

**PRELIMINARY  
CONSTRUCTION  
MANAGEMENT PLAN  
ROZELLE VILLAGE PROJECT**

February 2012

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# 1 GENERAL

## 1.1 Introduction

This plan sets out the proposed site access and construction management requirements for the site works of the Rozelle Village Project.

The project will be under the control of a head contractor who will be appointed after the approval is granted for the Project Application. Upon appointment and once familiar with the site and having developed a final detailed methodology for the construction of the Rozelle Village project, the contractor will prepare and submit a detailed construction management plan. It is anticipated the detailed plan will be based upon this plan.

This construction management plan (CMP) is a preliminary plan which has been prepared to give an outline of the processes to be employed during construction of this project. Prior to the on-site activities commencing, this plan will be revised by the contractor and expanded to provide a project specific site management plan, incorporating:

- Operational Health & Safety (OH&S) Management Plan;
- Environmental Management Plan including Waste Management Plan and
- Pedestrian and Traffic Management Plan.

## 1.2 Description of the Works

The proposal involves the comprehensive redevelopment of the site to accommodate a mix of commercial and residential uses. The scope of the proposal includes:

- Demolition of all existing buildings and structure and site remediation.
- Excavation to provide eight basement levels (to a depth of RL12.0m) providing bicycle and car parking, loading bays, plant room, speciality retail space, a supermarket and ancillary spaces.
- Construction of a podium level comprising speciality retail, restaurants, gym, home offices, medical centre and new premises for the Balmain Leagues Club.
- Construction of two residential towers above podium level (to a maximum height of RL145m) comprising a mix of 1, 2 and 3 bed apartments.

The anticipated duration of the works, including demolition, excavation and construction is 42 months. The final development is expected to be fully operational by 2016.

## 1.3 Objective

The objective of this plan is to provide an outline of the procedures and mechanisms that will be employed on this project during construction in order to minimise the impact on the local community and public transport arrangements, as well as to ensure safety of the public and to protect the environment.

The planned development and the construction required for the two residential towers means that facility is unlikely to have any staged opening prior to practical completion of the whole project. During the design development stage and in discussions with future contractors this process will be analysed in a greater depth to see whether it is possible to provide an opening of some of the retail component of the project including the relevant loading dock and car parking facilities in an appropriate manner in providing the staged facility with a safe, secure and functional operation.

## 1.4 The Site

The site is bounded by Victoria Road to the North, Waterloo Street to the South, Darling Street to the East and private properties to the West.

On the footprint of the site are several buildings, being the (currently vacant) Balmain Leagues Club, some properties used for commercial purposes, vacant dwellings and a public car park (currently operated by Leichhardt Council).

Immediate neighbours are residential and commercial properties facing both Waterloo St and Victoria Rd as well as commercial properties on Darling Street, the latter separated by a right-of way laneway from the site.

## **2. SITE MANAGEMENT**

### **2.1 Site establishment**

The contractor will provide all necessary accommodation, material handling and secure storage for its operations.

The facilities to be provided and maintained by the contractor will include:

- construction plant,
- hoisting equipment and cranes,
- scaffolding, platforms, access ladders, barriers, handrails,
- barricades and hoardings (including B-class),
- temporary driveways, road crossovers and construction zone,
- 24/7 emergency vehicle access,
- on-site hardstand areas for vehicle loading and unloading,
- storage sheds and compounds,
- rubbish sorting areas,
- site amenities with all required equipment and facilities,
- construction worker accommodation,
- First Aid facilities,
- site administration accommodation,

Construction plant and site amenities will comply with the requirements of all relevant authorities and be wholly contained within the hoarded site. All construction plant and equipment will be progressively removed when no longer required.

First Aid facilities for the use of all workmen in the form of a fully provisioned first aid shed with life-saving and safety equipment as required by relevant statutes, authorities and awards will be maintained at all times by the contractor.

The contractor will obtain all required permits, pay the applicable fees and comply with all conditions.

Leichhardt Council and other authorities including WorkCover will be notified of commencement of construction works one week prior to commencement.

### **2.2 Hoarding and Fences**

Prevention of unauthorised access to the site is a very high priority and will be vigorously managed throughout the construction period. When the contractor is appointed, the site will be secured with site barriers and hoardings in accordance with the final construction management plan. Any hoardings and signboards to the perimeter of the site will comply with the requirements of the relevant authorities, Occupational Health and Safety Act and NSW Workcover.

The contractor will be required to erect a single project signboard to the hoarding at the main entrance points to identify the site.

## **2.3 Services relocations and temporary protection of public domain**

Prior to any works commencing on site, detailed dilapidation reports will be carried out to properties and buildings adjoining the site.

Further dilapidation reports will be carried out for footpaths, kerbs, road pavements and utility infrastructure features of the main access routes in immediate vicinity to the site.

The contractor will provide protection to existing surrounding building elements potentially impacted by the works. Protection may be in the form of screened hoardings, scaffolding and fencing, taped drop sheets and the like, all installed prior to commencement of the demolition works.

The type of required hoardings, scaffolding and fencing will vary over the duration of the works, depending on how the site activities potentially impact on the adjoining public domain and neighbourhood.

The project geotechnical report recommendations will be reviewed in light of any requirements for temporary underpinning of foundations to adjoining buildings. If deemed to be required, any works will be designed and certified by qualified engineers.

'Dial-before-you-dig' enquiries and detailed services location investigations shall be carried out to identify any need for temporary protection of elements of existing utility infrastructure that are not to be diverted as part of the works.

All temporary protection is to be installed and maintained during the duration of the works until they are no longer required.

The existing electrical substation located within the existing Balmain links the building, supplies the existing league club as well as properties on the west side of Victoria Road. A temporary kiosk substation is required to be established on-site to supply the other Ausgrid customers currently connected and to provide construction power in the short term. This kiosk is proposed to be located on Darling Street laneway. As part of this substation works, a temporary HV pit and duct system is also required to be established from Victoria Road.

## **2.4 Parking**

Cognisance is taken of the fact that there is very limited public parking available in the vicinity of the site, and accordingly all contractor site staff and construction workers will be encouraged to make use of the existing public transport provisions.

Other options include car pooling and small bus hire by the workers' companies for the purpose of transporting workers from and to the site will be made a high priority during the construction tender as well as each subcontract tender.

There will be no parking on site.

## **2.5 Major Plant and Equipment**

Plant and equipment used during the entire works are:

- Articulated and rigid trucks
- Piling rigs, bulldozers, excavators, backhoes, with ancillary equipment (rock hammers or saws)
- Fixed tower cranes (with mobile cranes for set up and removal)
- Concrete delivery trucks
- Concrete pumps
- Man and material hoists
- Scissor, boom and fork lifts

The preliminary construction methodology in Appendix A describes the associated processes in more detail.

All plant and equipment will be operated by experienced and qualified personnel with the appropriate registrations.

It may be required to set up the tower cranes from the street using mobile cranes, and these works will be coordinated with NSW Transport Roads and Maritime Services (formerly the RTA) and Leichhardt Council as required.

A detailed crane analysis will be prepared for verification of the safe load parameters. No loads will be lifted over the public domain or adjacent properties.

## **2.6 Construction Hours**

The hours of construction, including the delivery of materials to and from the site, shall be as follows:

- A) Between 7:00am and 7:00pm, Monday to Fridays inclusive;
- B) Between 7:00am and 4:00pm, Saturdays; and
- C) No work on Sundays and public holidays.

# **3 TRAFFIC MANAGEMENT**

## **3.1 Site Traffic, Traffic and Pedestrian Management**

The contractor will prepare a detailed construction traffic management plan and ensure the appropriate allocation of resources to manage vehicle and pedestrian traffic around the site, ensuring the safety and security all persons moving in proximity of the Rozelle Village site.

The anticipated truck movements from and to the site in relation to the preliminary programme for the works are nominated in the preliminary construction methodology of Appendix A and further addressed in a separate Traffic Impact Assessment by Halcrow.

The detailed construction traffic management plan will consider the recommendations of this traffic impact assessment, in particular with respect to Victoria Road public transport and general traffic constraints.

Heavy vehicle movements will be predominantly focused on Victoria Road, so that the traffic impact on neighbouring residential areas is contained.

The construction site will be delineated by means of hoardings and lockable gates with screened fencing at the entry and exit points. The Contractor will pay particular attention to pedestrian traffic and safety at the entrances. Trained traffic Control Personnel will be employed by the Contractor to manage site access.

All vehicles will enter and exit the site in a forward direction. Pedestrians will have right of way. If required, alternate pedestrian routes around the site will be created and clearly signed.

Depending on the progress of the works and temporary constraints imposed by the construction methodology, the location of access and exit points to the site will vary.

The preliminary construction methodology in Appendix A provides further detail.

## 4. ENVIRONMENTAL MANAGEMENT

The contractor will be required to develop a detailed project environmental management plan to satisfy the requirements of "AS/NZS ISO 14001:2004, Environmental management systems – Requirements with guidance for use". It will establish guidelines and controls for all activities that may impact on the surrounding environment for the duration of the works, including; air, water, land, natural resources, flora, fauna, humans, and their interrelation.

The project environmental management plan is to be developed to enable to all personnel with the means to understand their responsibilities and to meet the contractor's statutory, contractual and procedural obligations relating to environmental management.

The project environmental management plan will seek to comply with the requirements as set out in the NSW Government Environmental Management Systems Guidelines (2009) - Part 3; "Environmental Management Plans". For each activity the environmental aspects and associated actual and potential impacts are to be identified as they relate to the following environmental elements:

- Emissions to Air;
- Releases to Water;
- Releases to Land;
- Use of Raw Materials & Natural Resources;
- Use of Energy;
- Waste and Bi-Products;
- Community & Neighbours;
- Flora & Fauna; and
- Heritage & Cultural.

### 4.1 Hazardous Materials & Decontamination

Prior to the contractor being appointed, a detailed investigation of the existing site will be carried out to identify both any contamination in the soil and hazardous materials in the existing buildings.

Samples will be taken and analysed, and the report will contain recommendations for the removal procedures of any identified materials.

The contractor may be responsible for the control and decontamination of hazardous substances. Handling, use, isolation, removal and disposal of any such substances encountered during the execution of the works, will be undertaken in accordance with statutory requirements.

Demolition and excavation works will each address the requirements of this investigation report and verify the treatment and removal of all hazardous materials and contamination encountered during the works.

### 4.2 Stormwater and Waste Water Management

Stormwater and waste water management will be included in the contractor's project environmental management plan and the control measures documented in the plan will be implemented during the works.

The purpose of these procedures is to ensure that stormwater and waste water run off is managed and that there is no off site environment impact caused by overland stormwater flows.

The project environmental management plan will be developed in detail to include:

- Silt control on the roads;
- Discharge water from dewatering systems;

- Harvesting, treatment and disposal of rainwater within the site, during excavation and before final pavements are installed;
- Diversion of clean water;
- Treatment and disposal of waste water from general clean-up of tools and equipment; and
- Spills control.

Implemented procedures will be in compliance with the current Environmental Protection Act, Leichhardt Council and Sydney Water requirements.

### **4.3 Waste Management**

The project green star specifications will require waste management practices that minimise the amount of construction waste going to disposal. The contractor is required to implement a waste management plan in accordance with the ESD specification.

Storage of materials and rubbish or carrying out of associated works will be permitted only on site in dedicated areas designated by the waste management plan. The contractor is responsible for the removal of all rubbish from the site. The contractor is to provide locations and methodology for washout zones as part of the site management plan.

The site shall be cleaned daily or more often as required to ensure minimal impact on building operations.

### **4.4 Air Quality Management**

The construction process has the potential to lead to the generation of high levels of dust or other air pollution.

The project environmental management plan controls will include items such as:

- All construction plant, equipment and vehicles are to be properly maintained and operated so as to alleviate excessive exhaust emissions;
- Good “House Keeping” on site with regular removal of loose material;
- Waste loads leaving the site are to be covered at all times;
- All dust generating construction activities are to cease during high wind conditions unless operations can be controlled by localized watering or other control means;
- The burning of waste materials and the lighting of fires will be strictly prohibited on the site at all times;
- Continual visual monitoring of the site will be undertaken by site management to ensure that works do not generate unacceptably high levels of dust;
- materials and processes will be employed to minimize possible harmful affects to air quality;
- Scaffolding is to include mesh and shade cloth to trap any wind born objects; and
- Activities which produce airborne particles are to be done in enclosed spaces e.g. spray painting.

### **4.5 Dust, Vibration and Noise Control**

The contractor shall provide a methodology for the notification of disruptive activities prior to commencement of the works.

Dust from the works is to be dampened and contained within the site, as a minimum standard in accordance with OH&S and Workcover requirements. Community consultation may determine greater measures to be taken.

The contractor shall arrange the programming of the works so as to prevent, as far as practicable, excessive and nuisance noise reaching neighbouring buildings. The contractor shall adopt best practice methods for noise suppression.

The contractor will utilise and ensure that the workmen and contractors employed in the works utilise best practice of noise suppression on all compressors, jackhammers and other machinery of whatsoever descriptions to ensure that the noise level emanating from the site during the execution of the works is kept to a minimum.

A construction noise and vibration management plan will be prepared to establish relevant noise criteria for the construction works (particularly in relation to impacts on the nearby residential areas) which will be monitored during construction. This plan will identify relevant recommendations so construction noise levels should not exceed the maximum amenity criteria established by relevant policies and the project approval conditions.

Control of noise and vibration will be achieved through the use of appropriately licensed and experienced contractors coupled with monitoring. Plant and equipment utilised during demolition will be required to meet relevant guidelines with regards to noise levels.

If works are planned that will exceed the construction noise objective, all sensitive receivers will be notified in writing at least 48hrs prior to the commencement of those works.

# APPENDIX A

## PRELIMINARY CONSTRUCTION METHODOLOGY

### Overview

The key issues addressed in the following preliminary construction methodology are as follows:

- The anticipated demolition, excavation and construction processes to be used, including types of machinery and materials handling;
- Expected quantities of material to be delivered and/ or removed and related truck movements;
- Access to the site;
- Storage of materials and equipment.

The Rozelle Village Site is a constrained site and the objective of this construction methodology, in conjunction with the Traffic Impact Assessment, will be to demonstrate that the proposed development can be physically constructed and that impacts on the traffic network and neighbouring properties can be adequately managed.

The estimated duration of the works is 42 months. A summary of the activities is outlined in the chart of Figure A below:

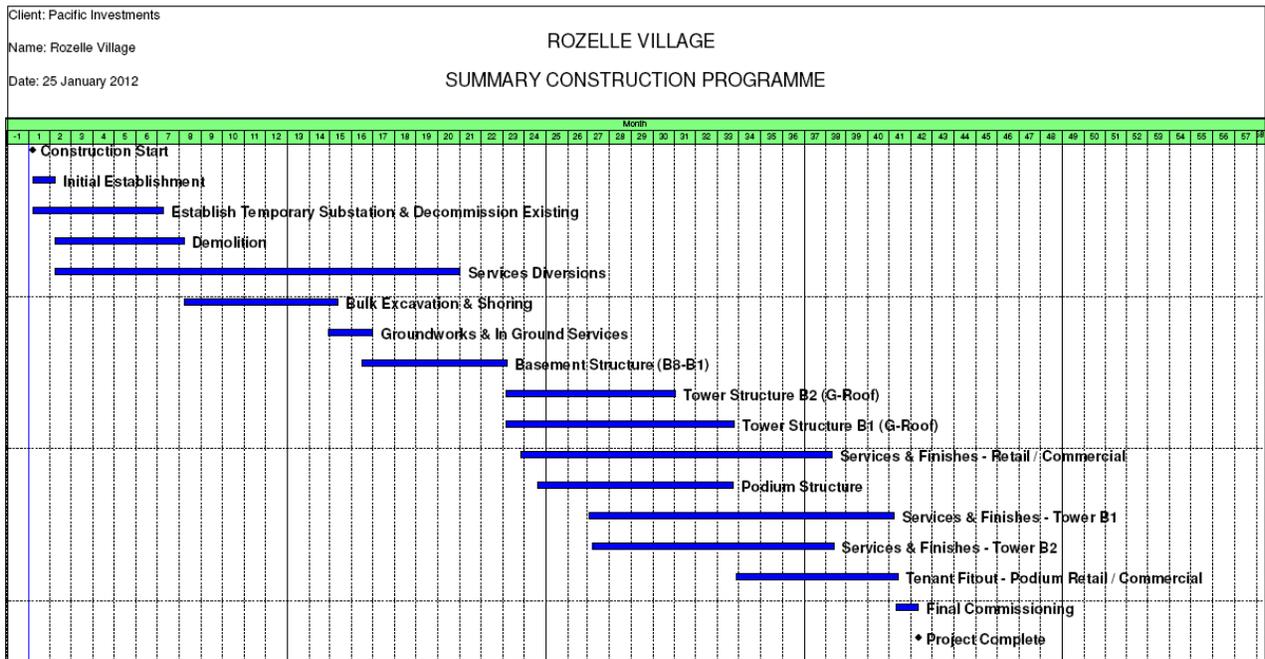


Figure A- Preliminary Construction Program overview

The main phases of the project can be summarised as follows:

1. Services relocation, installation of alternative sub station and demolition
2. Excavation
3. Construction
  - Basement structure up to street level
  - Structure above street level

- Finishes and Fitout works

Each phase will require application for and issue of a Construction Certificate based on detailed design documentation to demonstrate compliance of the project's design with the Building Code of Australia and the Project Approval conditions.

Each project phase will involve different activities and therefore generate different amounts of vehicle movements to either deliver or remove materials from and to site.

The anticipated truck movements in relation to the program are shown in the chart of Figure B:

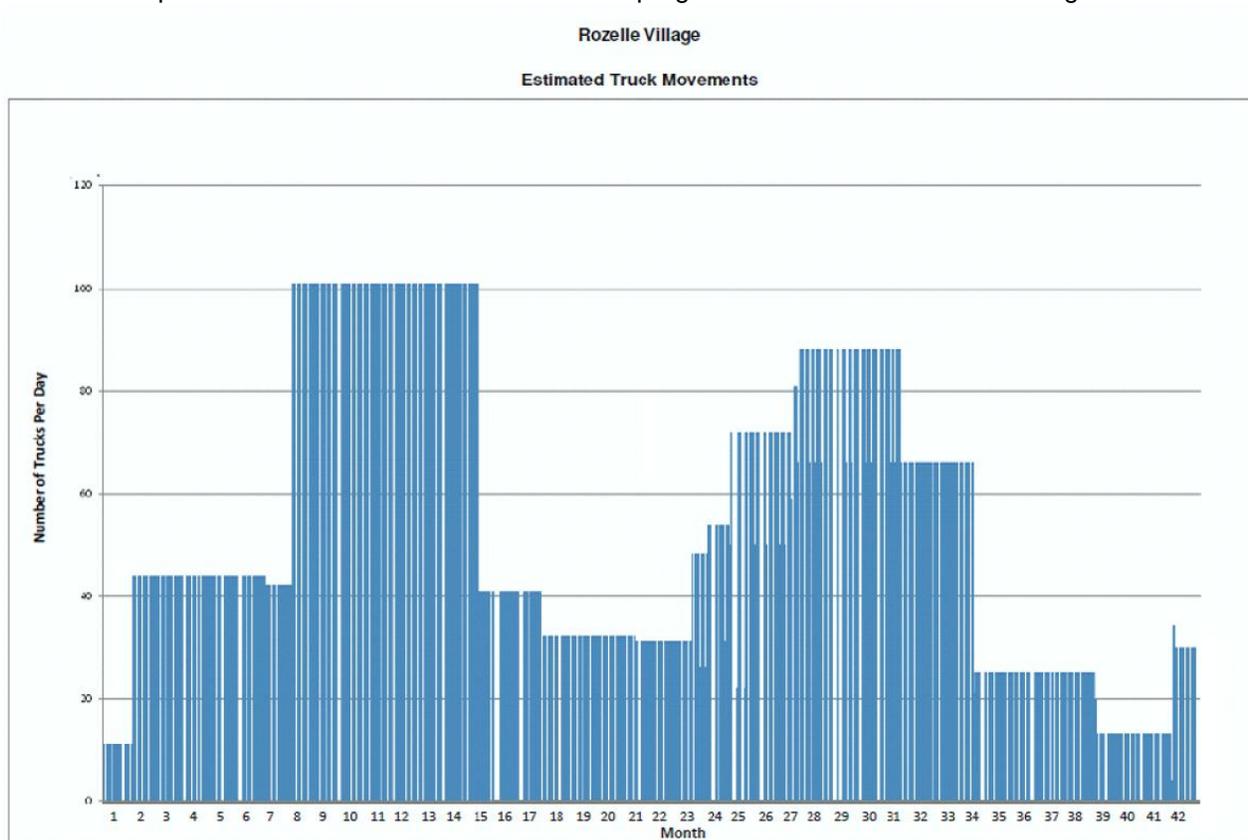


Figure B- Preliminary Truck movement histogram

The sections below discuss the programme activities and anticipated truck movements in more detail.

### Services relocation and demolition

Prior to demolition works commencing, all utilities will be turned off and made safe for any required diversion and relocation works. This will include the establishment of a temporary substation for the residential properties north of the site.

If any hazardous materials are found to be present in the existing buildings, the removal will be carried out by hand and removed from site with dedicated transport for disposal in accordance with EPA requirements.

The demolition works are expected to require the utilisation of bulldozers, rock hammers and trucks for removal of the demolished materials.

Protection to the adjacent properties and public space will be provided by means of perimeter fencing and gates, hoardings or scaffolding and shade cloths for dust control.

It is estimated that during the six month demolition period approximately 44 trucks will travel from and to site every day creating 88 truck movements per day.<sup>3w</sup>

Access to the site will be predominantly from Waterloo Street, as the existing public car park provides a suitable area to load trucks with the demolition material.

Secondary vehicle access and exit from site will utilise the existing Balmain Leagues Club car park entry off Victoria Road.

Both access points will negate the need to create a construction zone on the street, as shown in the site diagram in Figure C below.

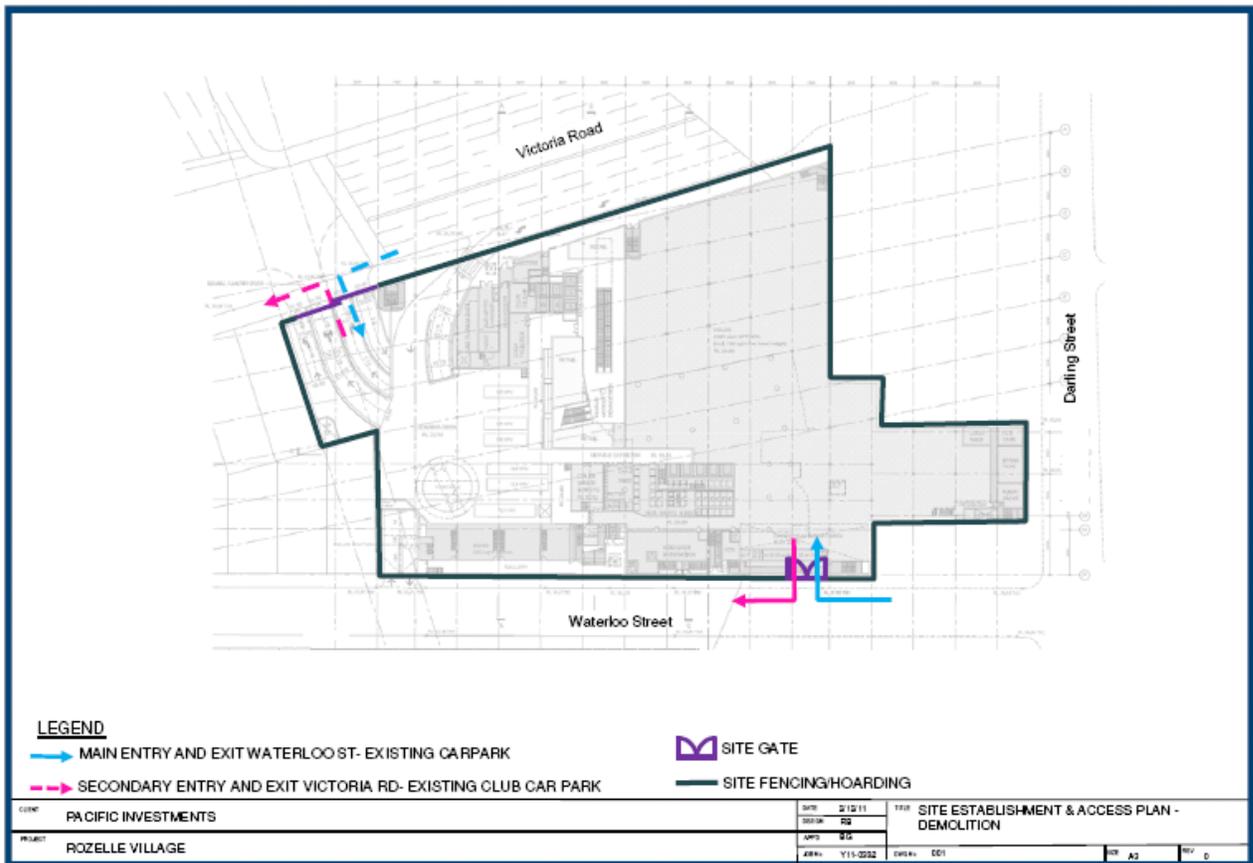


Figure C- Site establishment and access plan- Demolition

## Excavation and contamination removal

This work will be carried out over nine months and involve removal of paving and foundations, underlying fill, rock ripping and cutting, loading and removal as well as in-ground works installation.

An excavation retention or shoring system will be installed in accordance with an approved geotechnical and structural design to enable the excavation to progress and in-ground services installation to proceed. As excavation deepens, ramps will be created into the excavated area, leaving a shelf area between the site entry and exit points. This shelf area will be excavated last, with the site retention to the northern boundary progressively completed at the same time.

During excavation, heavy earthmoving equipment such as bulldozers, backhoes and excavators and trucks will be active on site. The shoring works will be carried out using piling rigs, drills, concrete trucks and pumps.

The anticipated volume of material to be removed is 215,000m<sup>3</sup>, which is the equivalent of 500,000 tonnes. This requires approximately 100 trucks travelling to and from site each day as shown in Figure B creating 200 truck movements per day. [as per comment above, is this in effect 200 truck movements or 50 in and 50 out?].

Spoil from the excavation will be predominantly loaded within the site boundary. Trucks will enter from Waterloo Street and then leave the site at Victoria Road, as shown on Figure D below. During the last stage of excavation, the construction zone along the site's Waterloo Street frontage needs to be established as well as the first crane on site.

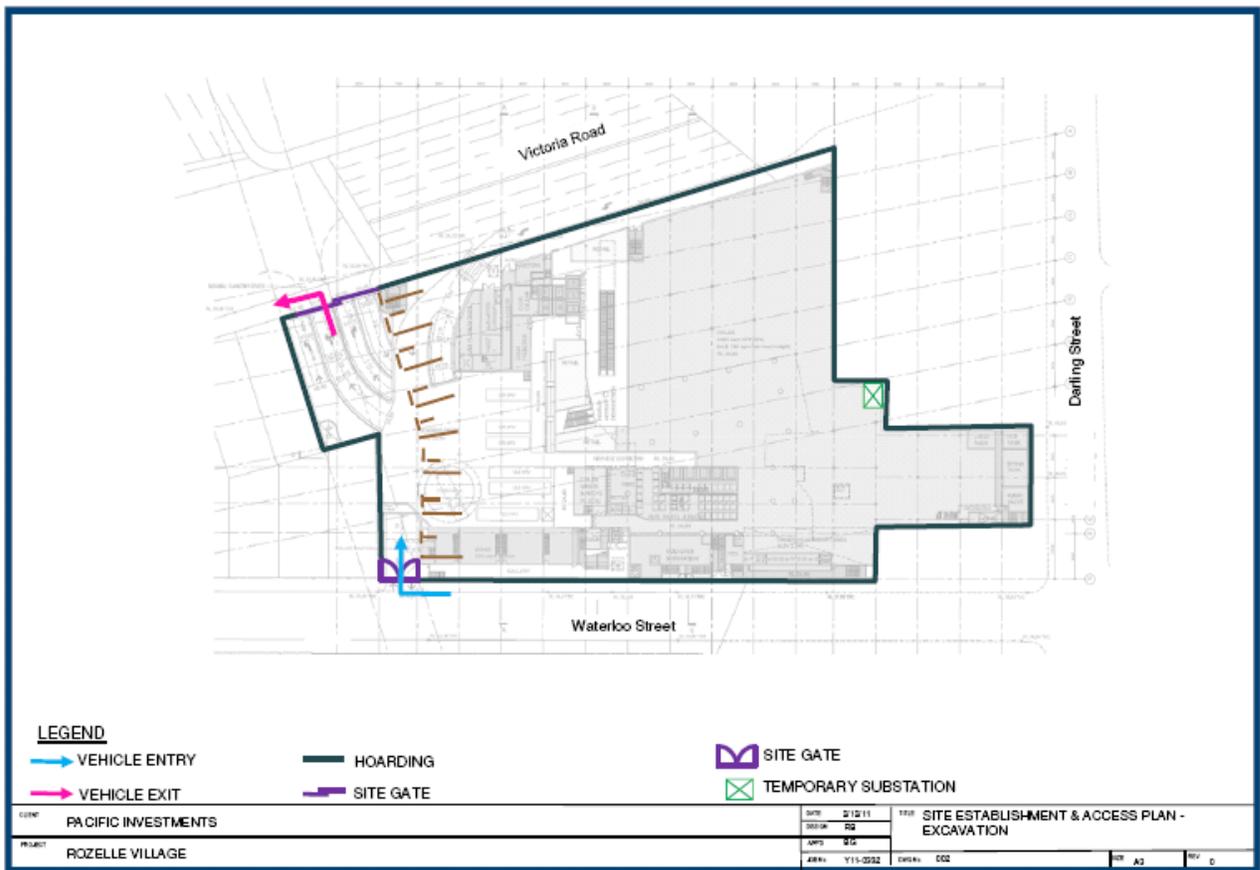


Figure D- Site establishment and access plan- Excavation

## Construction

### Basement structure up to street level

Following installation of the in-ground services, the structural works will commence with the installation of the foundations for the building. The works will continue with the construction of the carpark columns, slabs and ramps, as well as lift and stair cores that will provide lateral stability to the tower structure.

The structure will utilise conventionally reinforced concrete for the vertical elements as well as post-tensioned concrete for the slabs, beams and ramps. The concrete profile will be created with a formwork system.

All building services requirements will be designed and integrated at this stage by providing adequate plant room load provisions and penetrations and associated riser space for services reticulation.

This phase of the works is expected to take seven months and the following equipment will be used:

- Articulated and rigid trucks
- Fixed tower cranes (with mobile cranes for set up and removal)
- Concrete delivery trucks
- Concrete pumps
- Man and material hoists
- Scissor and boom lifts
- Fork lifts

The expected truck movements over this period of time vary between 30 and 40 trucks per day, depending on the progress phase of the construction works.

Construction traffic will approach the site from Waterloo Street and park in the construction zone along the site frontage. Traffic can leave the site on Waterloo Street towards either Darling Street or Moodie Street.

All material deliveries will be unloaded by tower cranes from trucks in the construction zone on Waterloo Street until the works reach adjacent street levels.

To access the construction zone on Waterloo Street, site deliveries will have to approach the site from the northern end of Waterloo Street via Victoria Road and Moodie Street and leave the construction zone towards Darling Street.

Site related details are shown in Figure E below, with the location of the cranes to be confirmed following completion of a crane analysis. Drop areas for forklift distribution of materials into the basement levels will be determined in conjunction with the crane analysis.

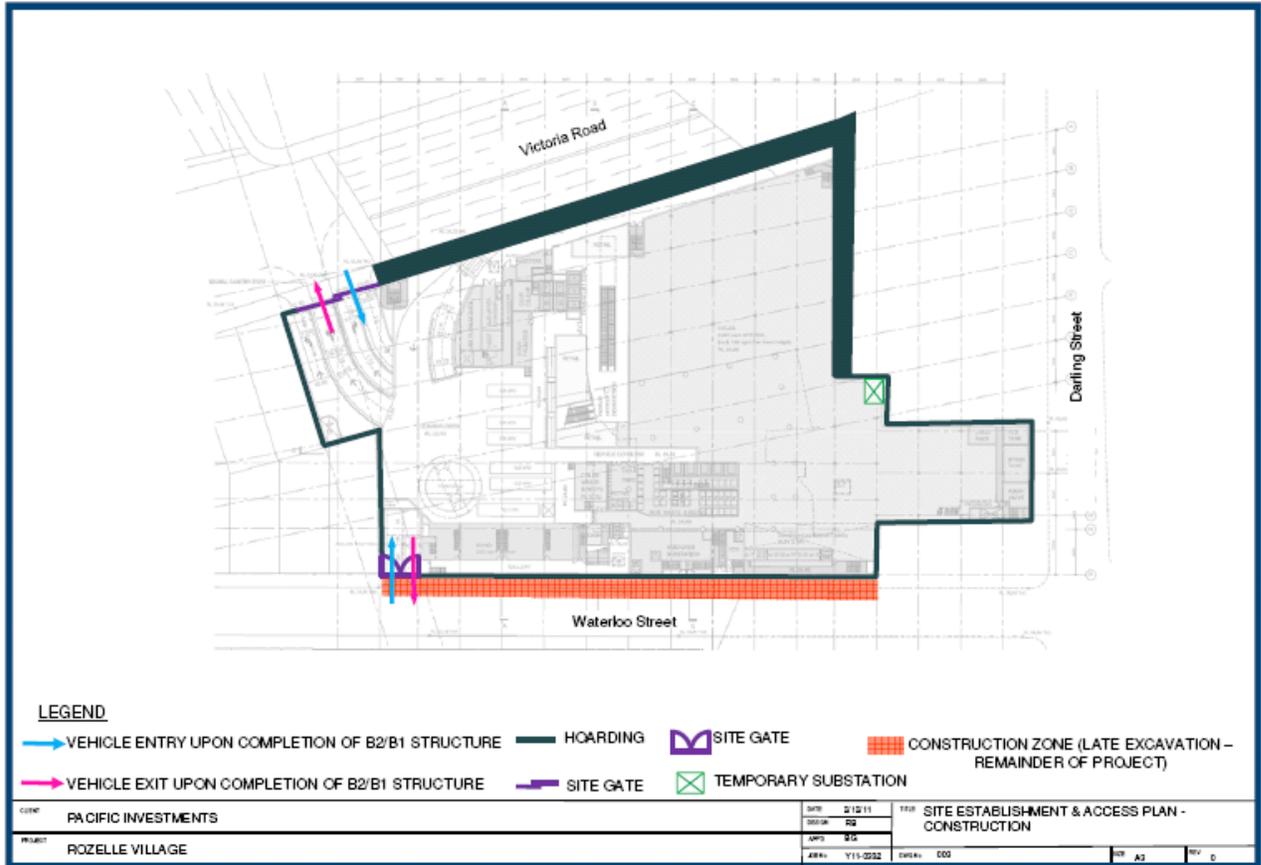


Figure E- Site establishment and access plan- Construction

### Structure above ground

Once construction advances for the carpark ramps to reach adjacent street levels, the ground floor will be utilized as much as feasible as a loading and materials handling area to avoid parking and loading on the roadway.

The construction zone on Waterloo Street will remain in place, and the adjacent access point at the carpark entry ramp will be used if feasible. Additional vehicular ingress is from Victoria Road, after temporary footpath crossovers have been established as shown in Figure E. From there, both the ground floor loading dock and the basement 1 area will be utilised for materials handling. Depending on the progress of the works and temporary constraints imposed by the construction methodology, the frequency of use of both site access points will vary.

As the tower structure progresses, the finishes and fitout works to the basement levels will commence. This will add mainly masonry, mechanical ductwork, some plant and equipment and other services related items to the materials to be delivered to site. Loading platforms and man and materials hoists will be introduced to the tower structure.

The podium structure will be delayed as much as the critical path of the program allows. Once the podium structure works commence, the use of the ground floor loading dock will become restricted again.

Anticipated truck movements will increase to approximately 50-88 vehicles per day over a 12 months period as shown in Figure A and B. The peak of 88 vehicles per day will extend only over a four month period.

## **Finishes and Fitout**

These works will commence concurrently with the ongoing structural works and extend for another nine months after the structure of the tower is completed. The anticipated vehicle movements will drop to between 15 and 30 trucks per day as shown in Figure A and B.

Material delivery will continue to use the Waterloo Street construction zone, as well as the ground floor loading dock.

Tower cranes and loading platforms will continue to serve the project until the façade is closed off, which will be determined by the duration of major finishes material loading onto the residential floors. The external hoists will be replaced by the use of the lifts that will be fitted out to be used as builder's lifts.

Upon project completion with all services and plant commissioned, all site fencing and hoarding will be removed and footpath areas made good and integrated into the public domain finishes as per the project documentation requirements.