical floor level 5

5.6 Site establishment and Amenities

Deicorp Constructions will establish the 1st stage of site amenities at the southern end of the site. Once the lower ground level has been constructed and is free of formwork. The site amenities will be extended to include the 2nd Stage of site amenities. It is expected that stage 1 will be able to accommodate a work force of 60 men and once stage 2 has been added the site accommodate will accommodate 180 men.

Please refer to Figure 5.6.1 “Areas for Site Amenities” for the areas allocated for stage 1 and stage 2 site accommodation.

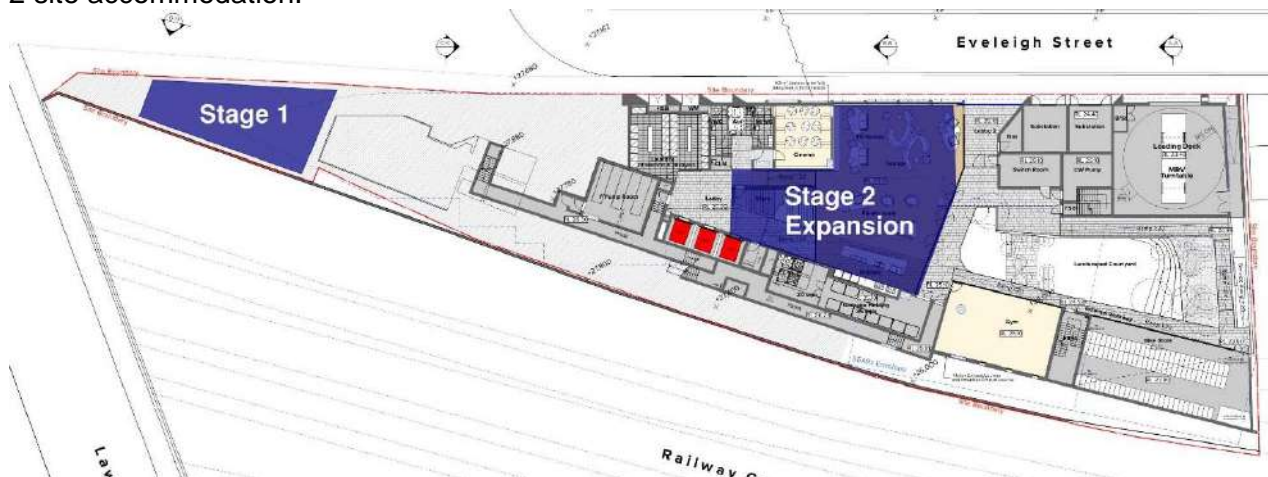


Figure 5.6.1 Areas for Site Amenities

5.6 Hoardings and Site Entries for Demolition and Excavation

Figure 5.6.1 “Extract from Traffic Management Plan rev 3” shows the site access to Precinct 3 during the demolition and excavation phase

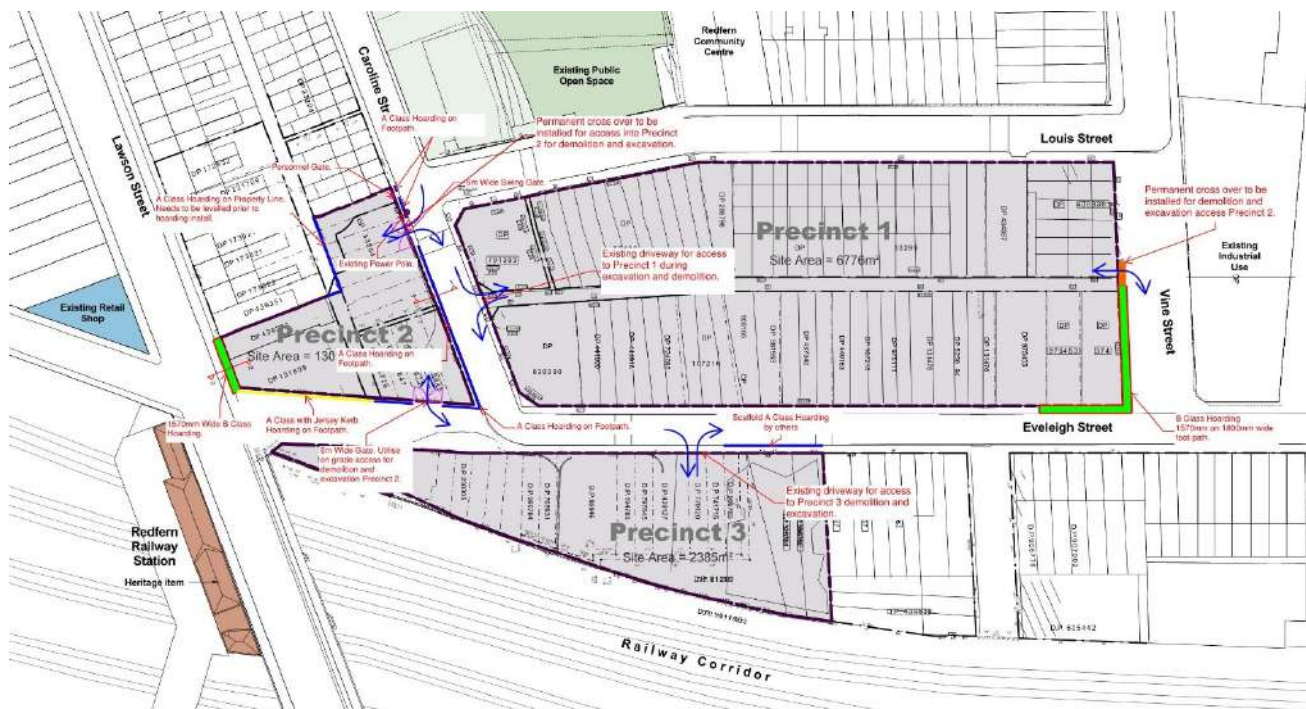


Figure 5.6.1 Extract from Traffic Management Plan Rev 3”

During the demolition and excavation phase site access will be from an existing driveway located off Eveleigh St. The existing chain wire and shade cloth fence will provide adequate site protection during the course of these works.

Figure 5.6.2 “Extract from Traffic Management Plan rev 3” shows the required hoardings, work zones and site access for Precinct 3 for the Construction Phase

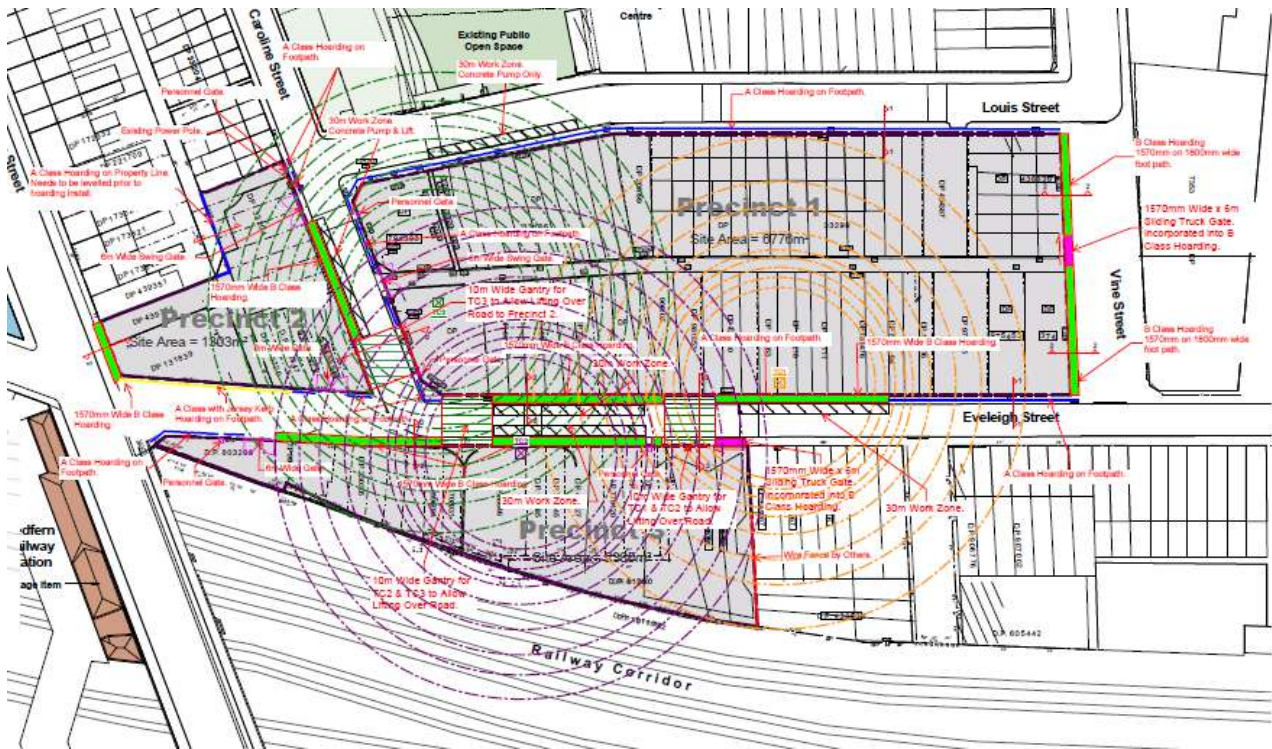


Figure 5.6.2 “Extract from Traffic Management Plan rev 3”

During the construction phase the following hoardings/workzones will be required

- 30m workzone to the eastern side of Eveleigh St to be used for concrete pumping for Precinct 3. Note that when this work zone is in operation the adjacent workzone on the western side of Eveleigh St is not to be used.
- 30 m workzone on the western side of Eveleigh St. This work zone will be used to unload deliveries coming to site. Note that semi trailers and HRV trucks can only travel in the northern direction of Eveleigh St due to turning circle restrictions
- A 10m wide overhead gantry is required to be installed which bridges over Eveleigh St to provide overhead protection to motorists and pedestrians as the crane on Precinct 3 lifts from the western workzone to Precinct 3
- A, B class hoarding will be installed on the eastern side of Eveleigh St for overhead protection for pedestrians using the eastern footpath
- The eastern boundary of Precinct 3 will rely on the existing Railcorp boundary fence for site fencing.
- The balance of the perimeter of the site will be enclosed with A class hoarding.

For full details of the traffic management plan **Refer to Annexure A for detailed Traffic Management Plan**

5.9 Builder' Hoist Locations

Deicorp is proposing to utilize 2 of External builders hoists at the locations as depicted on Figure 5.9.1 "Hoist Locations" for Precinct

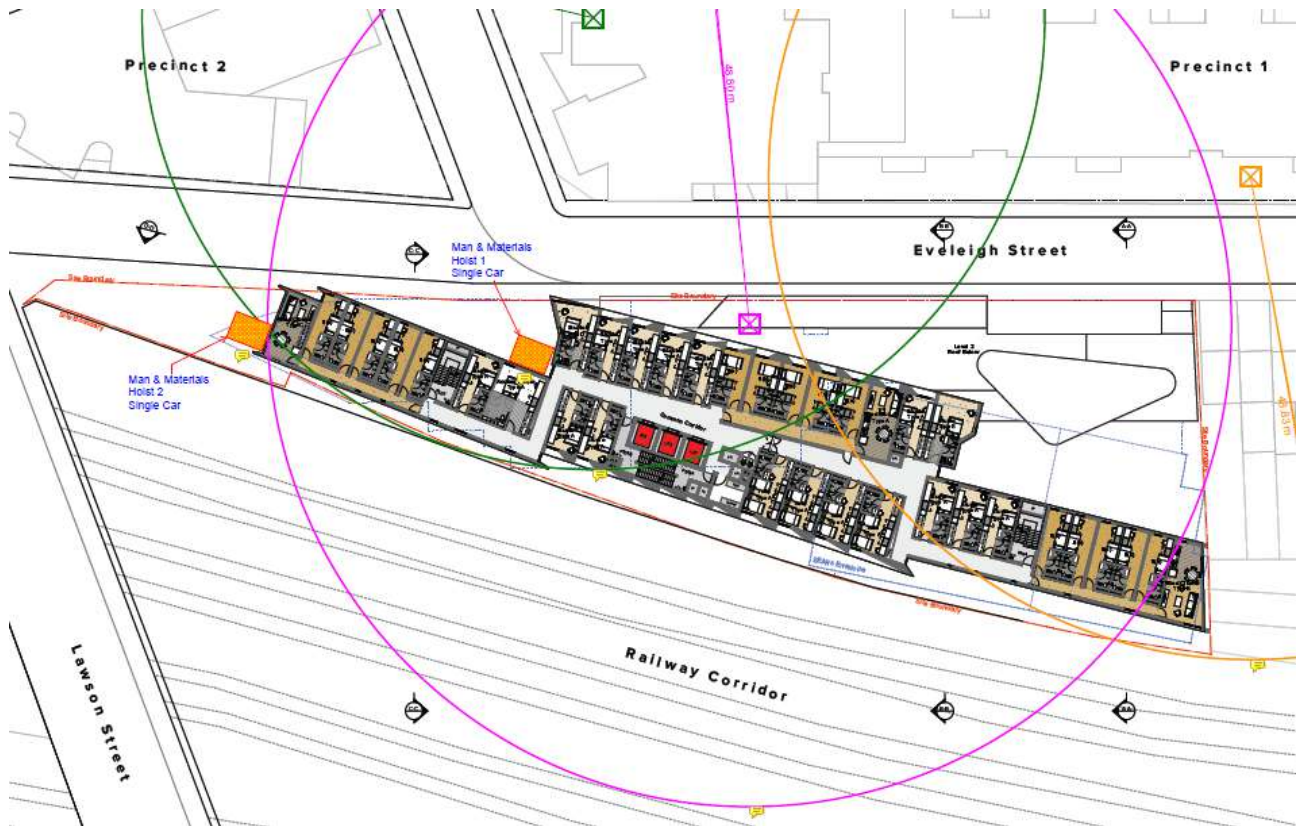


Figure 5.9.1 Hoist locations

The hoists will be the same or equal to a Alimak Scando 650 . Refer to figure 5.9.2 for a photo of of a Alimak Scando 650



Figure 5.9.2 Photo of Alimak Scando 650

5.10 Edge protection

The edge protection to the site will be a combination of the following

- 1) Scaffold
- 2) Precast
- 3) Formwork / Finishing screens

Figure 5.10.1 shows the extent of scaffold, precast and formwork finishing screens which is expected to be used on an upper ground level. **Refer to annexure B for full scaffold layout plans** identifying areas of scaffold, screens and precast

- 1) Scaffold
The extent of scaffold proposed on the project is as per Scaffold drawings contained in annexure B Scaffold will be typically erected to areas of the façade where concrete precast panels are used, areas where curtaining wall is prescribed and where formwork screens cannot be utilized.
- 2) Precast
As the precast is load bearing the precast panel will have to be installed on the slab first and then propped in position. The precast panel will extend 200mm higher than the finished floor level above thus provide a hob where to attached a handrail at the top of the precast panel prior to the panel being stood. Once the precast panel has been stood vertically and propped the handrail at the top of the panel will act as the required edge protection for when the formwork soffit is formed and the structural trades are working on the formed soffit. All precast panels will be craned into place
- 3) Formwork / Finishing screens figure 5.10.2 and 5.10.3 show the typical detail of the formwork / finishing screens. For further details regarding the use of screen refer to Annexure D for Natform standard screen details. To lift and lower the screens the site tower crane will be used.

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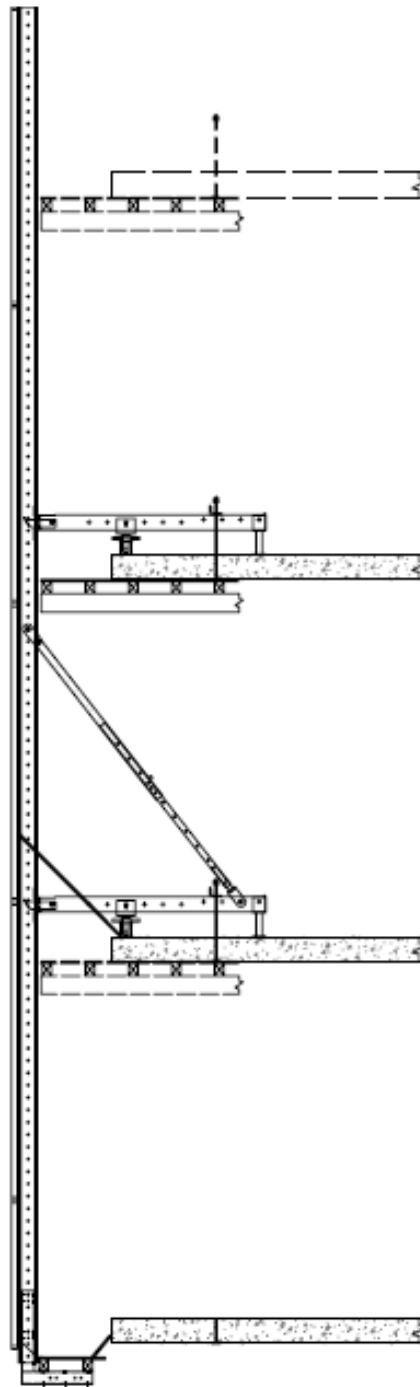


Figure 5.10.2 Formwork screen

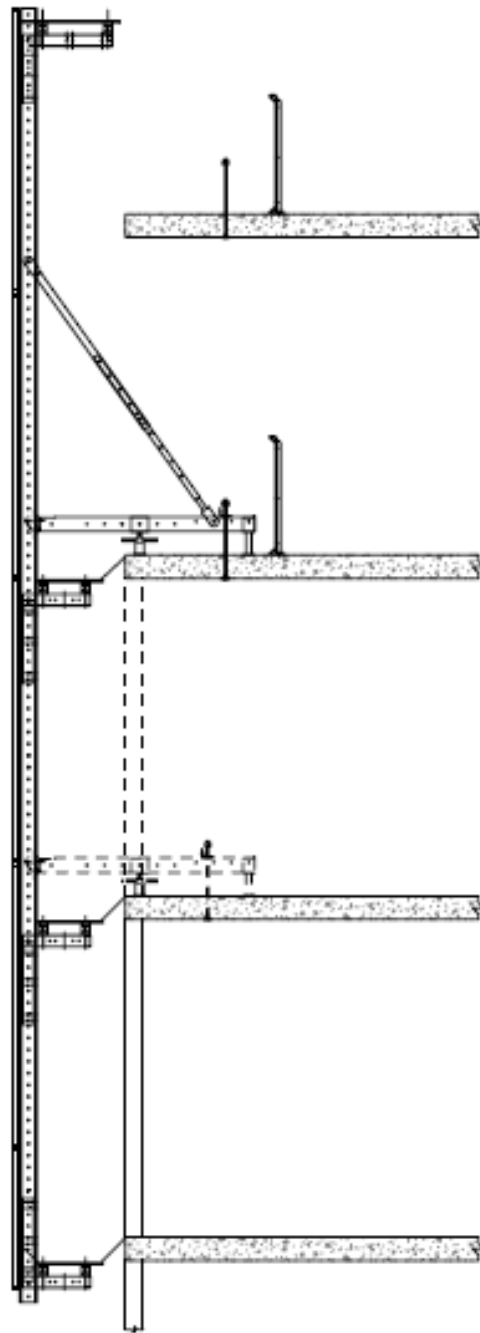


Figure 5.10.3 Finishing screen

5.12 Jumpform:

To expedite the construction process Jumpform will be used to construct the building cores, which consist of the lift shafts and fire stairs. Refer to Figure 5.12.1 which shows the extent of concrete core from Ground floor to level 23 which will be constructed using the Jumpform technique

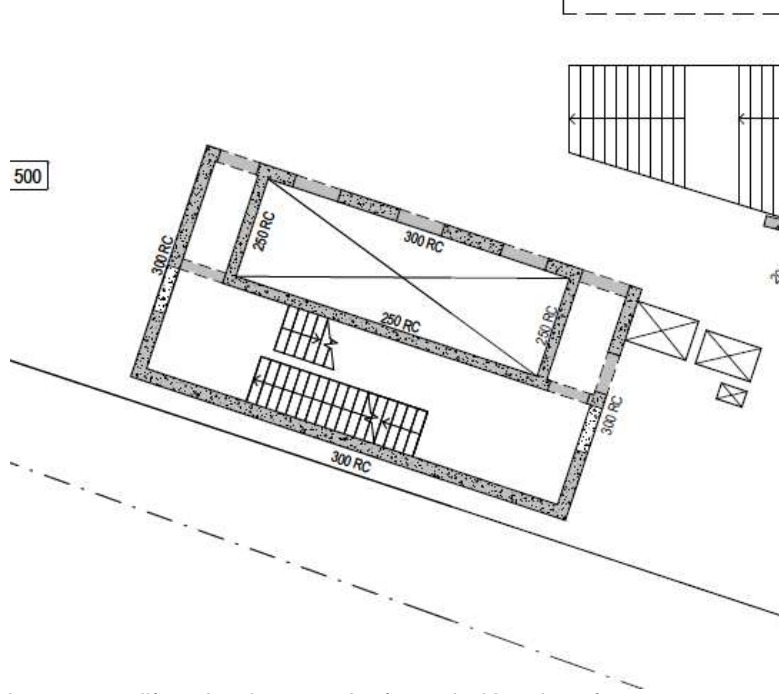


Figure 5.12.1 Showing the concrete lift and stair core to be formed with a Jumpform

The jumpform will consist of hydraulic self climbing equipment and prefabricated all form shutters and grid beams. Refer to attached Figure 5.12.2 which shows jumpforms being used on Deicorp's 7 to 9 Gibbons St, Refern Project.



Figure 5.12.2 Jumpforms being used on Deicorp's 7 to 9 Gibbons St project

5.13 Finishes and project completion

Following the completion of the façade and “lock up” being achieved, Deicorp Constructions will load the building (service gear) with all of the items required to complete the finishing works with an aim to significantly reduce the area hoarded off, thus reducing the visual impact of the construction works.

Currently the level of finishes within the completed structure are of a base building nature and are expected to be completed with a minimum of disruption to the surrounding users and are not expected to be of an extended nature.

Following the completion of the project Deicorp Constructions will remove all hoardings, then hand the site to the client.

5.14 Construction Hours

Worksite hours will specifically be in accordance with approved D.A. Hours. 7am to 7pm Monday to Friday and between 7am and 5pm on Saturday, with the operation of plant and high noise machinery restricted between the hours of 8am to 12pm and 2pm to 5pm. Works requiring work outside of these hours will be via permit issued from City of Sydney Council and will mainly be for works requiring mobile cranes

6 Environmental Safeguards

6.1 Noise Control

Noise from the site shall endeavour not to exceed the limits set out in the Development Consent Conditions and other applicable regulatory guidelines. No machine work will occur outside any approved hours or permits given by City of Sydney Council.

- All work shall comply with Councils Code for the Control and Regulation of Noise on Building sites and Australian Standard 2436-1981 "Guide to Noise Control on Construction, Maintenance and Demolition Sites"
- That noise and vibration from the use of any plant equipment and/or building services associated with the premises shall not give rise to an offensive noise as defined under the provisions of the Noise Control Act 1975
- As part of the noise mitigation treatment for the project, all trucks and machinery will be checked for defective exhaust systems and maintain regular servicing.
- No works shall be conducted outside normal working hours unless the superintendent's representative has given approval to do so.
- An external consultant has been engaged to conduct noise monitoring during noisy works in accordance with the Noise Management Plan included under Annexure 9C.

6.2 Dust Control

The constant watering of the rock saw / breaker / ripper during detailed excavation will be carried out when required, to prevent airborne dust particles being generated. Additional precautions include the covering of haulage trucks with covers.

As a result of Construction Activities, any extraordinary affect to adjacent properties (dust, dirt) will be cleaned up by EQ Constructions.

6.3 Hazardous Material Disposal

Asbestos and other hazardous materials such as Hazardous Waste and Solid Waste (if any) will be disposed of at a landfill that is appropriately approved by the EPA.

6.4 Environmental Monitoring and Reporting

Erosion and Drainage Control devices will be monitored daily particularly during wet weather. Should the capacity of the control devices be insufficient they will be upgraded or replaced. During Demolition & Excavation activity dust generation will also be checked and monitored (if required extra measures will be adopted to minimise its generation).

6.5 Waste Management

Where possible and practicable, material generated from the Excavation & Demolition contract will be offered to be recycled. In past projects Deicorp Constructions has managed to recycle between 80-90% of its excavation material.

Waste generated from the Construction phase of the project will be sorted and recycled off site.

Refer to Annexure G for details of Waste Management Plan

7 Annexures

Annexure A Traffic Management Plan

**Barker Ryan Stewart Traffic Management Plan , Pemulwuy Project Precincts 1,2 & 3
ref SY170002 rev 3 dated the 6/6/2017**



Deicorp Constructions (NSW) Pty Ltd

Construction Traffic Management Plan

Pemulwuy Project (Precincts 1, 2 and 3), Redfern

June 2017

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Appendix B – Traffic Control Plans

Appendix C – Vehicle Movement Plan

Appendix D – Swept Path Analysis Plans

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1 Introduction

Barker Ryan Stewart has been engaged by Deicorp Constructions (NSW) Pty Ltd to prepare a Construction Traffic Management Plan (CTMP) to detail traffic management procedures and systems for the demolition, excavation and building stages for the proposed mixed-use Pemulwuy development in Redfern, in accordance with the requirements of:

- Sydney City Council Development Control Plan;
- RMS's *"Traffic Control at Worksites"* document; and
- AS1742.3 2009 *"Manual of uniform traffic control devices"*

The purpose of this plan is to ensure the safe and controlled movement of traffic at the site during the demolition, excavation and building works to address potential traffic, access, car parking and pedestrian issues generated by the works.

In preparing this CTMP the following items have been considered/undertaken:

- An inspection of the site and surrounding road network to determine any constraints that may impact on the safe and controlled movement of traffic during demolition, excavation and building works.
- Determination of appropriate traffic/haul routes,
- Provision of a swept path analysis to ensure safe access/egress from the site,
- Traffic control plans (TCPs) and Vehicle Movement Plan (VMP), and
- A brief outline of the demolition, excavation and building works in relation to traffic management.

2 Project Overview

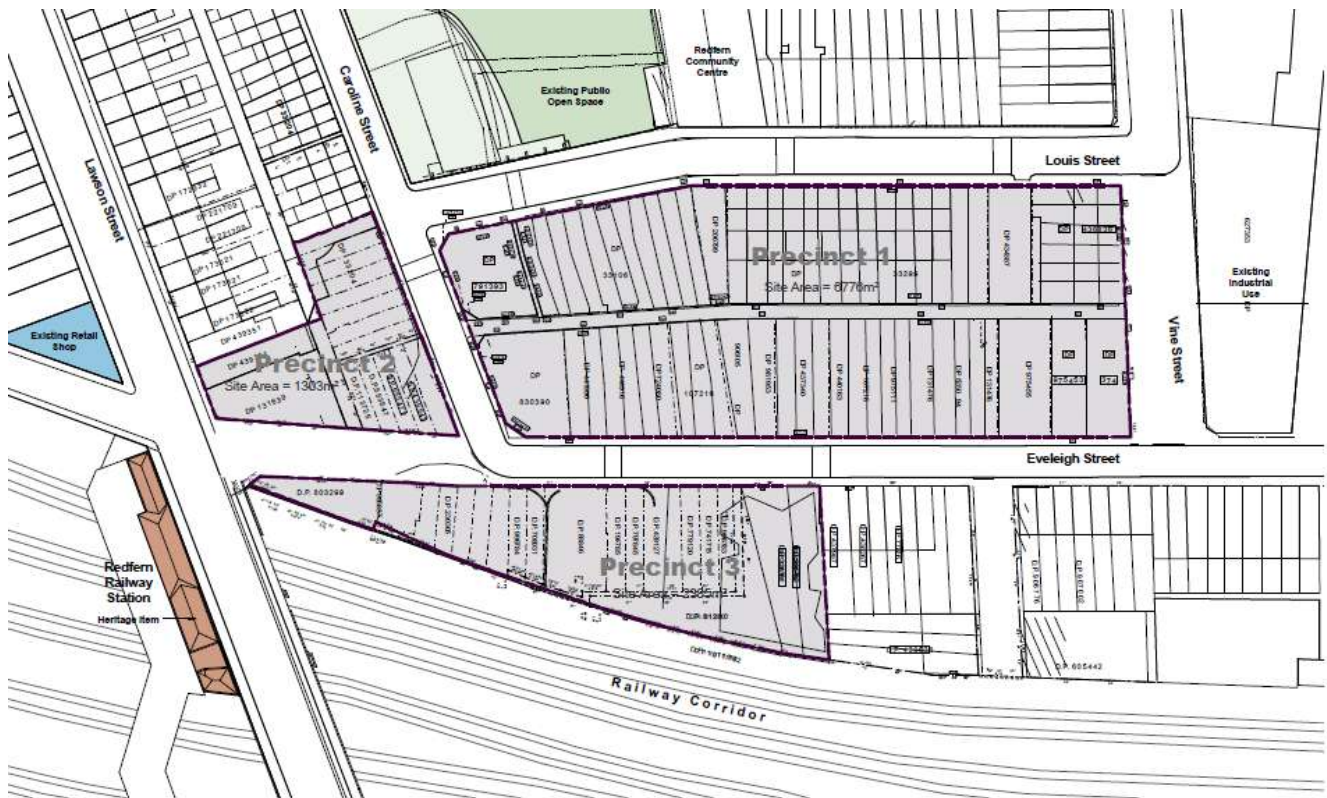
2.1 Proposed Development

The Pemulwuy project is as defined in Department of Planning Approval MP11-0093. The project consists of 3 Precincts:

- Precinct 1 comprises of 1 level of underground carpark basement, 36, 2 storey town houses, 26 apartments, gymnasium and retail within a 6 storey building
- Precinct 2 comprises of 4 storey childcare, retail and commercial building with no basement carpark
- Precinct 3 comprises of a student accommodation building with no basement carpark

The three precincts are bounded by the following roads within the suburb of Redfern:

- Precinct 1 – Eveleigh St, Vine St, Louis St & Caroline St
- Precinct 2 – Eveleigh St, Lawson St, Caroline St & adjoining houses
- Precinct 3 – Eveleigh St, Rail corridor and adjoining houses



Survey Adapted From PDF Copy Of Survey Prepared By Denny Linker

2.2 Building and Construction Works

This CTMP covers the demolition of the existing buildings and the construction of the new buildings in the following stages:

- Stage 1 - Demolition of the existing buildings (1.5 months)
- Stage 2 - Excavation, shoring and piling (4.5 months)
- Stage 3 - Construction and Practical completion (21 months).

2.3 Road Network

The VMP (vehicle movement plan) in Appendix C outlines the main routes of ingress and egress to the site. The main roads of interest are summarised below:

- Dowling Street/Eastern Distributor (M1): Dowling Street is an RMS road generally with 3 lanes each in the north/south direction. The Eastern Distributor is a motorway that runs in between, separating the north and south carriageways of Dowling Street.
- Cleveland Street: An RMS road that runs east/west with 2 lanes in both directions. There are generally parking restrictions for the most of the road.
- Regent Street: An RMS road that runs north/south generally with 3 lanes. South of Lawson Street, Regent Street is south bound only. Between Cleveland Street and Lawson Street, there are parking restrictions.

2.4 Construction Overview

2.4.1 Times of Operation

The expected total construction period is 26 months. The hours of operation will be as follows:

- Monday-Friday: 7am-7pm
- Saturday: 7am-5pm
- No work on Sunday or Public Holidays

2.4.2 Demolition/Excavation

This will occur over a 6 month period, commencing in August

2017 and will involve an average workforce of 20 people. Trucks utilised during this stage will be limited to rigid bogie trucks with a maximum length of 7.7 metres with all loading to occur on-site.

Demolition will have an average of 6 truck arrivals per day (6 in, 6 out) which equates to one truck movement every two hours. This stage will have an average of 55 truck arrivals per day (55 in, 55 out) which equates to five trucks per hour.

The arrival of trucks will be strictly managed and monitored throughout all stages of construction by an onsite manager who will only call trucks to the site (via CB radio or hands free mobile) when required and when there is capacity within the site. This management of deliveries will ensure that no trucks are required to queue or park on-street, with this arrangement considered acceptable.

The figure below shows the demolition, and excavation hoarding and loading plan.

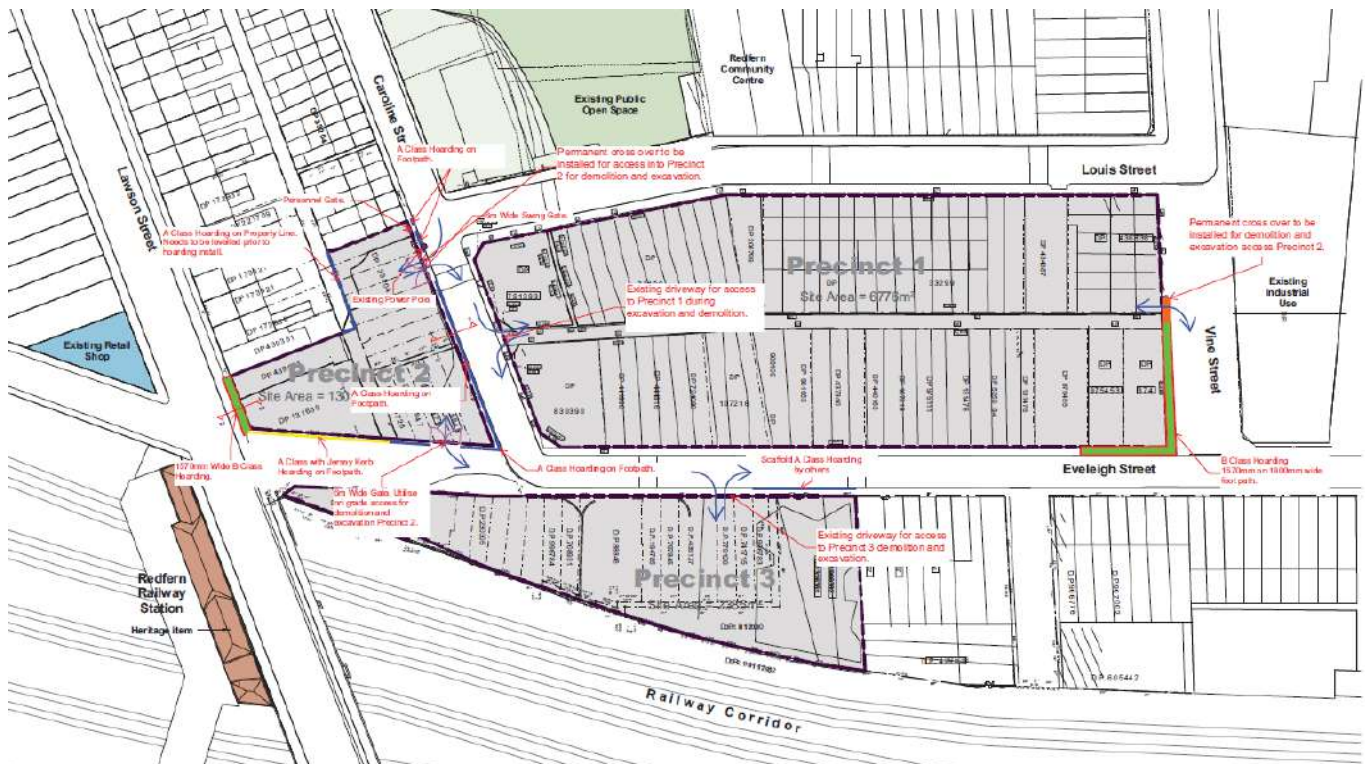


Figure 1: Demolition and excavation hoarding and loading plan (refer to Appendix A for larger version of plan)

2.4.3 Required Hoardings / Driveways / Workzones for Demolition & Excavation Phase (refer figure 1 for details)

2.4.3.1 Precinct 1

- B Class hoarding will be required at the corner of Vine and Eveleigh St to allow the demolition of 42 to 46 Eveleigh St
- The existing 1.8m high chain wire fence will be used to secure the balance of the site during demolition and excavation
- The existing driveways off Caroline St and Vine St will be used to access the site during demolition and excavation works

2.4.3.2 Precinct 2

- B Class hoarding along Lawson St footpath will be required along Lawson St to allow the demolition of 104-106 Lawson St
- A class hoarding on shared roadway will be required along Eveleigh St with scaffold inboard to allow the demolition of 104-106 Lawson St
- A Temporary driveway off Caroline St at the location of the proposed permanent driveway will provide 1 of the 2 access points into Precinct 2
- The existing road access off Eveleigh St will provide the 2 of 2 access points into Precinct 2
- A class hoarding on footpath to be erected to the balance of the site perimeter

2.4.3.3 Precinct 3

- Existing drive way off Eveleigh St will provide the access point into Precinct 3
- A class hoarding with Scaffold inboard along Eveleigh St footpath will be required for the demolition of 77 to 89 Eveleigh St
- A Class hoarding on footpath to be erected to the balance of the site perimeter

2.4.4 Construction and Practical Completion

This will occur over a 21 month period, commencing in October 2017 and will involve an average workforce of 90 people. Trucks utilised during this stage will be limited to rigid trucks and semi-trailers with a maximum length of 12.5 metres and 18m respectively, with all loading to occur via the proposed Works Zone onto Eveleigh Street with the use of an on-site tower crane. This Works Zone shall also be used for the standing of all concrete trucks and the concrete pump, during concrete pours. This stage will have an average of 20 truck arrivals per day (20 in, 20 out) which equates to approximately two trucks per hour. The arrival of trucks will again be strictly managed and monitored by an on-site manager who will only call trucks to the site (via CB radio or hands free mobile) when required and when there is capacity within the Works Zones. The location of the proposed Works Zones are shown in the figure below.

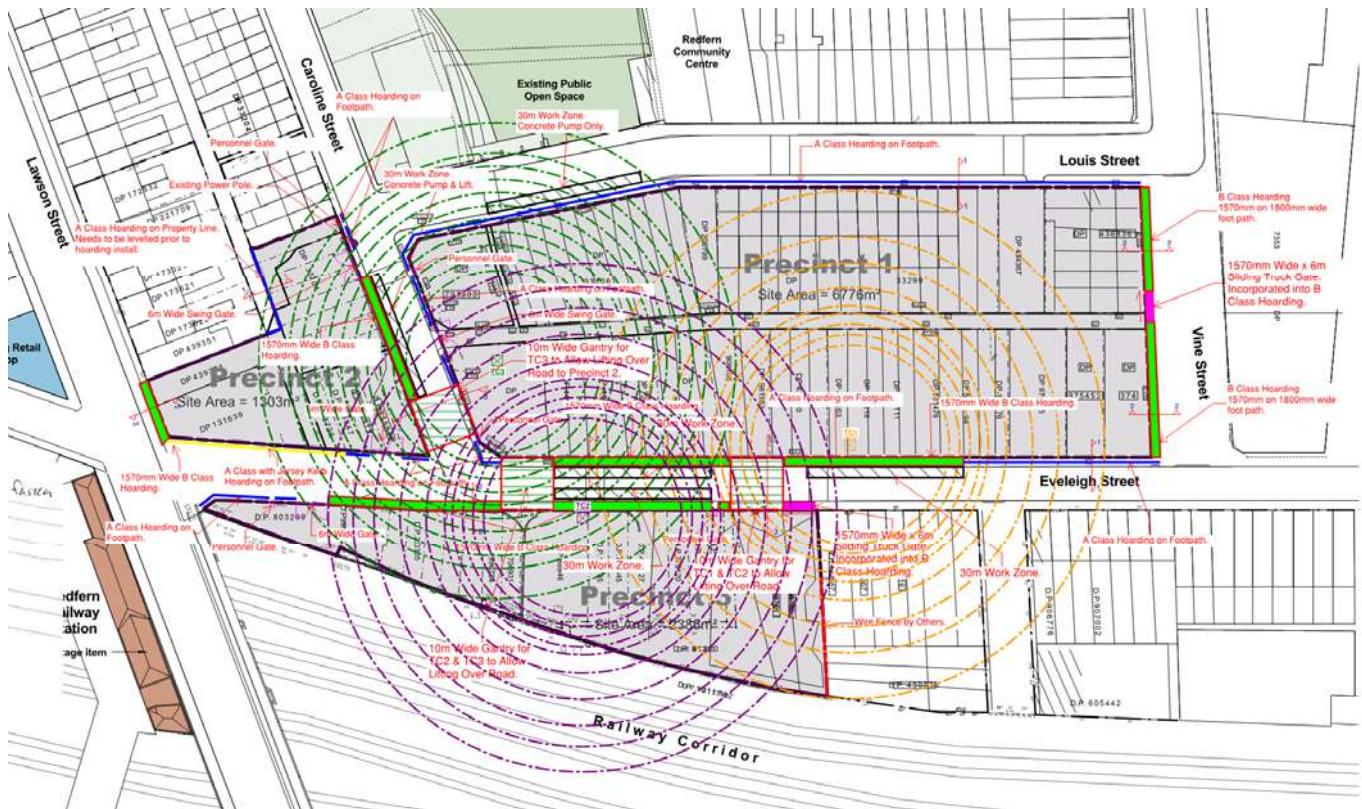


Figure 2: Construction hoarding and work zone plan (refer to appendix A for larger version of plan)

2.4.5 Required Hoardings / Driveways / Workzones for Construction Phase (refer figure 1 for details)

2.4.5.1 Precinct 1

- 30 m workzone required in Louis St to be used for concrete pumping to precinct , 6 storey building
- 1 of 2 , 30 m workzones required on the western side of Eveleigh St required for deliveries to be craned off using tower cranes TC3 and TC2 to feed Precincts 1 and 3
- 2 of 2, 30m workzones required on the western side of Eveleigh St for concrete pumping to Precinct 1 and to crane off deliveries for precinct 1 and 3 using tower crane TC1
- 1 of 2, 10m wide overhead gantries spanning across Eveleigh St to allow tower cranes TC3 and TC2 to lift from Eveleigh St western workzone over road to Precinct 3 .
- 2 of 2, 10m wide overhead gantries spanning across Eveleigh St to allow tower cranes TC2 and TC1 lift from Eveleigh St western workzone over road to Precinct 3
- 1, 10 m wide gantry spanning across Caroline St to allow tower crane TC3 to crane between Precinct 2 1 and 2.
- 1 of 2, 30m B class hoardings along western side of Eveleigh St footpath at 1 of 2 workzones on the western side of Eveleigh St for overhead protection to pedestrians
- 2 of 2, 30m B class hoardings along the western side of Eveleigh St footpath at 2 of 2 workzones on the western side of Eveleigh St for overhead protection for pedestrians
- B class hoarding along the footpath of Vine St
- A class hoarding on the footpath to the remaining perimeter of Precinct 1

2.4.5.2 Precinct 2

- 30m workzone required in Caroline St, required for craning deliveries from delivery trucks for Precinct 2 and for concrete pumping to Precinct 2
- 30m B class hoarding along Caroline footpath at Workzone for overhead protection to pedestrians
- B class hoarding along the footpath of Lawson St
- A class hoarding on footpath and shared walkway to the remaining perimeter of Precinct 2

2.4.5.3 Precinct 3

- 30m workzone to the eastern side of Eveleigh St to be used for concrete pumping for Precinct 3. Note that when this workzone is in operation the adjacent workzone on the western side of Eveleigh St is not to be used
- B class hoarding along the eastern footpath of Eveleigh St
- Railcorp specified fencing to the rail to site shared boundary
- A class hoarding to the remaining perimeter of Precinct 3

2.5 Tower Crane Locations during Construction Phase

Figure 1 page 7 and Figure 2 page 8 shows the location of the 3 tower cranes which are to be used during the construction phase of the works.

Due to the restriction that tower cranes are not permitted to slew over the train lines the 3 cranes are all located on Precinct 1 which was the only location available to maximise crane coverage to Precinct 3

3 Traffic Management

3.1 Council's requirements

The TCPs that are included in this report, should be implemented taking due account of on-site conditions as will occur over the construction period. Accordingly, construction crew are expected to respond proactively to ensure that the plan is implemented with an appropriate level of due diligence to ensure no obvious safety risks are being overlooked. In particular, the following matters are considered noteworthy:

- All signs are to be placed where clear visibility is available;
- All barriers should be positioned to provide satisfactory clearances;
- Installations should be checked intermittently during the course of the day/s, and
- A certified Traffic Controller should be on-site at all times to supervise vehicle access and pedestrian movements.

Construction contractors are also required to comply with Council's Standard Construction Traffic Management Plan requirements below:

- The approved truck route plan shall form part of the contract and must be distributed to all truck drivers.
- All vehicles must enter and exit the site in a forward direction.
- All Traffic Control Plans associated with this Construction Traffic Management Plan must comply with Australian Standards and RTA's Traffic Control at Work Sites Guidelines.
- The applicant must provide Council with details of the largest truck that will be used during the demolition, excavation and construction, prior to the start of any work on site and obtain approval from City's Construction Regulation Unit for the use of this vehicle.
NOTE: No dog trailers to be used without City's Construction Regulation Unit approval.
- The developer must obtain a permit from the City's Construction Regulation Unit regarding the placing of any plant/equipment on public ways.
- No queuing, marshalling or parking of trucks is permitted in any public road.
- All vehicles associated with the development shall be parked wholly within the site. All site staff related with the works are to park in a designated off street area, no staff are to park on the street.
- All loading and unloading must be within the development site or at an approved "Works Zone".
- The applicant must comply with development consent for hours of construction.
- Traffic Controllers are NOT to stop traffic on the public street(s) to allow trucks to enter or leave the site. They MUST wait until a suitable gap in traffic allows them to assist trucks to enter or exit the site. The Roads Act does not give any special treatment to trucks leaving a construction site - the vehicles already on the road have right-of-way.
- Trucks are not (at any time) allowed to reverse into the site from the road for safety reasons (unless specific approval is obtained from the City's Construction Regulation Unit).
- Pedestrians may be held only for very short periods to ensure safety when trucks are leaving or entering BUT you must NOT stop pedestrians in anticipation i.e. at all times the pedestrians have right-of-way on the footpath not the trucks.
- Physical barriers to control pedestrian or traffic movements need to be determined by the Construction Regulations Unit prior to commencement of work.
- Any temporary adjustment to a Bus Stop or Traffic Signals will require the applicant to obtain approval from the STA and RMS (formerly RTA) respectively prior to commencement of works.
- The developer must apply to the Construction Regulations Unit to organise appropriate approvals for cranes and barricades etc.
- The developer must apply to Building Compliance Unit to organise appropriate approvals for hoarding prior to commencement of works.
- The developer must apply to the Work Zones Co-ordinator to organise appropriate approvals for the Work Zones.
- It is noted that project manager/builder is responsible for the implementation of this Construction Traffic Management Plan.

3.2 Traffic Management responsibilities

Traffic management for the site shall be configured to ensure that workers can undertake demolition, excavation and building works safely at all times by separating workers and public road users. Contractors are responsible for the demolition and excavation work and the building contractor is responsible for construction management, shall establish and maintain the Construction Traffic Management Plan for this project and shall be responsible for its ongoing effectiveness, including the control of all quality, environmental and safety aspects that may apply to traffic control measures.

The TCP shall be implemented by appropriately qualified and authorised traffic controllers only. Traffic controllers must have completed RMS (formerly RTA) accredited courses for traffic controllers and must wear yellow vest with the words Authorised Traffic Controller. Reflective white overalls with reflective bands must be worn at night.

All signs and devices shall be placed in accordance with the TCP prior to works starting and in clear view of public road users to inform and guide road users to pass the site. All devices and signs shall then be removed upon the completion of the works.

The road reserves bordering the site must not be obstructed by any materials, vehicles, refuse, skips or the like without prior approval of Council.

3.3 Potential Traffic Impacts

A summary of potential traffic impacts for the site are listed below:

- Construction sites within the vicinity of the site,
- Duration of the project,
- Short term activities such as floating machinery to the site,
- Access, egress and parking in and near the worksite by employees and visitors,
- Pedestrian movements,
- Heavy vehicles parking in and around worksite,
- Vehicles depositing spoil on public roads,
- Loading and unloading, including construction zones,
- Truck/vehicle turning movements,
- Disruption of established traffic movements or patterns,
- Traffic interference in peak times (morning and afternoon),
- Interference to public transport services,
- Interference to the railway station on Lawson Street,
- Traffic volumes including nearby school, industrial, commercial, retail and residential developments

3.4 Site Management Plans

The Site Management Plans Stage 1 Demolition Hoardings and Stage 2 Construction Hoardings are attached at Appendix A. These plans show the location and types of hoarding proposed to be installed, the pedestrian protection measures, the site entry/exit locations during the demolition and the requested work zones during the construction.

They also show the proposed crane locations within the site.

3.5 Truck Routes

The Vehicle Movement Plan (VMP) attached in Appendix C shows vehicles are to access the site travelling south along Regent Street, turning right onto Lawson Street, and turning right at Eveleigh Street to access the site northbound.

When leaving the site vehicles will continue north along Eveleigh Street then re-join the road network via the intersection of Cleveland Street/Eveleigh Street. Vehicles will be able to connect to City Road (Princes Highway) to continue their return trip.

3.6 Traffic Control Plans

The Traffic Control Plans (TCPs) attached in Appendix B show the proposed entry/exit point in Eveleigh Street, Caroline Street and Louis Street and arrangements for warning traffic and guiding traffic and pedestrians around and/or past the worksites of Precincts 1, 2 and 3.

In the implementation of the TCPs the following steps should be undertaken;

1. Place all signs, devices and control measures,
2. Complete a Location Risk Assessment (as per Traffic Control at Work site (TCAW) manual) and identify any modifications that may be required,
3. Drive through and around the site to make sure the TCP is effective,
4. Record implementation, risk assessment and any modifications, and
5. Monitor conditions and record observations.

Where required the TCPs may be changed/updated as necessary to reflect changes in traffic flow or work practices by an appropriately qualified traffic control designer only.

Minor modifications to the TCPs which have been identified in a Location Risk Assessment can be made by a person with a current certificate in TCAW Planning (red card). Should the TCPs be changed all relevant permits and details are to be forwarded to the PCA/Council as required.

Note that the TCP does not relate to works within the road reserves. These TCPs will be prepared once the Public Infrastructure Engineering Design plans have been approved by the Road Authorities.

3.7 Traffic Management Plan

Table 3.4 on the following page summarises the identified potential traffic impacts for this worksite and describes the control measures to be implemented to address each impact.

A swept path analysis was undertaken to check vehicles can safely manoeuvre in and out of the site and conduct the right turn at the intersection of Regent Street and Lawson Street, right turn into Eveleigh Street then left turn into Cleveland Street for an Articulated Vehicle (AV), a truck and dog and a Heavy Rigid Vehicle (HRV). A swept path analysis was also undertaken for an MRV within the street network adjacent to Precincts 1, 2 and 3.

The swept path analysis plans are attached in Appendix D of this report.

It is recommended that an Emergency Plan is considered by the project manager of the site in case of emergency, including the response of traffic emergencies such as accidents or unplanned disruptions.

The local community, road users and other stakeholders shall be kept informed of changed traffic conditions where required by Council.

Seven (7) days notification must be provided to adjoining property owners prior to the implementation of any temporary traffic control measures.

Table 3.4: Traffic Management Plan

Potential Impact	Impact Assessment	Control Measure
Railway station, commercial, retail and residential developments in the vicinity of the site. Duration of project	Heavy vehicle traffic movement through the following local streets: <ul style="list-style-type: none"> Regent Street Lawson Street Eveleigh Street Cleveland Street 	Bring the majority of traffic through Lawson Street where the impact is minimised. Any potential conflicts in Lawson Street and Eveleigh Street to the operation of the railway station is to be minimised by having Traffic Controllers providing right of access to police and fire fighting vehicles over all other traffic movements including construction traffic. Location Risk Assessments are to be undertaken where necessary to enable safe access and from the site.
Floating machinery to the site	In/out of the site.	Swept path analysis shows turning movements are satisfactory for ARV's and HRV's (See Appendix D). All loading and unloading will be done on site in designated area on site or via the construction/work zone areas adjacent to the Eveleigh Street, Caroline Street and Louis Street as indicated on the Stage 2 Construction TCP (See Appendix B).
Parking in and around worksite by employees and visitors	Possible impact on residents, visitors and commercial developments in the vicinity of the site.	Parking for construction workers will occur off site.
Vehicles leaving the site	Depositing spoil on roadways	Truck shaker grids with a minimum length of 6m will be installed at the vehicle entry/exit points for erosion sediment control and all loads are to be covered. Where sediment is tracked onto the road it is to be swept up immediately.
Pedestrian management	Pedestrians walking around construction zone	Set up delineation by way of no go zones and signage. There is no need to cut off current walkways along the perimeter of the site. Pedestrians will be protected by Class B hoardings as shown on the Site Management Plans attached at Appendix A.
Disruption of established traffic movements or patterns, Traffic interference in peak times (morning and afternoon)	Heavy vehicle traffic through the following streets, particularly in morning and afternoon peaks with residents entering and exiting: <ul style="list-style-type: none"> Regent Street Lawson Street Eveleigh Street Cleveland Street 	Where possible construction vehicle movements are to be restricted during peak times to allow traffic to pass the site.
Interference to public transport services.	Traffic movements blocking bus routes	Access to and from the site is off Eveleigh Street via Lawson Street and will have traffic control devices and controllers in place to prevent disruption to bus routes during the demolition, excavation and building works.

4 Monitoring and Performance

4.1 General

Routine monitoring of the performance of the Construction Traffic Management Plan (CTMP) to confirm the effectiveness of methods, equipment and controls shall be undertaken. Observations shall be recorded by the supervisor/contractor's and opportunities for improvement recommended to the Project Manager.

It is recommended that the CTMP including the Traffic Control Plans (TCPs) be formally reviewed every 4 weeks during the demolition, excavation and building works. Please refer to section 3.3 for the modification of TCPs.

Audits of the demolition, excavation and building works are to be carried out by a suitable qualified person as required.

4.2 Records

The following records shall be kept as evidence of the design, implementation and performance of the CTMP:

1. Qualifications
 - RMS accredited Traffic Control Plan designers
 - RMS accredited Traffic Controllers
2. Principal Contractor's meetings minutes with Principal Contractor(s) from adjoining sites
3. TCP approval
4. Temporary speed zone approval (if applicable)
5. Community consultation (where required by Council) including provision of:
 - Letters
 - Handouts
 - Maps and plans
6. Location Risk assessment and any modifications
7. Confirmation of implementation and start of works
8. Monitoring reports
9. Incident reports and corrective action

5 Conclusion

This Construction Traffic Management Plan details traffic management procedures and systems for the proposed demolition, excavation and building of the mixed use Pemulwuy development in Redfern.

Potential traffic impacts have been identified locally with control measures specified to address these impacts.

Site Management Plans show the location and types of hoarding proposed to be installed, the pedestrian protection measures and the vehicle entry/exit locations during the demolition, excavation and construction.

Traffic Control Plans (TCPs) have been prepared showing appropriate traffic control devices to be implemented for the duration the demolition, excavation and construction.

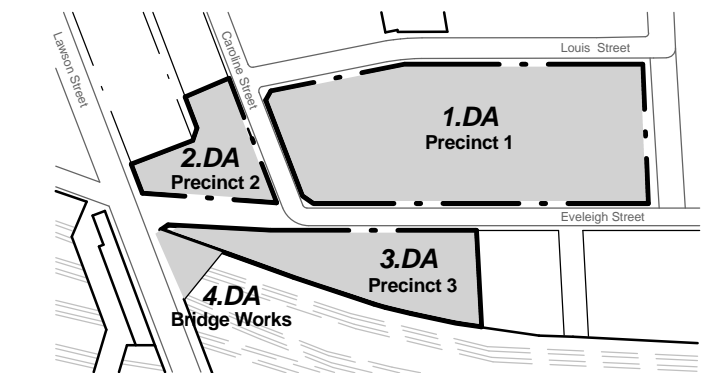
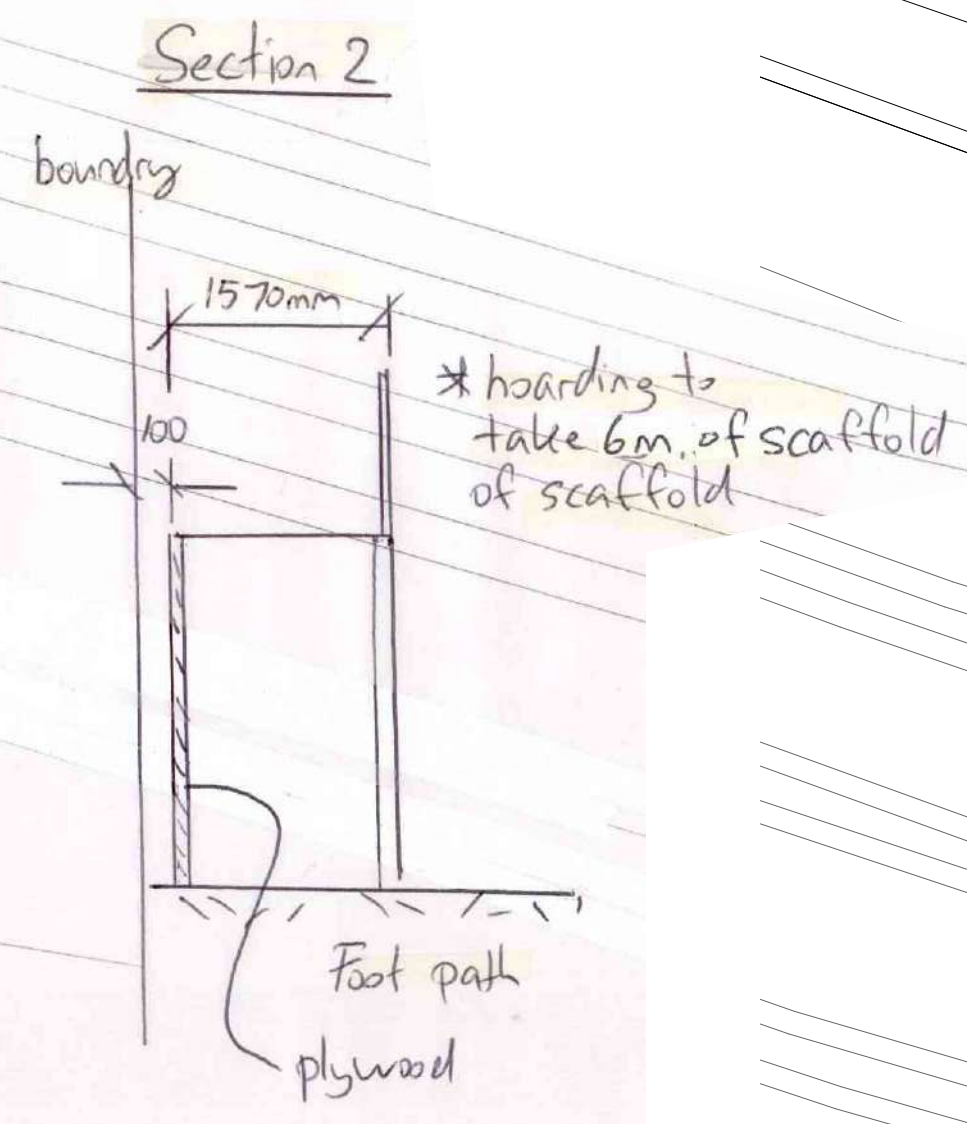
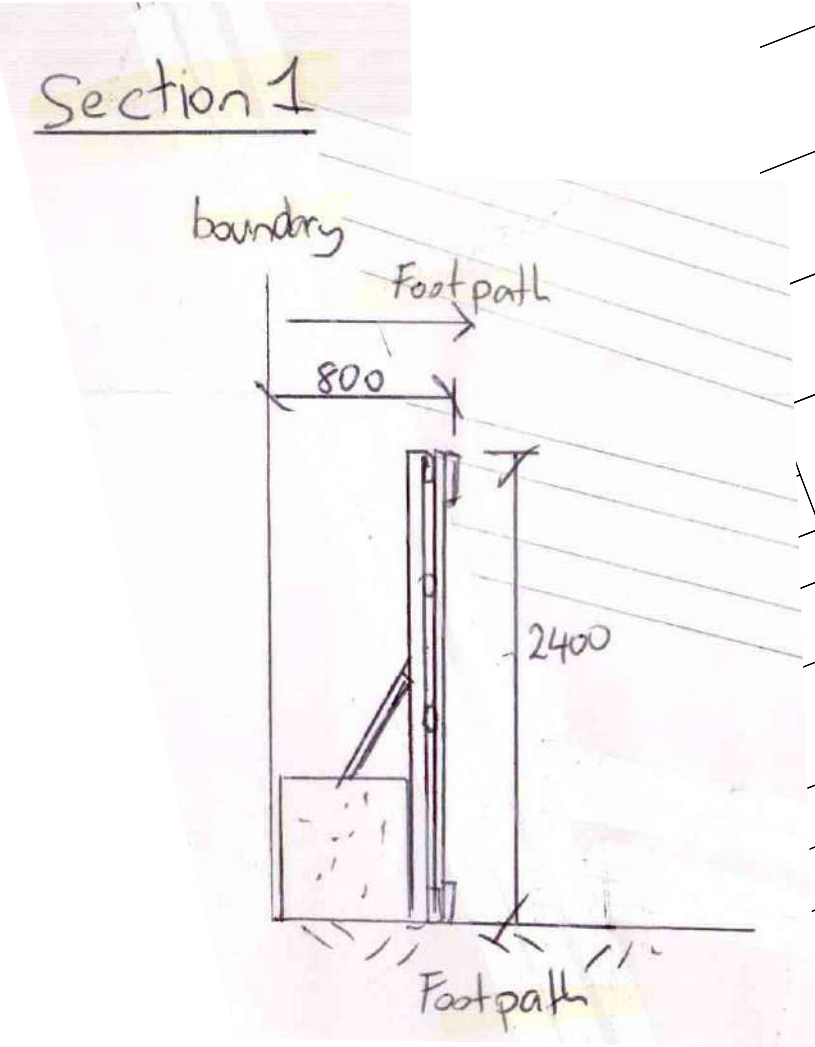
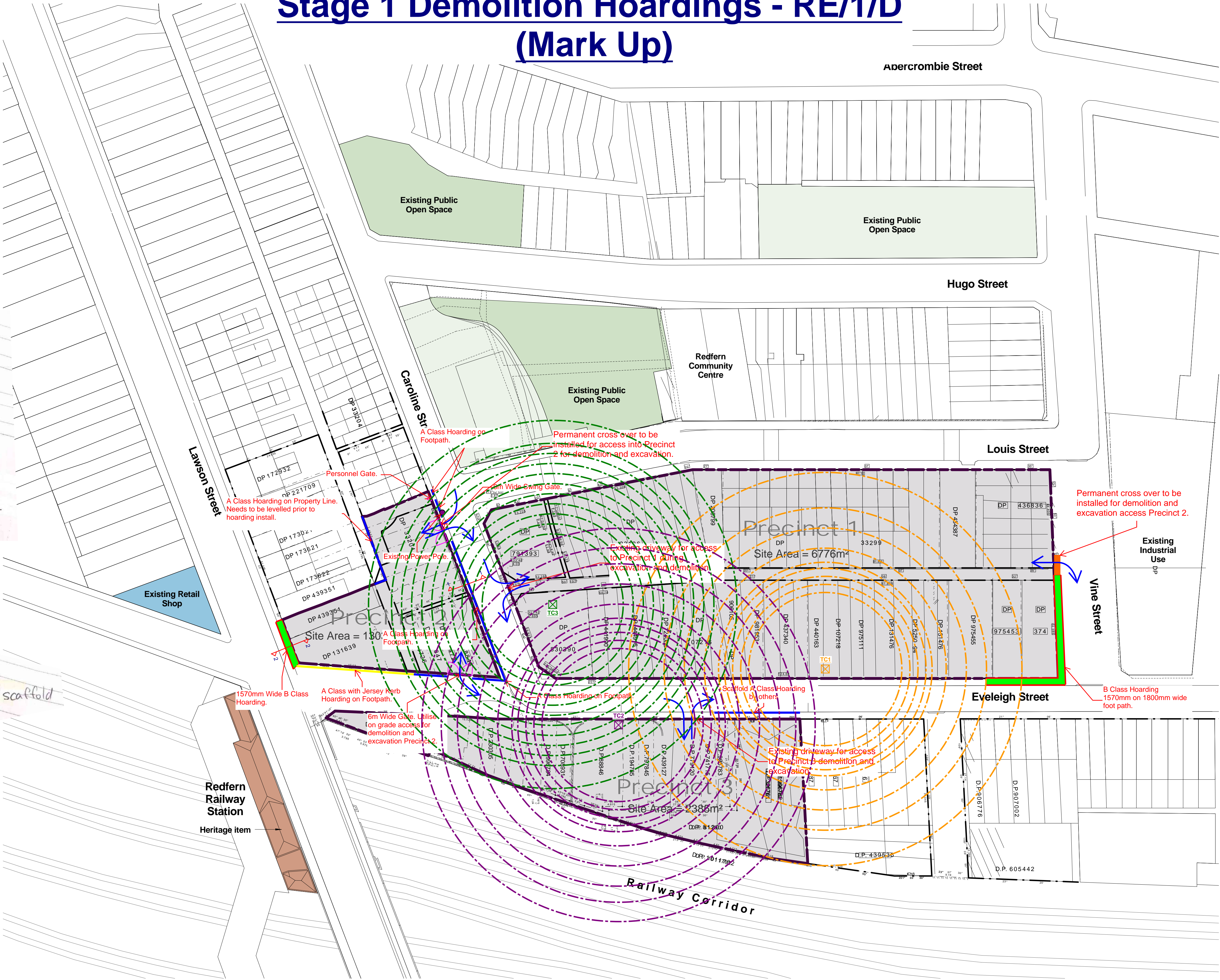
A Vehicle Movement Plan (VMP) has been prepared showing the proposed truck haulage and delivery routes to and from the site.

A swept path analysis has been undertaken for the site and shows that articulated vehicles (AV), truck and dogs and Heavy Rigid Vehicles (HRV) can safely manoeuvre in and out of the site to/from Eveleigh Street.

It is considered that if the control, monitoring and performance measures listed in this document are adhered to negative impacts of the site or surrounding properties will be minimised during the demolition, excavation and building works associated with the development.

Appendix A Site Management Plans

Stage 1 Demolition Hoardings - RE/1/D
(Mark Up)



General Notes:

Architectural Drawings To Be Read In Conjunction With All Other Consultants Detailed Drawings, Reports And Specifications.

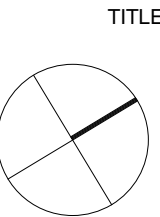
All Levels Indicated Taken To Australian Height Datum (AHD)

Refer To ODA900 For Abbreviation Schedule And Proposed Outline Colour Selections And Finishes Selections.

Site Underlay Based On Survey Carried Out By Denny Linker For Previous Application And Subsequent Survey Work Carried Out By Daw & Walton Consulting Surveyors - Refer To Drawing 302808.

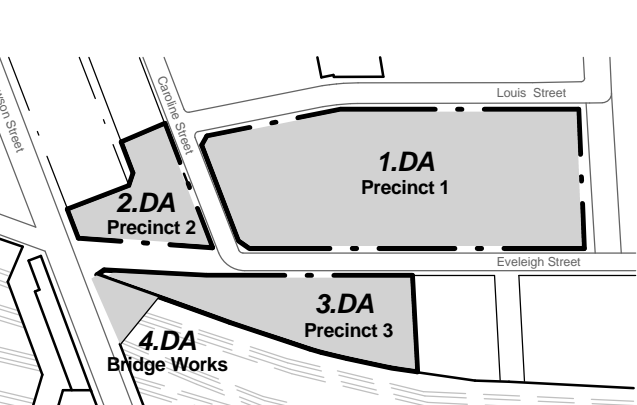
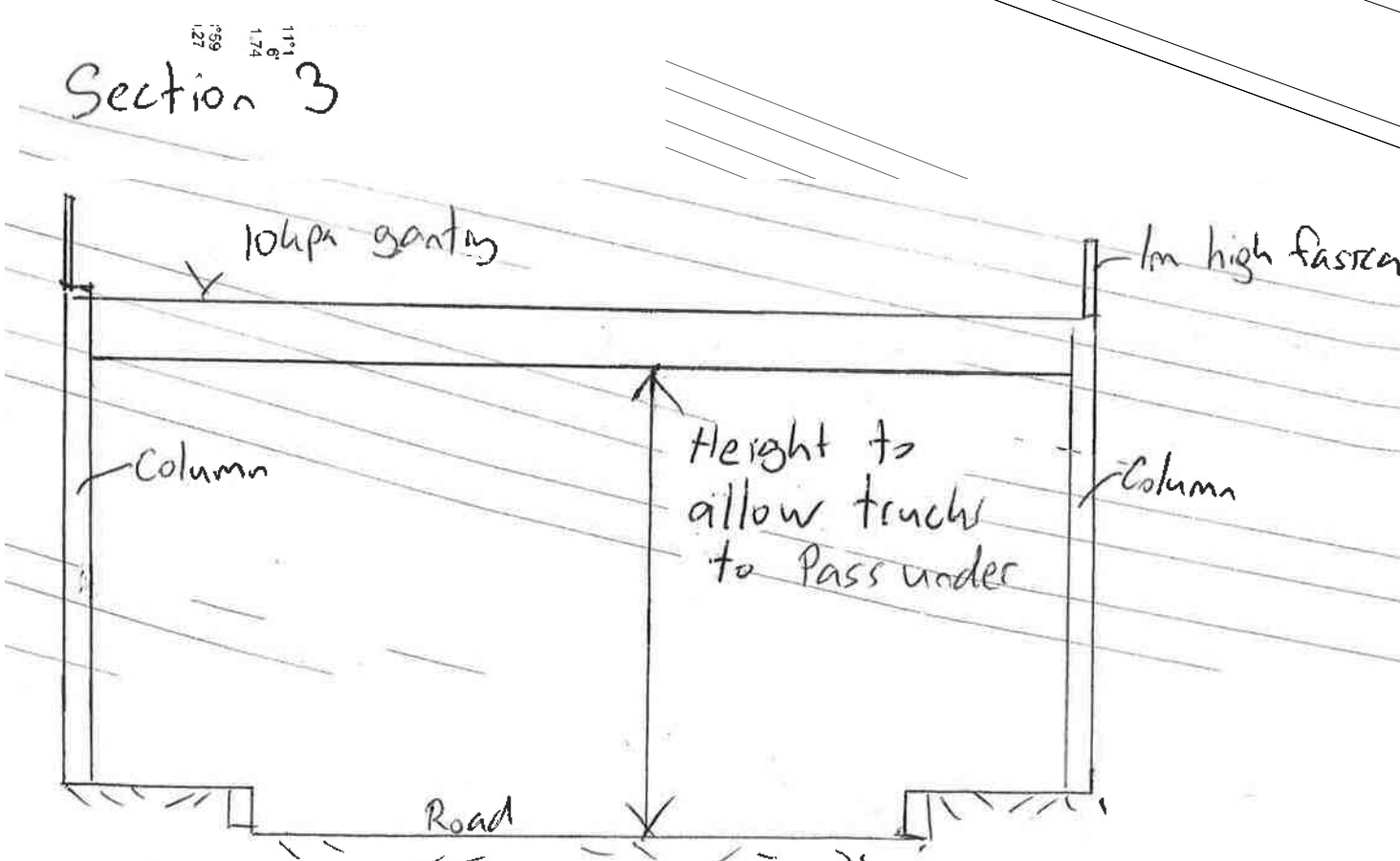
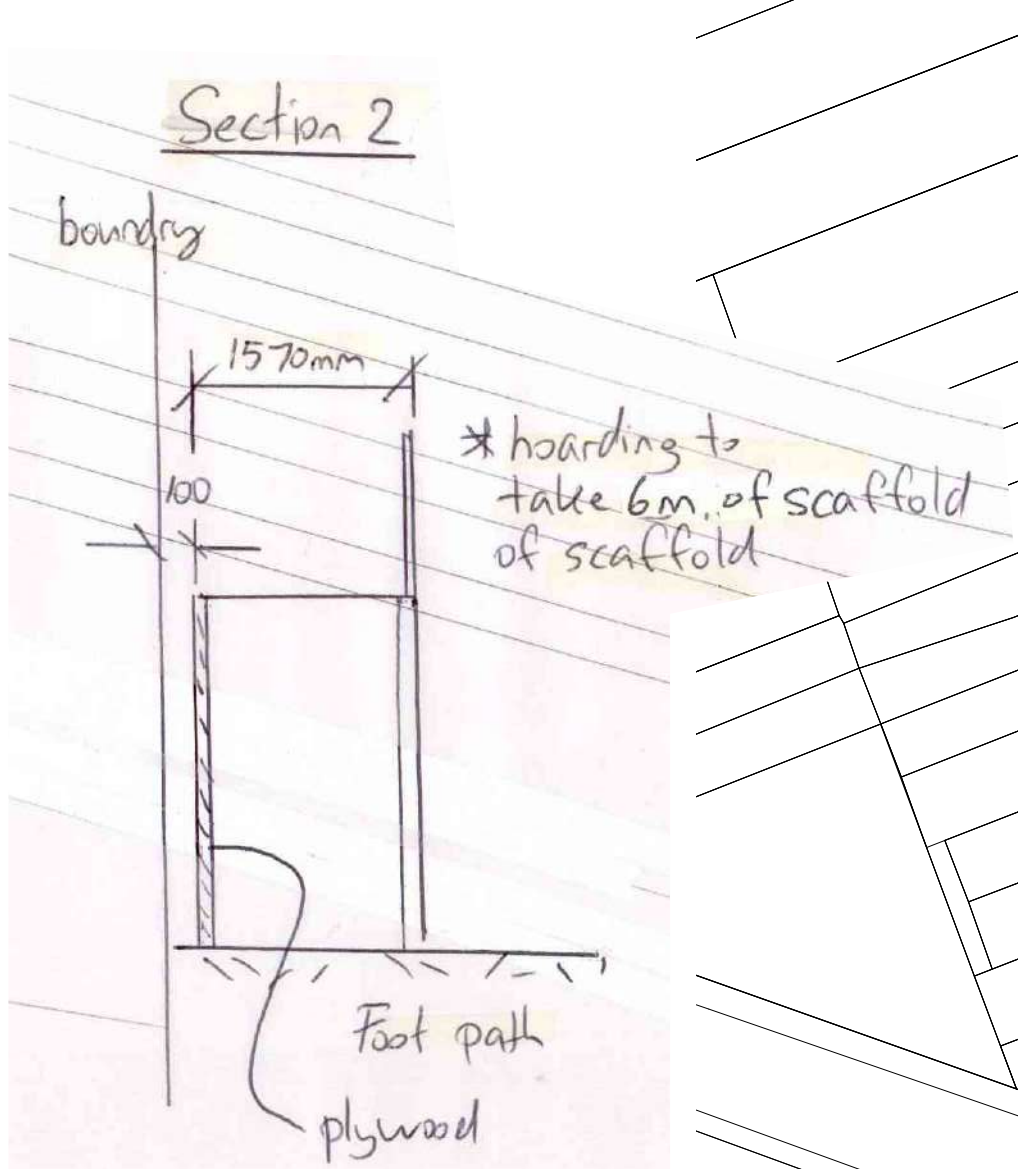
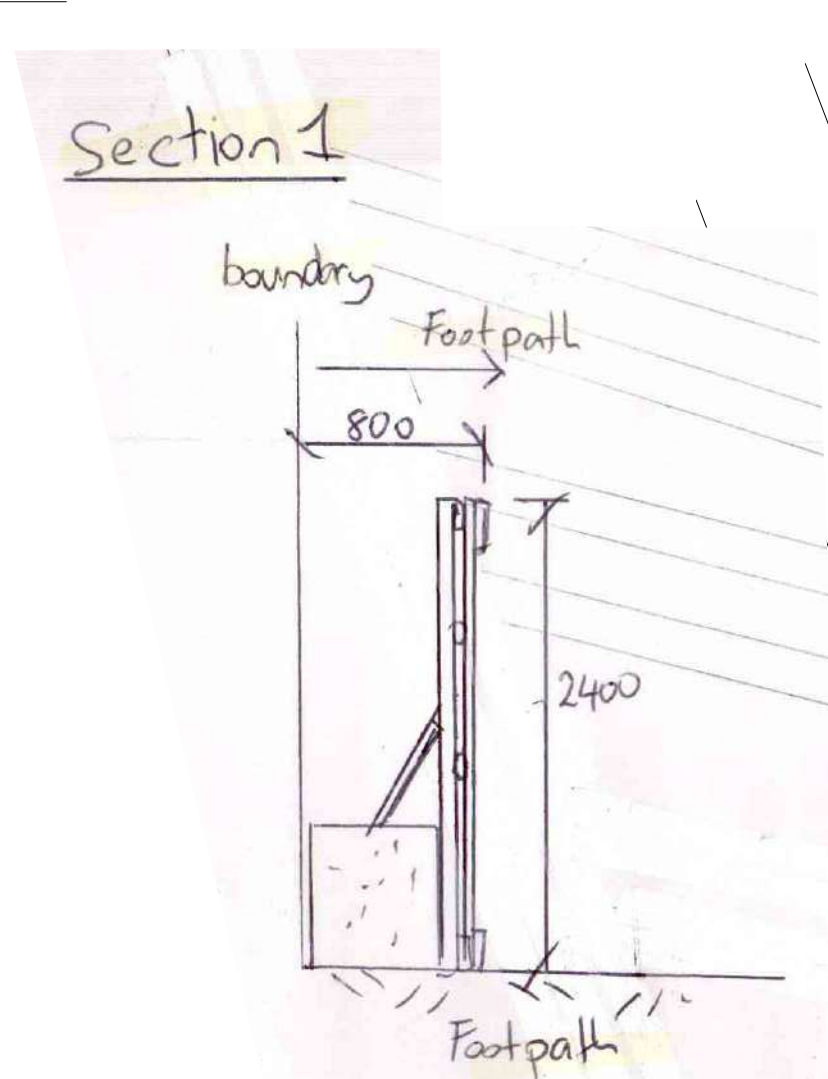
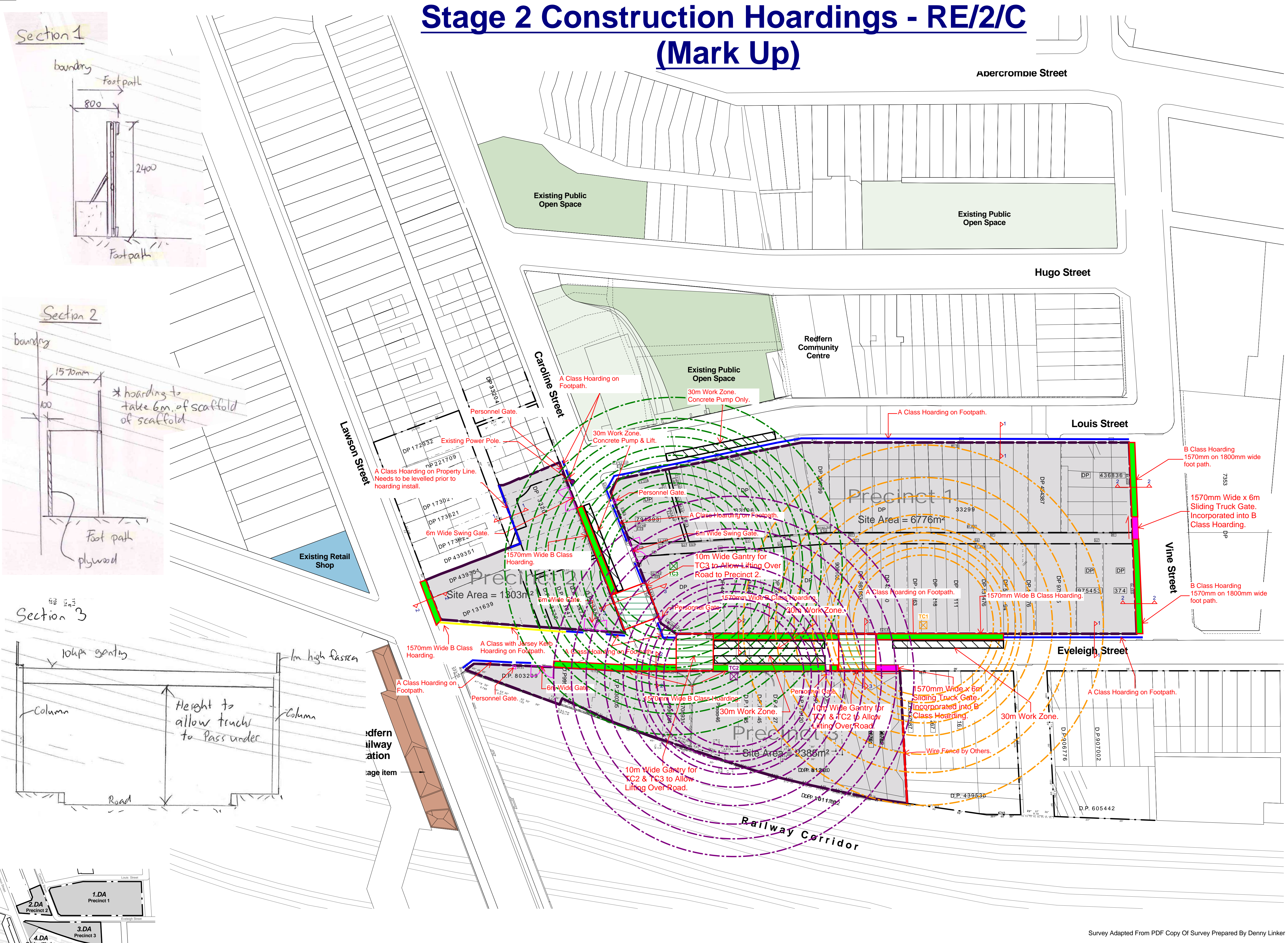
Survey Adapted From PDF Copy Of Survey Prepared By Denny Linker

Development Application		
Rev	Description	Date
A	Preliminary DA Issue For Review	11.07.11
B	Preliminary DA Issue For Review	20.07.11
C	Preliminary Environmental Assessment Issue (PEA)	28.07.11
D	Site Plan Extension	12.10.11
E	Development Application Issue	14.12.11



Stage 2 Construction Hoardings - RE/2/C

(Mark Up)



General Notes:

Architectural Drawings To Be Read In Conjunction With All Other Consultants Detailed Drawings, Reports And Specifications.

All Levels Indicated Taken To Australian Height Datum (AHD)

Refer To ODA900 For Abbreviation Schedule And Proposed Outline Colour Selections And Finishes Selections.

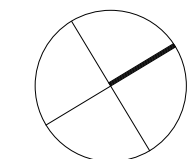
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CNR PARRAMATTA RD & JOHNSTON ST - PO BOX 254 - ANNANDALI - NSW 2038 - T.02 9517 2822 F.02 9517 2833
STEPHEN J. NORDON REGISTRATION No. NSW - 4704 GRAHAM P. JAGO REGISTRATION No. NSW - 4926

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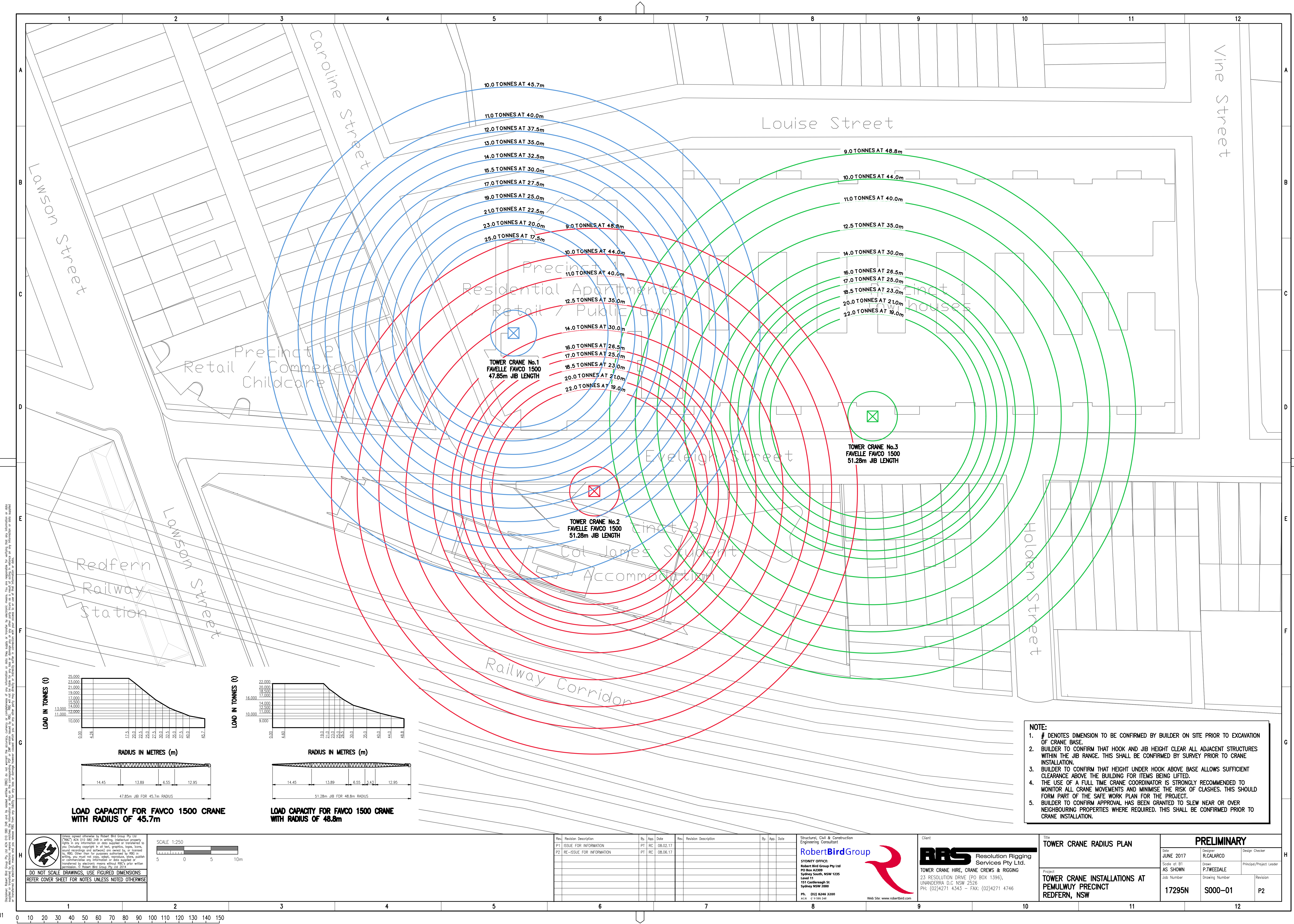


Pemulwuy Project, Mixed Use Development, REDFERN

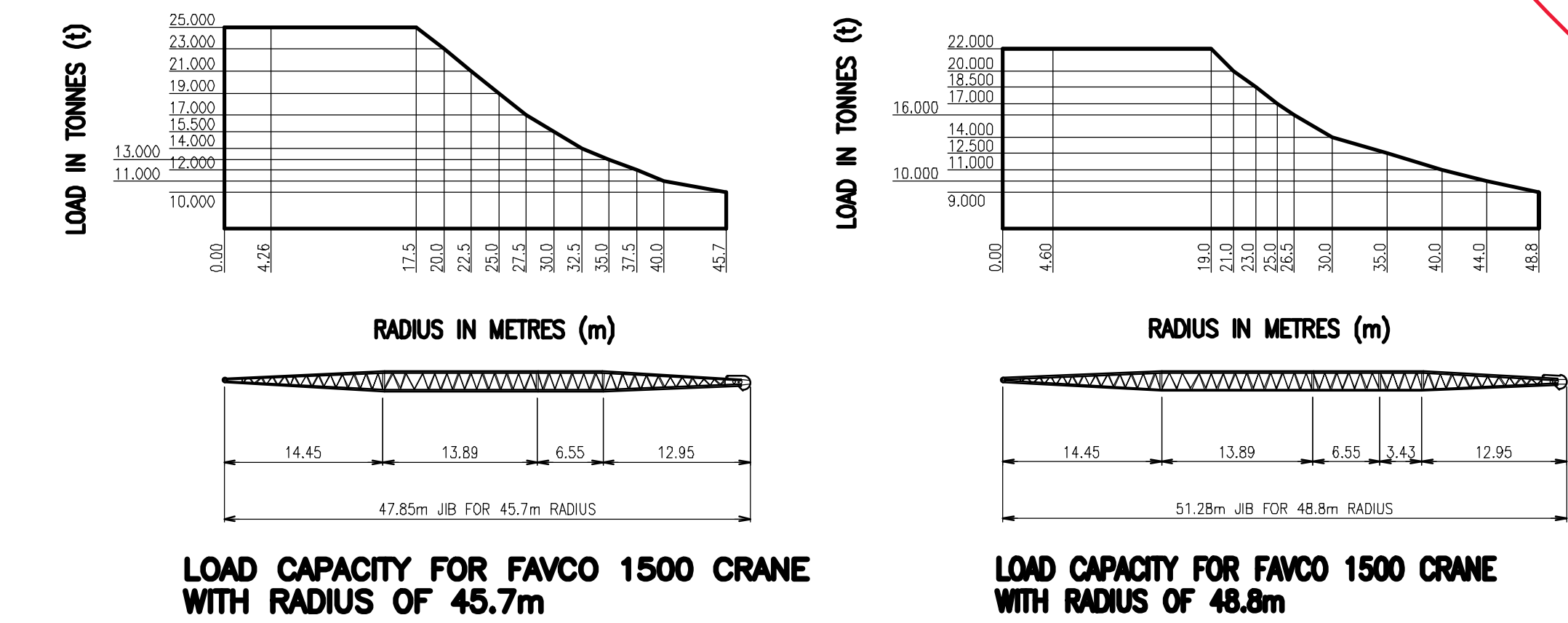
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Existing Site Plan

JOB No.	DEI00210
DATE	June 2010
SCALE	A1 @ As indicated
DWG No.	ODA010 E



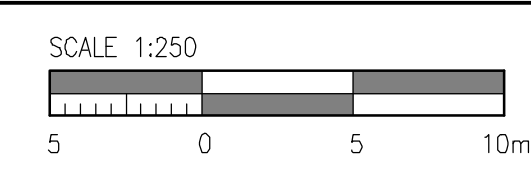
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NOTE:

- # DENOTES DIMENSION TO BE CONFIRMED BY BUILDER ON SITE PRIOR TO EXCAVATION OF CRANE BASE.
- BUILDER TO CONFIRM THAT HOOK AND JIB HEIGHT CLEAR ALL ADJACENT STRUCTURES WITHIN THE JIB RANGE. THIS SHALL BE CONFIRMED BY SURVEY PRIOR TO CRANE INSTALLATION.
- BUILDER TO CONFIRM THAT HEIGHT UNDER HOOK ABOVE BASE ALLOWS SUFFICIENT CLEARANCE ABOVE THE BUILDING FOR ITEMS BEING LIFTED.
- THE USE OF A FULL TIME CRANE COORDINATOR IS STRONGLY RECOMMENDED TO MONITOR ALL CRANE MOVEMENTS AND MINIMISE THE RISK OF CLASHES. THIS SHOULD FORM PART OF THE SAFE WORK PLAN FOR THE PROJECT.
- BUILDER TO CONFIRM APPROVAL HAS BEEN GRANTED TO SLEW NEAR OR OVER NEIGHBOURING PROPERTIES WHERE REQUIRED. THIS SHALL BE CONFIRMED PRIOR TO CRANE INSTALLATION.

DO NOT SCALE DRAWINGS. USE FIGURED DIMENSIONS.
REFER COVER SHEET FOR NOTES UNLESS NOTED OTHERWISE



Rev.	Revision Description	By.	App.	Date	Rev.	Revision Description	By.	App.	Date
P1	ISSUE FOR INFORMATION	PT	RC	08.02.17					
P2	RE-ISSUE FOR INFORMATION	PT	RC	08.06.17					

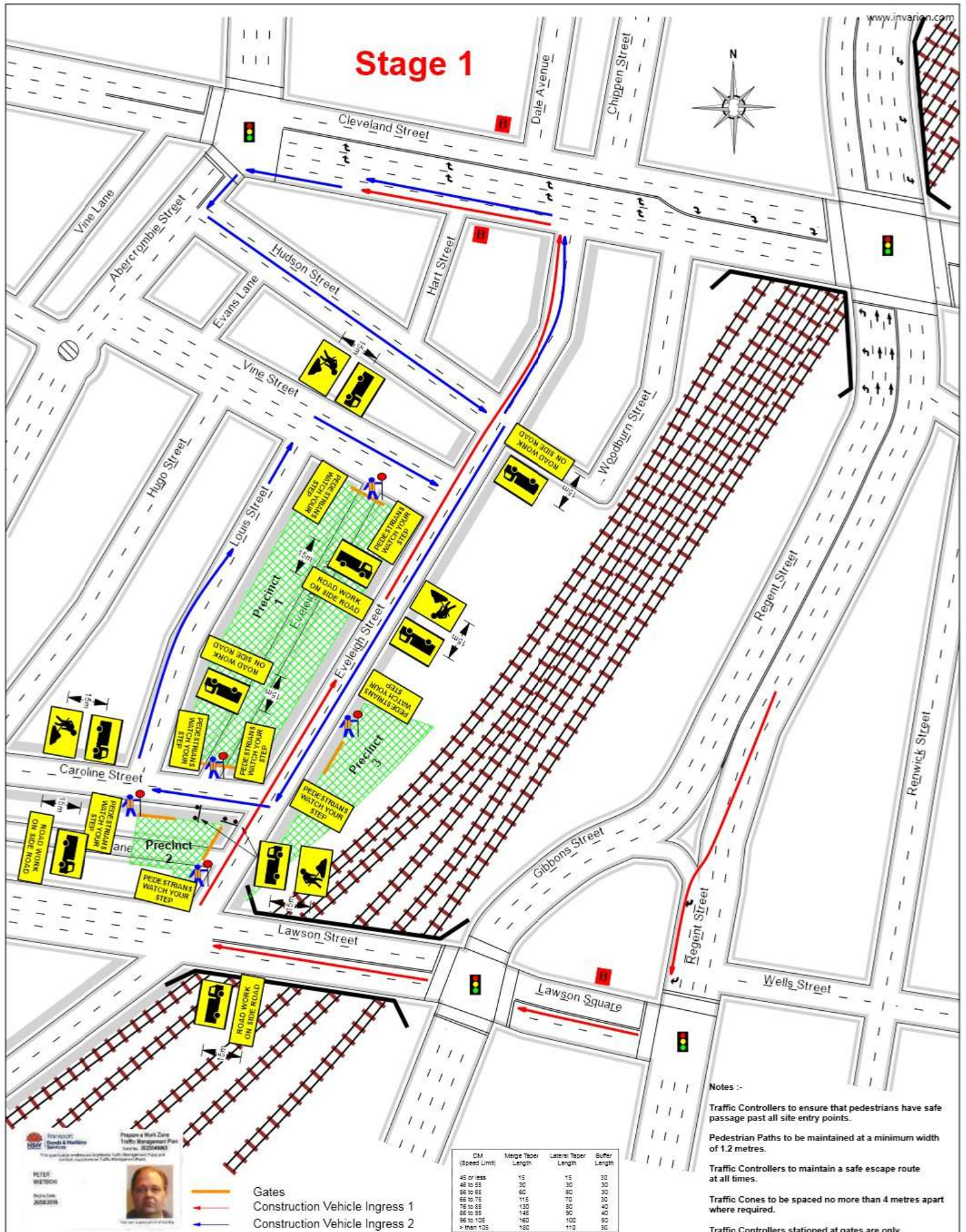
Structural, Civil & Construction Engineering Consultant
RobertBirdGroup
SYDNEY OFFICE:
Robert Bird Group Pty Ltd
PO Box A3309
Sydney South, NSW 1235
Level 11
151 Castlereagh St
Sydney NSW 2000
Ph: (02) 8246 3200
A/CN: C/O 580 248
Web Site: www.robertbird.com

Client
BBS Resolution Rigging Services Pty Ltd.
TOWER CRANE HIRE, CRANE CREWS & RIGGING
23 RESOLUTION DRIVE (PO BOX 1396),
UNANDERRA D.C. NSW 2526
PH: (02)4271 4343 - FAX: (02)4271 4746

TOWER CRANE RADIUS PLAN				PRELIMINARY		
Date	JUNE 2017	Designer	R.CALARCO	Design Checker		
Scale at B1	AS SHOWN	Drawn	P.TWEEDALE	Principal/Project Leader		
Job Number	17295N	Drawing Number	S000-01	Revision	P2	

Appendix B Traffic Control Plans

Stage 1



- Notes :-
- Traffic Controllers to ensure that pedestrians have safe passage past all site entry points.
 - Pedestrian Paths to be maintained at a minimum width of 1.2 metres.
 - Traffic Controllers to maintain a safe escape route at all times.
 - Traffic Cones to be spaced no more than 4 metres apart where required.
 - Traffic Controllers stationed at gates are only required when gates are in operation.
 - Trucks are to exit to all roads using natural gaps in traffic. Passing traffic is NOT to be stopped to allow trucks to exit.
 - Hard copies of all appropriate permits to be held by traffic controllers on duty at all times.
 - Emergency vehicles to be given high priority at all times
 - Traffic Control Plan not drawn to scale.

CM (Speed Limit)	Merge Taper Length	Lateral Taper Length	Buffer Length
45 or less	15	15	30
45 to 55	20	30	30
55 to 65	60	80	30
65 to 75	115	100	30
75 to 85	130	80	40
85 to 95	145	90	40
95 to 105	160	100	50
> 105	160	110	50

- Gates
- Construction Vehicle Ingress 1
- Construction Vehicle Ingress 2

PETER WIEDECK

 Traffic Controller

 Mobile: 0800 201 201

Date: 04/04/2017 Author: Peter Wietek License # 0025546963 Exp 26.08.18 Project: Deicorp Eveleigh Street Redem Stage 1
 EVS Group Australia Pty Ltd: Unit 3, 1 Marina Close Mt Ku-ring-gai NSW 2080 TCP No.: 01812017 UBD Ref No.: 15 A2
 Comments:
 This Traffic Control Plan is drawn in accordance with AS1742.3 and the RMS Traffic Control at Work Sites manual, it is to be implemented as such. This Traffic Plan is a GUIDE ONLY and can be altered on site but must be signed by an RTA Accredited person
 Approach speed up to and equal to 60km/h
 Day/Night Class 1 reflective signs to be used
 RMS Accredited Traffic controllers to be employed
 All traffic controllers are to wear approved Hi-Vis PPE

Stage 2



Notes :-

Traffic Controllers to ensure that pedestrians have safe passage past work sites.

Pedestrian Paths to be maintained at a minimum width of 1.2 metres.

Traffic Controllers to maintain a safe escape route at all times.

Traffic Cones to be spaced no more than 4 metres apart where required.

Trucks are to exit to all roads using natural gaps in traffic. Passing traffic is NOT to be stopped to allow trucks to exit.

Hard copies of all appropriate permits to be held by traffic controllers on duty at all times.

Emergency vehicles to be given high priority at all times

Traffic Control Plan not drawn to scale.



Prepare a Work Zone Traffic Management Plan (Form 825/2016)

The plan must be signed and stamped by a Traffic Management Plan (Form 825/2016)

PETER WIEDECKI

Mobile: 08 9558 2018

The plan must be signed and stamped by a Traffic Management Plan (Form 825/2016)

OM (Speed Limit)	Merge Taper Length	Lateral Taper Length	Buffer Length
45 or less	15	15	30
46 to 55	20	20	30
56 to 65	30	30	30
66 to 75	40	40	30
76 to 85	50	50	30
86 to 95	60	60	30
96 to 105	70	70	30
106 to 115	80	80	40
116 to 125	90	90	40
126 to 135	100	100	40
136 to 145	110	110	40
146 to 155	120	120	40
156 to 165	130	130	40
166 to 175	140	140	40
176 to 185	150	150	40
186 to 195	160	160	40
196 to 205	170	170	40
> 205	180	180	40



B Class Hoarding



Work Zone



Gates



Construction Vehicle Ingress 1



Construction Vehicle Ingress 2

Date: 04/04/2017 Author: Peter Wiedecki License # 0025546963 Exp 26.08.18 Project: Deirorp Eveleigh Street Redfem Stage 2
EVS Group Australia Pty Ltd: Unit 3, 1 Marina Close Mt Ku-ring-gai NSW 2080 TCP No.: 01822017 UBD Ref No.: 15 A2

Comments:

This Traffic Control Plan is drawn in accordance with AS1742.3 and the RMS Traffic Control at Work Sites manual, it is to be implemented as such. This Traffic Plan is a GUIDE ONLY and can be altered on site but must be signed by an RTA Accredited person

Approach speed up to and equal to 60km/h

Day/Night Class 1 reflective signs to be used

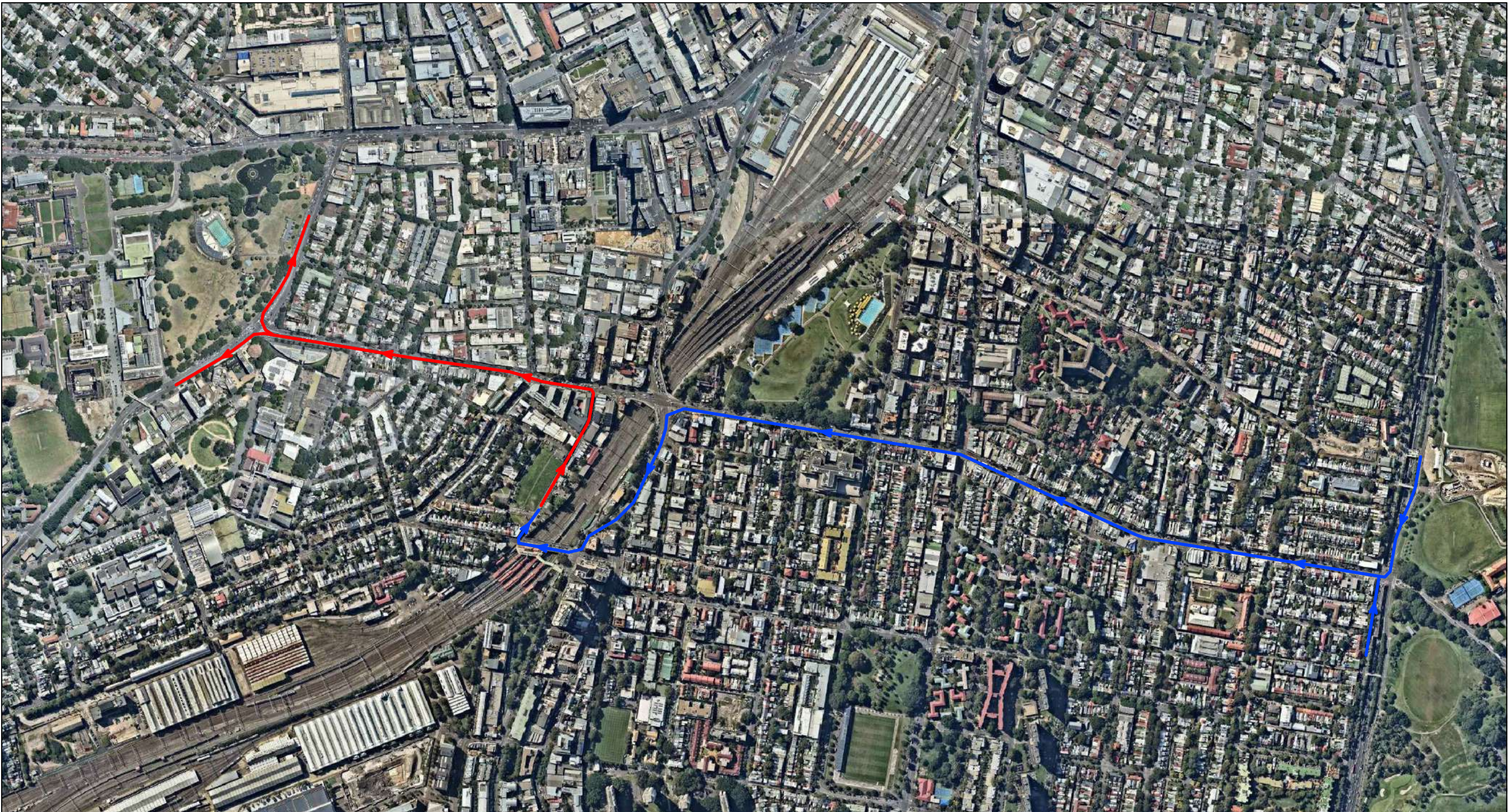
RMS Accredited Traffic controllers to be employed

All traffic controllers are to wear approved Hi-Vis PPE



Appendix C

Vehicle Movement Plan



← INGRESS ROUTE
← EGRESS ROUTE

A	09/05/17	FIRST ISSUE
No.	DATE	AMENDMENT



TOTAL PROJECT SOLUTIONS
PLANNING - PROJECT MANAGEMENT - ENGINEERING - CERTIFICATION

SYDNEY
P: 02 9659 0005
CENTRAL COAST
P: 02 4325 5255
HUNTER
P: 02 4966 8388
ABN: 26 134 067 842
barkerryanstewart.com.au
mail@barkerryanstewart.com.au

Designed: GL
Drawn: GL
Checked: GB

Scales: Plan
Horiz.
Vert.
X-Sect.

Datum:

Client:

LGA:

Council Ref:

PEMULWUY PRECINCTS 1, 2 & 3
VEHICLE MANAGEMENT PLAN (VMP)

Plan No.	REV.
SY1702C01	A
File Ref.	
SY1702C1.dwg	
SHEET 1 OF 1 SHEETS	

Appendix D

Swept Path Analysis Plans

HRV Swept Path



Semi Swept Path.



MRV Swept Path.



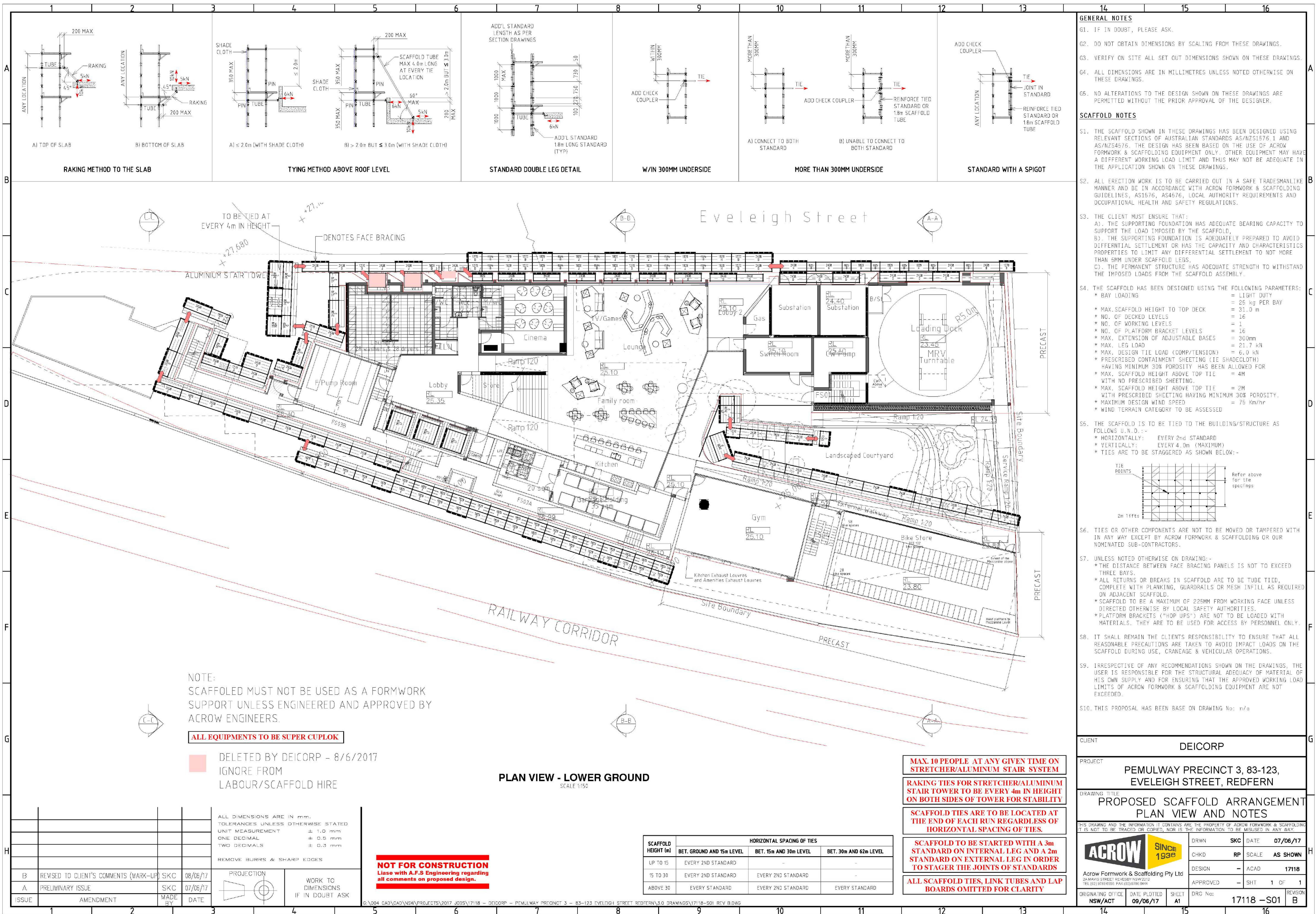


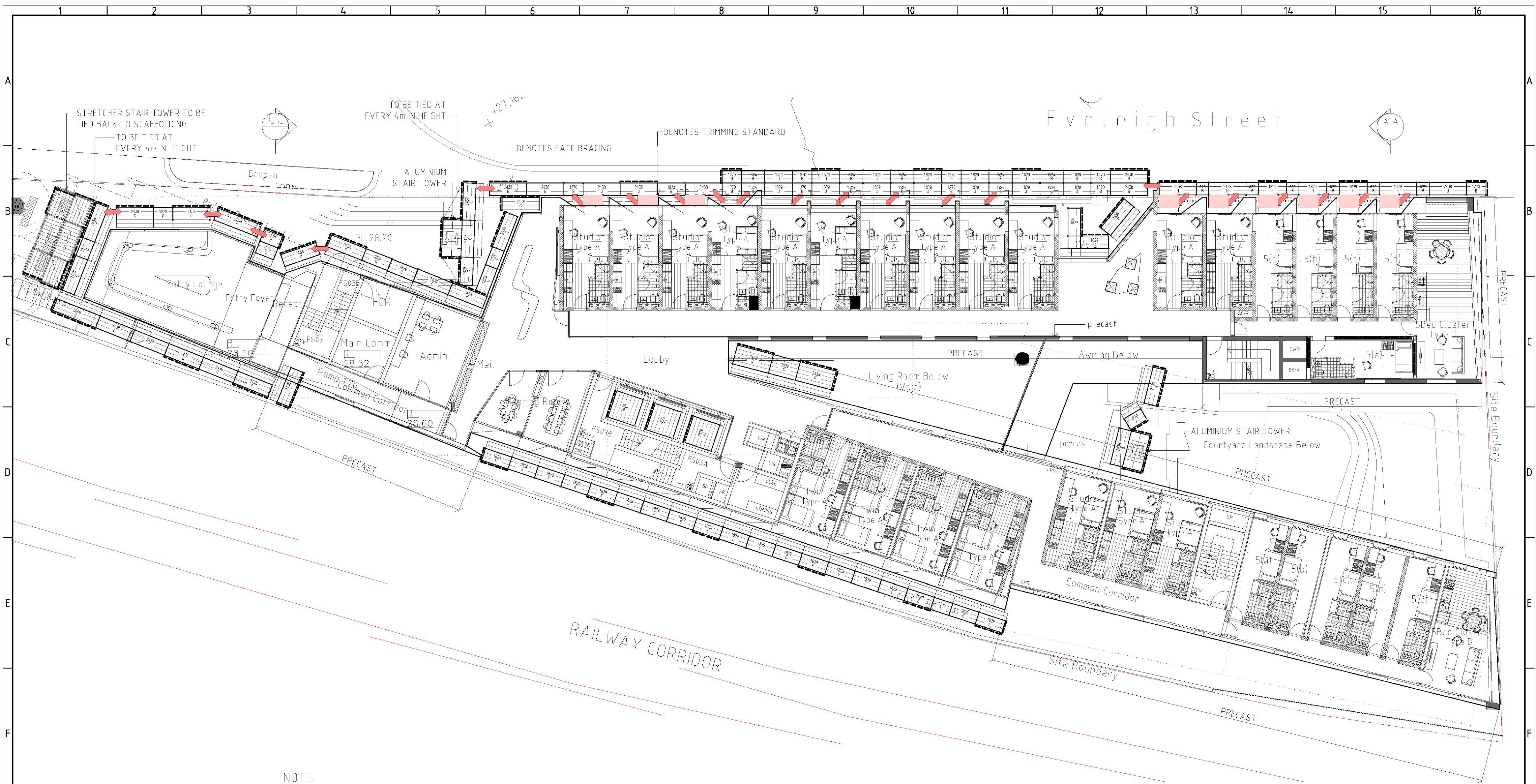
Annexure B Site Scaffold Plans

Acrow Scaffolding Plans

Drawings

17118-S01,2,3,4,5,6,7,8, & 9 rev B





NOTE:
SCAFFOLD MUST NOT BE USED AS A FORMWORK
SUPPORT UNLESS ENGINEERED AND APPROVED BY
ACROW ENGINEERS.

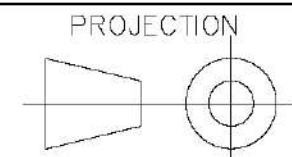
PLAN VIEW - UPPER GROUND
SCALE 1:125

ALL EQUIPMENTS TO BE SUPER CUPLOK

DELETED BY DEICORP - 8/6/2017
IGNORE FROM
LABOUR/SCAFFOLD HIRE

ALL DIMENSIONS ARE IN mm.
TOLERANCES UNLESS OTHERWISE STATED
UNIT MEASUREMENT ± 1.0 mm
ONE DECIMAL ± 0.5 mm
TWO DECIMALS ± 0.3 mm

REMOVE BURRS & SHARP EDGES



WORK TO
DIMENSIONS
IF IN DOUBT ASK

NOT FOR CONSTRUCTION
Liaise with A.F.S Engineering regarding
all comments on proposed design.

G:\004 CAD\NSW\PROJECTS\2017 JOBS\17118 - DEICORP - PEMULWAY PRECINCT 3 - 83-123 EVELEIGH STREET REDFERN\3.0 DRAWINGS\17118-S01 REV B.DWG

MAX. 10 PEOPLE AT ANY GIVEN TIME ON
STRETCHER/ALUMINIUM STAIR SYSTEM

RAKING TIES FOR STRETCHER/ALUMINIUM
STAIR TOWER TO BE EVERY 4m IN HEIGHT
ON BOTH SIDES OF TOWER FOR STABILITY


SCAFFOLD TIES ARE TO BE LOCATED AT
THE END OF EACH RUN REGARDLESS OF
HORIZONTAL SPACING OF TIES.

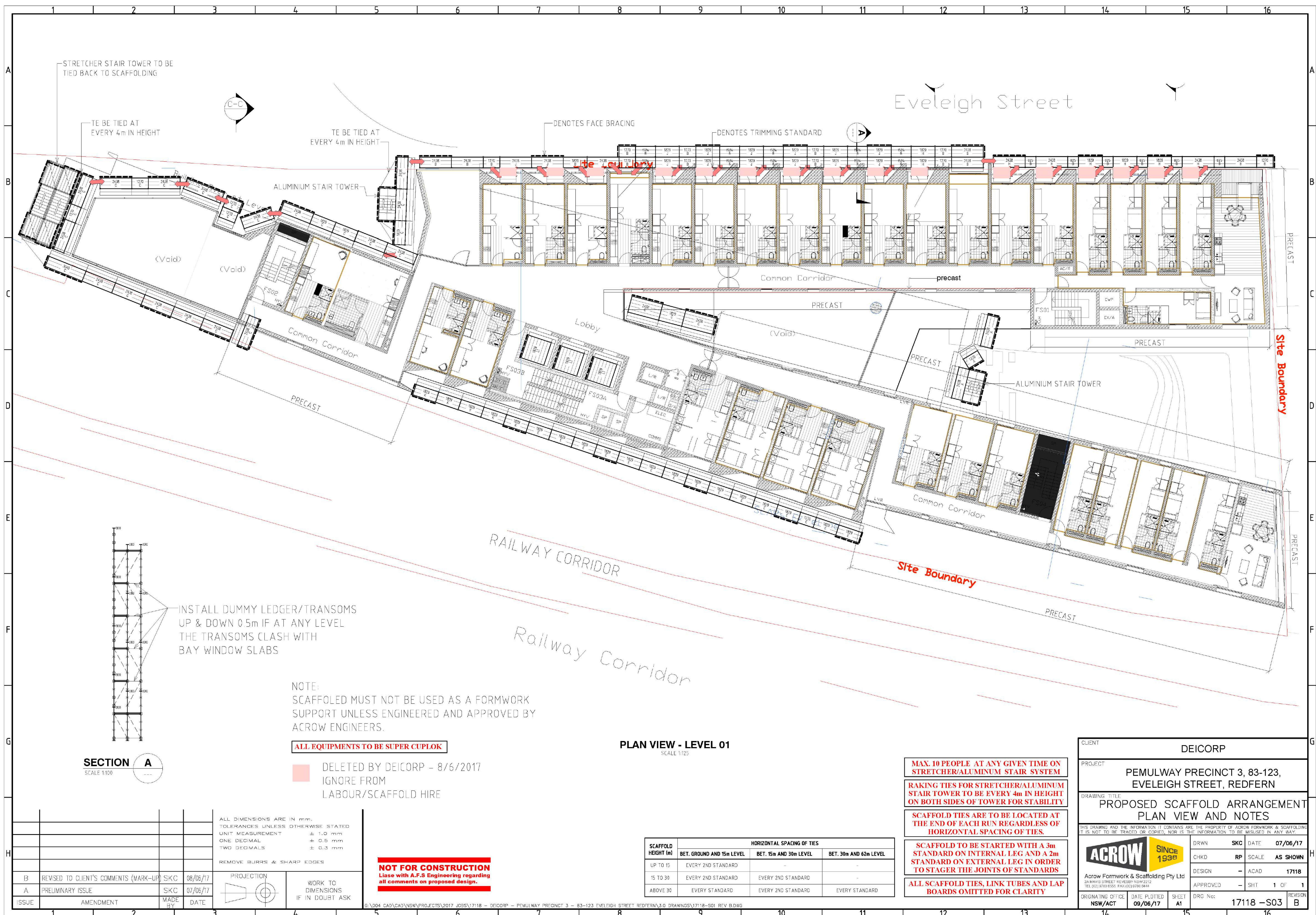
SCAFFOLD TO BE STARTED WITH A 3m
STANDARD ON INTERNAL LEG AND A 2m
STANDARD ON EXTERNAL LEG IN ORDER
TO STAGER THE JOINTS OF STANDARDS

ALL SCAFFOLD TIES, LINK TUBES AND LAP
BOARDS OMITTED FOR CLARITY

SCAFFOLD HEIGHT (m)	HORIZONTAL SPACING OF TIES		
	BET. GROUND AND 15m LEVEL	BET. 15m AND 30m LEVEL	BET. 30m AND 62m LEVEL
UP TO 15	EVERY 2ND STANDARD	-	-
15 TO 30	EVERY 2ND STANDARD	EVERY 2ND STANDARD	-
ABOVE 30	EVERY STANDARD	EVERY 2ND STANDARD	EVERY STANDARD

B	REVISED TO CLIENT'S COMMENTS (MARK-UP)	SKC	08/06/17
A	PRELIMINARY ISSUE	SKC	07/06/17
ISSUE	AMENDMENT	MADE BY	DATE

CLIENT	DEICORP			
PROJECT	PEMULWAY PRECINCT 3, 83-123, EVELEIGH STREET, REDFERN			
DRAWING TITLE	PROPOSED SCAFFOLD ARRANGEMENT PLAN VIEW AND NOTES			
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	CHKD	RP	SCALE	AS SHOWN
	DESIGN	-	ACAD	17118
	APPROVED	-	SHT	1 OF 1
ORIGINATING OFFICE NSW/ACT	DATE PLOTTED 09/06/17	SHEET A1	DRG No:	17118 -S02
				REVISION B





PLAN VIEW - LEVEL 02
SCALE 1:125

ALL DIMENSIONS ARE IN mm. TOLERANCES UNLESS OTHERWISE STATED UNIT MEASUREMENT ± 1.0 mm ONE DECIMAL ± 0.5 mm TWO DECIMALS ± 0.3 mm REMOVE BURRS & SHARP EDGES			
PROJECTION		WORK TO DIMENSIONS IF IN DOUBT ASK	
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A		PRELIMINARY ISSUE	SKC 07/06/17
ISSUE	AMENDMENT	MADE BY	DATE

NOT FOR CONSTRUCTION
Liaise with A.F.S Engineering regarding
all comments on proposed design.

SCAFFOLD HEIGHT (m)	HORIZONTAL SPACING OF TIES		
	BET. GROUND AND 15m LEVEL	BET. 15m AND 30m LEVEL	BET. 30m AND 62m LEVEL
UP TO 15	EVERY 2ND STANDARD	-	-
15 TO 30	EVERY 2ND STANDARD	EVERY 2ND STANDARD	-
ABOVE 30	EVERY STANDARD	EVERY 2ND STANDARD	EVERY STANDARD


**MAX. 10 PEOPLE AT ANY GIVEN TIME ON
STRETCHER/ALUMINUM STAIR SYSTEM**

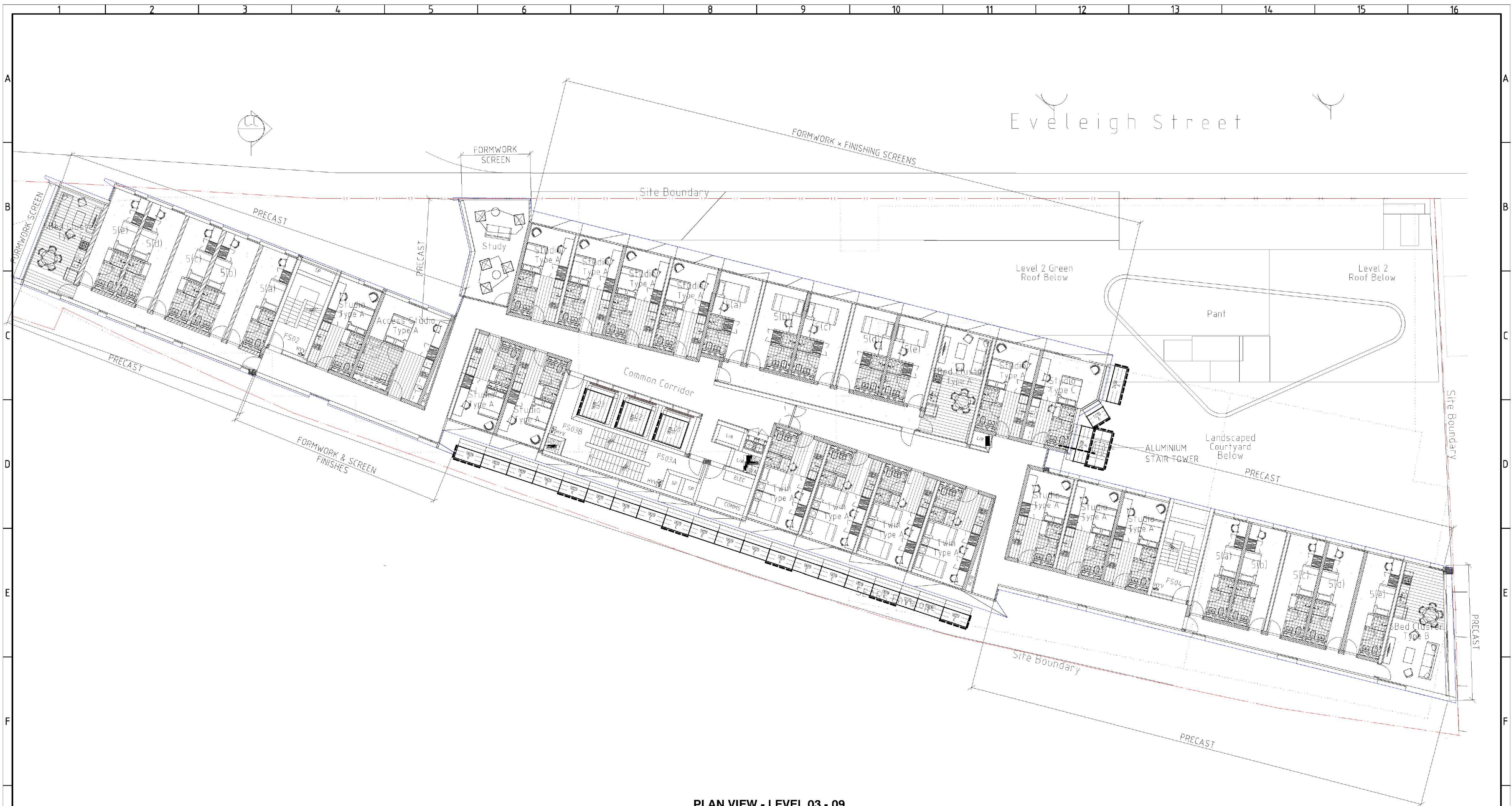
**RAKING TIES FOR STRETCHER/ALUMINUM
STAIR TOWER TO BE EVERY 4m IN HEIGHT
ON BOTH SIDES OF TOWER FOR STABILITY**

**SCAFFOLD TIES ARE TO BE LOCATED AT
THE END OF EACH RUN REGARDLESS OF
HORIZONTAL SPACING OF TIES.**

**SCAFFOLD TO BE STARTED WITH A 3m
STANDARD ON INTERNAL LEG AND A 2m
STANDARD ON EXTERNAL LEG IN ORDER
TO STAGER THE JOINTS OF STANDARDS**

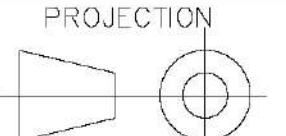
**ALL SCAFFOLD TIES, LINK TUBES AND LAP
BOARDS OMITTED FOR CLARITY**

CLIENT		DEICORP	
PROJECT		PEMULWAY PRECINCT 3, 83-123, EVELEIGH STREET, REDFERN	
DRAWING TITLE		PROPOSED SCAFFOLD ARRANGEMENT PLAN VIEW AND NOTES	
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Acrow Formwork & Scaffolding Pty Ltd 24 MARVIS STREET REVELEY NSW 2212 TEL (02) 9780 9555 FAX (02) 9780 9444		CHKD	RP SCALE AS SHOWN
		DESIGN	- ACAD 17118
		APPROVED	- SHT 1 OF 1
ORIGINATING OFFICE NSW/ACT	DATE PLOTTED 09/06/17	SHEET A1	DRG No: 17118 -S04 REVISION B



PLAN VIEW - LEVEL 03 - 09
SCALE 1:125

ALL EQUIPMENTS TO BE SUPER CUPLOK

ALL DIMENSIONS ARE IN mm. TOLERANCES UNLESS OTHERWISE STATED UNIT MEASUREMENT ± 1.0 mm ONE DECIMAL ± 0.5 mm TWO DECIMALS ± 0.3 mm REMOVE BURRS & SHARP EDGES			
PROJECTION 			
WORK TO DIMENSIONS IF IN DOUBT ASK			
B	REVISED TO CLIENT'S COMMENTS (MARK-UP)	SKC	08/06/17
A	PRELIMINARY ISSUE	SKC	07/06/17
ISSUE	AMENDMENT	MADE BY	DATE

NOT FOR CONSTRUCTION
Liaise with A.F.S Engineering regarding
all comments on proposed design.

SCAFFOLD HEIGHT (m)	HORIZONTAL SPACING OF TIES		
	BET. GROUND AND 15m LEVEL	BET. 15m AND 30m LEVEL	BET. 30m AND 62m LEVEL
UP TO 15	EVERY 2ND STANDARD	-	-
15 TO 30	EVERY 2ND STANDARD	EVERY 2ND STANDARD	-
ABOVE 30	EVERY STANDARD	EVERY 2ND STANDARD	EVERY STANDARD


MAX. 10 PEOPLE AT ANY GIVEN TIME ON
STRETCHER/ALUMINIUM STAIR SYSTEM

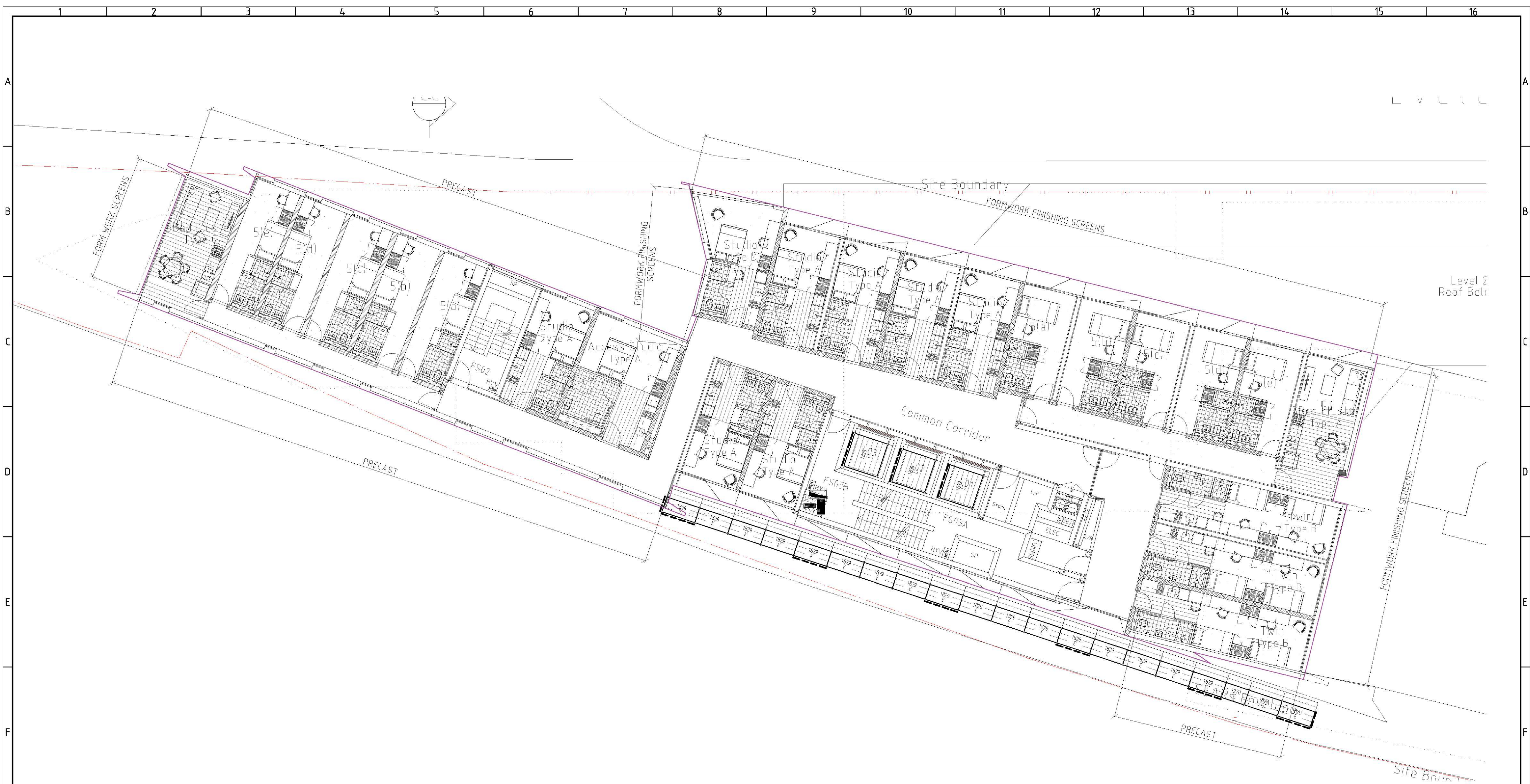
RAKING TIES FOR STRETCHER/ALUMINIUM
STAIR TOWER TO BE EVERY 4m IN HEIGHT
ON BOTH SIDES OF TOWER FOR STABILITY

SCAFFOLD TIES ARE TO BE LOCATED AT
THE END OF EACH RUN REGARDLESS OF
HORIZONTAL SPACING OF TIES.

SCAFFOLD TO BE STARTED WITH A 3m
STANDARD ON INTERNAL LEG AND A 2m
STANDARD ON EXTERNAL LEG IN ORDER
TO STAGER THE JOINTS OF STANDARDS

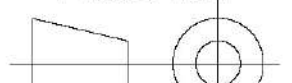
ALL SCAFFOLD TIES, LINK TUBES AND LAP
BOARDS OMITTED FOR CLARITY

CLIENT	DEICORP			
PROJECT	PEMULWAY PRECINCT 3, 83-123, EVELEIGH STREET, REDFERN			
DRAWING TITLE	PROPOSED SCAFFOLD ARRANGEMENT PLAN VIEW AND NOTES			
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	CHKD	RP	SCALE	AS SHOWN
	DESIGN	-	ACAD	17118
	APPROVED	-	SHT	1 OF 1
ORIGINATING OFFICE NSW/ACT	DATE PLOTTED 09/06/17	SHEET A1	DRG No:	17118 -S05
				REVISION B



PLAN VIEW - LEVEL 10 - 20


SCALE 1:100

H						ALL DIMENSIONS ARE IN mm. TOLERANCES UNLESS OTHERWISE STATED UNIT MEASUREMENT ± 1.0 mm ONE DECIMAL ± 0.5 mm TWO DECIMALS ± 0.3 mm REMOVE BURRS & SHARP EDGES
	B	REVISED TO CLIENT'S COMMENTS (MARK-UP)	SKC	08/06/17		WORK TO DIMENSIONS IF IN DOUBT ASK
	A	PRELIMINARY ISSUE	SKC	07/06/17		
	ISSUE	AMENDMENT	MADE BY	DATE		

ALL DIMENSIONS ARE IN mm.
TOLERANCES UNLESS OTHERWISE STATED

UNIT MEASUREMENT	± 1.0 mm
ONE DECIMAL	± 0.5 mm
TWO DECIMALS	± 0.3 mm

PROJECTION



WORK TO
DIMENSIONS
IF IN DOUBT ASK

ALL EQUIPMENTS TO BE SUPER CUPLOK

NOT FOR CONSTRUCTION
Liase with A.F.S Engineering regarding
all comments on proposed design.

SCAFFOLD HEIGHT (m)	HORIZONTAL SPACING OF TIES		
	BET. GROUND AND 15m LEVEL	BET. 15m AND 30m LEVEL	BET. 30m AND 62m LEVEL
UP TO 15	EVERY 2ND STANDARD	-	-
15 TO 30	EVERY 2ND STANDARD	EVERY 2ND STANDARD	-
ABOVE 30	EVERY STANDARD	EVERY 2ND STANDARD	EVERY STANDARD


MAX. 10 PEOPLE AT ANY GIVEN TIME ON STRETCHER/ALUMINUM STAIR SYSTEM

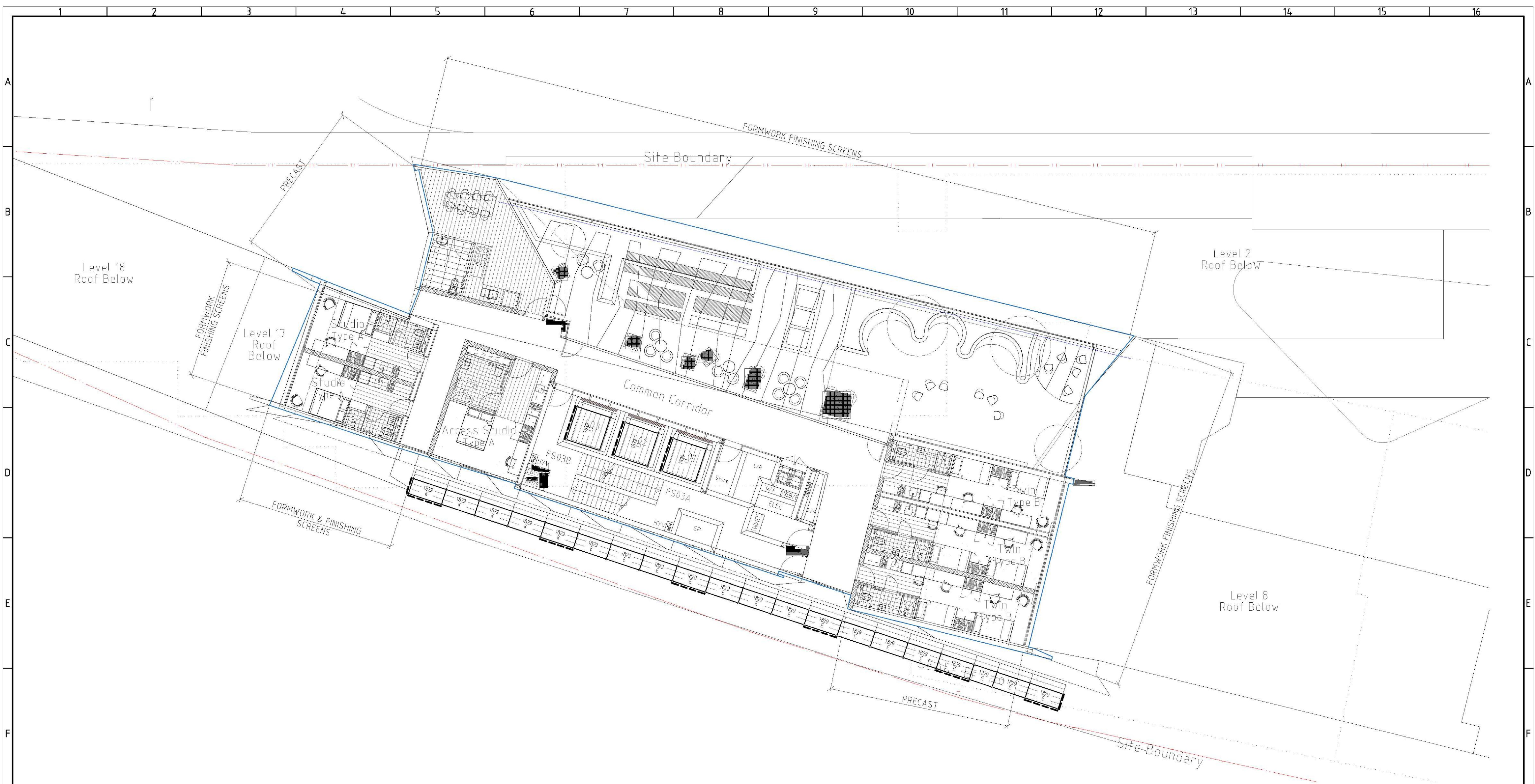
**RAKING TIES FOR STRETCHER/ALUMINUM
STAIR TOWER TO BE EVERY 4m IN HEIGHT
ON BOTH SIDES OF TOWER FOR STABILITY**

SCAFFOLD TIES ARE TO BE LOCATED AT THE END OF EACH RUN REGARDLESS OF HORIZONTAL SPACING OF TIES.

SCAFFOLD TO BE STARTED WITH A 3m STANDARD ON INTERNAL LEG AND A 2m STANDARD ON EXTERNAL LEG IN ORDER TO STAGER THE JOINTS OF STANDARDS

**ALL SCAFFOLD TIES, LINK TUBES AND LAP
BOARDS OMITTED FOR CLARITY**

CLIENT		DEICORP																	
PROJECT																			
PEMULWAY PRECINCT 3, 83-123, EVELEIGH STREET, REDFERN																			
DRAWING TITLE																			
PROPOSED SCAFFOLD ARRANGEMENT PLAN VIEW AND NOTES																			
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		<table border="1"> <tr> <td>DRAWN</td> <td>SKC</td> <td>DATE</td> <td>07/06/17</td> </tr> <tr> <td>CHKD</td> <td>RP</td> <td>SCALE</td> <td>AS SHOWN</td> </tr> <tr> <td>DESIGN</td> <td>—</td> <td>ACAD</td> <td>17118</td> </tr> <tr> <td>APPROVED</td> <td>—</td> <td>SHIT</td> <td>1 OF 1</td> </tr> </table>		DRAWN	SKC	DATE	07/06/17	CHKD	RP	SCALE	AS SHOWN	DESIGN	—	ACAD	17118	APPROVED	—	SHIT	1 OF 1
DRAWN	SKC	DATE	07/06/17																
CHKD	RP	SCALE	AS SHOWN																
DESIGN	—	ACAD	17118																
APPROVED	—	SHIT	1 OF 1																
Acrow Formwork & Scaffolding Pty Ltd 2A HAVES STREET, REDFERN NSW 2145 TEL (02) 9780 6555 FAX (02) 6796 0445		DRG No: 17118 – S06 REVISION B																	
ORIGINATING OFFICE NSW/ACT	DATE PLOTTED 09/06/17	SHEET A11																	



PLAN VIEW - LEVEL 21

SCALE 1:100

H			
B	REVISED TO CLIENT'S COMMENTS (MARK-UP)	SKC	08/06/17
A	PRELIMINARY ISSUE	SKC	07/06/17
ISSUE	AMENDMENT	MADE BY	DATE

ALL DIMENSIONS ARE IN mm.
TOLERANCES UNLESS OTHERWISE STATED

UNIT MEASUREMENT	± 1.0 mm
ONE DECIMAL	± 0.5 mm
TWO DECIMALS	± 0.3 mm

PROJECTION

WORK TO
DIMENSIONS
IF IN DOUBT ASK

ALL EQUIPMENTS TO BE SUPER CUPLOK

NOT FOR CONSTRUCTION
Liase with A.F.S Engineering regarding
all comments on proposed design.

SCAFFOLD HEIGHT (m)	HORIZONTAL SPACING OF TIES		
	BET. GROUND AND 15m LEVEL	BET. 15m AND 30m LEVEL	BET. 30m AND 62m LEVEL
UP TO 15	EVERY 2ND STANDARD	-	-
15 TO 30	EVERY 2ND STANDARD	EVERY 2ND STANDARD	-
ABOVE 30	EVERY STANDARD	EVERY 2ND STANDARD	EVERY STANDARD

G:\004 CAD\CAD\NSW\PROJECTS\2017 JOBS\17118 - DEICORP - PEMULWAY PRECINCT 3 - 83-123 EVELEIGH STREET REDFERN\3.0 DRAWINGS\17118-S01 REV B.DWG


MAX. 10 PEOPLE AT ANY GIVEN TIME ON STRETCHER/ALUMINUM STAIR SYSTEM

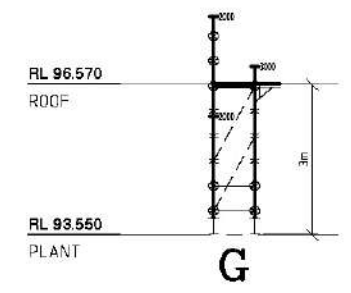
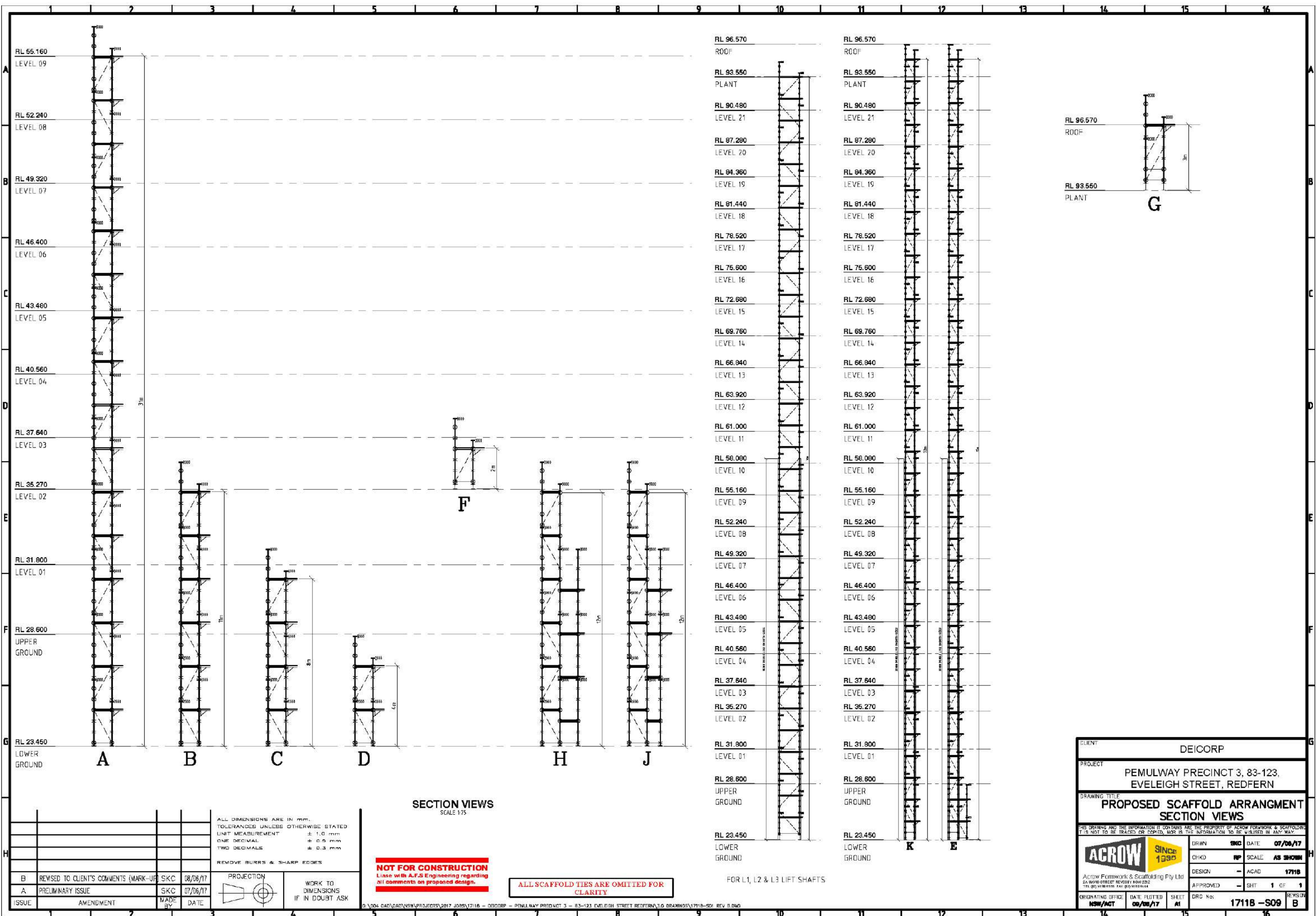
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**ALL SCAFFOLD TIES, LINK TUBES AND LAP
BOARDS OMITTED FOR CLARITY**

CLIENT		DEICORP																	
PROJECT																			
PEMULWAY PRECINCT 3, 83-123, EVELEIGH STREET, REDFERN																			
DRAWING TITLE																			
PROPOSED SCAFFOLD ARRANGEMENT PLAN VIEW AND NOTES																			
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		<table border="1"> <tr> <td>DRWN</td> <td>SKC</td> <td>DATE</td> <td>07/06/17</td> </tr> <tr> <td>CHKD</td> <td>RP</td> <td>SCALE</td> <td>AS SHOWN</td> </tr> <tr> <td>DESIGN</td> <td>—</td> <td>ACAD</td> <td>17118</td> </tr> <tr> <td>APPROVED</td> <td>—</td> <td>SHT</td> <td>1 OF 1</td> </tr> </table>		DRWN	SKC	DATE	07/06/17	CHKD	RP	SCALE	AS SHOWN	DESIGN	—	ACAD	17118	APPROVED	—	SHT	1 OF 1
DRWN	SKC	DATE	07/06/17																
CHKD	RP	SCALE	AS SHOWN																
DESIGN	—	ACAD	17118																
APPROVED	—	SHT	1 OF 1																
Acrow Formwork & Scaffolding Pty Ltd 20 MARAIS STREET, REDFERN NSW 2145 TEL (02) 9780 6555 FAX (02) 9780 0644																			
ORIGINATING OFFICE NSW/ACT	DATE PLOTTED 09/06/17	SHEET A1	DRG No: 17118 -S07																
			REVISION B																



SECTION VIEWS
SCALE 1:75

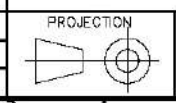
ALL DIMENSIONS ARE IN mm.
TOLERANCES UNLESS OTHERWISE STATED
UNIT MEASUREMENT ± 1.0 mm
ONE DECIMAL ± 0.5 mm
TWO DECIMALS ± 0.3 mm
REMOVE BURRS & SHARP EDGES

NOT FOR CONSTRUCTION
Liaise with A.F.S Engineering regarding
all comments on proposed design.

ALL SCAFFOLD TIES ARE OMITTED FOR CLARITY

FOR L1, L2 & L3 LIFT SHAFTS

B	REVISED TO CLIENT'S COMMENTS (MARK-UP)	SKC	08/06/17
A	PRELIMINARY ISSUE	SKC	07/06/17
ISSUE	AMENDMENT	MADE BY	DATE

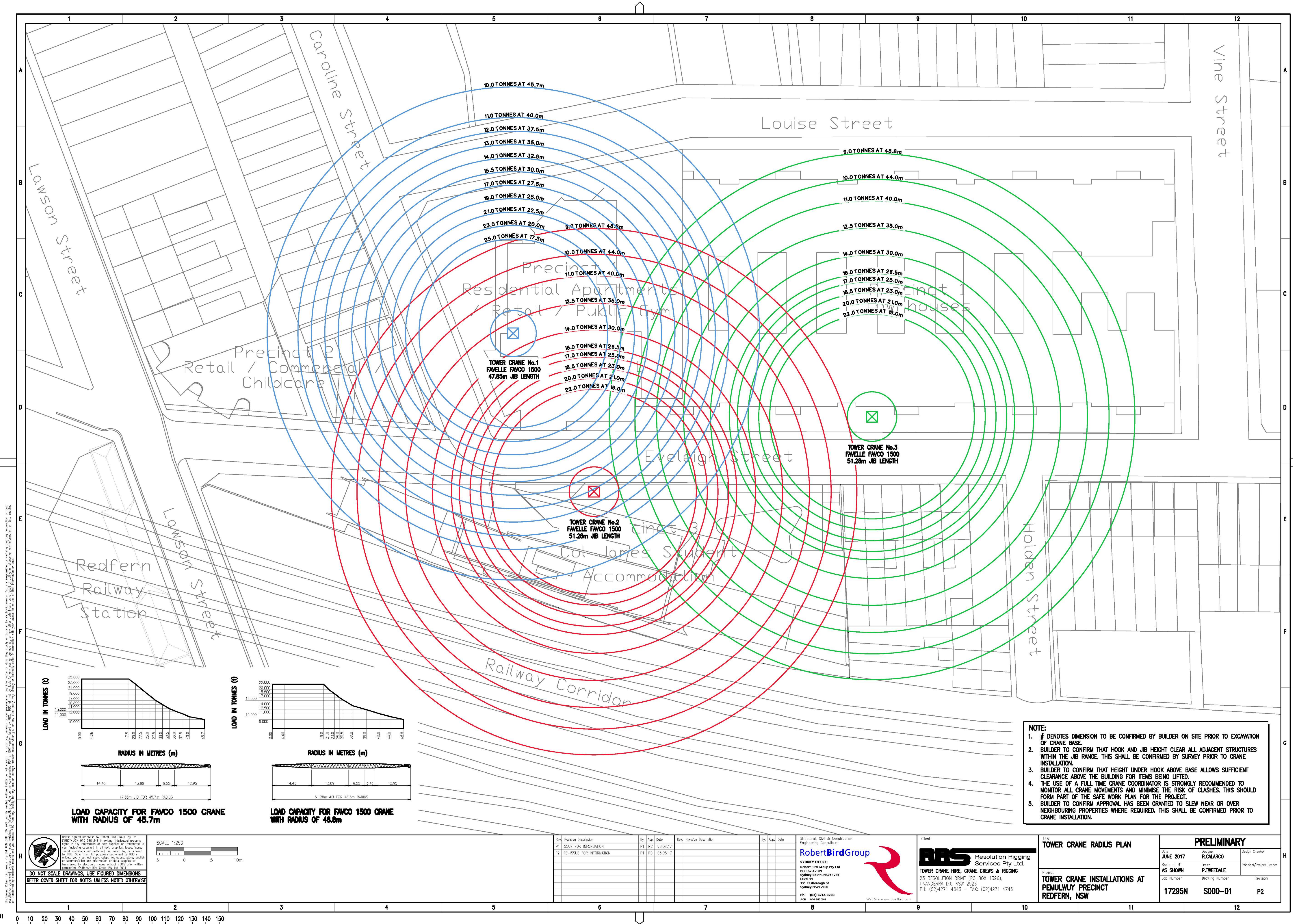


WORK TO
DIMENSIONS
IF IN DOUBT ASK

CLIENT	DEICORP		
PROJECT	PEMULWAY PRECINCT 3, 83-123, EVELEIGH STREET, REDFERN		
DRAWING TITLE	PROPOSED SCAFFOLD ARRANGMENT SECTION VIEWS		
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	DRWN	SKC	DATE 07/06/17
	CHKD	RP	SCALE AS SHOWN
	DESIGN	-	ACAD 17118
	APPROVED	-	SHT 1 OF 1
ORIGINATING OFFICE	DATE PLOTTED	SHEET	DRG No: 17118-S09
NSW/ACT	08/06/17	A1	REVISION B

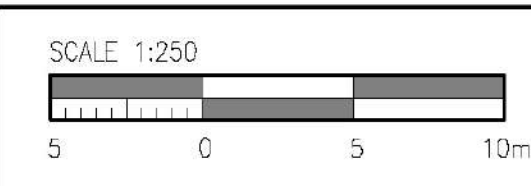
Annexure C Crane Radius Plan

**Drawing - Robert Bird Group Tower Crane Installations @ Pemulwuy Precinct
Redfern NSW , 17295N-S000-01-P2**



- NOTE:**
- 1. # DENOTES DIMENSION TO BE CONFIRMED BY BUILDER ON SITE PRIOR TO EXCAVATION OF CRANE BASE.
 - 2. BUILDER TO CONFIRM THAT HOOK AND JIB HEIGHT CLEAR ALL ADJACENT STRUCTURES WITHIN THE JIB RANGE. THIS SHALL BE CONFIRMED BY SURVEY PRIOR TO CRANE INSTALLATION.
 - 3. BUILDER TO CONFIRM THAT HEIGHT UNDER HOOK ABOVE BASE ALLOWS SUFFICIENT CLEARANCE ABOVE THE BUILDING FOR ITEMS BEING LIFTED.
 - 4. THE USE OF A FULL TIME CRANE COORDINATOR IS STRONGLY RECOMMENDED TO MONITOR ALL CRANE MOVEMENTS AND MINIMISE THE RISK OF CLASHES. THIS SHOULD FORM PART OF THE SAFE WORK PLAN FOR THE PROJECT.
 - 5. BUILDER TO CONFIRM APPROVAL HAS BEEN GRANTED TO SLEW NEAR OR OVER NEIGHBOURING PROPERTIES WHERE REQUIRED. THIS SHALL BE CONFIRMED PRIOR TO CRANE INSTALLATION.

DO NOT SCALE DRAWINGS. USE FIGURED DIMENSIONS. REFER COVER SHEET FOR NOTES UNLESS NOTED OTHERWISE



Rev	Revision Description	By	App	Date	Rev	Revision Description	By	App	Date
P1	ISSUE FOR INFORMATION	PT	RC	08.02.17					
P2	RE-ISSUE FOR INFORMATION	PT	RC	08.06.17					

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TOWER CRANE RADIUS PLAN				PRELIMINARY		
Date	JUNE 2017	Designer	R.CALARCO	Design Checker		
Scale of B1	AS SHOWN	Drawn	P.WEEDALE	Principal/Project Leader		
Job Number	17295N	Drawing Number	S000-01	Revision	P2	

Annexure D Natform Screen Details

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AN INNOVATIVE IDEA

Since formation in 1989, the Company has experienced strong growth reflecting market acceptance. 100% Australian owned Natform is now the leading designer and hirer of screen systems for the construction industry.

Natform screens continue to offer the industry savings in time and labour without compromising site safety. Large developers and constructors recognise the site efficiencies from using screens. This is occurring more than ever before, particularly in the low rise buildings.

DESIGN IN FOCUS

Natform's highly skilled staff continually deliver design solutions to satisfy the demands of the diverse construction industry.

Through their experience, Natform's team has a true understanding and knowledge of the relationship between the site structure, finishing works and screen system.

Maintenance of new designs and engineering standards allows larger construction companies to benefit from the inherent advantages of screens.

ENJOY A VERSATILE SYSTEM

With flexible and innovative Natform designs, there are few limitations on building companies that use the screen system.

Natform accommodates screens in a vast diversity of low, mid and high rise projects including;

- Shopping Complexes
- Residential Buildings
- Commercial Offices
- Hospitals
- Car Parks
- Bridges

An extensive range of specialised fittings has enabled the Natform screens to be utilised in applications previously regarded as not being suitable such as;

- Building extensions and refurbishments
- Excavation zones
- Train Stations
- Construction zones

Versatility has been demonstrated with the expanded role of screens in steel framed buildings and for finishing trades. There are very few construction sites that cannot be handled by Natform Screens.

Screen stock availability is an integral part of the Company operation. Natform's expanded and upgraded storage yard permits delivery at relatively short notice.

SIGNIFICANT BENEFITS

- Simple design means faster installation, lifting and removal
- The labour requirements are substantially lower
- Natural light is not restricted
- No onsite maintenance is required
- Screens are controlled by the Client allowing for better site coordination and also eliminates the need for another trade
- Due to ease of operation, construction speed is increased
- Valuable ground storage space is available for access
- Loading platform positions are flexible
- There is unobstructed access for cladding
- The installation of architectural awnings is possible at an early stage of the construction cycle.

Screens have proven to be a cost effective and safer overall solution in most applications.

SCREEN SYSTEM APPLICATIONS