7/4/2020

# CONSTRUCTION TRAFFIC MANAGEMENT PLAN, 2 GREENWICH RD, GREENWICH



AUTHOR STEVENS CONSTRUCTION PTY LTD





#### **Project Details**

Project	Details
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Report Type	Pre-DA
Project & Report Number	T-722/AS
Client	Alceon Group

#### **Report Record**

Rev	Description	Date	Prepared by	Reviewed by
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## Contents

Introduction	5
Background	6
Purpose	7
Approvals and Consultation	7
Traffic Control Signs and Devices	7
Existing Traffic Conditions	8
Site Location	8
Road System and Facilities	8
Road Network	8
Existing Traffic Flows	
Existing Pedestrian and Bicycle Facilities	
Public Transport	
Existing Train Services	
Taxi Services	
Bus Services	
Summary	
On Street and Off Street Car Parking	
Loading	
Description of Works	
Description of Works and Duration	
Stage 1 Site Establishment and Demolition	
Site Establishment	
Demolition	
Stage 2 Excavation Works	
Stage 3 Structural & Building Services Works	
Stage 4 Fit-out, Finishes & Restoration Works	
Fit-out and Finishes	
Restoration Works	
Construction details	
Construction Site Plan	



Construction Site Accesses	20
Hoardings	20
Site Fencing	20
Greenwich Road Works Zone	20
Site Facilities	24
Materials Handling	24
Mobile Cranes	24
Tower Cranes and Hoists	24
Concrete Pump and Loading	24
Waste Trucks	25
Work Hours	25
Waste Management Plan	25
Construction Vehicle Activity	26
Construction Activities	26
Stage 1 Site Establishment and Demolition	26
Site Establishment	26
Demolition	27
Stage 2 Excavation Works	27
Stage 3 Structural and Building Services Works	28
Stage 4 Fit-out, Finishes & Restoration Works	28
Fit-out and Finishes	28
Restoration Works	29
Summary of Construction Vehicle Impacts	29
Construction Traffic Management	
Construction Truck Routes	
Traffic Control	
Traffic Controllers	
Pedestrians	
Bicycles	
Bicycles Public Transport	
-	

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Taxi Ranks	
Staff Parking Impacts	
Parking Impacts	
Loss of Public Car Parking	
Summary	
Community Consultation	
Emergency Vehicle Access	
Public and Worker Safety	
Construction Traffic Measures	
Truck Management and Driver Protocols	40
Detailed Planning	
Traffic Controllers	40
Hours / Days of Operations	41
Pedestrians and Cyclists	41
Safe work method statements	41
Stakeholder Agreement and Feedback	41
Signage	41
Speed Zoning	41
Onsite Emergency Contact	
Plant	
Other	
Staff Responsibilities	42
Conclusion	44
Appendix A Plans	45



# 5

# Introduction

This Construction Traffic Management Plan (CTMP) has been prepared on behalf of Alceon Group to outline the traffic management for the works at 2 Greenwich Rd, Greenwich. The site location is shown in **Figures 1a & 1b**.



Figure 1a

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DESIGN-CONSTRUCTION-MANAGEMENT





#### Figure 1b

#### Background

This Construction Traffic Management Plan (CTMP) is in relation to the demolition of existing structures and construction of a 7 level (plus 4 underground levels plus roof level) mixed use building containing a car parking for 89 spaces & loading spaces, services, storage, commercial space, cinema, café, gallery, wellness centre, one bed, two bed and three bed units, roof top gardens, pergolas and open kitchen.

The project is located on the land described as 2 Greenwich Rd, Greenwich. Selected plans of the development are shown in **Appendix A**.

The works required on the site for the project would be broken into four stages:

- Stage 1 Site Establishment and Demolition Works
- Stage 2 Excavation Works
- Stage 3 Structural and Building Services Works
- Stage 4 Fit-out, Finishes and Restoration Works.





#### Purpose

The purpose of this CTMP is to provide a description of the works including the proposed site establishment, demolition and excavation, and construction activities. This CTMP would identify the management measures necessary to mitigate potential construction traffic implications associated with each respective stage.

The major external constraints on the project are:

- maintaining smooth traffic and pedestrian flow with minimal disruptions;
- ensure the safety of workers and the public;
- undertaking the works with minimal impact on neighbours;
- ensuring existing bus stops are collaboratively relocated or temporarily removed from service

#### Approvals and Consultation

Prior to commencing temporary modification of the traffic arrangements, further approvals will be required from Lane Cove Council and Roads and Maritime Services (RMS) including but not necessarily limited to:

- Traffic Committee Approvals;
- Temporary Lane and/or Road Closure Application;
- Application for a Works Zone;
- Permit to Stand Plant;
- Road Opening Application;
- Hoarding Application;
- Out of Hours Application;
- Any Signs and Line Marking Changes.

Other negotiations are required with:

- Sydney Buses;
- Local affected residents;
- Local affected businesses

#### Traffic Control Signs and Devices

The on-site specific traffic control management such as signage, device placement, and selection of any traffic control plans will be undertaken by traffic controllers under the instruction of the building contractor.





# **Existing Traffic Conditions**

#### Site Location

The subject site is located at 2 Greenwich Rd, Greenwich. Greenwich suburb is a residential, retail and commercial area supporting shops, restaurants, residential buildings, medical facilities and commercial development.

The site is located towards the northern end of Greenwich Road. The site is between Pacific Highway and River Road, and located directly opposite the intersection of Bellevue Avenue and Greenwich Road. The existing building has two levels of basement car parking and four levels of medical space.

The site location is shown in Figures 1a & 1b

#### **Road System and Facilities**

A site inspection was undertaken on Tuesday 03 March 2020. **Figure 2** shows the site and road network. Below is a description of the road network and local facilities.

#### Road Network

The roads surrounding the subject site are described briefly below.

- **Pacific Highway** is a national highway and major transport route that runs from east to west to the north of the site.
- **Greenwich Road** branches off to the south of Pacific Highway for destinations in the Greenwich Park and Manns Point locations;
- **River Road** branches off Greenwich Road towards Northwood suburb in the west, and in the east Crows Nest, North Sydney and Wollstonecroft;
- **Anglo Road** branches off Greenwich Road to the east between Pacific Highway and River Road. Anglo Road services predominantly residential properties.
- **Bellevue Avenue** branches off Greenwich Road to the west between Pacific Highway and River Road directly across Greenwich Road from the site. Bellevue Avenue intersects with Pacific Highway to the west of Greenwich Road intersection with Pacific Highway. Bellevue Avenue services predominantly residential properties and a few commercial properties.





Figure 2 – Road Network

**Pacific Highway** – to the North of Greenwich Road intersection there are three traffic lanes heading west, one lane being a turning lane into Greenwich Road. To the west of Greenwich Road intersection there are two lanes heading west. Pacific Highway heading east at the intersection of Greenwich Road there are three lanes. 3PM to 7PM clearway applies to Pacific Highway east of the intersection with Greenwich Road. Pacific Highway speed limited to 60km/h. There are bus stops along Pacific Highway.

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**Greenwich Road** – between the site and Pacific Highway there are two lanes in each direction. Between the site and River Road there is effectively one lane in each direction plus on road parking in both directions. Directly in front of the site is a loading zone and bus stops – one on each side of Greenwich Road. There are additional bus stops on Greenwich Road at the intersection of Anglo Road. Greenwich Road speed limited to 50km/h.

**River Road** – at the intersection of Greenwich Road River Road has two lanes in each direction. There are a number of bus stops on both sides of River Road. River Road speed limited to 50km/h. No right turn from River Road into Greenwich Road towards Pacific Highway. There are a number of roads and lanes between River Road and Pacific Highway that could be used for vehicles departing the site to return to Pacific Highway.

**Anglo Road** (not to be confused with Anglo Lane) turns east off Greenwich Road between the site and River Road. Shortly after leaving Greenwich Road it turns left and continues up the hill toward Pacific Highway. Before reaching Pacific Highway though, Anglo Road ends in a cul-de-sac. The road is a narrow road with on street parking on both sides of the road. Anglo Road services mainly residential properties.

**Bellevue Avenue** turns west off Greenwich Road directly opposite the site. Bellevue Avenue is a narrow avenue with one lane in each direction. Restricted on street parking on both sides of the avenue. Bellevue Avenue speed is limited to 40km/h. There is a restriction on vehicles 3T and over – these vehicles are not permitted into Bellevue Avenue.

#### **Existing Traffic Flows**

No specific analysis was carried out for this CTMP, however, the following websites were checked and the information in the table below was extracted.

- Roads and Marine Services NSW
- Lane Cove council
- North Sydney Council

#### **Table 1 Traffic Volumes**

Street	Volume (vehicles per hour)
River Road	1,600 – 1900 (two-way)
Greenwich Road	No data available
Pacific Highway	3,500 - 4,100 (two-way)
Bellevue Road	No data available
Anglo Road	No data available
Anglo Lane	No data available

#### Existing Pedestrian and Bicycle Facilities

There are full width footpaths located on both sides of Pacific Highway, both sides of Greenwich Road, both sides of River Road, both sides of Anglo Road, and both sides of Bellevue Avenue.



There are no dedicated bicycle paths on Pacific Highway, Greenwich Road, River Road, Anglo Road or Bellevue Avenue.

Pedestrian crossings can be found at the following locations:

- Across Pacific Highway at the intersection with Greenwich Road (traffic lights);
- Across Greenwich Road at the intersection with Pacific Highway (traffic lights);
- Across Greenwich Road at the intersection with River Road (traffic lights);
- Across River Road at the intersection with Greenwich Road (traffic lights);
- Across Anglo Road at the intersection with Greenwich Road (pram ramp);
- Across Bellevue Avenue at the intersection with Greenwich Road (pram ramp and refuge island).

Pedestrian count is from a Low to Medium pedestrian traffic past the site during construction Hours.

#### **Public Transport**

#### **Existing Train Services**

The site is approximately 10 to 15 minutes' walk from St Leonards Train Station located on Pacific Highway to the east of Greenwich Road. Wollstonecraft Train Station is approximately 30 minutes' walk from the site (walk along Greenwich Road towards River Road, turn left into River Road, turn right into Russell Street, turn right into Milner Crescent and continue in Milner Crescent until Wollstonecraft Train Station is reached).

A number of different routes operate to and from St Leonards Train Station at various times. The following link will provide details of routes, days and times of operation.

#### https://transportnsw.info/stop?q=10101115#/

The following link will provide details of routes, days and times of operation to and from Wollstonecraft Train Station.

#### https://transportnsw.info/stop?q=10101114#/

#### Taxi Services

Taxi services are also available from St Leonards Train Station and Wollstonecraft Train Station.

#### **Bus Services**

Local bus services operate from the bus stops on Pacific Highway, Greenwich Road, River Road, and Anglo Rd. There are no bus stops close to the site in Bellevue Avenue.

Bus services leaving from the bus stop directly in front of the site heading towards River Road and towards Pacific Highway are indicated / listed below





**Bus Services – Route Number 265** 

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E	from Lane Cove to McMahons Point													
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#### **Bus Services Timetable**

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#### **Bus Services Timetable**



#### Summary

The site has excellent public transport facilities within walking distance to the site. Bus stops are located on the site frontage. High frequency train services also operate in walking distance to the site.

#### On Street and Off Street Car Parking

Period parking restrictions operate in the local area. Street parking is summarised below:

- Pacific Highway- Limited on street parking east of the intersection with Greenwich Road. Note that clearways apply between 3PM 7PM Monday to Friday.
- Greenwich Road- Limited on street parking on both sides of the road. A large no of cars, presumably belonging to local residents, currently park on both sides of the road.
- River Road- Limited on street parking on both sides of the road. Note that clearways apply between 6AM 10AM and 3PM 7PM Monday to Friday.
- Anglo Road- Limited on street parking on both sides of the road. A large no of cars, presumably belonging to local residents, currently park on both sides of the road, effectively reducing the width of the road to one lane.
- Bellevue Avenue- Limited on street parking on both sides of the road. A large no of cars, presumably belonging to local residents, currently park on both sides of the road.

#### Loading

An existing loading zone is located directly in front of the site on Greenwich Road. The width of Greenwich Road allows for traffic to pass the loading zone unobstructed in both directions.





# **Description of Works**

#### Description of Works and Duration

The works required on the site for the project would be broken into four stages. Total approximate duration of site works is 95 weeks.

- Stage 1
  - Site Establishment 3 weeks
  - Demolition Works 11 weeks
- Stage 2 Excavation & Substructure (basement slab on ground) Works 16 weeks
- Stage 3 Superstructure Works 53 weeks
- Stage 4
  - Fit-out and Finishes 35 weeks
  - Restoration Works 14 weeks

Each phase would not happen in isolation. Phases 3 and 4 would happen simultaneously once the structure is sufficiently completed to allow the finishing trades to commence on lower levels. The restoration works are likely to begin after structural construction is complete and whilst the fit out and finishes are being completed. The site works are anticipated to begin in the first quarter of 2021 and be completed in early 2023.

#### Stage 1 Site Establishment and Demolition

#### Site Establishment

This stage of works would involve the establishment of fencing, erection of hoardings, signs and temporary site offices / facilities. Other preparation works would include tree trimming, removal and protection as required.

#### Demolition

The demolition of the existing buildings on site would be included in this stage of works. The demolition work involves the removal of internal fittings, demolition of building structures and demolition of existing foundations.

The demolition of buildings starts with the strip out phase. The strip out phase involves the complete removal of all fittings and fixtures and non-load bearing walls, floor finishes, ceilings, joinery items and partition walls. Once the strip out is completed, the structural demolition takes place with brick, concrete and steel demolished and then removed from the site.

The protection to adjacent properties and public space will be provided by means of perimeter fencing, gates, hoardings, and shade cloths for dust control.





#### Stage 2 Excavation Works

Excavation works involve the removal and loading of spoil onto truck and trailers. During excavation, heavy earthmoving equipment such as bulldozers, backhoes, excavators and trucks would be active on the site.

An excavation shoring system would be installed in accordance with geotechnical and structural design to enable the excavation work to be completed. In ground services installation will commence after completion of bulk excavation.

Piling would involve the delivery of concrete and materials to site. The shoring and piling works would be carried out using piling rigs, drills, concrete trucks and concrete pumps.

#### Stage 3 Structural & Building Services Works

Following the installation of the in-ground services, structural works would commence with the construction of basement levels, and thereafter the superstructure works would be undertaken.

The following vehicles, plant and equipment would be used:

- articulated and rigid trucks;
- mobile cranes;
- fixed tower crane (mobile cranes for set up / removal);
- concrete delivery trucks;
- concrete pumps;
- man and material hoists;
- scissor and boom lifts; and
- fork lifts.

#### Stage 4 Fit-out, Finishes & Restoration Works

#### Fit-out and Finishes

As the construction of the structure continues, the building services work and initial finishes would begin and continue concurrently with the structural works. The building services work includes installation of mechanical, electrical, fire, hydraulic and other services. Initial finishes work includes masonry, plasterboard, joinery and tiling.

#### **Restoration Works**

When the building is complete, and the tower crane has been removed, the hoardings will also be removed. This will allow the external works to be completed.

The works will include reconstruction of the crossover, footpath, kerb and gutter, laybacks and associated road adjustments.





# **Construction details**

#### **Construction Site Plan**

Construction Site Plans have been prepared for the works and are shown in **Figure 3** The plans show the location of the site facilities, fencing, site accesses, hoardings and the like. Other important features that are indicated on **Figure 3** are the two proposed work zones, namely "onsite work zone" and off-site work zone". These two works zones will be referenced often in the pages that follow.

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Figure 3 – Work Stages 1 - 4



#### **Construction Site Accesses**

Initially during Stages 1 and 2, all construction plant and vehicles would access the site via Pacific Highway turning into Greenwich Road. From Greenwich Road vehicles would reverse into the site (on-site work zone). Vehicles would exit the site from the same entry/exit turning left into Greenwich Road. From Greenwich Road vehicles would turn either left or right into River Road.

At the end of Stages 1 and 2 all vehicles would need to be loaded (and unloaded) on Greenwich Road to enable demolition and excavation to be completed in the NW corner.

Initially during Stage 3 all vehicles would be loaded (and unloaded) on Greenwich Road to enable basement construction, lower ground floor construction, and ground floor slab construction to be completed. After completion of ground floor structural works, all slabs below (and including) ground floor will be back propped, then loading and unloading would be done from the on-site work zone north of the site (highlighted orange in **Figure 3** for the remainder of construction.

#### Hoardings

Hoardings (A class) would be erected during stage 1 along Greenwich Road (west of site) and to the north of the shared entrance. A temporary gate will be installed to allow vehicle access.

The hoarding will be maintained until the commencement of restoration works (stage 4). During restoration works the A class hoarding will be replaced with temporary fencing.

#### Site Fencing

On the east side of the excavation between the neighbouring houses and the site, and on the southern side of the site, a 2.4m high temporary fence will be installed. The site will be fenced using Best Practice Methodology.

The following indicative issues will be considered with regard to site fencing.

- Attach shade cloth to the site fencing to control views and manage dust where necessary.
- The perimeter fencing would be kept tidy throughout the programme of works.
- Safety fences would be erected throughout the site/works as necessary.

On completion of the restoration works the temporary fencing will be removed.

#### Greenwich Road Works Zone

Loading and unloading areas are required throughout the works for the removal of demolished materials and spoil and the delivery of materials, concrete and the like. These activities will be managed by the provision of a temporary off-site works zone throughout Stages 1 to 4 of the works, even though the current shared access would be used. There will be times when both loading/unloading zones are in use at the same time.

A works zone on Greenwich Rd will need to be maintained during the four stages of construction to the entire frontage of the site. There is currently a bus stop and a loading zone in this location. The bus stop would be either temporarily shut down for the duration of the works, or the bus company



that manages this route could suggest temporarily relocating the bus stop. The off-site works zone would be suitable for large vehicles and can be used to queue a number of trucks at any one time. The current loading zone will be replaced with the off-site work zone for construction works only.

Applications to temporarily shut down the bus stop and for the creation of the works zone will be submitted.

In accordance with NSW Road Rule 181, the works zone would be used as follows.

- A driver must not stop in a works zone unless the driver is driving a vehicle that is:
  - o engaged in construction work in or near the zone,
  - or dropping off, or picking up, passengers.

The use of the off-site works zone would be managed by traffic staff and the site manager.

The existing and proposed signage associated with the off-site works zone is shown in **Figure 5** and **Figure 6** respectively.





Figure 5 – Greenwich Road existing street signage





Figure 6 – Greenwich Road proposed street signage





#### Site Facilities

The site facilities will be located at the rear of 2 Greenwich Road (highlighted blue in **Figure 3**). The site facilities will be erected in stage 1 and will be made available to workers immediately and through to completion of stage 4. Access to the site facilities would be via Greenwich Road during Stages 3 and 4. During demolition, excavation and basement works access to the site facilities will be via Anglo Road.

#### **Materials Handling**

#### Mobile Cranes

Mobile cranes will be used throughout the works, in particular:

- Mobile cranes will be used to erect the tower crane.
- Mobile cranes will be used for all loading and unloading when the tower crane is not on the site.
- Mobile cranes would be used throughout the works to supplement the tower crane during peak times.
- Mobile cranes are required for site preparation works such as the hoarding and site container installation.

#### Tower Cranes and Hoists

One tower crane will be erected on the site together with hoists. The hoists would be used to lift staff and materials. The tower crane will be erected during stage 3 and after the ground floor structural slab has been concreted.

The tower crane will be located at the north west corner of the proposed building.

#### Concrete Pump and Loading

Concrete handling would take place at the off-site works zone in Greenwich Road using mobile concrete pumps and concrete trucks in late stage 2 (concrete the basement slab on ground) and early stage 3 (upper basements structural works, lower ground floor and ground floor structural slabs). The mobile concrete pumps will park in the off-site works zone facing towards Pacific Highway. The concrete trucks will reverse up behind the mobile concrete pump and discharge the concrete into the mobile concrete pump. The mobile concrete pump and concrete trucks will be protected from oncoming traffic by concrete barriers.

After the ground structural slab has been completed a static concrete pump will replace the mobile concrete pumps and will be placed in the shared access to the north of the site. The concrete trucks will reverse up behind the static concrete pump and discharge the concrete into the static concrete pump.

Approximately 25 peak concrete deliveries would occur throughout the works. These being for pouring of perimeter shoring piles, foundation piles, concrete floor slabs (including basements and superstructure), and basement walls. During peak concrete pours, Greenwich road would be used



for both access to the on-site work zone, and to stand a mobile concrete pump and concrete delivery trucks in the off-site work zone.

#### Waste Trucks

Waste will be separated and loaded into skip bins placed on site by the mobile and tower cranes respectively. Once the skip bins have been filled, they will be placed in the off-site work zone by the respective cranes. From the off-site work zone they will be removed by a licensed waste contractor and in accordance with the Waste Management Plan.

#### **Work Hours**

The hours of construction including the delivery of materials to and from the site, demolition, excavation and all construction would be restricted to the following hours:

- Mondays Fridays: 7am 5pm
- Saturdays: 7am 3pm
- Sundays / Public Holidays: No work

Approval for work outside of these hours would be subject to the issue of a permit on each occasion from the relevant authorities.

#### Waste Management Plan

The demolition and excavation contractors will provide a detailed Waste Management Plan (WMP) once they have been appointed. A more detailed plan for the building construction will also be prepared once the stakeholder consultation has been undertaken and the final scope of works has been established.

The Waste Management Plan (WMP) would address the following issues:

- adherence to relevant legislation;
- avoidance of waste through design;
- avoidance of waste through innovative construction techniques;
- recycle as much waste as possible to reduce landfill waste;
- protection of the workforce and the public;
- the estimated volume of waste and method of disposal during construction;
- administrative arrangements for waste and recycling management during the construction process.

The following indicative issues should be considered when using skips or rubbish bins to prevent disruption to public areas:

- Skips and rubbish bins will be placed away from public thoroughfares;
- Waste or skips would not be placed in Council property without the proper consents;
- Where possible, a schedule for skip delivery and collection will be developed; and
- Chute locations and heights will be indicated in the WMP if required.



# **Construction Vehicle Activity**

#### **Construction Activities**

The project involves the demolition of the existing building on Greenwich road, excavation for, and construction of a new building and associated footpaths and landscaping. This section of the report describes the truck types and truck volumes associated with the work. It should be noted that not all of the different types of vehicles would visit the site on the same day.

The construction operations affecting traffic, parking and pedestrians include:

- construction vehicles entering and exiting the site during demolition and excavation at the on-site work zone
- removal of spoil by heavy rigid trucks and truck and dog
- delivery and erection of hoardings, delivery and placement of site containers, deliver and erect a tower crane
- tree trimming and tree removal on Greenwich Road in front of the site
- standing and loading / unloading of vehicles at the off-site work zone located on Greenwich Road (for material deliveries throughout the works, a mobile concrete pump and concrete delivery trucks)
- work vehicles such as tradesmen vans and utilities (less than 5.4m long). Note that site staff will be encouraged to make use of public transport to ease the demand on parking in the area.
- road closures, lane closures and footpath closures on approval from the relevant authorities

#### Stage 1 Site Establishment and Demolition

#### Site Establishment

Street trees on Greenwich Road will need to be removed so that works can be undertaken (new trees can be planted in stage 4 to replace the removed tress). Footpath and kerbside lane closures are required to carry out the works. Tree lopping would be undertaken from the kerbside lane. This work would be undertaken in the daytime.

Type A hoardings (to be erected on the property boundary) will require transport at commencement and at completion of site works. A heavy rigid truck or semi-trailer would be used to deliver and collect the hoardings. A mobile crane would be required to lift these items off / onto the truck. The delivery and removal of the hoarding is likely to involve one to two trucks.

The installation and dismantling of the hoarding would require the closure of the footpath and kerbside lane. The footpath and lane closure in Greenwich Road would occur during the day time (subject to RMS and Council approval) with appropriate pedestrian diversions.





#### Demolition

During demolition there will be A type hoardings on Greenwich Road and at the on-site work zone. Perimeter fencing will be erected on the east and south sides of the site.

Traffic controllers will work in accordance with a site-specific Traffic Management Plan while controlling the following specific activities:

- direct trucks while the trucks are reversing from Greenwich Road to the on-site work zone
- controlling other traffic making use of Greenwich Road (both directions), specifically when trucks are entering and leaving the on-site work zone (from / to Greenwich Road)
- direct pedestrians and cyclists making use of Greenwich Road, specifically when trucks are entering and leaving the on-site work zone (from / to Greenwich Road)
- One lane will always be open in each direction to traffic on Greenwich Road except for short periods while trucks are reversing into and driving out of the on-site work zone

#### Traffic movements for these works are indicated in Figure 7 and Figure 8.

The first stage of demolition is the strip out, which is carried out by mobile cranes, small machinery and labour reducing the building to concrete, brick and steel (structural elements). Once the strip out is complete structural demolition takes place. The mobile cranes would be located at the onsite work zone and / or at the off-site works zone on Greenwich Rd.

The demolition of the structural elements will be carried out using large excavators fitted with hydraulic attachments such as "pulverisers" and "grapple buckets". Demolished materials will be loaded onto trucks standing initially at the on-site work zone, and later at the off-site works zone on Greenwich Rd.

Truck access to the on-site work zone would be via Greenwich Road with egress via the same access point.

During the demolition stage, it is estimated that between 6 trucks per day and 12 trucks per day will cart materials off site, depending on the specific operations.

#### Stage 2 Excavation Works

The majority of the spoil would be loaded from the on-site work zone at the start of the excavation process. A ramp will be created into the excavated area as the excavation deepens. The ramp would be excavated last. Spoil material from the final stages of excavation will be loaded into trucks standing at the off-site work zone.

An average of 20 trucks per day are expected to cart spoil material from site during excavation. A peak of 30 trucks per day are expected during busier days.

As noted above, when the on-site work zone has been removed then the off-site works zone will be used for all deliveries, loading and unloading throughout the excavation, shoring, piling and ground services installation.





#### Stage 3 Structural and Building Services Works

Vehicular activity during the construction phase would include delivery of construction materials/concrete and removal of waste.

During construction of the basement levels, and until completion of ground floor structural slab, all deliveries, loading and unloading will be undertaken from the off-site work zone on Greenwich Road.

After the ground floor slab has been completed the tower crane will be erected in the north west corner of the site. Thereafter most of the deliveries, loading and unloading will be undertaken from the on-site work zone. In the unlikely event that a mobile crane is required after the tower crane has been erected, the mobile crane will stand at the off-site work zone.

The expected number of truck movements during this period of time would vary between 10 to 40 trucks per day depending on the phase of works. On days when large concrete pours are undertaken the truck count would be closer to 40 vehicles. The off-site work zone will be used on these days and truck movements will be controlled by traffic controllers and managed by the site manager.

In order to get the tower crane erected it is estimated that 5 trucks will deliver the components for the tower crane. It is estimated that the operation will take approximately one day.

Semi-trailers will be required to transport the tower crane components to site. A mobile crane will be required to lift the components into position. The mobile crane will stand at the on-site work zone. The semi-trailers will stand at the off-site work zone on Greenwich Road. All truck movements and other traffic, pedestrians and cyclists will be controlled by traffic controllers and or signage and managed by the site manager.

#### Stage 4 Fit-out, Finishes & Restoration Works

#### Fit-out and Finishes

The fit out and finishes will begin while the structural work (stage 3) is still under construction. It is estimated that there would be approximately 10 truck deliveries per day generated due the building services and fit-out work. Vehicles of various sizes would deliver fit-out and finishes materials each day.

Both the off-site work zone (Greenwich Road) and on-site work zone would continue to be available to delivery vehicles throughout this work.

The tower crane will continue to serve the project until the façade at the tower crane location needs to be closed, at which time the tower crane will be disassembled and removed from site. A mobile crane and trucks required to disassemble the tower crane and remove it from site will be similar to the plant required to erect the tower crane.



#### **Restoration Works**

When restoration works begin the basement may be made available for trade vehicles parking, however, this will be subject to receipt of relevant approvals. The on-site work zone (previously shared access) may be made available to the neighbouring business for exit from that car park when restoration works begin.

The site remains a construction work area during restoration works – normal WH&S regulations and restrictions will apply during this stage.

The hoarding will be replaced with temporary site fencing and the site accommodation will be removed from the site.

Truck deliveries during the footpath restoration, crossover and landscaping works would include the delivery of landscaping supplies, formwork, reinforcing and concrete. It is expected that smaller delivery trucks will be utilised during these works. It is likely that there would be less than 5 truck movements per day for the final restoration works.

The off-site works zone in Greenwich Road will be utilised to load / offload vehicles during these works. The footpath will remain closed until the new footpath and crossover has been concreted. At the same time as the footpath restoration works, the bus stop and original loading zone will be reinstated.

#### Summary of Construction Vehicle Impacts

Throughout the construction project the average number of trucks is likely to vary considerably. The truck movements will be managed by the site manager between the on-site work zone and offsite work zone on Greenwich Rd. The largest concrete pour would require up to 8 concrete trucks to / from the site per hour.

Traffic control measures will be implemented during the entire construction project. The intensity of the traffic control will depend on activities and would change periodically / accordingly. Traffic control will be managed by the site manager and controlled by traffic controllers and / or signage.

- truck management measures would be in place to manage loading / unloading;
- driver protocols would be in place;
- there would be safe management of traffic through the use of signs and devices;





### **Construction Traffic Management**

The construction traffic impacts and management are outlined below.

#### **Construction Truck Routes**

General construction vehicle traffic will have origins / destinations throughout Sydney. The designated inbound and outbound truck routes are shown in **Figure 7** and **Figure 8** respectively.

Trucks would reach the site from Pacific Highway by turning right into Greenwich Road from the west or left into Greenwich road from the east. Trucks leaving site will turn left onto Greenwich Road and head towards River Road before turning left or right onto River Road before joining Pacific Highway.

All building contractors would be notified of the truck routes and would be required to adhere to the nominated routes.





Figure 7 – Inbound & Outbound vehicle routes





Figure 8 – Inbound & Outbound vehicle route



#### **Traffic Control**

The planning for this site has examined all reasonable opportunities to maintain safe pedestrian and traffic / parking lanes. However, there will be times when additional lanes need to be closed temporarily to accommodate certain tasks and traffic movements.

It is noted that for the majority of the works duration there would be no major traffic diversions. The site plan shown in **Figure 3** show the site setup during the majority of the works.

For the majority of the works pedestrians will be diverted to the opposite footpath on Greenwich Road only. This measure will be achieved during and after normal business hours by the use of signage. The signage would direct pedestrians to make use of the pedestrian crossings at the intersections with Pacific Highway & River Road respectively.

With regard to pedestrians crossing Bellevue Avenue, there is traffic calming, pram ramps and a refuge island to ensure safe crossing conditions for pedestrians.

Some pedestrians may occasionally need to cross Anglo Road. At the intersection with Greenwich road there are existing pram ramps and footpaths on both sides of Anglo Road.

Additional lane closures to those incorporated in the off-site work zone include:

- trucks reversing into the on-site work zone
- Restoration works to the footpath, crossover and adjacent areas
- kerb & gutter and road pavement restoration works
- when workers are within 1.2 metres of the travel lane without protection by a safety barrier (in accordance with RMS Guidelines). This includes any work on the footpath, hoarding installation / removal, etc

If there is a requirement for lane closures, there will be adequate safety measures in place to safeguard workers and road users. Site specific Traffic Control Plans would be prepared and adhered to at all times. Applications will be submitted, and approval received from the relevant authorities before lane closures are implemented.

A mobile concrete pump with outriggers would be used to concrete the following levels:

- basement 3 slab on ground, walls and columns
- basement 2 slab, walls and columns
- basement 1 slab, walls and columns
- lower ground slab, walls and columns
- ground level slab, walls and columns

The concrete pump would be parked at the off-site work zone on Greenwich Road. Traffic control would be used to control traffic. Two-way traffic flow would be maintained throughout this work. Traffic control will be undertaken in accordance with *AS 1742.3 Manual of uniform traffic control devices - Traffic control devices for works on roads* and the *RMS's Traffic Control at Worksites*.



Traffic detours, pedestrian diversions and traffic arrangements for footpath and lane closures will be submitted to council and RMS prior to these closures and be approved prior to the works commencing onsite. See **Figure 9** for detail.

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#### **Traffic Controllers**

Certified traffic controllers will, when necessary, temporarily stop traffic on Greenwich Road. The main responsibilities of the traffic controllers are to safely assist pedestrians, manage construction vehicles and control traffic when required.

Traffic controllers shall be qualified, having passed the RMS approved Traffic Controllers training course, and shall be authorised. Use of traffic controllers will be undertaken in accordance with AS 1742.3 Manual of uniform traffic control devices - Traffic control devices for works on roads and the RMS's Traffic Control at Worksites.

#### **Pedestrians**

In order to maximise safety, pedestrians will be diverted to the opposite side of Greenwich Road by means of traffic control (signage) during the construction project. All pedestrian diversions must occur whilst traffic control is in place. Pedestrian diversions are shown in **Figures 9**.

Currently pedestrian crossing facilities are provided at the traffic signals on Greenwich Rd at the intersections with both Pacific Highway and River Road. During construction the maximum vehicle speed limit will be reduced to 40km/h on Greenwich Road between Pacific Highway and River Road. Signage warning drivers and pedestrians of the construction work will be placed on both sides of Greenwich Road covering both directions. Pedestrians will be directed to cross Greenwich Road at the intersection with Pacific Highway and River Road respectively.

Footpath diversions and associated signs and devices must be undertaken in accordance with AS 1742.3 Manual of uniform traffic control devices - Traffic control devices for works on roads and the RMS's Traffic Control at Worksites.

It is considered that the impact to pedestrians will be low and that movement will be safe, given that:

- Signage will be clearly displayed advising pedestrians of changes along Greenwich Road.
- Traffic controllers will be provided at areas of pedestrian / vehicle conflict for large truck movements.
- Any impacts on the road / traffic flow and pedestrians would be appropriately managed using traffic control (signage).
- Trucks will be instructed to travel at low speeds to improve safety near construction access / loading and unloading areas.




Figure 9 – Traffic & Pedestrian Management





#### **Bicycles**

Greenwich Road has no dedicated bicycle paths. Cyclists may be affected by construction vehicle activity.

Driver protocols would include a requirement that drivers be mindful of cyclists. The access and egress from the off-site work zone and on-site work zone will be controlled by traffic control (signage and / or traffic controllers).

During full / partial road closures traffic controllers will be present to ensure that vehicles, bicycles and pedestrian movements are monitored and risks are reduced.

Bicycle warning signs will be incorporated into the Traffic Control Plans to warn and inform drivers of cyclists.

#### **Public Transport**

#### Buses

Bus services would not be detoured during construction works. The bus stop located directly in front of the site (Stop ID 206590) would need to be temporarily closed for the duration of the construction project (only on the site side of Greenwich Road, the bus stop on Bellevue Avenue side of Greenwich Road will remain open). Bust stop ID 206589 located on Greenwich Road adjacent to Anglo Road will remain open and will need to be used instead of bus stop ID 206590.

Bus stop ID 206590 on the site side of Greenwich Road would be closed during site establishment (Stage 1) and will be re-opened at the end of Stage 4 when safe to do so.

Bus stop ID 206590 in front of the site but on Bellevue Avenue side of Greenwich Road will remain open during the construction project. There will be times when this bus stop is affected by truck movements. Traffic controllers will be present to control all vehicle, bicycle and pedestrian movements at these times.

The bus company would be contacted and notified prior to the works commencing. Relevant permit applications will be submitted to the respective authorities, and approvals gained before any bus stop changes are implemented.

#### Taxi Ranks

There are no taxi ranks within the proximately of the site. The nearest taxi rank is located at St Leonards Train Station.

#### **Staff Parking Impacts**

The construction project will generate an on-site workforce. Workers car parking in the local area is very limited.

Given the high demand for parking in the area and the excellent availability of public transport, site staff would be encouraged to use public transport to get to and from the site. Public transport information would be prepared and given to workers.

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Some trades rely on their respective vehicles being parked close to the site as their vehicles are used to transport and store materials, tools and equipment. These drivers will be encouraged to unload equipment from their respective vehicles at the start of each shift. It <u>may</u> rarely happen that these trades occasionally need to park on Greenwich Road, Bellevue Avenue and Anglo Road. It is stressed that site staff will be encouraged to make use of public transport to ease the demand on parking in the area.

#### **Parking Impacts**

#### Loss of Public Car Parking

Due to the requirement for trades to park their vehicles in on-street parking during the works, there may be some disruption to, and loss of on-street public car parking. During restoration works the trades may be permitted to park their vehicles in the basement parking of the new building. As mentioned, site staff will be encouraged to make use of public transport to ease the demand on parking in the area.

The parking to the neighbouring building located directly to the north of the site will be affected by the construction. The neighbouring building currently accesses its parking bays via an entrance on Greenwich Road, and exits the car park via the shared access located between the site and the northern neighbour. This exit will not be available to the neighbouring building during stages 1, 2 and 3. The access would be made available to the neighbour during the restoration works.

#### Summary

In summary there would be a greater demand for car spaces due to construction works.

#### **Community Consultation**

Neighbouring property owners will be consulted throughout the construction works and site contact details provided to them.

Staff will be available on site to assist neighbours with any traffic related issues.

The ongoing consultation process will include the following.

- Identify policies and procedures for dealing with all forms of communication that involve interaction with the community and stakeholders.
- Ensure that impacts of construction are appropriately advised to the local community. In particular, local businesses and residents would be notified of footpath closures and parking related changes.
- Ensure that all necessary notifications (e.g. signage) are displayed to minimise impact to the community.
- Ensure that there are procedures in place for managing issues as they arise from construction, community and compliance perspectives.
- Identify all stakeholder groups and individuals, and ensure there are ways of communicating with them effectively.



 Provide a mechanism for ongoing strategy evaluation, issue management and procedure development.

Some of the communication activities involved would likely take the form of a monthly flyer updating people on the progress of the works and what to expect in the coming months.

#### **Emergency Vehicle Access**

Emergency protocols on the site would include a requirement for traffic controllers to assist with emergency access from the street. Staff would be inducted on emergency evacuation protocols for the site under WH&S. The builder will implement an emergency response plan which outlines initial contact with emergency vehicles.

#### Public and Worker Safety

All site staff and subcontractors will be required to complete a site-specific induction before commencing work on site. The induction will cover aspects relating to safety and amenities; including access, emergency evacuation procedures, location of first aid facilities, location of amenities, site hours, material handling, noise and dust policies, environmental management and parking. As part of the induction site staff will be encouraged to make use of public transport to ease the demand on parking in the area.

Prior to commencing works on site, all subcontractors will be required to submit a project specific Safety Management Plan which would need to be compliant with the overall Project Safety Plan.

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### **Construction Traffic Measures**

The following are traffic management requirements for the site.

#### Truck Management and Driver Protocols

Truck management to reduce delay to trucks and improve safety along construction routes would include:

- Construction vehicles using public streets and on-site / off-site work zones.
- Scheduling of vehicle movements must occur to minimize off site waiting times.
- Vehicle movements must be compliant with Conditions of Consent and broader road-use regulations / laws, particularly with regard to hours of work, materials loading and unloading, and over size deliveries and installation.
- Drivers must be aware of speed limits in the area and access to works zones must occur at low speeds.
- Deliveries by semitrailers and heavy rigid trucks should be managed throughout the works to avoid unnecessary queuing.
- All building contractors would be notified of the designated truck routes and that they would be required to adhere to the nominated routes. Drivers and traffic staff must be mindful of cyclists and pedestrians on Greenwich Road.

#### **Detailed Planning**

- Advisory road signage in accordance with AS 1742.3 Manual of uniform traffic control devices Traffic control devices for works on roads and the RMS's Traffic Control at Worksites must be installed and maintained throughout the construction stages.
- The plans in this document are indicative. Detailed Traffic Control Plans (TCPs) must be prepared and controlled by traffic controllers with the appropriate work tickets in accordance with the measures set out in this CTMP.
- The selection and specific implementation of traffic control plans would be carried out by qualified traffic control personnel.
- Any / all changes to the traffic control plans must be documented. Any change to the TCP which contradicts this report must also be documented.

#### Traffic Controllers

- The main responsibilities of the traffic controllers is to assist pedestrians, manage construction vehicles and control traffic.
- Traffic controllers shall be qualified, having passed the RMS approved Traffic Controllers training course, and shall be authorised.
- Use of traffic controllers must be undertaken in accordance with AS 1742.3 and the RMS's Traffic Control at Worksites.





#### Hours / Days of Operations

- Work to be undertaken between 7:00am and 5:00pm Monday to Friday and 7:00am and 3:00pm on Saturdays.
- Works zones would operate between 7:00am and 5:00pm Monday to Friday and 7:00am and 3:00pn on Saturdays.
- Work outside of these hours must have permission from relevant authorities.

#### Pedestrians and Cyclists

- Traffic staff must be available to monitor activity and/or vary the traffic management, e.g. placement of signage, screen, barriers, where feasible or to assist pedestrian and cyclist movements past the worksite during peak periods.
- Pedestrian diversions must occur whilst traffic control is in place.
- Traffic controllers to be used to assist with pedestrians and bicycles if required.
- Pedestrian access along the site's frontages is to be closed for the duration of the works. Pedestrians will be directed to the opposite side of Greenwich Road.
- The builder must notify residents and businesses in the area of the footpath closure period.
- Ensure sight distance is provided for pedestrians crossing Greenwich Road.
- Greenwich Road is used by cyclists and a "watch for bicycle" sign is required on each approach.

#### Safe work method statements

Safe work method statements (SWMS) must be prepared by qualified personnel.

SWMS must be prepared by the building contractor responsible for traffic safety on the site.

Copies of the SWMS must be available and distributed in accordance with Occupational Health and Safety regulations.

#### Stakeholder Agreement and Feedback

Only the shared crossover to the north of the site would be blocked for the duration of the works.

#### Signage

Any covered, removed or new signage must be identified on the TCPs and with Council's traffic committee's approval. It is noted that without traffic committee approval the changes to signs are not enforceable. All necessary approvals will be sought and received prior to works being carried out.

#### Speed Zoning

- 40km/h speed zones must be implemented where required under RMS guidelines.
- RMS approval and recording processes are outlined in RMS Guidelines and must be followed. A plan showing existing signs to be covered and new signs to be installed must be prepared and signed by an accredited RMS orange card holder.
- Documentation and records must be kept on site in accordance with RMS requirements.

Suite 4 168-170 Central Coast Highway Erina NSW 2250 PO Box 3672 Erina NSW 2250 T 02 4365 8149 F 02 4367 2372 E admin@stevensconstruction.com.au W www.stevensconstruction.com.au Stevens Construction (NSW) Pty Ltd trading as Stevens Construction ABN 65 121 684 348





#### **Onsite Emergency Contact**

- Signs indicating an emergency contact name and number must be displayed on the fencing / hoarding around the work on site.
- Emergency services must be notified if traffic is diverted.
- Any incidents which become known to the contractor which affect the public safety within the road reserve must be forwarded to the relevant Authority

#### Plant

- Plant should not be parked and materials should not be stored in positions where they may create a hazard, obscure signs, block access or block approaching drivers' lines of sight. Particular attention must be given to pedestrian crossings and property accesses.
- Permit to stand plant must be approved and available on site.
- Temporary signs must not be placed so as to obstruct parking or otherwise create a hazard.

#### Other

- Ensure the placement of any temporary signs can be viewed by traffic in accordance with RMS requirements.
- Containment fencing and bollards must not obstruct vision to signs.

#### Staff Responsibilities

- The Site Manager is responsible for the work area and employees under their control as outlined below.
- The Site Manager will be responsible for ensuring that:
  - a documented WHS traffic management risk assessment is completed and that procedures and control measures are implemented on site;
  - road users, pedestrians and staff can continue with their respective undertakings in complete safety and with the minimum of inconvenience;
  - all site-related works are correctly barricaded and sign-posted using the approved signs; and
  - all signs and devices used are in good condition for the duration of the works and are removed at the completion of the work.
- The Site Manager will be responsible for all required planning and permits relating to traffic control including:
  - ensuring the applicable permits and licences have been obtained from the Council before carrying out any part of the design and construction activities that may impact on the community and users of the roads, footpaths, bikeways, shared use paths or other transport infrastructure;
  - o appointing staff to oversee all aspects of internal and external traffic control;
  - working collaboratively with the community, Council and other authorised representatives.
- The Site Manager would be directly responsible for all the required planning and permits for traffic control including:

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- ensuring all traffic control devices shown on the traffic control plans are available for use and fit for purpose, and in place as indicated on TCP's;
- o seeking approval from the relevant authority for all traffic control plans;
- ensuring all components of the implemented traffic control plans are relevant to the risks and hazards;
- ensuring traffic routes are driven to obtain a thorough understanding of the construction impacts on local businesses and service providers are understood;
- communicating and acting on all directions issued by Council, relevant authorities and stakeholders; and
- auditing the worksite layout / control measures and implementing changes based on the audit findings.





#### Conclusion

This CTMP has been prepared to document the proposed construction activities and associated measures necessary to facilitate the works on site.

It is considered that:

- Management measures would be established to ensure the safety for motorists, pedestrians and cyclists, and amenity of residents.
- If required then traffic controllers would be used to control vehicles and assist pedestrians during the works.
- Traffic control for any pedestrian diversions or traffic controllers would be prepared in accordance with Australian Standards and RMS Guidelines.

In summary it is concluded that the proposed CTMP measures would adequately address potential implications associated with the construction activities.





## Appendix A Plans

#### **GREENWICH SENIORS LIVING by ALCEON GROUP**

ARCHITECTURAL PLANS dated 02/04/2020

By Marchese Partners

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DESIGN-CONSTRUCTION-MANAGEMENT

## GREENWICH SENIORS LIVING

ARCHITECTURAL PLANS

02/04/2020

# marchesepartners



## **1. TABLE OF CONTENTS**

#### 1 | Introduction

1.1 Table of contents - Project Overview

#### 2 | Site Analysis

- 2.1 Aerial view
- 2.2 Site Context
- 2.3 Local context
- 2.4 Urban design analysis

#### 3 | Design Intent

3.1 Scheme evolution

- 3.2 Precedents study
- 3.3 Mood board

#### 4 Floor Plans

4.0 Development Data 4.1 Survey 4.2 Existing trees to be removed 4.3 Basement 3 4.4 Basement 2 4.5 Basement 1 4.6 Lower ground 4.7 Ground Level 4.8 Level 1 4.9 Level 1-2 4.10 Level 3 4.11 Level 4-6 4.12 Roof top level 4.13 North elevation 4.14 South elevation 4.15 East elevation 4.16 West elevation 4.17 Section 1 4.18 Section 2 4.19 Access ramp sections 4.20 GFA calculations LEP 4.21 GFA calculations SEPP 4.22 Cross Ventilation 4.23 Solar access 1 4.24 Solar access 2 4.25 Shadow study 1 4.26 Shadow study 2 4.27 Deep soil





## SITE ANALYSIS 2.1 Aerial view









8 Greenwich Rd





Greenwich Rd looking South



Existing substation adjacent on site

## 2 SITE ANALYSIS 2.2 Site Context

City views from existing rooftop level



View from 2 Greenwich Rd towards 154 Pacific Hwy



154 Pacific Hwy



Existing 2 Greenwich Rd







Source: Google maps - April 2020







2 SITE ANALYSIS





#### CURRENT PROPOSED **DA** ENVELOPE



- View flower
- Geometry open to the views
- Symmetric scheme

## 3 DESIGN INTENT 3.1 Scheme evolution

T















## 3 DESIGN INTENT 3.3 Mood Board





#### DA DRAWING LIST DWG NO. TITLE

REV

А

А

DA0.00 PRELIMINARIES						
DA0.01	COVER SHEET	A				
DA1.00 SITE PLANS						
DA1.03	URBAN DESIGN AND SITE ANALYSIS	А				
DA1.04	SURVEY	А				
	LEP&DCP CONSTRAINTS DIAGRAM	А				
DA2.00 FI	OOR PLANS					
	BASEMENT 3	А				
DA2.02	BASEMENT 2	А				
	BASEMENT 1	А				
DA2.04	LOWER GROUND	А				
DA2.05	GROUND LEVEL	А				
	LEVELS 1-2	А				
	LEVEL 3	А				
DA2.09	LEVELS 4-6	А				
DA2.10	ROOF TOP GARDEN	А				
DA3.00 EI	LEVATIONS					
DA3.01	NORTH	А				
DA3.02	SOUTH	А				
DA3.03	EAST	А				
DA3.04	WEST - GREENWICH RD.	А				
DA4.00 SE	ECTIONS					
DA4.01	SECTION 1	А				
DA4.02	SECTION 2	А				
DA4.03	ACCESS RAMP SECTIONS	А				
DA4.07	SKETCH SECTION 3	А				
DA5.00 SI	UN ANALYSIS					
DA5.01	GFA (LEP)	А				
DA5.02	GFA (SEPP)	А				
DA5.11	CROSS VENTILATION	А				
DA5.21	SOLAR ACCESS - SHEET 1	А				
	SOLAR ACCESS - SHEET 2	А				
DA5.31	SHADOW STUDY - SHEET 1	А				

#### UNIT MIX

TOTAL UNITS				
TYPE	COUNT	AREA (GFA)		
1B	4	60.0 m <sup>2</sup> 61.4 m <sup>2</sup>		
2B	13	90.9 m <sup>2</sup> 101.2 m <sup>2</sup>		
3B	23	110.0 m <sup>2</sup> 132.3 m <sup>2</sup>		
PRIVATE OPEN SPACE	5	47.9 m <sup>2</sup> 225.0 m <sup>2</sup>		
TOTAL	45			

UNITS PER LEVEL				
LEVEL	1B	2B	3B	COUNT
LOWER GROUND	2	3	0	10
LEVEL 1	1	4	2	7
LEVEL 2	1	4	2	7
LEVEL 3	0	2	4	6
LEVEL 4	0	0	5	5
LEVEL 5	0	0	5	5
LEVEL 6	0	0	5	5
TOTAL	4	13	23	45

STORAGE FACILITIES				
LEVEL	COUNT	VOLUME		
BASEMENT 3	16	5.80 m <sup>3</sup>		
BASEMENT 2	13	5.80 m <sup>3</sup>		
BASEMENT 1	18	5.80 m <sup>3</sup>		
LEVEL 5	4	56.47 m <sup>3</sup> 140.04 m <sup>3</sup>		
TOTAL: 51				

GFA LEP				
LEVEL	AREA			
LOWER GROUND	752.7 m <sup>2</sup>			
GROUND LEVEL	606.9 m <sup>2</sup>			
LEVEL 1	733.9 m <sup>2</sup>			
LEVEL 2	733.9 m <sup>2</sup>			
LEVEL 3	725.2 m <sup>2</sup>			
LEVEL 4	673.0 m <sup>2</sup>			
LEVEL 5	673.0 m <sup>2</sup>			
LEVEL 6	673.0 m <sup>2</sup>			
TOTAL	5571.6 m <sup>2</sup>			

GFA SEPP		
LEVEL	AREA	
LOWER GROUND	845.4 m <sup>2</sup>	
GROUND LEVEL	684.0 m <sup>2</sup>	
LEVEL 1	819.3 m <sup>2</sup>	
LEVEL 2	819.3 m <sup>2</sup>	
LEVEL 3	812.2 m <sup>2</sup>	
LEVEL 4	750.5 m <sup>2</sup>	
LEVEL 5	750.5 m <sup>2</sup>	
LEVEL 6	750.5 m <sup>2</sup>	
TOTAL	6231.7 m <sup>2</sup>	

FSR					
SITE AREA: 2140 m <sup>2</sup>					
GFA SEPP	6231.7 m <sup>2</sup>	2.91			
GFA LEP	5571.6 m <sup>2</sup>	2.60			

#### DEEP SOIL CALCULATION

DEEP SOIL ADG/DCP COMPLIANT AREAS: 320.m<sup>2</sup>, 15% OF SITE

CROSS VENTILATION				
LEVEL	YES	NO		
LOWER GROUND	3	2		
LEVEL 1	4	3		
LEVEL 2	4	3		
LEVEL 3	4	2		
LEVEL 4	4	1		
LEVEL 5	4	1		
LEVEL 6	4	1		
TOTAL: 40 PERCENTAGE	27	13 <b>68%</b>		

SUN ACCESS				
LEVEL	YES	NO		
LOWER GROUND	2	3		
LEVEL 1	4	3		
LEVEL 2	4	3		
LEVEL 3	4	2		
LEVEL 4	3	2		
LEVEL 5	3	2		
LEVEL 6	5	0		
TOTAL: 40	25	15		
PERCENTAGE		63%		

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DA5.32 SHADOW STUDY - SHEET 2

DA5.51 DEEP SOIL

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CLIENT ALCEON GROUP

PROJECT GREENWICH SENIORS LIV 2 GREENWICH ROAD, GRE

### FLOOR PLANS Development data

DCP CAR PARKING RATES					
TYPE	Unit	Ratio	Required	Disabled	
	1 Bed	1 per unit	3		
	2 Bed	1.5 per unit	27	1 space per 4 units	
RESIDENTIAL	3 Bed	2 per unit	38		
	Visitors	1 per 4 units	10	1 disabled per 50 visitors spaces (Min. 1 disables space)	
	Adaptable Unit	1 per unit	-		
RETAIL	1 space per 40m² gross floor area (GFA) 1 space per 60m² gross floor area (GFA)		6	1 disabled per 10 car spaces (Min. 1 disables space)	
COMMERCIAL			9	1 disabled per 10 car spaces (Min. 1 disables space)	

PROPOSED PARKING		
TYPE	NUMBER	

BASEMENT 3	
SENIORS SPACES	25
VISITORS	5
VISITORS DISABLE	4
BASEMENT 2	
SENIORS SPACES	25
VISITORS	5
VISITORS DISABLE	4

BASEMENT 1	
COMMERCIAL / RETAIL	9
COMMERCIAL / RETAIL DISABLE	1
SENIORS SPACES	4
VISITORS	4
VISITORS DISABLE	3
TOTAL: 89	

	DRAWING TITLE	EET		
VING	SCALE NTS	DATE 01/04/2020	drawn RS	CHECKED EB
EENWICH	<sub>ЈОВ</sub> 19118	drawing DA0.01		



	4	FLOOF		
			4.1 S	urvey
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	DATUM: A.H.D. DATE OF SURVEY: 4.	ISSUE:2 02.20 ISSUE DATE:18.0	02.20	
	SURVEYOR: KB DRAFTER: PH PLAN OF	SHEET SIZE:A1 SHEET 1 OF 1	1016-102-10-10	
	GRE	EENWICH ROAD GREENWICH		
	Veris	Veris Australia Pty Ltd Sulte 301, Level 3, 551 Surry Hills NSW 2012 PO Box 1807 Strawberry Hills NSW 2 t: (02) 92124655 email: surryhills@veris. web site: www.veris.co GREENWICH RD GREENWICH202046	2012 com.au m.au	
	DRAWING TITLE			
	SURVEY			
	SCALE	DATE	DRAWN	CHECKED
.IVING REENWICH	NTS JOB	01/04/2020 DRAWING	RS	EB REVISION
- • -	19118	DA1.04		A



**NOTE:** Plan to be updated by the Arborist consultant

Figure 6 Shows the trees in RED proposed to be removed. Trees 6 and 7 are both dead on an adjoining property.



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## 4 FLOOR PLANS 4.2 Existing trees to be removed

				1
	DRAWING TITLE			
	EXISTING TREES TO BE REMOVED			
	LAISTING TALLS TO DE ALIVIOVED			
	SCALE	DATE	DRAWN	CHECKED
IVING	NTS	01/04/2020	RS	EB
REENWICH	JOB	DRAWING		REVISION
	19118	DA1.04		А



## 4 FLOOR PLANS 4.3 LEP & DCP CONSTRAINTS DIAGRAMS

	DRAWING TITLE	CONSTRAIN	TS DIAGF	RAM
IVING	SCALE 1:150 @A1 1:300 @A3	DATE 01/04/2020	DRAWN RS	CHECKED EB
REENWICH	<sub>ЈОВ</sub> 19118	drawing DA1.05		REVISION A



		-		
/ING	SCALE 1:150 @A1 1:300 @A3	DATE 01/04/2020	DRAWN RS	CHECKED EB
EENWICH	<sub>ЈОВ</sub> 19118	DRAWING DA2.01		REVISION A

	B3 STORAGE	i
101/1	2. 01	

16

STORAGE CAGES

SENIORS SPACES	25
VISITORS	5
VISITORS DISABLE	4
TOTAL: 34	

B3 PARKING	
SENIORS SPACES	25
VISITORS	5
VISITORS DISABLE	4

## 4 FLOOR PLANS

4.4 Basement 3



NOT FOR CONSTRUCTION

## 4 FLOOR PLANS 4.5 Basement 2

B2 PARKING	
SENIORS SPACES	25
VISITORS	5
VISITORS DISABLE	4
TOTAL: 34	

B2 STORAGE		
STORAGE CAGES	13	

	DRAWING TITLE	Г 2		
IVING	SCALE 1:150 @A1 1:300 @A3	DATE 01/04/2020	DRAWN RS	CHECKED EB
REENWICH	<sub>ЈОВ</sub> 19118	drawing DA2.02		REVISION A



IVING	SCALE 1:150 @A1 1:300 @A3	DATE 01/04/2020	DRAWN RS	CHECKED EB
REENWICH	<sub>ЈОВ</sub> 19118	drawing DA2.03		REVISION A

DRAWING TITLE

BASEMENT 1

B1 STORAGE	
STORAGE CAGES	18

B1 PARKING	
COMMERCIAL / RETAIL	9
COMMERCIAL / RETAIL DISABLE	1
SENIORS SPACES	4
VISITORS	4
VISITORS DISABLE	3
TOTAL: 21	



4.6 Basement 1















	4	FLOOF 4.13 N	R PLA orth elev	
Lep Height Limi	T 25m			
POTENCIAL MAX COMMERCIAL BU	. Envelop of Jilding			
57.390				
	DRAWING TITLE			
VING REENWICH	SCALE 1:150 @A1 1:300 @A3 JOB	DATE 01/04/2020 DRAWING DA3 01	drawn RS	CHECKED EB REVISION A
	19118	DA3.01		А

▼ROOF RL 108.86	RL 108	3.360 RL 108.660
▼LEVEL 6 CEILING RL 108.36 ▼LEVEL 6		
RL 105.66		
▼LEVEL 5 RL 102.56		
▼LEVEL 4 8322		6171
▼LEVEL 3		6000
VLEVEL 2		
RL 93.26		
▼LEVEL 1		3000
▼GROUND LEVEL RL 86.66		
VLOWER GROUND		
RL 83.56		
▼BASEMENT 1 RL 79.40		
1 SOUTH ELEVATION		
1 : 150		
		CLIENT
A 0104/2020 PRELIMINARY RS	marchesepartners	ALCEON GROUP
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PRELIMINARY	Sydney · Brisbane · Canberra · Melbourne · Adelaide Kuala Lumpur · Auckland · Christchurch · London · Madrid ABN 20 098 552 151	GREENWICH SENIORS L 2 GREENWICH ROAD, GR

LANDSCAPE SCREEN FEATURE WALL

BL 110.060

RL 111.860

RL 132.430

RL 125.900

LIFT OVERRUN

BALINESE BED PERGOLA

## 4 FLOOR PLANS 4.14 South elevation



	DRAWING TITLE			
IVING REENWICH	SCALE 1:150 @A1 1:300 @A3	DATE 01/04/2020	drawn RS	CHECKED EB
REENWICH	<sub>ЈОВ</sub> 19118	DRAWING DA3.02		




### 4 FLOOR PLANS

	DRAWING TITLE WEST - GREENWICH RD.				
IVING	SCALE 1:150 @A1 1:300 @A3	DATE 01/04/2020	DRAWN RS	CHECKED EB	
REENWICH	<sub>ЈОВ</sub> 19118	DRAWING DA3.04		$\mathbf{A}^{REVISION}$	



IMPORTANT NOTES:

## DRAWING TITLE **SECTION 1**

DATE

01/04/2020

DRAWING

DA4.01

DRAWN

RS

CHECKED

REVISION

EB

SCALE 1:150 @A1 1:300 @A3

<sub>ЈОВ</sub> 19118





### 4 FLOOR PLANS 4.17 Section 1

▼LEVEL 5   RL 102.56   25     ▼LEVEL 4   RL 99.46   26     ▼LEVEL 3   RL 93.26   26     ▼LEVEL 1   RL 90.16   26     ▼LEVEL 1   RL 90.16   26     ▼LEVEL 1   RL 86.66   26     ▼LOWER GROUND   26     ▼LOWER GROUND   26     ▼LOWER GROUND   26     ▼BASEMENT 1   26     ▼BASEMENT 2   26				
	1 <u>Section 2</u> - 1:150			
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### FLOOR PLANS 4

VING REENWICH	SCALE	DATE	DRAWN	CHECKED
	1:150 @A1 1:300 @A3	01/04/2020	RS	EB
	JOB	DRAWING		REVISION
	19118	DA4.03		А



7					
7					
	GR LEV LEV LEV LEV	OUND LEVEL     60       /EL 1     73       /EL 2     73       /EL 3     72       /EL 4     67       /EL 5     67	Area 52.7 m <sup>2</sup> 06.9 m <sup>2</sup> 33.9 m <sup>2</sup> 25.2 m <sup>2</sup> 73.0 m <sup>2</sup> 73.0 m <sup>2</sup> 73.0 m <sup>2</sup>		
		nd total 55	571.6 m <sup>2</sup>		
IVING REENWICH	SCALE 1:350 @A1 1:700 @A3 JOB 19118	DATE 01/04/2020 DRAWING DA5.01	drawn RS	CHECKED EB REVISION A	

4 FLOOR PLANS 4.20 GFA calculations LEP



DRAWING TITLE			
GFA (SEPP)			
-	-		
SCALE 1:350 @A1 1:700 @A3	DATE 01/04/2020	drawn RS	CHECKED EB
<sub>ЈОВ</sub> 19118	DRAWING DA5.02		REVISION A
	GFA (SEPF 1:350 @A1 1:700 @A3 JOB	SCALE     DATE       1:350 @A1     01/04/2020       JOB     DRAWING	SCALE     DATE     DRAWN       1:350 @A1     01/04/2020     RS       JOB     DRAWING

GFA SEPP				
Level	Area			
LOWER GROUND	845.4 m²			
GROUND LEVEL	684.0 m²			
LEVEL 1	819.3 m <sup>2</sup>			
LEVEL 2	819.3 m <sup>2</sup>			
LEVEL 3	812.2 m <sup>2</sup>			
LEVEL 4	750.5 m²			
LEVEL 5	750.5 m²			
LEVEL 6	750.5 m <sup>2</sup>			
Grand total	6231.7 m <sup>2</sup>			







	CROSS VENTILATION			
IVING	SCALE NTS	DATE 01/04/2020	drawn RS	CHECKED EB
REENWICH	<sub>ЈОВ</sub> 19118	drawing DA5.11		REVISION A

	1	-
Level	Cross Ventilation YES	Cross Ventilation NO
LOWER GROUND	3	2
LEVEL 1	4	3
LEVEL 2	4	3
LEVEL 3	4	2
LEVEL 4	4	1
LEVEL 5	4	1
LEVEL 6	4	1
Grand total: 40	27	13
PERCENTAGE		68%

	CROSS VENTILATION	I
Level	Cross Ventilation YES	Cross Ventilation NO

### 4 FLOOR PLANS 4.22 Cross Ventilation



PRELIMINARY

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2 21st JUNE - 10:00 am



5 21st JUNE - 1:00 pm

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CLIENT ALCEON GROUP

PROJECT GREENWICH SENIORS LIV 2 GREENWICH ROAD, GR

SUN ACCESS					
Level	Sun Acces YES	Sun Acces NO			
LOWER GROUND	2	3			
LEVEL 1	4	3			
LEVEL 2	4	3			
LEVEL 3	4	2			
LEVEL 4	3	2			
LEVEL 5	3	2			
LEVEL 6	5	0			
Grand total: 40	25	15			
PERCENTAGE		63%			

	DRAWING TITLE SOLAR ACCESS - SHEET 1				
IVING	SCALE NTS	DATE 01/04/2020	drawn BM	CHECKED EB	
REENWICH	<sub>ЈОВ</sub> 19118	DRAWING DA5.21		REVISION	



	DRAWING TITLE SOLAR ACCESS - SHEET 2					
IVING	SCALE NTS	DATE 01/04/2020	drawn RS	CHECKED EB		
REENWICH	<sub>ЈОВ</sub> 19118	DRAWING DA5.22		REVISION A		

Levei	Sull Acces IES	JUIT ACCES NO
LOWER GROUND	2	3
LEVEL 1	4	3
LEVEL 2	4	3
LEVEL 3	4	2
LEVEL 4	3	2
LEVEL 5	3	2
LEVEL 6	5	0
Grand total: 40	25	15
PERCENTAGE		63%

SUN ACCESS							
Level	Sun Acces YES	Sun Acces NO					

## 4 FLOOR PLANS

4.24 Solar access 2

1   8 Storeys - 21 Jun - 9.00am - Co			<u>3</u> 8 Storeys - 21 Jur
IMPORTANT NOTES: Date DESCRIPTION BY   Do not scale from drawings. All dimensions to be checked on site bidree commencement of work. All dimensions take preference. This drawing is copyright and the property of the author, and must not be retained, copied or used without the express authority of MARCHESE + PARTINERS INTERNATIONUL PTY. LTD. RS D100/2020 PRELIMINARY RS   PRELIMINARY NOT FOR CONSTRUCTION	SHADOWS CAST BY PROPOSED BUILDING SHADOWS CAST BY NORTH TOWER ADDITIONAL SHADOW CAST FOR MAX.ENVELOPE OF COMMERCIAL BUILDING VS PROPOSED ENVELOP SHADOWS CAST BY EXISTING BUILDING SHADOWS CAST BY EXISTING BUILDING	NSW 2060 Australia E info@marchesepartners.com	ALCEON GROUP

### 4 FLOOR PLANS 4.25 Shadow study 1



lun -11.00am - Comparison

	DRAWING TITLE SHADOW STUDY - SHEET 1					
IVING REENWICH	SCALE NTS	DATE 01/04/2020	drawn RS	CHECKED EB		
	<sub>ЈОВ</sub> 19118	drawing DA5.31		REVISION A		







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PRELIMINARY					SHADOWS CAST BY EXISTING BUILDING
NOT FOR CONSTRUCTION					



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CLIENT ALCEON GROUP

PROJECT GREENWICH SENIORS LIV 2 GREENWICH ROAD, GRE

	DRAWING TITLE SHADOW STUDY - SHEET 2					
IVING REENWICH	SCALE NTS	DATE 01/04/2020	drawn RS	CHECKED EB		
	<sub>ЈОВ</sub> 19118	DRAWING DA5.32		REVISION A		

NEW GATE PERGOLA ABOVE	
PLAZA	THE TABOVE
LOADINIE ZONE	
GREEEMMICHT ROAD	

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# 4 FLOOR PLANS 4.27 Deep soil

DEEP SOIL CALCULATION

DEEP SOIL ADG/DCP COMPLIANT AREAS: 320sqm, 15% of site

	DRAWING TITLE DEEP SOIL				
S LIVING	SCALE 1:150 @A1 1:300 @A3	DATE 01/04/2020	drawn RS	CHECKED EB	
GREENWICH	<sub>ЈОВ</sub> 19118	DRAWING DA5.51		REVISION A	

## marchesepartners

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