



Construction Management Plan

For the

Warringah Golf Club Development Project at 433 Pittwater Road, North Manly





New Warringah Golf & Community Club – Construction Management Plan

Prepared for:

Northern Beaches Council Development Application

Quality Control	
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1. Definitions

Northern Beaches Council (NBC)

Local Government Area and owner of land upon which development is taking place.

Warringah Golf Club Limited (WGC)

Developer and owner of Club Building.

Protection of Environments Operations Act (POEO)

The Protection of the Environment Operations Act 1997 (POEO Act) is the key piece of environment protection legislation administered by the EPA.

Construction Management Plan (CMP)

A Construction Management Plan outlines the client's intentions for a construction project and acts as a key information document for the project team, statutory authorities, and other stakeholders.



2. Objective of Plan

The objective of this Construction Management Plan (CMP) is to plan works so as to minimise the impacts of construction activities on:

- Neighbours
- Nearby residents
- Users of public footpaths and roads
- Parking in the vicinity of the site
- Surrounding streets used to access the site
- The local Environment

3. Content of Plan

This CMP outlines the nature of the construction project in terms of what work will be carried out at each stage, vehicles that will be used, numbers of vehicles accessing the site, sizes and types of vehicles that will be used and routes that will be taken. It includes plans that show the recommended routes for vehicles travelling to and from the site as well as access to the site and locations of proposed Works Zones.

The CMP references other reports such as Arboriculture for tree protection during construction and Stormwater for requirements associated with sediment management during all stages of the development as well as Architectural Plans for the development.

4. Northern Beaches Council Contribution

Northern Beaches Council (NBC) is developing the site jointly with WGC and will be responsible for: -

- Removal of trees;
- Demolition of buildings and tennis / futsal courts;
- Development of carparks.

NBC work will be done prior to and after WGC construction work and will be subject to a separate CMP.

5. Development and Distribution

This CMP will be adopted by the successful tenderer and distributed to sub-contractors and drivers of construction vehicles that need to access the work site providing them with the information that they require including but not limited to access routes, areas for delivery, access points to the site, parking and work hours.



6. Plan Inclusions

This CMP addresses the following:

1. Detail of the scope of the works to be completed including details of the various stages, including Demolition, Excavation, Construction etc. and the duration of each stage.
2. Identifies local traffic routes to be used by construction vehicles.
3. Identifies ways to manage construction works to address impacts on local traffic routes.
4. How construction workers will travel to and from the site and parking arrangements for those that drive.
5. Identifies any proposed road closures, temporary traffic routes, loss of pedestrian or cyclist access or reversing manoeuvres onto a public road and provide Traffic Control Plans (TCPs) prepared by an accredited RMS Red or Orange card holder to manage these temporary changes.
6. Details the size (including dimensions), of the construction vehicles that will service the site.
7. Provides for the standing of vehicles during construction.
8. Provides a scaled drawing showing where the construction vehicles will stand, and the vehicle swept path to show that these vehicles can access and egress the site in a forward direction.
9. Shows the location of any site sheds and any anticipated use of cranes.
10. Makes provision for all materials, plant, etc. to be stored within the development site at all times during construction.
11. Shows the location of any proposed excavation and estimated volumes.
12. Shows the location of all Tree Protection (Exclusion) zones.
13. Makes provision for all materials, plant, etc. to be stored within the development site at all times during construction.

7. EXISTING SITE

The existing site is known as the Warringah Recreation Area and is shown in Image 1.



Image 1 – Existing Site

8. PROJECT OVERVIEW

8.1 Summary of Development

Warringah Golf Club is building a new clubhouse on the area known as the Warringah Recreation Area at 433 Pittwater Road North Manly NSW 2100 on the northern corner of Pittwater Road and Kentwell Road. The development is on land owned by the Northern Beaches Council (NBC).

NBC will be undertaking demolition, tree removal and development of parking areas and new recreational facilities at the site.

At the site the redevelopment of the new premises includes construction of a double level facility consisting of a main bar, dining, lounges, external courtyard, amenities, back of house and external works including landscaping.

The footprint of the planned development is shown in Image 2.

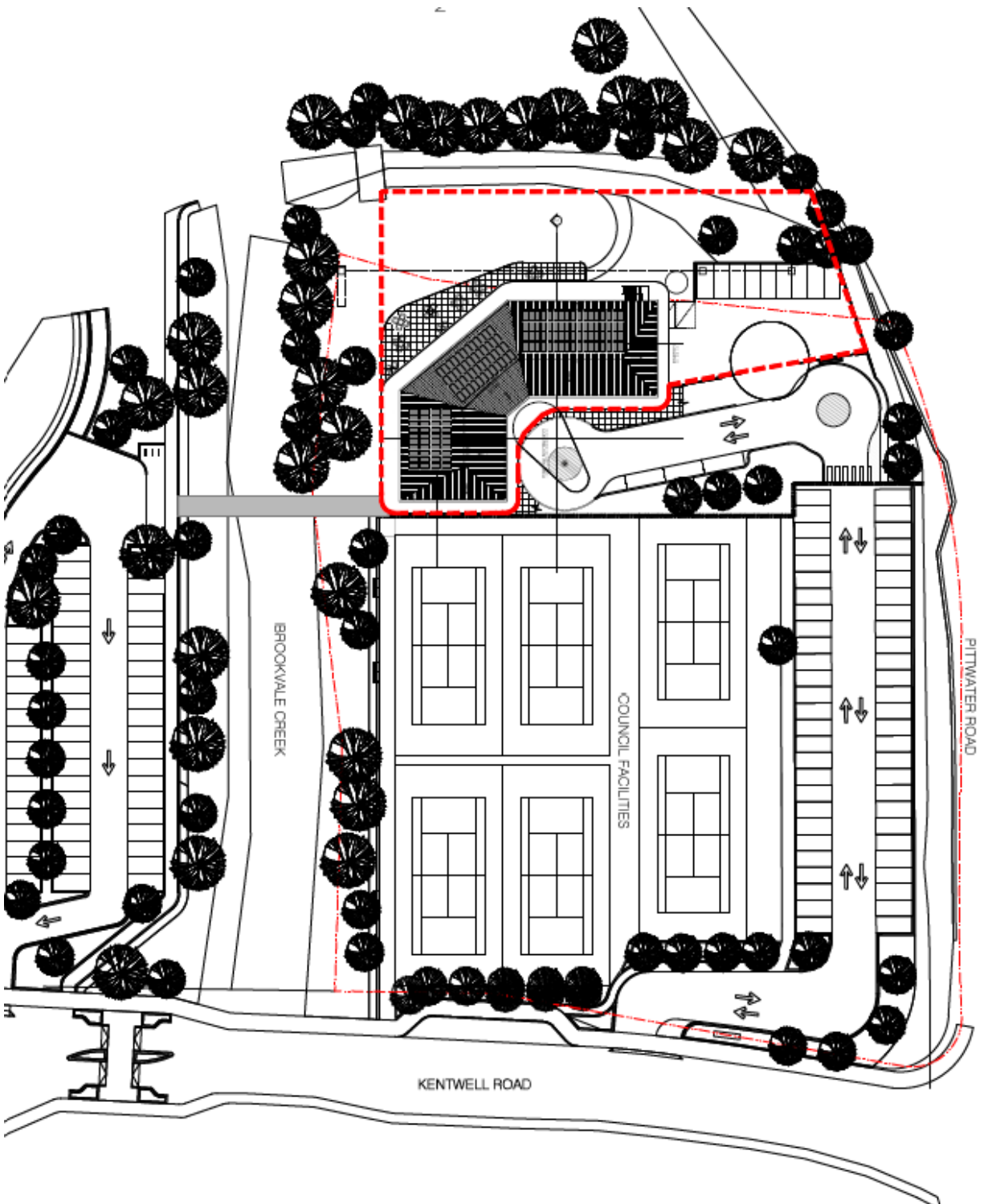


Image 2 – Planned development overall site plan

8.2 Site Overview

Image 3 shows the new clubhouse footprint superimposed on the existing site with indications of key points associated with the development.

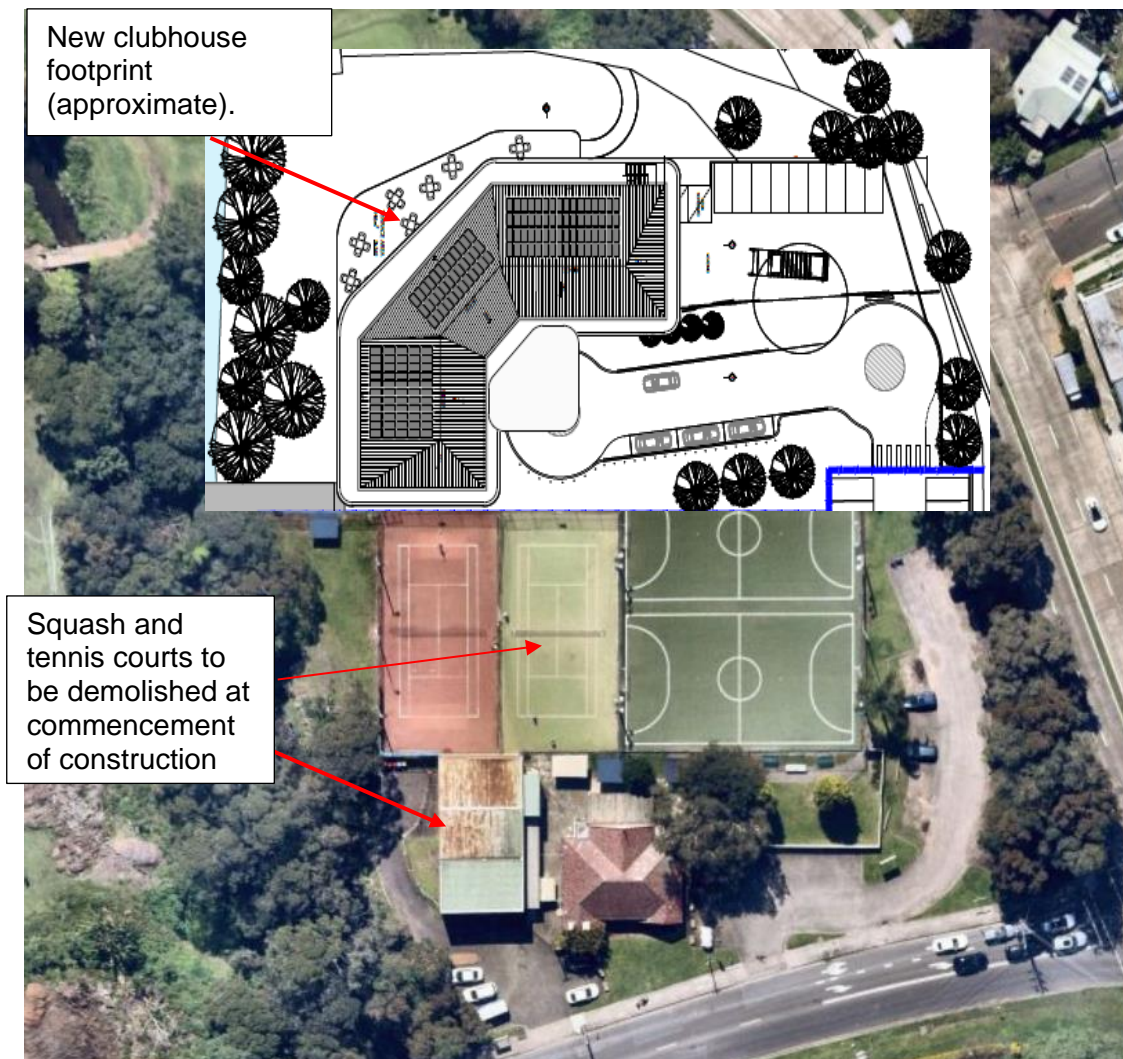


Image 3 – Construction Site overview

8.3 Scope of Work & Stages

Key Project Milestones

The project will generally follow the milestones as outlined below: -

- Pre-construction stage Contract awarded
- Contract Awarded
- Site existing tenants (tennis & squash) vacate site.
- Demolition (NBC) including: -
 - Termination of Electrical Services to Squash Courts
 - Demolition of Squash Courts
 - Demolition of tennis courts and associated fencing and floodlights
 - Setup of temporary site access whilst Squash Courts are being demolished.
 - Removal of all trees earmarked for demolition
- Principal Contractor (PC) Site possession including setting up offices
- Preliminary Works including: -



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- Site set up incl. fencing, amenities, etc.
- Conduct dilapidation records both internal and external
- Protection of trees to be retained
- Establishment of Stormwater and Erosion Controls
- Community engagement including commencement information session.
- Services Upgrade including: -
 - Hydraulic Services
 - Electrical Services
 - Stormwater
- Construction stage including general: -
 - Detail Excavation
 - Install piers/piles
 - FRP strip and pad footings
 - In-Gnd. Services
 - Structure
 - FRP Ground Floor slab
 - Erect Structural Steel
 - Structural Blockwork/Brickwork
 - Install Lower Metal Roof and roof plumbing
 - Install Upper Metal Roofing/ Roof plumbing/Fall Arrest system
 - Plant platforms
 - Flashings
 - Face Brickwork
 - External cladding
 - Windows
 - Internal Finishes
 - Stud Walls
 - Services Rough-in
 - Plasterboard Wall Lining
 - Ceilings
 - Membranes
 - Ceramic Tiling
 - Floor Tiling
 - Carpentry
 - Resilient floor coverings
 - Joinery
 - Metalwork
 - Services Fit-off
 - Paint
 - Fit out
 - Clean
- External works including landscaping
- Build New Eastern Carpark (NBC)
- Build New Western Carpark & Pedestrian Bridge (NBC)

9. CONSTRUCTION SITE

9.1 Site Arrangement, Parking and Storage

9.1.1 Vehicle Access

Access to the site will be via Kentwell Road in accordance with Traffic Movement Plan as shown in Image 8. All vehicles entering the site must do so by travelling from West to East along Kentwell Road and turning left into the site.

There are 2 driveways. The western one will be designated 'ENTRY' and the eastern 'EXIT'. All vehicles will be required to strictly observe this movement arrangement.

Trucks and Deliveries will use the circular entry and exit route as per Image 6.

Right turn from Kentwell Road into the site will not be permitted to minimise traffic congestion at the corner of Kentwell Road and Pittwater Road with traffic possibly queuing behind vehicles turning into the site.

The Site Supervisor will coordinate Deliveries and Removal of Waste.

9.1.2 Type & Size of Vehicles

The typical trucks to be accommodated on the site are shown in images 4 and 5.

Image 4 shows typical dual axle covered 10.5m semi-trailer. This type of vehicle will make most deliveries to the site. Image 5 shows a Single Articulated vehicle that will be expected to make deliveries of steel to the site. This is the longest vehicle expected at the site. It is represented on the plan in Image 6

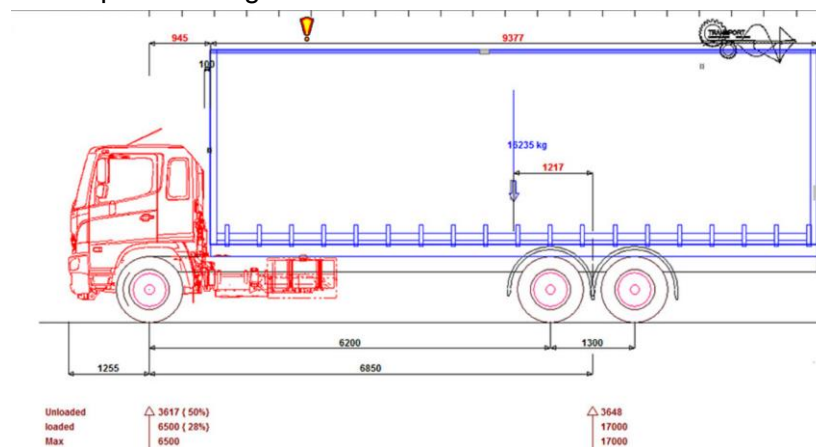


Image 4 – Typical delivery vehicle – 10.5m long – min turning radius 13m approx.

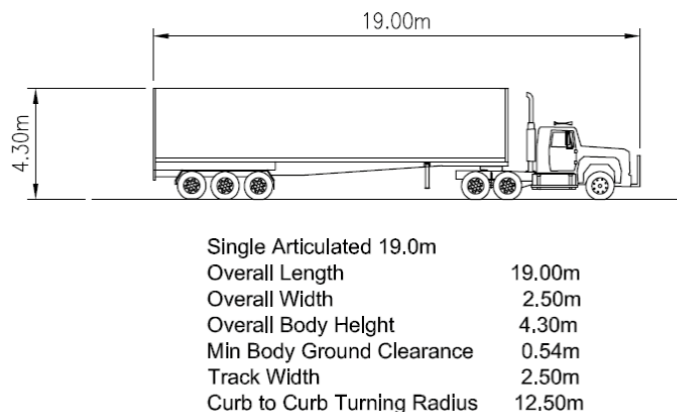


Image 5 – Typical Single Articulated Vehicle – 19m long – min turning radius 15m approx.



9.1.3 Traffic Control:

On site personnel will be ticketed in traffic control which allows personnel to manage and direct traffic in minor situations i.e., deliveries etc. if required. Additional controls are engaged for the high-risk trades i.e., concrete pours, structural steel delivery, excavation which may impinge on surrounding areas. The Principal Contractor will co-ordinate with adjacent property owners i.e., golf course on days when high risk trades are scheduled and may affect adjacent properties.

It is not anticipated that any road closures will be required.

9.1.4 Parking

All construction vehicle parking as far as possible will be onsite in the areas shown in Image 6. Parking in the parallel and right-angle spots along Kentwell Road in nearby residential streets will not be permitted. All construction personnel will have these instructions in their site induction.

The following additional measures will be implemented to minimise potential parking problems:

- Construction staff will be encouraged to carpool to minimise the number of cars.
- Construction staff will be encouraged to use public transport with due consideration of bus stops being near the site.

9.1.5 Principal Contractor's Access & Site Amenities

Amenities in the form of temporary office and toilets will be located to the north of the site entrance to cater for construction personnel as the workforce increases & decreases if required. Shown in Image 6

Power to this site will be taken over by the Principal Contractor and a separate builder's supply arranged with a Retailer for the duration of the construction period.

All services and facilities will be connected to appropriate services connections such as sewer, water, power & telecommunications.

Internet and phone facilities will be arranged by the Principal Contractor.

9.1.6 Materials and Plant Storage

Image 6 shows the locations for positioning of materials and plant storage to facilitate installation safe movement around the site and maintenance of a well-ordered site.

All materials delivered to site will be inspected for quality assurance and compliance with required specifications and stored within the construction zone in a safe and neat manner. All loading & unloading will be done within the construction zone.

9.1.7 Travelling to and from the site – Public Transport Options

Image 7 shows the multiple local bus stop options for construction workers travelling to and from the site. This plan will be provided in the induction information and posted on the site notice board.

9.1.8 Crane Location

Image 6 shows the likely location of site crane. The crane is likely to be of capacity of 60 tonnes with a footprint of approximately 40 sqm.

9.1.9 Impact on Golf Course operations

The construction works and all associated traffic will have nil impact on the day-to-day golf course operations.

9.2 Site Security

Temporary fencing will be provided as shown in Image 6 to completely secure the site, to prevent public from entering the construction site as well as providing security for materials stacked for installation. Entry and exit gates will be provided in the locations shown and will be locked at the end of each workday. Site offices & sheds will be alarmed with back to base connection.

Security services will conduct regular inspections during periods outside of construction hours.

Security lighting will be provided and positioned and directed so as not to impact on traffic and neighbouring properties.

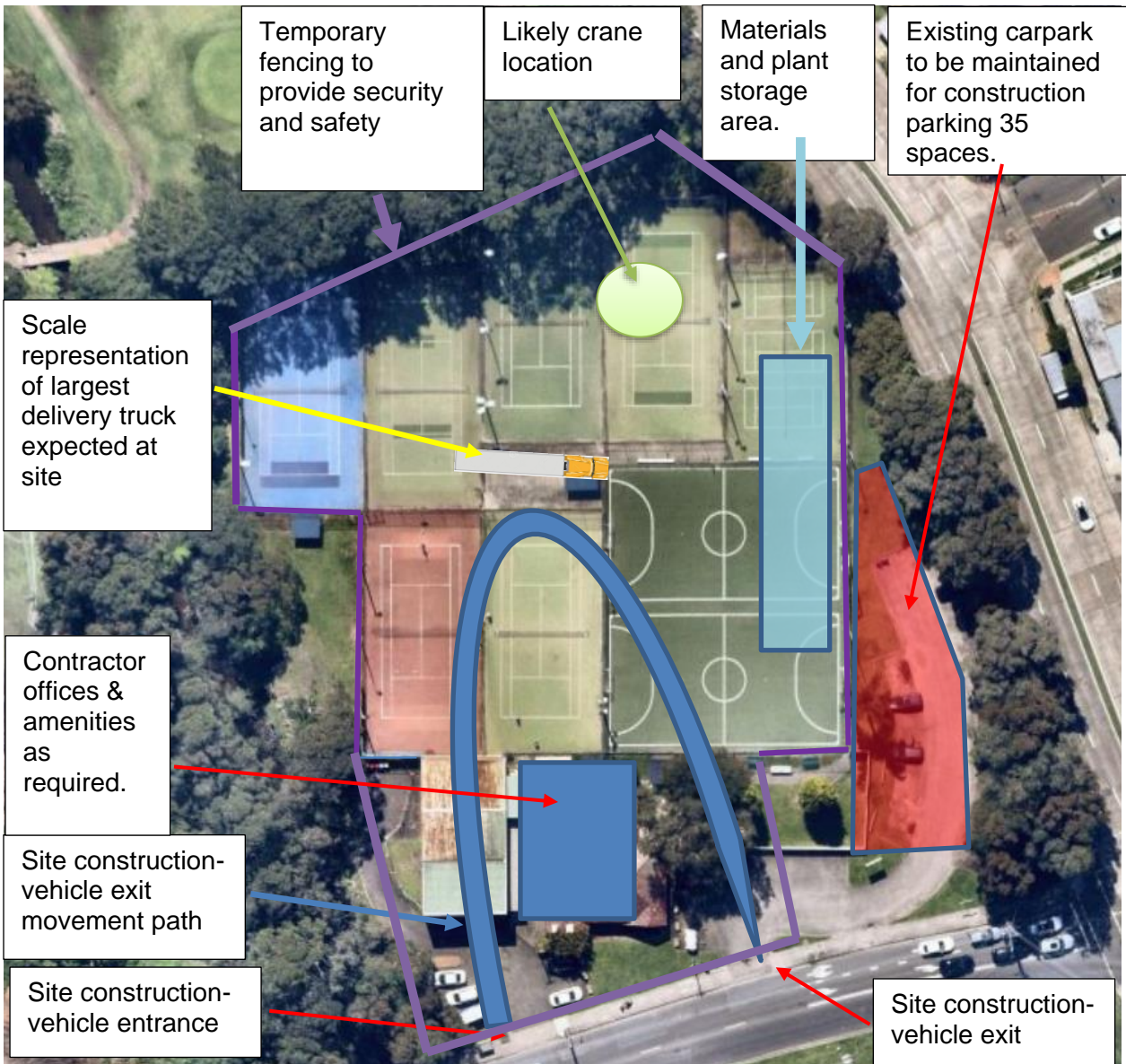


Image 6 – Security, access, crane location, and storage

9.3 Working Hours

Construction Work times shall be in accordance with Conditions of DA consent with all work likely for instance to occur between the following hours:

- Monday to Friday 7.00 am to 5.00 pm
- Saturday 7.00 a.m. to 1.00 p.m.
- Sunday and public holidays No Work



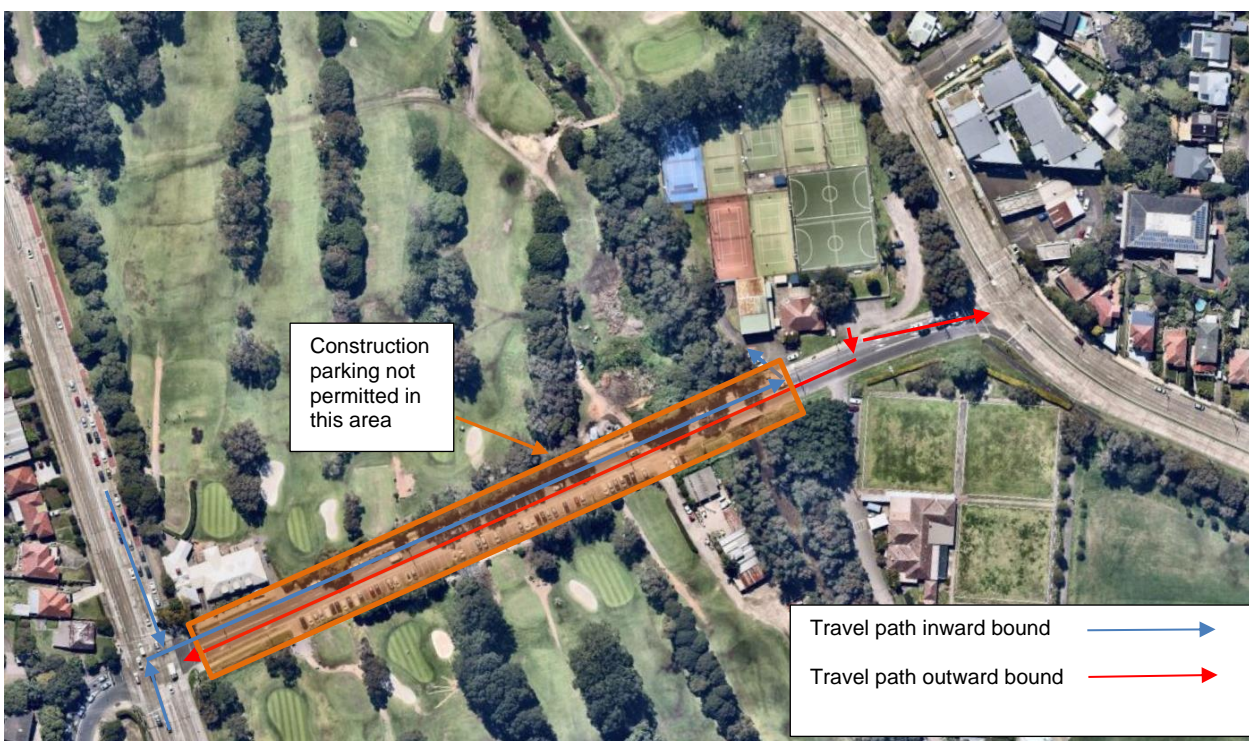


Image 8 – Travel paths for construction traffic & restricted parking areas

9.4 Environmental Considerations

9.4.1 Stormwater and Erosion Control

Water carrying sediment will be prevented from directly entering Brookvale Creek and the neighbouring roads and other public areas with the use of sandbags or hay bales along the line shown in Image 7. This will be regularly inspected and repaired as necessary. Regular cleaning will be undertaken to remove buildup of sediment.

Application of the following principles will help ensure that the stormwater and erosion controls are of an acceptable standard and that any stormwater released from the site meets water quality standards:

- Sediment and erosion control measures will be constructed in accordance with “Managing Urban Stormwater: Soils and Construction (Landcom 2004)” The Blue Book
- All stormwater and erosion control structures will be in place before the commencement of construction and continue to operate after completion of the construction until the land is stabilised.
- Uncontaminated runoff from outside the construction site will be diverted around the site.
- No untreated construction site runoff will be discharged into receiving waters such including Brookvale Creek and Kentwell Road stormwater drains.
- Drainage through and from areas of construction will be designed to minimise surface flow velocities.
- All silt fences, silt traps and sedimentation basins will be cleaned out once 30% of their capacity has been filled.
- Bare areas will be stabilised within 20 days of the completion of construction activities or 14 days in areas where erosion is more likely to occur.
- Temporary stabilisation techniques such as strategically placed erosion matting, sediment screens, hay bale energy dissipaters, mulching and annual grass species establishment will be implemented on disturbed areas.



9.4.2 Protection of Trees

Trees on the site will be either removed or protected in accordance with Abnoba Arbor Arboricultural Services.

Trees on the site not earmarked for removal have been identified in the temporary 'Tree Protection Zone' as shown in image 9. This zone will have temporary fencing established along the borders prior to the commencement of any works to be maintained until the completion of the project.

Excavation Near Trees

Excavation near trees that are to be retained must be undertaken in accordance with the following plan: -

1. Carefully excavate with a trenching machine up to 2.0 metres from the base of the tree. A spotter will be used to guide the machine and avoid damage.
2. Excavation by hand digging shall be employed within 2.0 metres on either side of the tree and within 2.0 metres of the tree trunk.
3. No tree root greater than 40mm in diameter is to be cut without prior inspection and approval from NBC tree services.
4. Tree roots less than 40mm in diameter are to be clean cut with a sharp implement.
5. No material is to be stored under trees to be retained or against the tree's trunk

9.4.3 Waste Management

Waste management bins will be consolidated in the area as shown in Image 9. Bins where necessary will be covered to prevent material being blown around the site and neighborhood. The bins will be separated into recyclables and non-recyclables.

Waste minimisation and recycling will be adopted throughout the construction,

To ensure that those wastes that cannot be recycled are disposed of at an appropriate licensed waste disposal facility, the following actions will be taken:

Where possible, the following wastes will be disposed of via recycling.

- timber
- plaster products
- steel
- cement based masonry
- clay based products, and
- asphalt

Licensed waste disposal contractors will only undertake waste disposal and recycling.

Where possible, recycled wastes such as crushed concrete will be reused on site.

All wastes including concrete wastes and bituminous plant residues must be removed from the site. No wastes will be buried or incinerated on site.

9.4.4 Air Quality

Air pollution from construction activities will primarily come from equipment exhaust emissions and dust generation from vehicle movements and earthwork activities.

The following measures and controls will be utilised according to site conditions and activities:

- All petrol and diesel engine vehicles and equipment will be properly maintained to ensure that exhaust emissions comply with the Clean Air Regulations.
- Water tankers will be used to suppress dust generated by earthworks activities (i.e.,

excavation, scraping and grading of earthworks) with spraying increased on windy days.

- The total area disturbed by construction will be minimised at any one time to reduce the potential of dust generation.
- All trucks transporting excavated or fill material to and from site must cover their loads.
- Construction vehicles' wheels will be cleaned if required to prevent the tracking of soil and other materials on to public roads.
- Material deposited from construction traffic along existing sealed roads will be cleaned up.



Image 9 – Tree removal and protection areas and sediment barrier positioning & waste management area.

9.4.5 Noise Control

Noise generated on the site will be kept to a minimum as far as possible particularly in the mornings.

This CMP will adopt any noise level restrictions and time restrictions imposed by the DA conditions where there is a likelihood of annoyance due to noise from a construction site.



Machinery and activities likely to cause noise and vibration include the operation of heavy earth moving and compaction equipment and pile driving.

9.4.6 Hazardous Materials Management

Compliance with the following actions will reduce the risk of significant pollution arising from inappropriate storage and handling of hazardous materials on the site:

- Refueling of vehicles and/or construction plant must not be done on site unless it is impractical to transport to offsite refueling stations.
- Refueling of vehicles and construction plant must not be carried out in areas from which fuel or oil may be discharged to waters, street gutters or stormwater drainage systems.
- Refueling of vehicles and construction plant must not be carried out without an operator or driver attending all times.
- All containers of fuel and hazardous chemicals must be stored in a bunded area whose volume is not less than 110% of the largest container. Suitable barriers must be erected along bund walls to prevent elevated storage tanks and drums stored more than 2 drum heights from falling outside of bunded areas.
- The maintenance and cleaning of vehicle and construction plant must not be carried out in areas from where washings may be discharged into receiving waters, street gutters or stormwater channels.
- Spillages of hazardous liquids should be contained by means of a dry absorbent such as sand, saw-dust, or oil absorber, which can be transferred to a suitable container for disposal by a licensed waste disposal contractor.
- All contaminated material including any material contaminated by the spillage of hazardous substances should be disposed of in accordance with the following requirements:
 - The waste disposal contractor must hold the appropriate POEO license.
 - The proposed disposal location must be a POEO registered waste disposal facility and have approval to accept the particular waste.
 - A POEO disposal consent number must be obtained before removing the contaminated waste from the site.
 - The POEO docket chain of custody documentation for the transportation of contaminated waste must be completed.

9.4.7 Hazardous Chemicals

Hazardous chemicals include hazardous substances and dangerous goods and will only be brought on to site if a necessary component of construction. The Hazardous Chemicals will be managed as per below: -.

- The Principal Contractor will ensure that no hazardous chemicals will be brought into a workplace unless authorised following assessment of any risks associated with the chemical. Suppliers of hazardous chemicals will be required to provide a current (less than 5 years old) Safety Data Sheet (SDS) of all hazardous chemicals that they will be providing to the PCBU prior to supply of the chemical.
- All SDS must be in the format required by the Code of Practice Preparation of Safety Data Sheets for Hazardous Chemicals, and will be held in a SDS Register, together with the risk assessment for each of the chemicals and is to be always readily available and accessible where the chemical is used.
- The Principal Contractor will provide to any workers who handle, use, or who are likely to be exposed to a risk associated with a hazardous chemical as part of their work, such information, instruction, and training in relation to –



- the nature of the hazards and the risk associated with the use of the chemical; and
 - the need for, and proper use of, measures to control the risk (including the selection and use of suitable personal protective equipment when a risk cannot be adequately controlled by higher-ranked controls).
- Hazardous chemicals will be stored in a secure storage. Bunding will be provided for all materials which may create, and environmental hazard should a spill or leak occur, and appropriate spill control and clean up equipment will be provided. Any spill or leak will be recorded and investigated on the Incident Record Form, and storage and handling procedures amended where necessary.
- The following procedures will be followed in the handling and use of hazardous chemicals:
 - all persons handling chemicals will be instructed about the hazards of the chemical, and the means of protecting themselves from the chemical.
 - all use of hazardous chemicals must be carried out in accordance with the precautions (including the use and care of protective clothing and equipment) specified on the SDS for the chemical.
 - suitable respiratory, eye and body protection as required by the SDS will be provided to all persons who are likely be exposed to a chemical if adequate ventilation cannot be maintained, or if the chemical poses an immediate risk to health.
 - flammable and hazardous substances will be stored in safe and secure storages and take into account any separation and segregation requirements for incompatible substances, and precaution taken to prevent ignition.
- Handling procedures (including transfer and decanting) will be implemented to eliminate where possible, or minimise so far as is practicable, the risk of a spill or leak of hazardous chemicals. Workers will be provided with formal training in safe handling and use procedures, including housekeeping practices, spill and leak clean up procedures, and prevention of entry of chemicals into the environment.
- Spill response procedures will be developed and implemented for spills or leaks of all hazardous chemicals, and appropriate spill controls provided for the chemical. Spills and leaks must be cleaned up immediately and reported immediately to the workplace supervisor or other designated person, who will notify emergency services if the spill or leak is large or creates a risk to the workplace, neighbours, or the environment, or if a risk of fire or explosion is identified.

9.4.8 Excavation & Fill

Construction will require only minimal level of excavation as required to level the site and establish piers and footings.

The building footprint will be built up in accordance with Architect Plans and Flood Management requirements. The cut and fill arrangement is shown in Image 10 and detailed further in the Flood and Overland Flow report submitted with the DA.

Where suitable the cut material will be reused on site for the fill.



Image 10 – Excavation & Fill Plan.

10. DEMOLITION & TREE REMOVAL

10.1 Demolition

Image 11 shows the site Demolition Plan.

The demolition will all be done at the commencement of the project and will include the tennis courts, fencing and flood lighting, the squash courts, and the tennis courts office.

All demolition works will be in accordance with AS2601- The Demolition of Structures Prior to demolition and any other relevant Standards and Codes of Practice.

Details of Hazardous Materials

- Prior to Demolition a Hazardous Materials Survey must be carried out to determine any removal requirements
- Hazardous Materials identified such as asbestos fibro sheet where encountered must be disposed of by a Licenced Asbestos removing contractor according to the Asbestos Removal Standards.

Method of Demolition

- Hatched and Dashed areas indicate items and structures to be demolished.
- Electricity and Telephone to be disconnected as per relevant guidelines and reconnected through temporary supply arrangements.
- Water supply, sewerage, and stormwater to be capped off/ relocated where required.
- Maintain and protect construction and property on adjoining blocks from Demolition Activities.

10.2 Tree Removal

Trees earmarked for removal are shown in Image 11 and in the Arboricultural Report.

Tree removal must be completed in compliance with the Code of Practice: Amenity Tree Industry, 1998 – SafeWork NSW

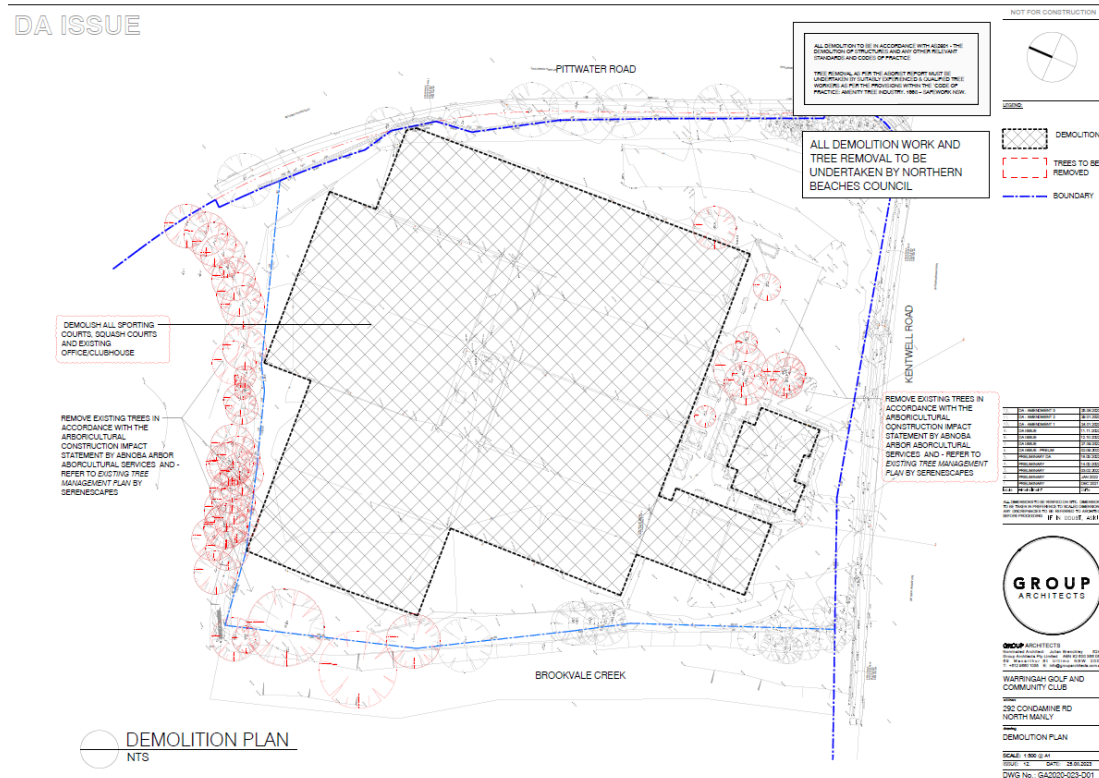


Image 11– Demolition Plan – Source Group Architect Plans



11. COMMUNITY LIAISON & COMMUNICATION

The local community will be engaged and provided with an overview of the project at the outset as well as newsletter drops to provide key milestone updates.

At the entrance to the site a sign detailing as a minimum the following will be provided to facilitate communication and advice on the project.

WARRINGAH GOLF AND COMMUNITY CLUB NEW CLUBHOUSE DEVELOPMENT

SITE CONTACT NUMBER: _____

PRINCIPAL CONTRACTOR: _____

SITE OWNER: _____

ARCHITECT: _____

CONSULTING ENGINEERS: _____

Image 12 Site Community advice sign

12. OTHER SITE-SPECIFIC RULES

The following is a list of rules applying to the site that will be maintained throughout the construction period: -

- No persons are to enter this site unless prior arrangements have been made with the Principal Contractor.
- All workers on the site be it Principal Contractor staff or sub-contractors must have in place, and provide evidence of, Certificates of Currency for Workers Compensation Insurance and Public Liability Insurance and must have in place Safety Management Plan(s) and Safe Work Method Statements that are regularly revised to meet changing conditions.
- If an area is barricaded, all persons must avoid walking through the barricaded area.
- All Contractors and their workers must have current construction induction training evidence. All workers to notify site supervisor via site induction
- All persons are to maintain site amenities in a clean, tidy, and hygienic state. All persons operating plant or performing an activity that requires an operator's license (e.g., scaffolding, excavator, etc.), are required to hold the appropriate license and provide proof.



- No lighting of fires is permitted.
- Work areas are to be always kept clean and tidy.
- No smoking is permitted whilst working. Smoking is only permitted in areas where there is no risk of fire, and all cigarette butts and rubbish should be disposed of sensibly. Smoking is not permitted in enclosed areas and is only permitted in designated areas.
- No animals are permitted at the workplace.
- All rubbish to be placed in bins / cages.
- All incidents, dangerous events, serious bodily injuries, near misses, and work-related illnesses must be reported immediately to the Principal Contractor.
- No children are allowed at the workplace.
- No fighting or aggressive behaviour will be tolerated.
- No alcohol or drugs are to be consumed at the workplace. Workers are not to attend site affected in any way by drugs or alcohol.

PLAN END