



Demolition & Construction Traffic Management Plan

DA2023/0669

16 Macpherson Street, Warriewood

Proposed Construction of an Approved Subdivision and Low-Density
Residential Development

Ref 22131

12th April 2025



CONSULTING
ENGINEERS

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1. Introduction

1.1 Project Summary

CJP has been engaged by Warrimac Pty Ltd to prepare a Demolition and Construction Traffic Management Plan (DCTMP) for submission to Northern Beaches Council, addressing consent **conditions 26 and 49 of DA2023/0669**, relating to an approved subdivision located at 16 Macpherson Street, Warriewood.

In summary, development consent has been granted for the *demolition work and the construction of 28 dwellings, infrastructure, roadworks, tree removal, landscaping, community title subdivision and the rehabilitation and dedication of the creek line corridor to Council.*

Vehicular access to the site and the individual allotments is approved to be provided via two new intersections off Brands Lane which connect with each other by way of an internal access lane through the site.

This DCTMP has been prepared by a Transport for NSW (TfNSW) accredited person and shall be submitted to and approved by the Council before commencing any demolition and construction work. Generally, the purpose of the DCTMP is to ensure public safety and minimise any adverse effects on the adjoining pedestrian and vehicular traffic systems.

A copy of the approved demolition and subdivision plans for DA2023/0669, prepared by Craig & Rhodes, are reproduced in Appendix A, whilst a copy of the approved architectural plans, prepared by PBD Architects, are reproduced in Appendix B.

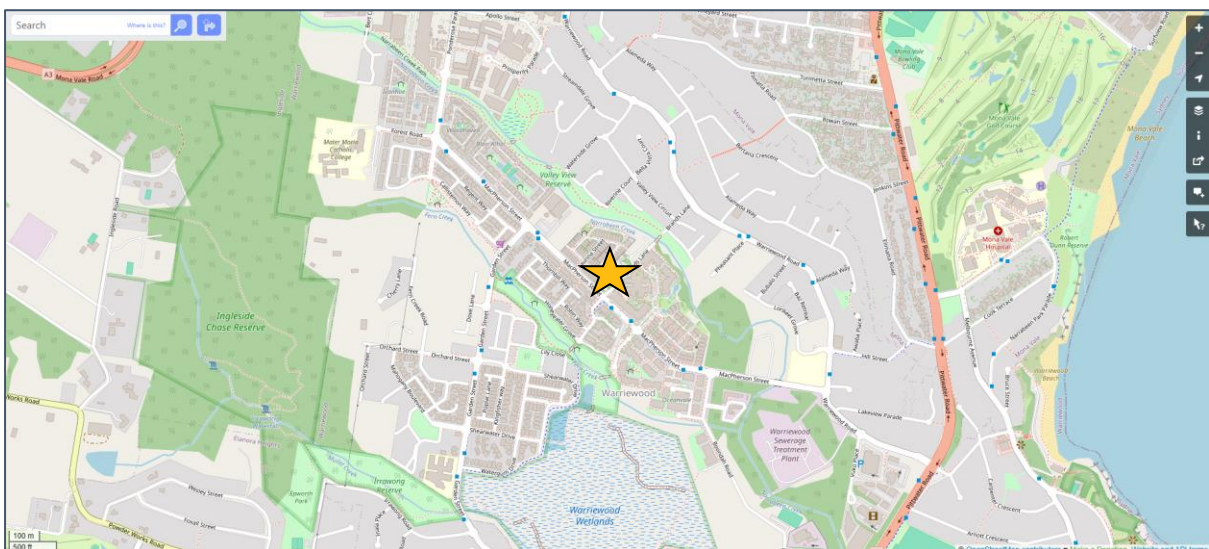


Figure 1.1 – Site Location (Source: OpenStreetMap)

It is important to note that, whilst CJP is tasked with the development of this Demolition and Construction Traffic Management Plan, the responsibility for its execution rests with other parties, such as the project manager and/or the builder.

1.2 Purpose of this Report

The purpose of this DCTMP is to outline the traffic management principles and procedures that should be implemented during the demolition, excavation, and construction works of the approved development, in order to minimise impacts on the surrounding road network, ensure the safety and efficiency of everyone in the vicinity, and provide information on the heavy vehicle access route to/from the site. This DCTMP is intended to provide procedural information on regular day-to-day activities during the construction programme, including:

- ensuring the safety of workers, members of the public and road users in the vicinity of the site.
- details on the loading and unloading arrangements during demolition, excavation, and construction works.
- details on the heavy vehicle route between the arterial road network and the subject site.
- estimates of truck movements during the various stages.
- maintaining vehicular and pedestrian access to neighbouring properties.
- ensuring all works are carried out in accordance with Northern Beaches Council's approved working hours, outlined in consent condition 6(a)

Information on infrequent/one-off activities such as hoarding erection/dismantling, mobile crane set-up, public domain works, oversized deliveries *etc.*, are not covered in this report. These activities require separate permits from Council, along with task-specific Traffic Control Plans which are typically provided by the respective contractor under separate cover.

In addition, this DCTMP provides information on, but not limited to, the following:

- description of the existing site and its location
- existing road network and traffic conditions
- construction programme
- heavy vehicle access route
- public and active transport infrastructure
- demolition and construction traffic generation estimates and its impacts on the surrounding road network
- hoarding
- site amenities
- sediment control
- neighbour notification
- contractor parking
- site inductions

1.3 Relevant Policies & Guidelines

In preparing this DCTMP, reference has been made to the following policies and guidelines:

- TfNSW Traffic Control at Work Sites Technical Manual (Issue 6.1 – 28 February 2022)
- Australian Standards AS1742.3: Traffic Control for Works on Roads
- Determination of Development Application by Grant of Consent for DA2023/0669

This DCTMP has been prepared and reviewed by engineers who hold the Prepare a Work Zone Traffic Management Plan accreditation.



Figure 2.2 – Aerial map (Source: Nearmap)



Figure 2.3 – Streetview image of Macpherson Street & Brands Ln intersection, looking north (Source: Google Maps)



Figure 2.4 – Streetview image of Brands Ln and existing roundabout, looking north-east (Source: Google Maps)



Figure 2.5 – Streetview image of Brands Ln, looking south-west (Source: Google Maps)

2.2 Road Network

The Transport for NSW (TfNSW) road hierarchy comprises the following road classifications:

- State Roads: Freeways, Motorways and Primary Arterial Roads (TfNSW managed)
- Regional Roads: Secondary or Sub-Arterial (Council managed, partly funded by the State)
- Local Roads: Collector and Local Access Roads (Council managed)

The road hierarchy in the vicinity of the site is shown in the figure on the following page, whilst the key roads are summarised below:

- Pittwater Road is classified as a State Road and provides the key north-south road link in the Northern Beaches area, linking Brookvale to Mona Vale. It carries two traffic lanes plus dedicated bus lanes in each direction in the vicinity of the site, with turning lanes provided at key intersections.
- Mona Vale Road is also classified as a State Road which provides a key east-west road link through the area, linking Pymble to Mona Vale. It carries one traffic lane in each direction, with additional lanes and turning lanes provided at key locations.
- Macpherson Street is a local road which performs the function of a collector route through the Warriewood area, as well as providing vehicular and pedestrian access to frontage properties. In terms of the Warriewood Valley Roads Masterplan, it is classified as a Sub-Arterial Road. It carries one traffic lane in each direction in the vicinity of the site, with kerbside parking generally permitted.
- Brands Lane is a local road which provides vehicular access to the existing plant nursery on the subject site as well as the existing seniors living development opposite. The existing formal section of the road terminates at the roundabout, however, extends beyond the roundabout in the form of a dirt road without kerb and gutter. Beyond that is a pedestrian walking track which connects to the northern section of Brands Lane, at the Lorikeet Grove intersection.

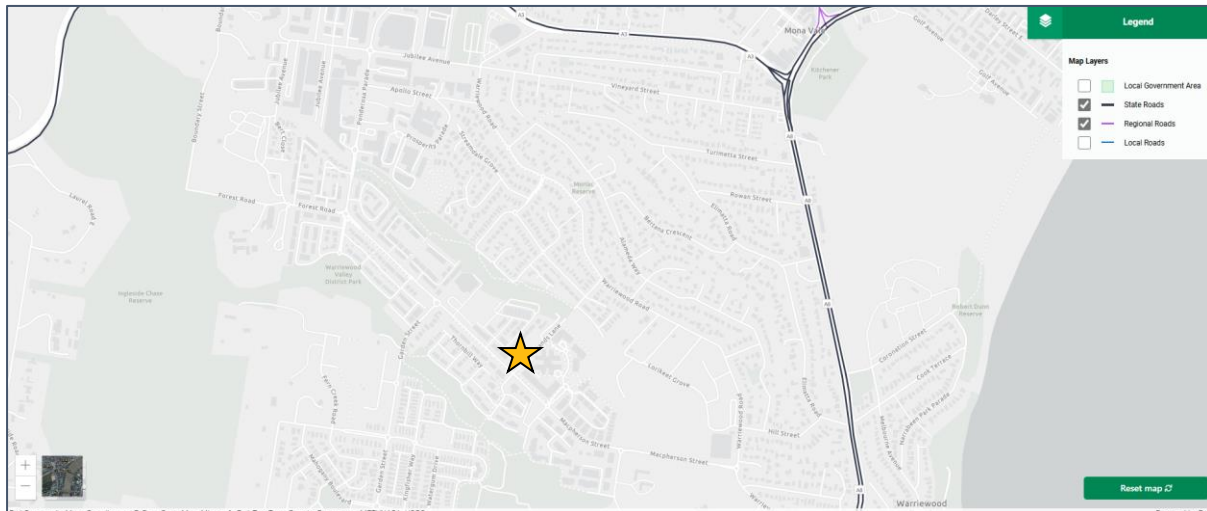


Figure 2.6 – Road Hierarchy Map (Source: Transport for NSW)

2.3 Public & Active Transport

The existing bus network map is shown in the figure on the following page. The nearest bi-directional bus stop is located within 200m of the site along Macpherson Street and serviced by the 185 bus, operating 7 days per week between Narrabeen and Mona Vale via Warriewood.

There is also a bi-directional bus stop located within 400m of the site along Garden Street and serviced by the 182 bus, operating 7 days per week between Narrabeen and Mona Vale via Elanora Heights, North Narrabeen and Warriewood.

Both the 182 and 185 services also provide connections to B-Line services at Mona Vale. The B-Line provides high-frequency services 7 days per week between Mona Vale and Wynyard.

Research suggests that proximity to bus services influence the travel mode choice for areas within 400m (approximately 5 minutes) of a bus stop. As such, the approved development has good potential for construction contractors to utilise bus for their commute to/from work.

In addition to the public transport services available in the vicinity of the site, there is also a good level of pedestrian connectivity, including safe and convenient footpaths to the abovementioned bus stops. All future footpaths in the surrounding area will be of good quality, with appropriate widths and pram ramps provided at most intersections.

The *Planning Guidelines for Walking and Cycling* identify a number of city-scale design principles that can assist the creation of walkable and cyclable cities and neighbourhoods. These principles emphasise urban renewal and the creation of compact, mixed use, accessible centres around public transport stops. At the neighbourhood scale, design principles can be reinforced through the creation of local and accessible centres and neighbourhoods with connected street patterns and road design which aim to reinforce local walking and cycling networks.

In particular, the *Guidelines* note that increased population density is an important element in creating a walkable and cyclable city. A compact development brings activities close together, making them more accessible by foot or by bicycle, without the need to use a car. Increased population density also enhances the viability of public transport services.

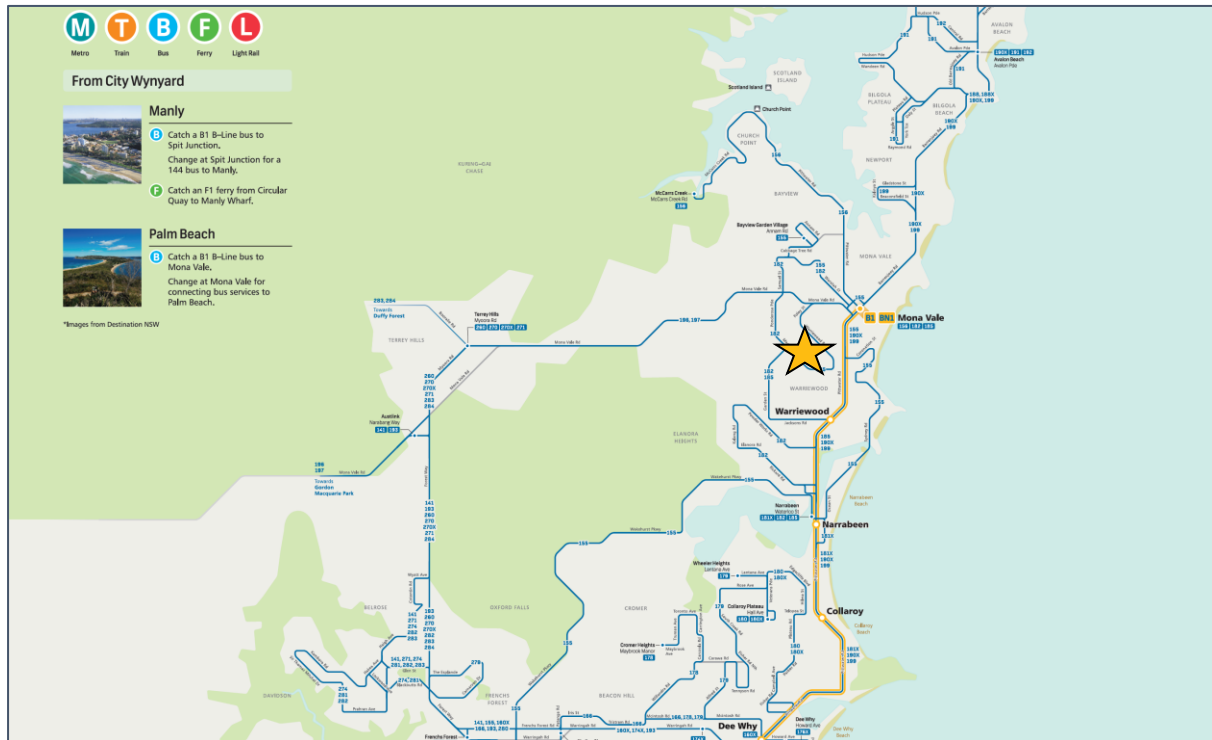


Figure 2.7 – Existing Public Transport Map (Source: Transport for NSW)

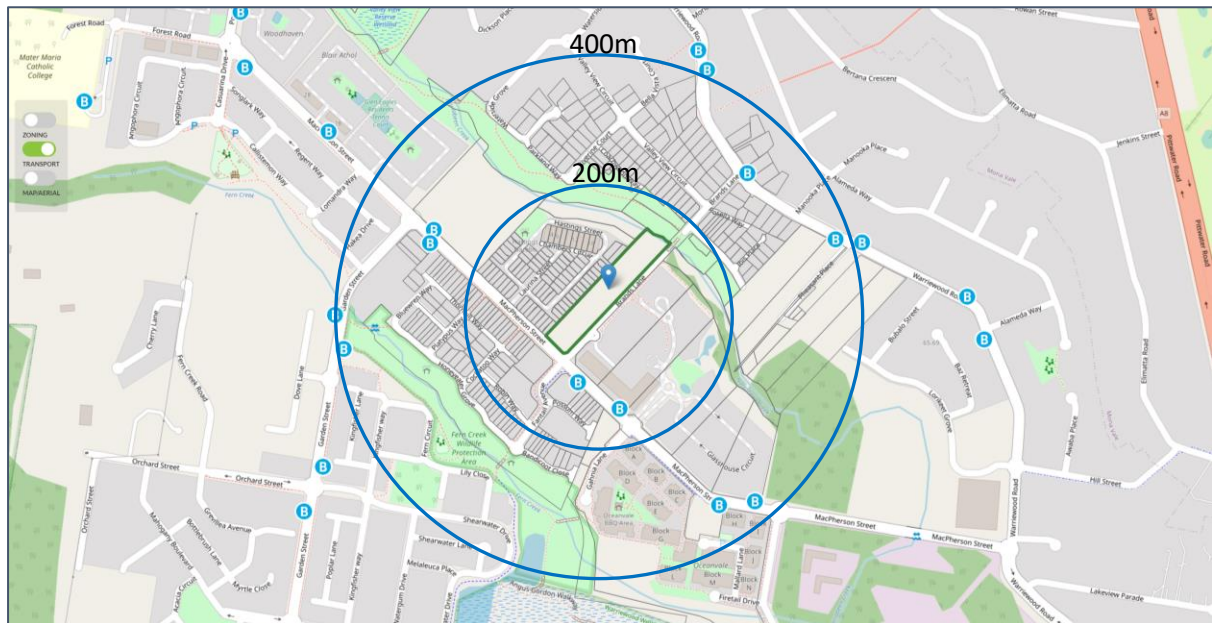


Figure 2.8 – Existing nearby bus stops (Source: Transport for NSW)

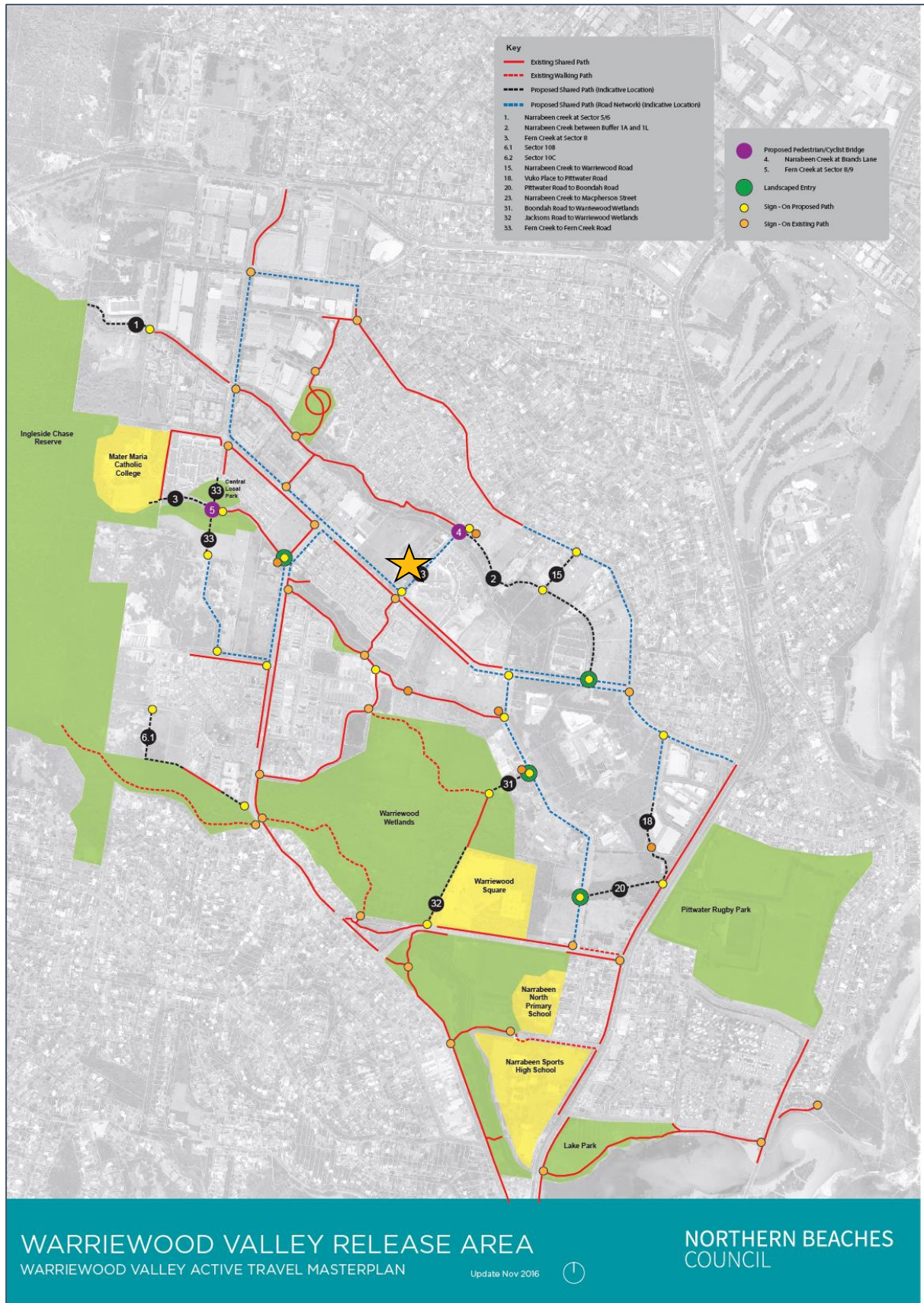


Figure 2.9 – Warriewood Valley Active Travel Masterplan (Source: Warriewood Valley Landscape Masterplan)

2.4 Existing Surrounding Traffic Controls

The existing traffic controls in the surrounding area comprise:

- Traffic signals at the Pittwater Road, Warriewood Road & Hunter Street intersection
- Roundabouts in Ponderosa Parade where it intersects with Mona Vale Road, Jubilee Avenue, and Macpherson Street
- Roundabouts in Macpherson Street where it intersects with Warriewood Road, Boondah Road, Anglicare Warriewood, Garden Street and Ponderosa Parade
- a 50km/h speed limit along Macpherson Street
- Give way restrictions in Brands Lane where it intersects with Macpherson Street
- Stop restrictions in Fantail Avenue where it intersects with Macpherson Street

2.5 Existing Surrounding Parking Restrictions

The existing parking restrictions in the surrounding area comprise:

- Unrestricted parallel kerbside parking in indented bays along both sides of Macpherson Street
- Bus Zones located at regular intervals along both sides of Macpherson Street
- No Stopping restrictions elsewhere along Macpherson Street
- No Stopping restrictions along both sides of Brands Lane, in between the roundabout and Macpherson Street
- Unrestricted angled parking along the northern side of Brands Lane, beyond the roundabout

3. Approved Development

3.1 Development Description

The approved development involves the *demolition work and the construction of 28 dwellings, infrastructure, roadworks, tree removal, landscaping, community title subdivision and the rehabilitation and dedication of the creek line corridor to Council.*

A copy of the approved demolition and subdivision plans for DA2023/0669, prepared by Craig & Rhodes, are provided in Appendix A, whilst extracts of both are reproduced in Figure 3.1 and Figure 3.2.

A copy of the approved ground floor master plan, prepared by PBD Architects, is provided in Appendix B whilst an extract is provided in Figure 3.3 on the following page.

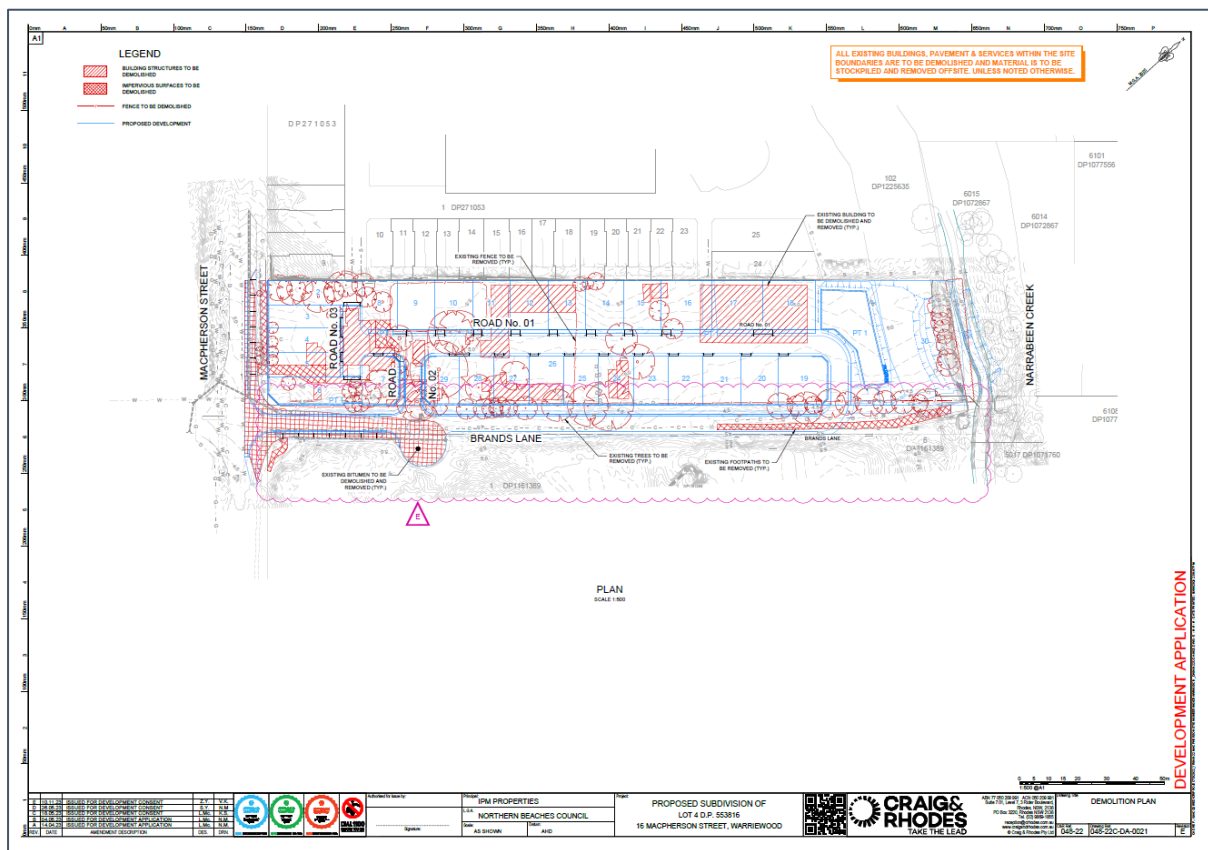


Figure 3.1 – Approved demolition plan (Source: Craig & Rhodes)



Figure 3.2 – Approved subdivision plan (Source: Craig & Rhodes)

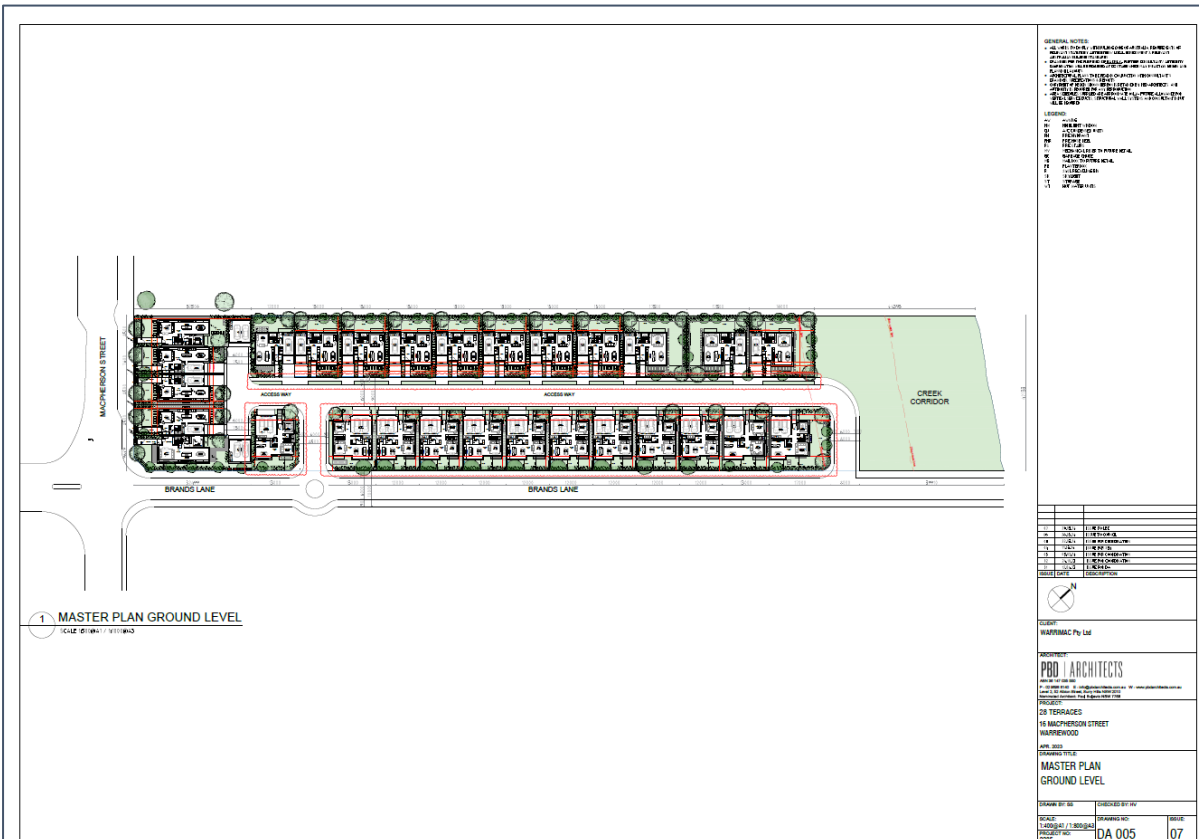


Figure 3.3 – Approved ground floor master plan (Source: PBD Architects)

3.2 Parking & Vehicular Access Arrangements

Off-street parking is approved for 2 cars per allotment, in accordance with Council's Pittwater 21 Development Control Plan (P21 DCP) Section B6.3 requirements, to be provided on each individual allotment. Depending on the dwelling type, the 2 car parking spaces will either be in a traditional side-by-side double garage or a single-car garage with a tandem space in front of the garage.

Vehicular access to the site and the individual allotments is approved to be provided via two new intersections off Brands Lane, which connect with each other by way of a 6.0m wide internal access road through the site – i.e. there will not be any new driveways located off the Macpherson Street or Brands Lane frontages.

The site's approved south-western vehicular access point aligns with the existing roundabout that services the Anglicare residential aged care facility opposite. Notwithstanding, the existing dome roundabout island is approved to be realigned to the centre of Brands Lane, as the existing island is currently offset closer towards the Anglicare development. The centring of the island will ensure that motorists negotiate the intersection as intended – i.e. by driving around the island rather than over it. The centring of the island does not require any works to the Anglicare development, and their existing vehicular access driveways will remain unchanged. Appropriate chevron linemarking will be painted on the road pavement to ensure that those accessing the existing Anglicare driveways can continue to do so easily and in a logical fashion.

Furthermore, Brands Lane is to be realigned and extended towards the far north-eastern end of the site where it will terminate.

3.3 Waste Collection & Servicing

Waste collection is approved to be undertaken by Council's contractor using a 10.5m long side-loading garbage truck, travelling clockwise around the site.

4. Overview of Demolition and Construction Works

4.1 Demolition and Construction Programme & Duration of Works

The construction programme is expected to commence in mid-2025 and require approximately 20 months to complete, with practical completion expected in late 2025. The following are the estimated durations of the various activities:

- Site establishment & demolition works: 3 weeks
- Civil works: 6 months
- Structure: 8 months
- Internal & External Finishes: 6 months

4.2 Approved Hours of Work

In accordance with DA consent condition 6(a), unless authorised by Council, building construction and delivery of material hours are restricted to:

- 7:00am to 5:00pm inclusive Monday to Friday
- 8:00am to 1:00pm inclusive on Saturday
- No work on Sundays and Public Holidays

Furthermore, in accordance with DA consent condition 6(a), demolition and excavation works are restricted to:

- 8:00am to 5:00pm Monday to Friday only.

Note, excavation work includes the use of any excavation machinery and the use of jackhammers, rock breakers, excavators, loaders and the like, regardless of whether the activities disturb or alter the natural state of the existing ground stratum or are breaking up/removing materials from the site.

An application to vary the abovementioned hours may be submitted to Council for consideration, and approval to vary the specified hours may be granted in exceptional circumstances and for limited occasions (*e.g.* for public safety, traffic management or road safety reasons). Any applications are to be made on the standard application form and include payment of the relevant fees and supporting information. Applications must be made at least 10 days prior to the date of the proposed work and the prior written approval of Council must be obtained to vary the standard permitted working hours.

4.3 Vehicle Types

There are expected to be a range of construction vehicles visit the site during the course of the project, up to approximately 18.5m in length. A summary of the various vehicle types and their approximate lengths include:

- mini-tippers and utilities (standard B99 design vehicle)
- bogey trucks and truck & dog trailers for site clearing and excavation load out as well as importing fill to raise the site level (up to approximately 18.5m in length)
- concrete agitator trucks (up to approximately 9m in length)
- concrete pump truck (up to approximately 11m in length)
- flat-bed trucks will be used to deliver miscellaneous building material (up to approximately 12.5m in length)

4.4 Heavy Vehicle Construction Route

All heavy vehicles involved in the demolition, excavation, and building construction works will approach the site via Mona Vale Road – left/right onto Ponderosa Parade – straight onto Macpherson Street – left onto Brands Lane and down into the site.

Upon departure, trucks will turn right out of the site – left onto Macpherson Street – right onto Warriewood Road – left/right onto Pittwater Road.

The heavy vehicle route map is provided in Appendix D.

The site manager will ensure that the route map is prominently displayed on site and that all contractors, employees, suppliers and delivery drivers are given a copy and understand their obligations as part of their site induction procedure. Light traffic roads and those subject to load or height limits will be avoided, as well as minimising heavy vehicle movements during school peak periods.

Swept turn paths have been undertaken within the site, demonstrating that the anticipated trucks will be able to make the turns safely and without difficulty. The swept turn paths are provided in Appendix E.

4.5 Heavy Vehicle Movement Summary

Heavy vehicle construction movements will vary depending on the stage of the works. An estimation of the truck movements during the various stages is set out in the table on the following page.

Table 4.1 – Estimates of Heavy Vehicle Movements			
Stage	Description	Frequency of Trucks (Apx)	Frequency of Movements (Apx)*
Pre-construction	Installation of fencing, hoarding/protective barrier, site sheds and amenities	Average 2 trucks per day	Average 4 truck movements per day
Demolition	Demolition	Average 5 trucks per day	Average 10 truck movements per day
Excavation	Earthworks	Average 20 trucks per day	Average 40 truck movements per day
Main construction works	Construction of residential dwelling structures	Average 5 trucks per day	Average 10 truck movements per day
Main fit-out	Construction of internal walls, stairs, services etc	Average 5 trucks per day	Average 10 truck movements per day
Completion	Landscaping, removal of fencing, hoarding/protective barrier, site sheds and amenities, and commissioning	Average 2 trucks per day	Average 4 truck movements per day

* 2 movements = 1 vehicle

4.6 Traffic Impacts

Once operational, the approved development will theoretically generate in the order of 28 vehicle trips per hour during the AM and PM peak periods.

By way of comparison, the anticipated peak during the construction programme will be in the order of 40 truck movements per day which will occur during the excavation and earth works stages, as set out in the table above.

As such, the traffic impact on the surrounding local and broader arterial road network associated with construction vehicles will be minimal.

On its own, it is not expected that the approved development on the site will result in any unacceptable impacts to the surrounding road network capacity during its construction. Should future developments within the locality contribute additional traffic generation, the Contractor must co-ordinate with the nominated Project Managers of those construction sites in a manner which minimises disruption to the construction operation.

4.7 Hoarding

In order to protect public space and the general public, temporary fencing will be installed along the perimeter of the site, prior to the commencement of works.

The site must be fenced prior to the commencement of demolition and throughout construction and must comply with Safework NSW requirements and be a minimum of 1.8m in height.



Figure 4.1 – Example image of secure temporary fencing (Source: Google Maps)

4.8 Protection of Trees

In accordance with consent condition 52, all existing trees and vegetation located on adjoining properties and within the road reserve must be retained and protected unless otherwise approved under the development consent.

Tree protection measures shall comply with AS4970-2009 Protection of Trees on Development Sites and adhere to specific arboricultural requirements unless authorized by an AQF Level 5 Arborist. These requirements include maintaining existing ground levels within the tree protection zone (TPZ), prohibiting the removal of tree roots with a diameter of 25mm or greater, and preventing the placement of excavated material, building supplies, site facilities, or landscaping materials within the canopy dripline of retained trees. Additionally, any structures must be designed to bridge over tree roots with a diameter of 25mm or more. Activities specified in section 4.2 of AS4970-2009 must not be carried out within the TPZ of any retained tree. Pruning necessary for approved works must not exceed 10% of any tree canopy and must comply with AS4373-2007 Pruning of Amenity Trees.

The Principal Certifier is responsible for ensuring that all arboricultural works are carried out in strict compliance with AS4970-2009, thereby safeguarding the trees and vegetation identified for retention.



Figure 4.2 – Example images of tree protection measures

4.9 Erosion and Sediment Control

A Sediment & Erosion Control Plan has been prepared by Craig & Rhodes. In accordance with consent condition 59, during any on-site demolition, excavation, and construction works, the site should be maintained in accordance with “The Blue Book – Managing Urban Stormwater (MUS): Soils and Construction” and the aforementioned Sediment & Erosion Control Plan.

Erosion and sediment controls shall be effectively maintained and routinely monitored at all times, with particular attention following periods of rainfall. These controls shall remain fully operational until all development activities have been completed, and vegetation cover has been successfully re-established across a minimum of 70 percent of the site. The remaining areas shall be appropriately stabilised using ongoing measures such as jute mesh or matting.

All practicable measures will be taken to ensure that vehicles leaving the site do not deposit mud or soil on the road. If any mud or soil does end up accidentally on the road, the road must be cleaned up immediately in a manner that does not pollute the waterway (e.g. sweeping or vacuuming).

Similarly, all vehicles transporting loose materials will have their entire load covered and secured to prevent any large items, excess dust or dirt particles depositing onto the road during travel to/from the site.

Failure to prevent the transmission of silt and sediment and/or causing, water pollution, air pollution, noise pollution or land pollution may result in a breach of the Protection of the Environment Operations Act and orders, penalties and prosecutions may occur.

4.10 Neighbouring Properties

All neighbouring properties are to have their pedestrian and vehicular access maintained at all times. All adjacent residents and businesses will be advised by way of letterbox drop of the intention to commence works. A minimum 14 days notification should be provided to adjoining property owners prior to the implementation of any traffic control measures, in accordance with consent conditions 26(j) and 49(6).

Additionally, in accordance with consent conditions 26(l) and 49(8), the site manager must liaise with site managers of other existing construction sites located within a 250m radius of the site to ensure that appropriate measures are in place to prevent the cumulative traffic and parking impacts of construction activities.

As of 4 February 2025, an initial assessment using a 250m radius around the site confirms the absence of any major construction sites, as indicated in the aerial image below.

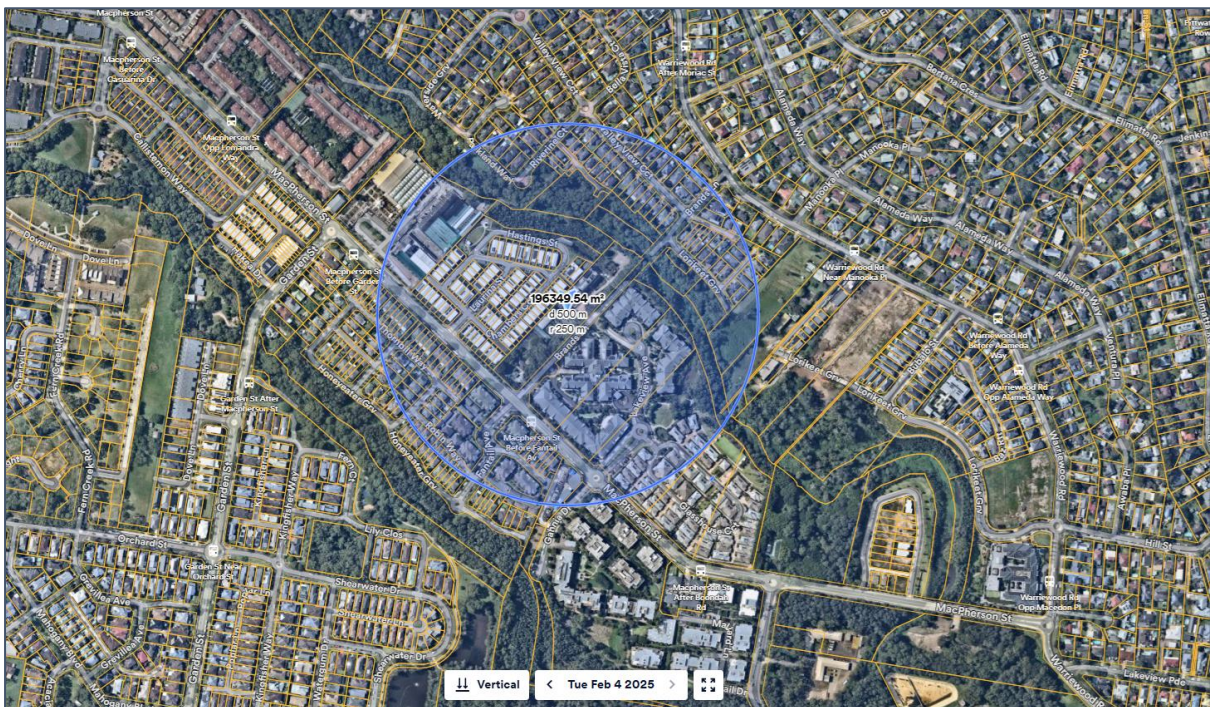


Figure 4.3 – 250m radius of the subject site (Source: Nearmap)

4.11 Queuing

It is expected that a schedule of deliveries will be established prior to the commencement of a new day, with traffic controllers maintaining radio contact with demolition and construction vehicles at all times. All trucks will be coordinated such that their arrival is staggered, and truck idling is not permitted, nor is any queuing permitted on the public road network.

4.12 Site Access & Materials Handling Arrangements

During the demolition and excavation stage, trucks will be able to enter and exit in a forward direction via the existing driveway in Brands Lane off the roundabout, and will stand within the site to be loaded with material. These trucks will range from bogeys up to truck & dog trailers, which are typically up to 18.5m in length.

During the construction stage, concrete pouring and material deliveries, loading/unloading will occur from within the nominated on-site area.

Swept turn paths have been prepared, demonstrating the ability for trucks to access the site without difficulty. The swept turn paths are provided in Appendix E.

Equipment, materials and waste will be kept within the construction site's boundaries. No building materials, plant or the like are to be stored on the road or footpath without written approval being obtained from Council beforehand. The site manager will also ensure that two deliveries do not occur at the same time unless they can both be accommodated on site.

Truck movements at the site access driveway/gate will be managed by traffic controllers to ensure the safe and efficient movement of all passing pedestrians and cyclists. All truck movements will be undertaken with the assistance of traffic controllers with appropriate TfNSW/Safework NSW accreditation.

4.13 Works Zone

As outlined in consent condition 48, a Works Zone Permit must be obtained to reserve a designated area of road pavement for the parking of construction-related vehicles.

Notwithstanding, the implementation of a Works Zone along Macpherson Street site frontage is not feasible due to its close proximity to the Brands Lane and Fantail Avenue intersection. Similarly, establishing a Works Zone along Brands Lane is also not possible, given its proximity to the Macpherson Street intersection, the roundabout on Brands Lane, and the narrow width of unpaved Brands Lane towards the north. Accordingly, all loading/unloading of materials is to occur wholly within the site, such that a Works Zone is not required for day-to-day loading/unloading purposes.

4.14 Special Permits

Unless otherwise specifically approved in writing by Council, all works, processes, storage of materials, loading and unloading associated with the development must occur entirely on the property.

The developer, owner or builder may apply for specific permits available from Council's Customer Service Centre for the following activities on Council's property:

- on-street mobile plant
- hoardings
- storage of materials and building waste containers (skips) on Council's property
- kerbside restrictions, construction zones

A minimum of forty-eight (48) hours notice is required for any permit.

4.15 Construction Staff

The number of construction staff on site is expected to range between less than 10 and up to 40, depending on the stage of the works, as set out in the table below.

Table 4.2 – Estimate of Construction Personnel On-Site	
Stage	Description
Pre-Construction	<10
Demolition & Excavation	Up to 10
Main Construction Works	Up to 30
Main Fit-Out	Up to 30
Completion	Up to 40

4.16 Contractor Parking

On-site parking for site personnel will be provided as often as possible and as practicable as possible. Notwithstanding, staff and sub-contractors will be encouraged to carpool and utilise nearby public transport for their commute to/from work. For staff and sub-contractors that must drive to the site and cannot park on site, they must be advised of the local parking facilities.

Such information is to be provided to employees through their contract engagement and Toolbox Talks. The following measures must also be implemented to encourage staff to utilise public transport:

- provision of an on-site tool storage facility to allow tradespeople to safely store tools required for the project
- during site inductions and regular management meetings, staff are to be reminded to use public transport when commuting to/from work and be provided with public transport timetables, if requested

4.17 Site Office & Amenities

During the early stages of the construction programme, the site office and amenities are expected to be located within the front setback of the site along Brands Lane, including toilets, lunch area, first aid *etc.* As the structures of the residential dwellings progress however, the site office and amenities will move to within the northern portion of the site, as this area has the least impact to works progressing on site.

4.18 Pedestrian & Cyclist Impacts

Pedestrian movements along the footpath area outside the site frontage on Macpherson Street will be maintained at all times. Traffic controllers will manage the interaction between pedestrians and construction vehicles into/out of the site, with pedestrians having right of way at all times, as far as reasonably possible. The general public will not be authorised to access the site. Access to the site will require authorisation from the site manager.

Given the relatively modest level of construction-related traffic, it is considered that cyclists in the vicinity of the site will not be impacted by the construction activities.

Notwithstanding, access for pedestrians and cyclists on Brands Lane through to the bridge over the creek will need to be closed during the civil works stage of the project. The proposed closure is unavoidable as the works include the reconstruction of Council's road and the construction of a new shared path along the full length of Brands Lane.

4.19 Emergency Vehicles

As part of Safework NSW requirement, a site-specific Emergency Management Plan will be prepared by the Head Contractor outlining the procedures to be followed in the event of an emergency. An evacuation plan with emergency contact details will be posted in relevant locations throughout the site.

Access to the subject site and neighbouring properties will not be affected by day-to-day construction activities, as all works are to be confined to within the site boundary. Emergency procedures on site will include a requirement for suitably accredited site personnel to assist with emergency access from the street.

Communication will be maintained with the police and emergency services throughout the duration of the construction programme, and a 24-hour contact will be made available for out-of-hours emergencies and site access.

4.20 Waste Management

A Waste Management Plan has been prepared by the Applicant under separate cover and is in accordance with Council's requirements. The plan outlines the expected waste generation during the demolition, excavation, and construction stages of the project, including estimated quantities. It also details the procedures for separating, storing, and disposing of these materials to ensure waste minimisation and the provision of adequate and appropriate waste and recycling facilities.

5. Demolition and Construction Traffic Management

5.1 Traffic Control Plans

TfNSW's Traffic Control at Work Sites Technical Manual (Issue 6.1 – 28 February 2022) contains standard Traffic Control Plans (TCPs) for a range of work activities. The manual's objective is to maximise safety by ensuring traffic control at worksites complies with best practice.

Site-specific TCPs have therefore been prepared to illustrate the traffic arrangements and signage to be implemented throughout the construction programme, and are provided in Appendix F. A brief description of the TCPs are provided below:

- advisory road signage alerting approaching drivers and cyclists along Macpherson Street, Fantail Avenue, and Brands Lane in the vicinity of the site, of possible road works and traffic controllers ahead.
- warning signs alerting pedestrians to watch their step as they walk along the site frontages.
- traffic controllers located outside the site access driveway/gate in Brands Lane with appropriate TfNSW/Safework NSW accreditation, as well as spotters, who will control and manage traffic movements and assist trucks to access the site to load/unload material, ensuring the safety of pedestrians and prioritising their movements at all times. The traffic controllers are to wait for suitable gaps in traffic before allowing the truck to exit the site access driveway/gate.

5.2 Implementation of Demolition and Construction Traffic Management Plan

All construction works to be undertaken in accordance with the approved DCTMP. All controls within the DCTMP must be maintained at all times and all traffic management control must be undertaken by personnel that have appropriate TfNSW/SafeWork NSW accreditation.

A copy of the approved DCTMP must be kept on site at all times and made available to the accredited certifier or Council on request.

5.3 Site Inductions

All staff working on the site, including demolition, excavation and construction contractors, builders, owners and sub-contractors, will be required to undergo a site induction. The induction is to include standard environmental, WH&S, driver code of conduct and emergency procedures, as well as notification of the permitted access route to/from the site for staff and delivery vehicles.

5.4 Road Reserve Safety

All public footways and roadways fronting and adjacent to the site must be maintained in a safe condition at all times during the course of the development works, with no obstructions caused to the said footways and roadways. Construction materials and plant must not be stored in the road reserve without approval of Council.

A safe pedestrian circulation route and a pavement/route free of trip hazards must be maintained at all times on or adjacent to any public access ways fronting the construction site.

At all times work is being undertaken within a public road, adequate precautions shall be taken to warn, instruct and guide road users safely around the work site. Traffic control devices shall satisfy the minimum standards outlined in Australian Standard AS1742.3:2019 “Traffic Control for Works on Roads”.

5.5 Monitoring Program

Construction operations will be monitored to ensure that it proceeds in accordance with the CMP. A daily inspection will be carried out prior to the start of work to ensure that conditions accord with those detailed in the CMP and prevent potential hazards. Any potential issues will be recorded and dealt with if they occur.

In addition, the Head Contractor will develop a program to monitor this DCTMP to ensure its effectiveness. The DCTMP shall be subject to regular reviews and updated if necessary. Key considerations when reviewing the DCTMP include, but not limited to:

- tracking actual truck movements and deliveries against the forecasted figures
- identify any parking, loading/unloading and site access issues and develop an action plan to address those issues that may arise
- to ensure the TCPs are suitable for the works and update if necessary
- ensure regular monitoring of trucks leaving the site with their loads fully covered

6. Conclusion

This report has been prepared to document the traffic management, cyclist and pedestrian measures to be implemented during the demolition, excavation, and construction works for the approved subdivision and dwelling construction at 16 Macpherson Street, Warriewood.

The report takes into account TfNSW's Traffic Control at Work Sites Technical Manual, AS1742.3: Traffic Control for Works on Roads, and Northern Beaches Council's DA2023/0669 consent conditions.

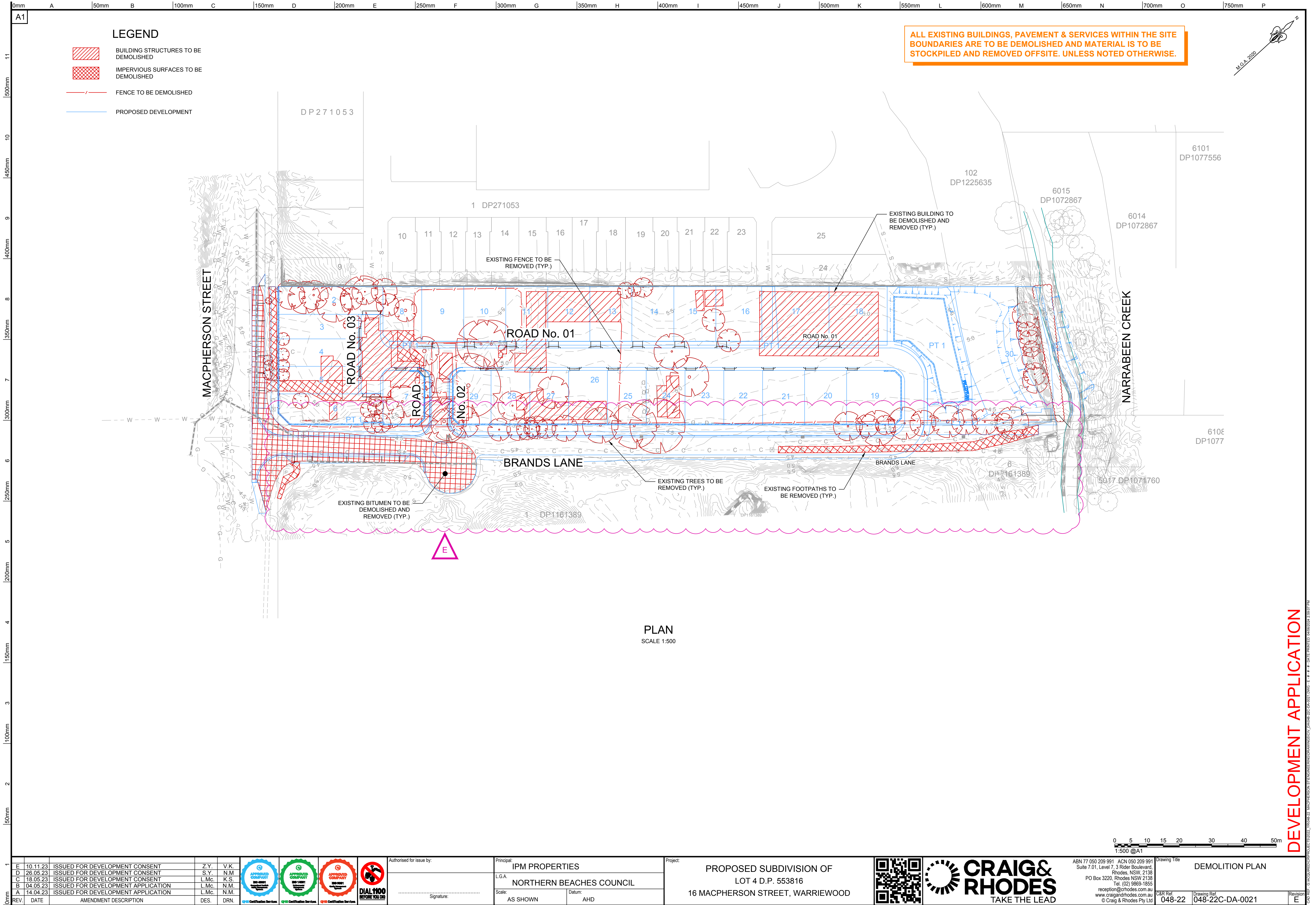
Based on the findings contained within this report, the following conclusions are made, along with the following measures which are to be implemented:

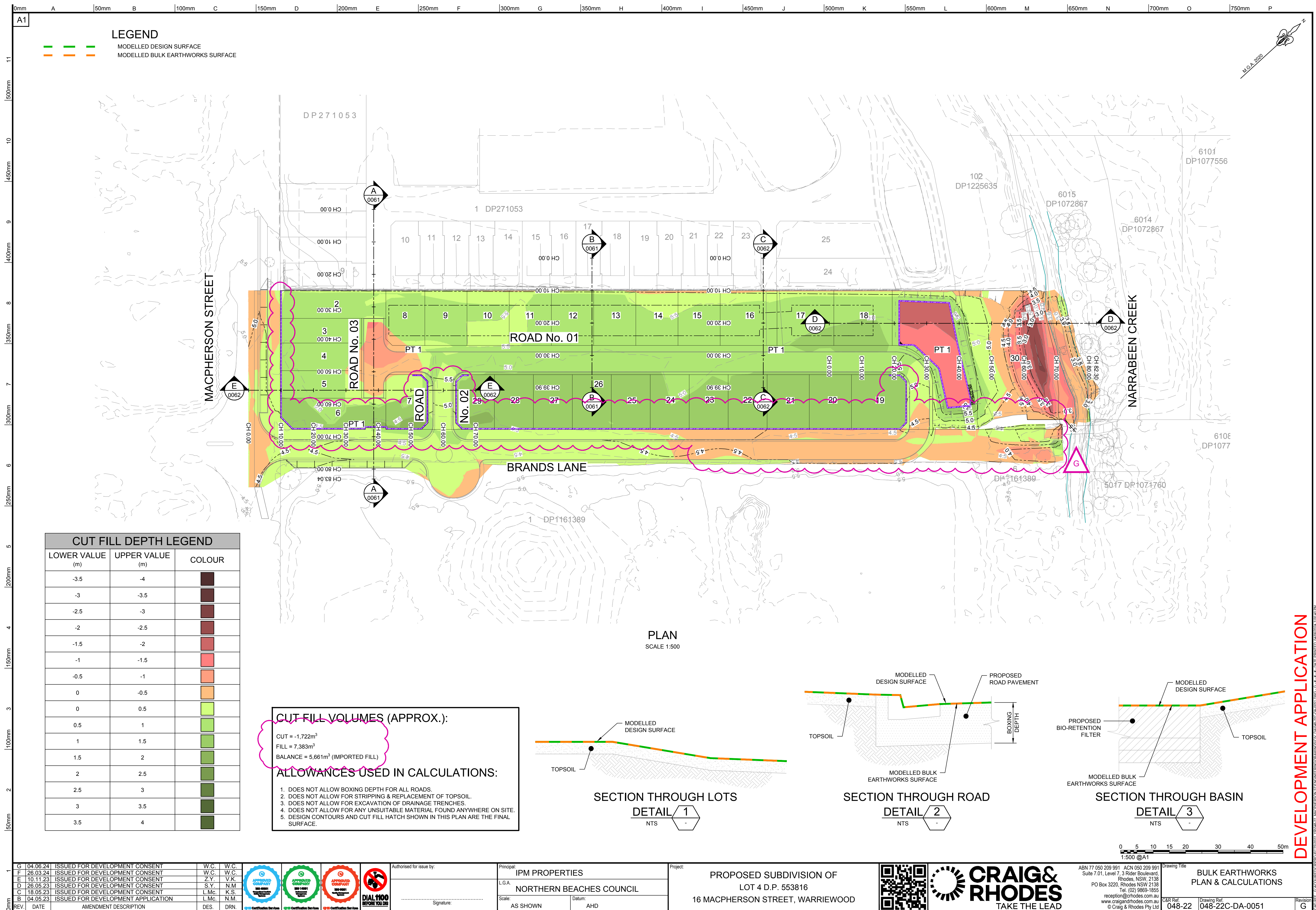
- peak period traffic activity during the demolition, excavation, and construction works will be minimal
- construction vehicle movements to/from the site can be satisfactorily accommodated on the surrounding road network, in terms of spatially and capacity
- all heavy vehicles must approach the site via Mona Vale Road – left/right onto Ponderosa Parade – straight onto Macpherson Street – left onto Brands Lane and down into the site
- during departure, trucks exit the site by turning right out of the site on Brands Lane – left onto Macpherson Street – right onto Warriewood Road – left/right onto Pittwater Road.
- all loading and unloading of materials will occur wholly within the nominated on-site site area
- traffic controllers with TfNSW/Safework NSW accreditation will be required to manage and regulate construction vehicle movements into and out of the site, however, will not be required during periods of zero construction vehicle activity.
- during construction vehicle movements and material hoisting, the traffic controllers, along with a spotter, at the site access point/driveway will also ensure the safe and efficient movement of pedestrians and cyclists.
- all vehicles are to exit the site in a forward direction.
- all vehicles transporting loose material will have their loads covered and/or secured in order to prevent any items depositing onto the road on approach/departure to/from the site.
- contractors will be encouraged to utilise nearby public transport for their commute to/from work.
- a number of driver protocols will be established as part of the site induction process to ensure the safety of all road users.

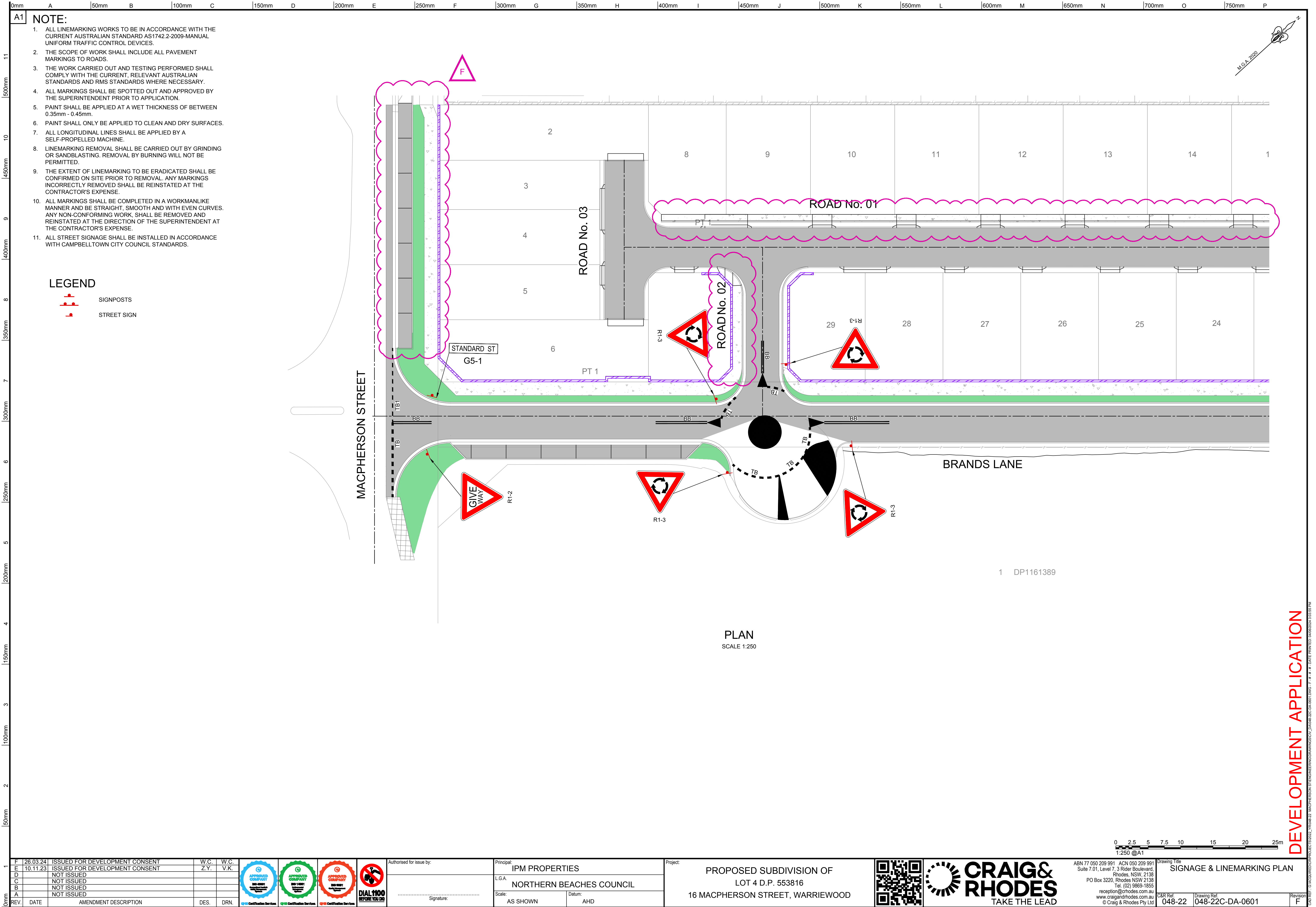
In summary, the construction traffic management measures contained within this DCTMP are considered acceptable for this scale of project.

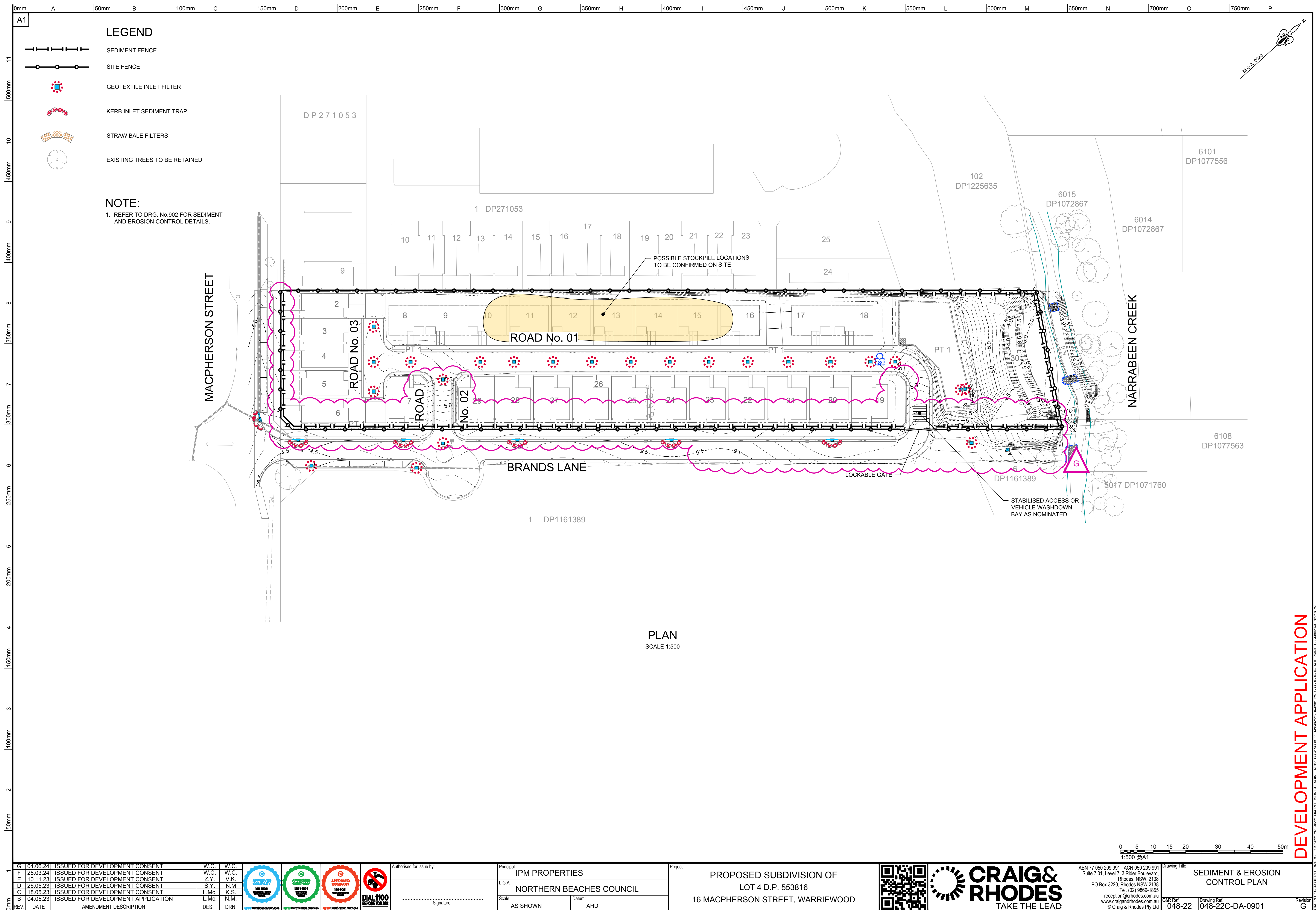
Appendix A

DA Approved Demolition & Subdivision Plans









Appendix B

DA Approved Architectural Plans



28 Lots
28 Dwellings
7 Adaptable (25%)

TYPES

- A1

7

25%
- A2

1

3.5%
- A3

3

11%
- B1

7

25%
- B2

1

3.5%
- B3

1

3.5%
- B4

2

7%
- B5

1

3.5%
- C1

1

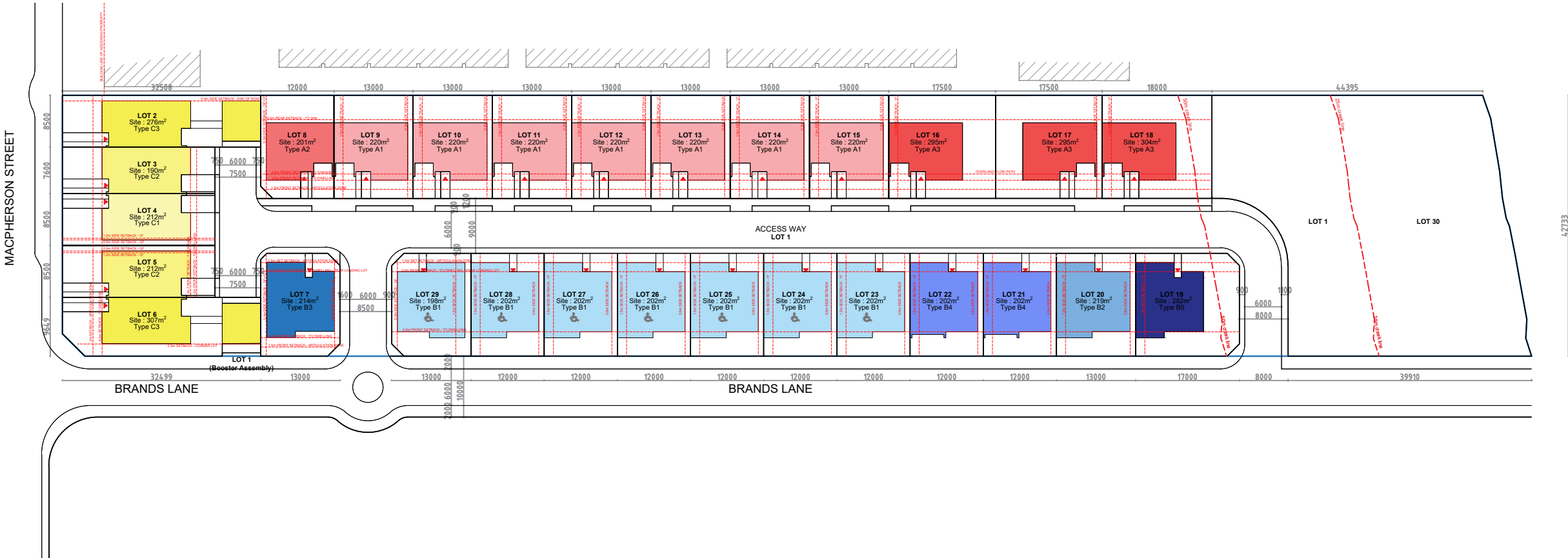
3.5%
- C2

2

7%
- C3

2

7%



1 LOT PLAN
SCALE 1:400@A1 / 1:800@A3

- GENERAL NOTES:
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- LEGEND:
- AW AWNING
 - HW HIGHLIGHT WINDOW
 - CU A/C CONDENSER UNITS
 - FH FIRE HYDRANT
 - FHR FIRE HOSE REEL
 - FS FIRE STAIRS
 - HV MECHANICAL RISER TO FUTURE DETAIL
 - GC GARBAGE CHUTE
 - MB MAILBOX TO FUTURE DETAIL
 - PB PLANTERBOX
 - R 240L RECYCLING BIN
 - SK SKYLIGHT
 - ST STORAGE
 - WT HOT WATER UNITS

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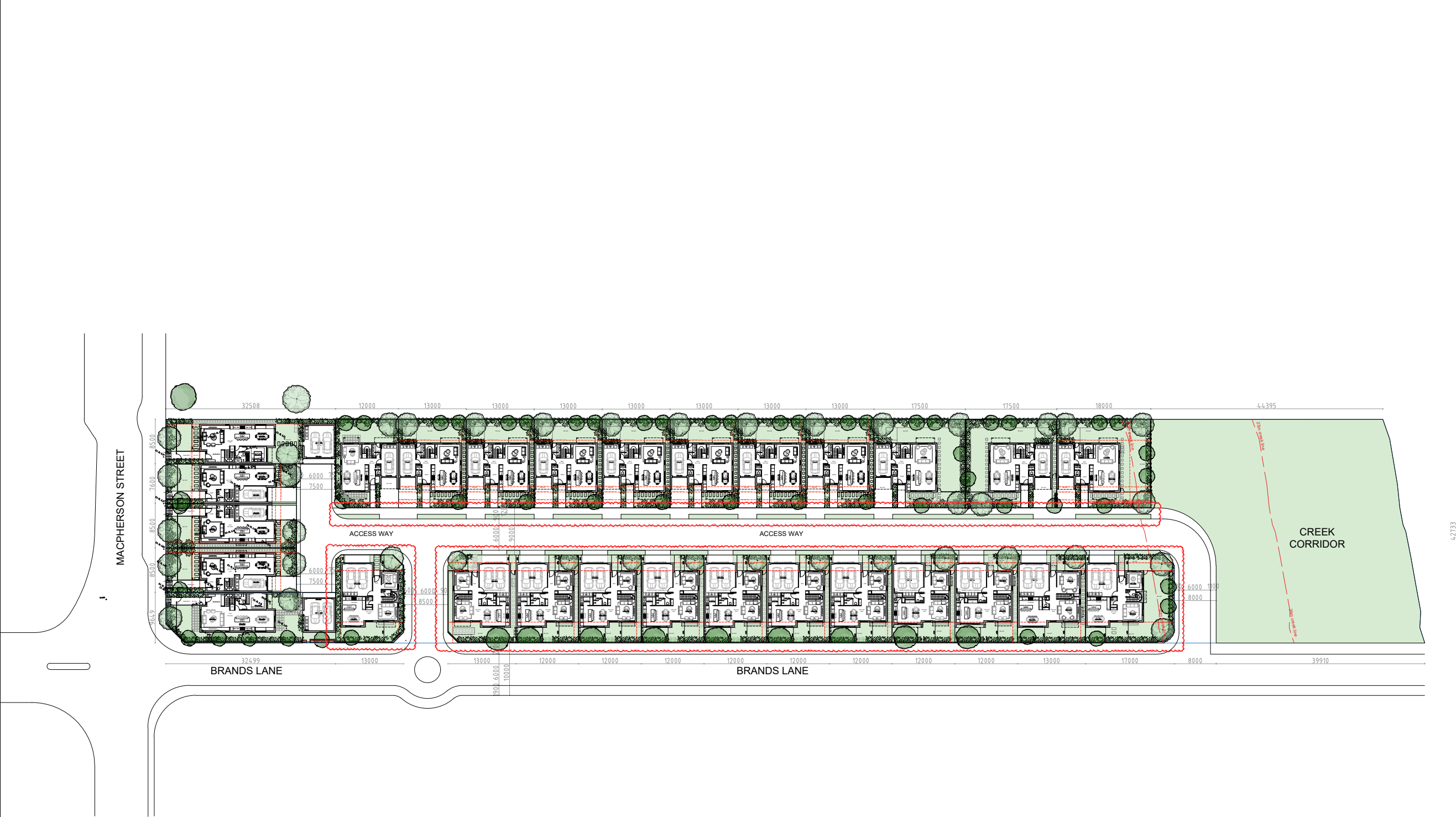
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Nominated Architect: Paul Buljevic NSW 7768

PROJECT:
28 TERRACES
16 MACPHERSON STREET
WARRIEWOOD

APR. 2023
DRAWING TITLE:
LOT PLAN

DRAWN BY: SS	CHECKED BY: HV	
SCALE: 1:400@A1 / 1:800@A3 PROJECT NO: 2235	DRAWING NO: DA 004	ISSUE: 05



1 MASTER PLAN GROUND LEVEL
SCALE 1:500@A1 / 1:1000@A3

- GENERAL NOTES:
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16 MACPHERSON STREET
WARRIEWOOD

APR. 2023
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MASTER PLAN
GROUND LEVEL

DRAWN BY: SS CHECKED BY: HV

SCALE: 1:400@A1 / 1:800@A3	DRAWING NO: DA 005	ISSUE: 07
PROJECT NO: 2235		



1 MASTER PLAN - FIRST FLOOR
SCALE 1:500@A1 / 1:1000@A3

- GENERAL NOTES:
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PROJECT:
28 TERRACES
16 MACPHERSON STREET
WARRIEWOOD
APR. 2023

DRAWING TITLE:
**MASTER PLAN
FIRST FLOOR**

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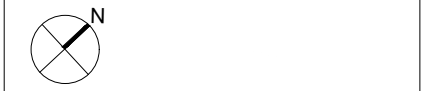


1 MASTER PLAN - ROOF LEVEL
SCALE 1:500@A1 / 1:1000@A3

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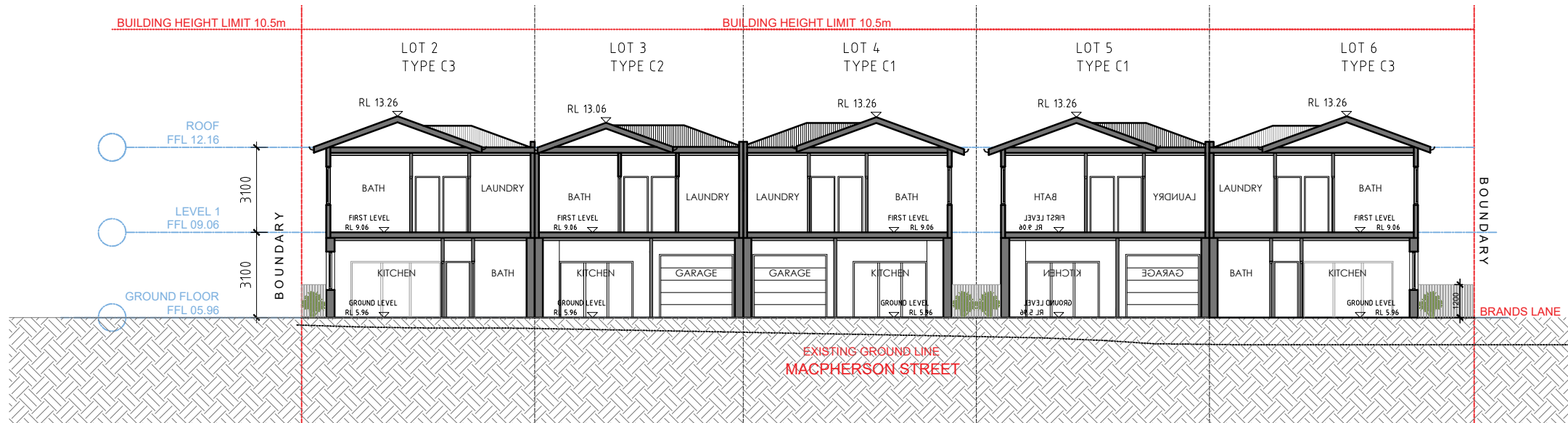
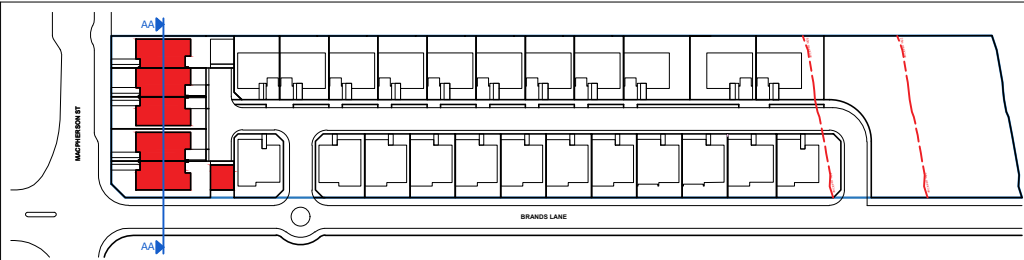
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16 MACPHERSON STREET
WARRIEWOOD

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ROOF LEVEL**

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2 SECTION AA
SCALE 1:100@A1 / 1:200@A3

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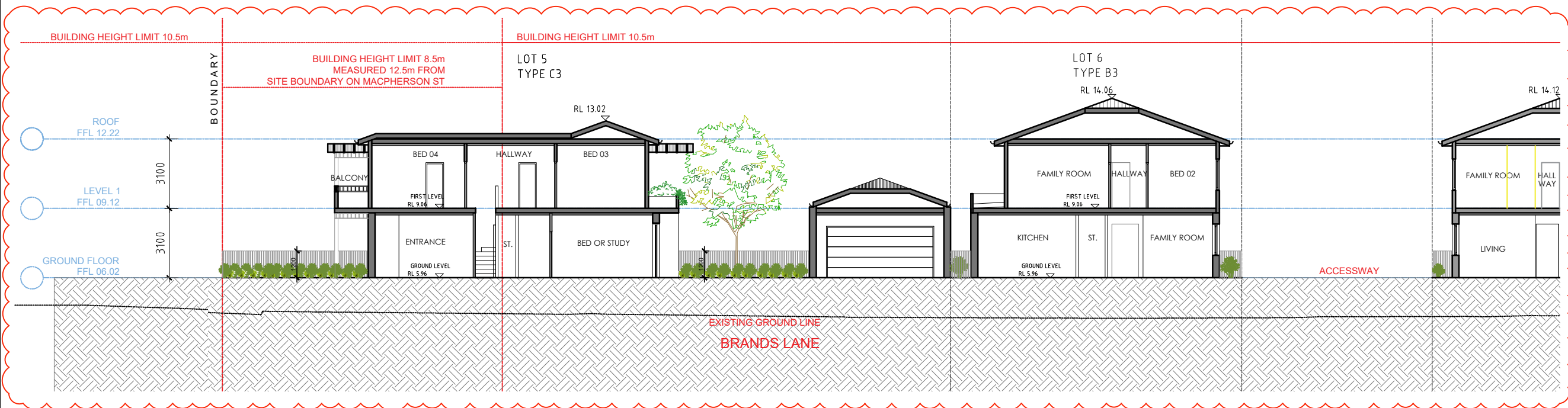
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28 TERRACES
16 MACPHERSON STREET
WARRIEWOOD

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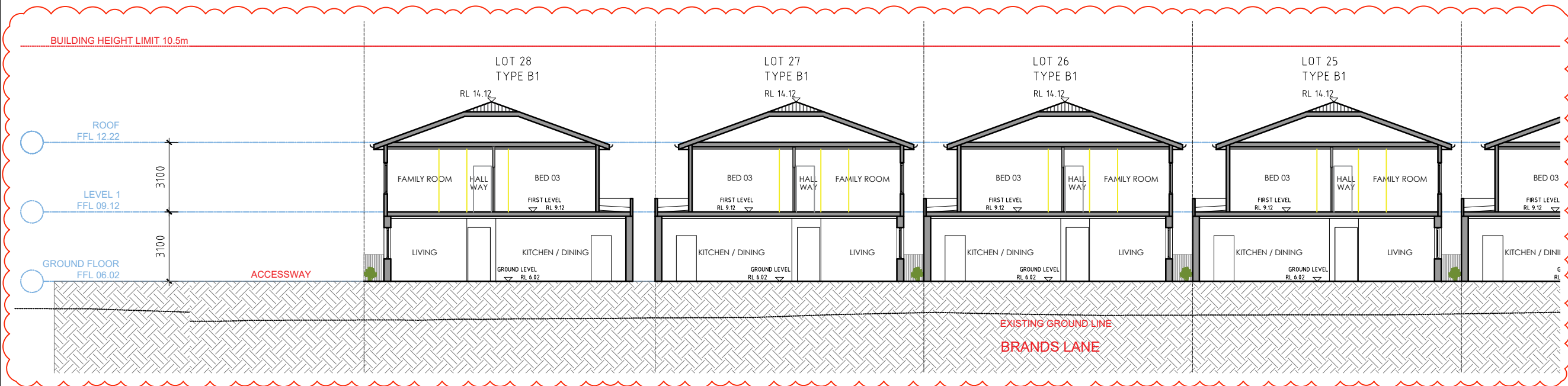
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1 LOCATION PLAN
SCALE 1:1000@A1 / 1:2000@A3



2 SECTION BB.a
SCALE 1:100@A1 / 1:200@A3



3 SECTION BB.b
SCALE 1:100@A1 / 1:200@A3

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- LEGEND:
- | | |
|-----|-----------------------------------|
| AW | AWNING |
| HW | HIGHLIGHT WINDOW |
| CU | A/C CONDENSER UNITS |
| FH | FIRE HYDRANT |
| FHR | FIRE HOSE REEL |
| FS | FIRE STAIRS |
| HV | MECHANICAL RISER TO FUTURE DETAIL |
| GC | GARBAGE CHUTE |
| MB | MAILBOX TO FUTURE DETAIL |
| PB | PLANTERBOX |
| R | 240L RECYCLING BIN |
| SK | SKYLIGHT |
| ST | STORAGE |
| WT | HOT WATER UNITS |

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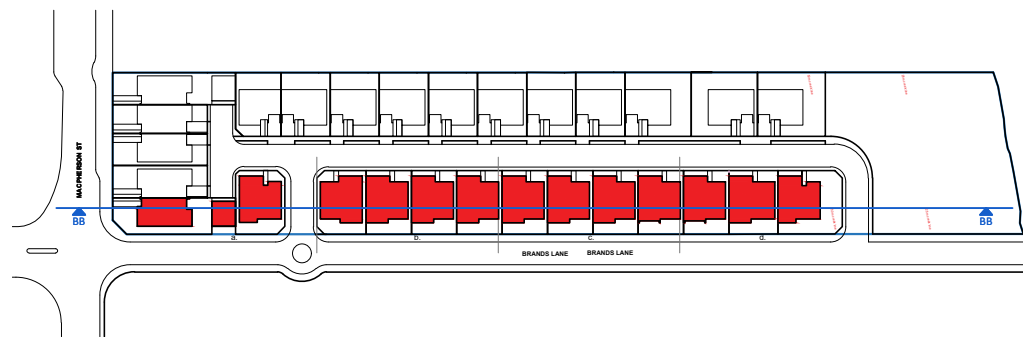
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28 TERRACES
16 MACPHERSON STREET
WARRIEWOOD

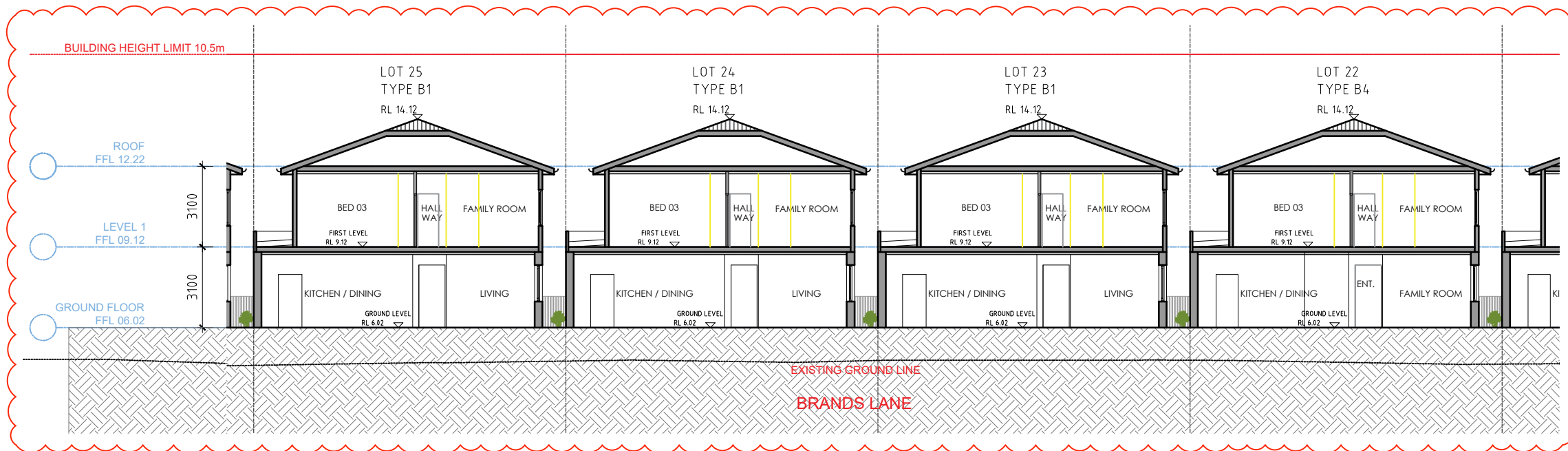
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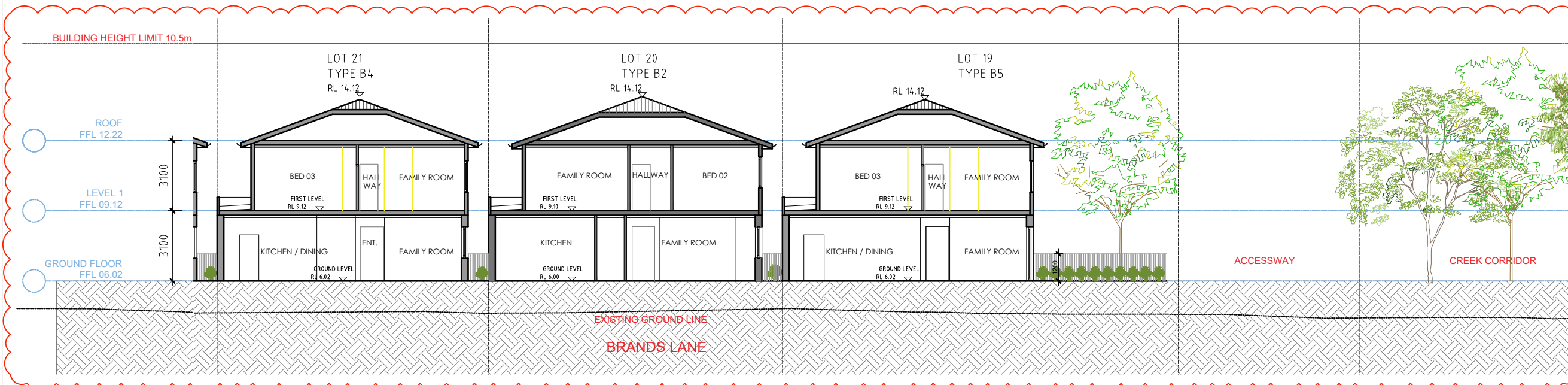
1 LOCATION PLAN

SCALE 1:1000@A1 / 1:2000@A3



2 SECTION BB.c

SCALE 1:100@A1 / 1:200@A3



3 SECTION BB.d

SCALE 1:100@A1 / 1:200@A3

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LEGEND:

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HW	HIGHLIGHT WINDOW
CU	A/C CONDENSER UNITS
FH	FIRE HYDRANT
FHR	FIRE HOSE REEL
FS	FIRE STAIRS
HV	MECHANICAL RISER TO FUTURE DETAIL
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PROJECT:
28 TERRACES
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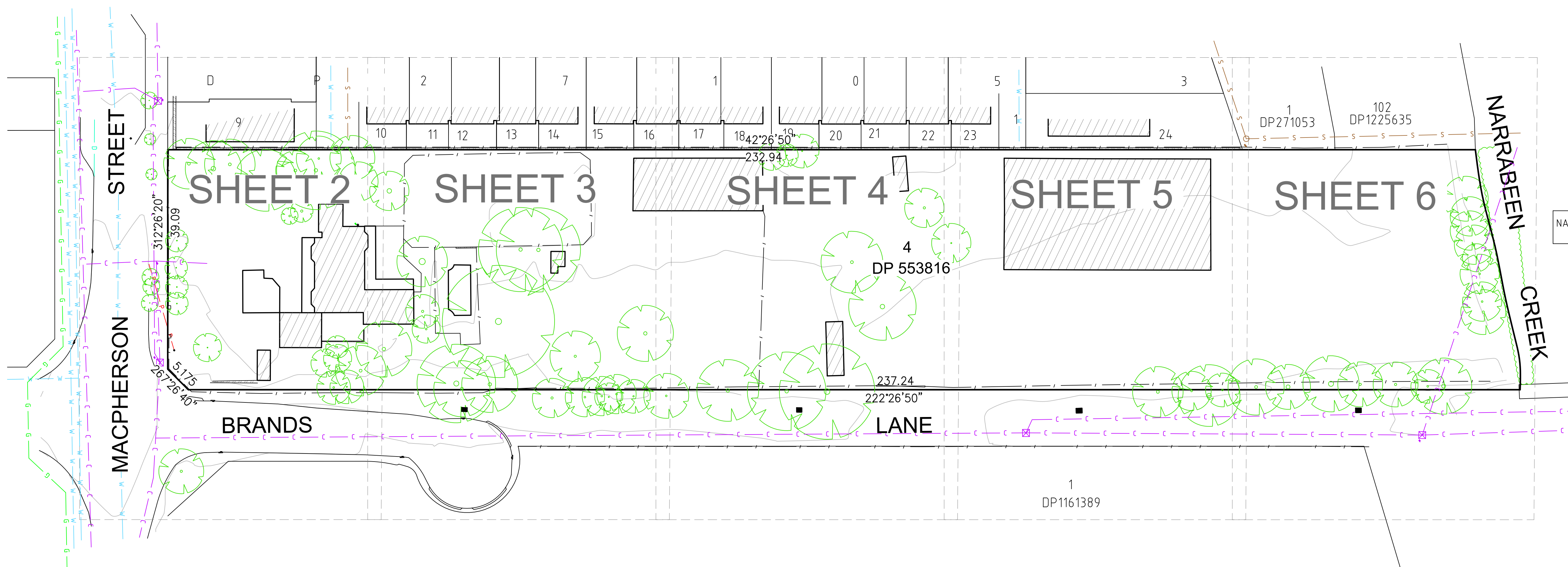
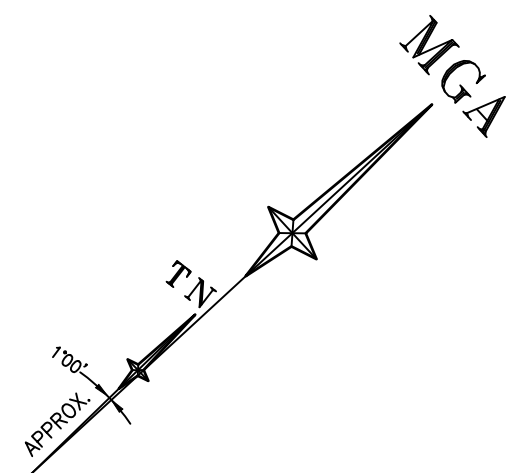
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SECTION BB (c+d)

DRAWN BY: SS
CHECKED BY: HV

SCALE: 1:100@A1 / 1:200@A3 PROJECT NO: 2235	DRAWING NO: DA 303	ISSUE: 05
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Appendix C

Survey Plan



LEGEND

BENCH MARK	▲
TELSTRA PIT	TEL
LIGHT (MOUNTED)	ELP
PIT WITH CONCRETE LID	CLID
GRATED INLET PIT	GIP
KERB INLET PIT	KIP
STOP VALVE	SV
HYDRANT	HYD
GATE	⋈
GAS VALVE	⊗ GAS
BOTTOM OF WALL	BW
TOP OF WALL	TW
POWER POLE	PP
STORM WATER PIT UNABLE TO OPEN	SW PIT (UTO)
VEHICLE CROSSING	(VC)
PRAM CROSSING	(PC)
TELSTRA	C
WATER	W
SEWER	S
ELECTRICITY (OVERHEAD)	P
STORMWATER	SW
GAS	G

NOTES

1. THE BOUNDARIES HAVE NOT BEEN MARKED ON GROUND
2. THE BOUNDARY SURVEY (DIMENSIONS AND AREA) HAVE BEEN SURVEYED IN ACCORDANCE WITH SURVEYING AND SPATIAL INFORMATION REGULATION 2017 CLAUSE 10 "IDENTIFICATION SURVEYS"
3. ORIGIN OF LEVELS ON A.H.D. IS TAKEN FROM SSM145906 R.L. 4.777 (A.H.D.) IN MACPHERSON STREET
4. CONTOUR INTERVAL 0.5 m
5. CONTOURS ARE INDICATIVE ONLY. ONLY SPOT LEVELS SHOULD BE USED FOR CALCULATIONS OF QUANTITIES WITH CAUTION
6. KERB LEVELS ARE TO THE TOP OF KERB UNLESS SHOWN OTHERWISE
7. FLOOR LEVELS SHOWN ARE THRESHOLD LEVELS. NO INVESTIGATION OF INTERNAL FLOOR LEVELS HAS BEEN UNDERTAKEN
8. NO INVESTIGATION OF UNDERGROUND SERVICES HAS BEEN MADE. SERVICES HAVE BEEN PLOTTED FROM RELEVANT AUTHORITIES INFORMATION AND HAVE NOT BEEN SURVEYED. ALL RELEVANT AUTHORITIES SHOULD BE NOTIFIED PRIOR TO ANY EXCAVATION ON OR NEAR THE SITE
9. 8/4/7 DENOTES TREE SPREAD OF 8m, TRUNK DIAMETER OF 0.4m & APPROX HEIGHT OF 7m
10. BEARINGS SHOWN ARE MGA (MAP GRID OF AUSTRALIA) ADD APPROX. 1°00' FOR TRUE NORTH

UNDERGROUND POWER MAY BE IN THIS
AREA BUT NOT SHOWN ON ASSET
UTILITY PLANS. USE CAUTION.



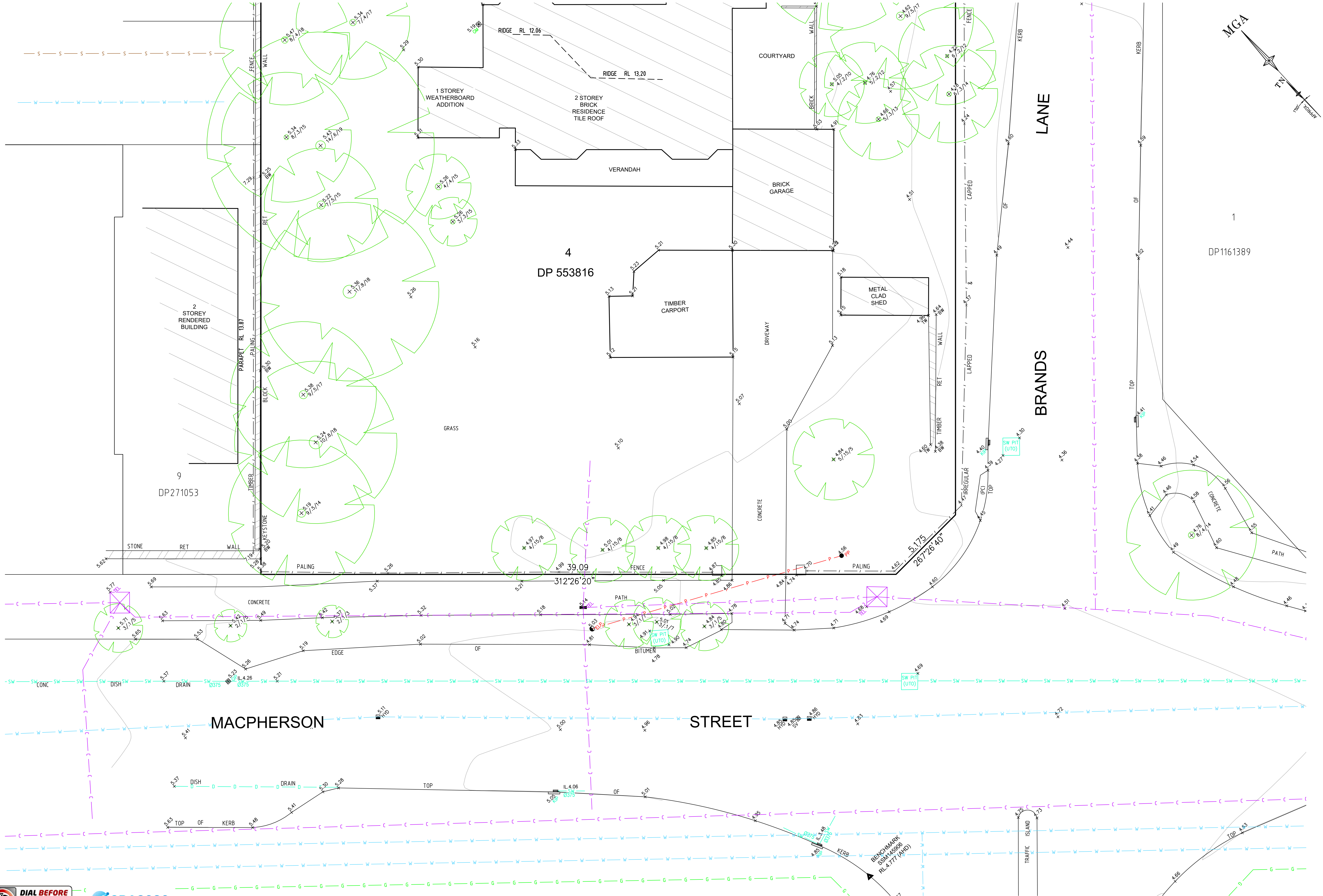
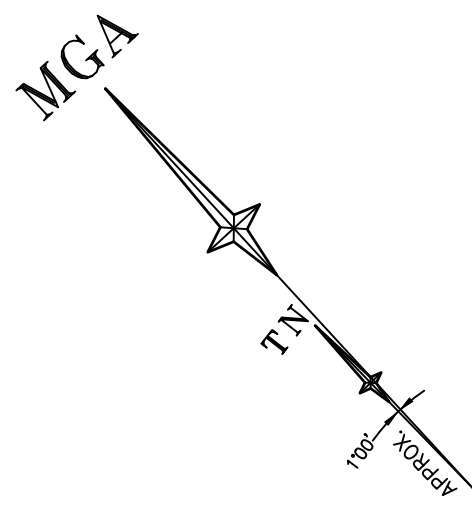
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F	00/00/00	-	00
E	00/00/00	-	00
Revision	Date	Description	Reference



D	00/00/00	-	00
C	00/00/00	-	00
B	00/00/00	-	00
A	00/00/00	-	00
Revision	Date	Description	Reference




Client - IPM PTY LTD
Drawing title
PLAN OF DETAIL AND LEVELS OVER LOT 4 IN DP553816
KNOWN AS 16 MACPHERSON STREET WARRIWOOD

datum AHD
site Area 1.012ha
LGA NORTHERN BEACHES
reference number 51644 001DT
scale 1:400 @A1
date of survey 08/02/2022
SHEET 1 OF 6







SCALE 1:400 @ A1

H	00/00/00	-	00	D	00/00/00	-	00
G	00/00/00	-	00	C	00/00/00	-	00
F	00/00/00	-	00	B	00/00/00	-	00
E	00/00/00	-	00	A	00/00/00	-	00
Revision	Date	Description	Reference	Revision	Date	Description	Reference



CONFIDENCE TOGETHER



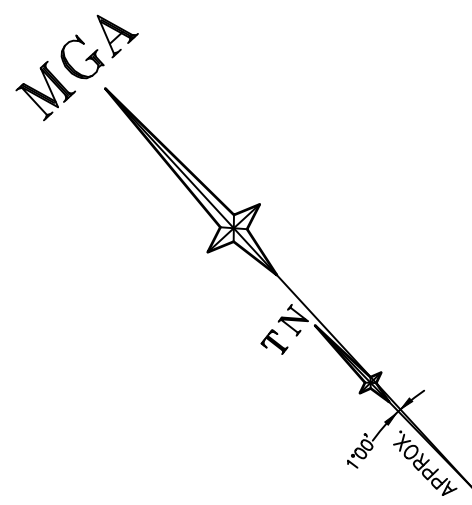
Registered Surveyor NSW
Surveyor ID: 8627

Client - IPM PTY LTD
Drawing title
PLAN OF DETAIL AND LEVELS OVER LOT 4 IN DP553816
KNOWN AS 16 MACPHERSON STREET WARRIWOOD

datum
AHD
site Area
1.012ha
LGA
NORTHERN BEACHES

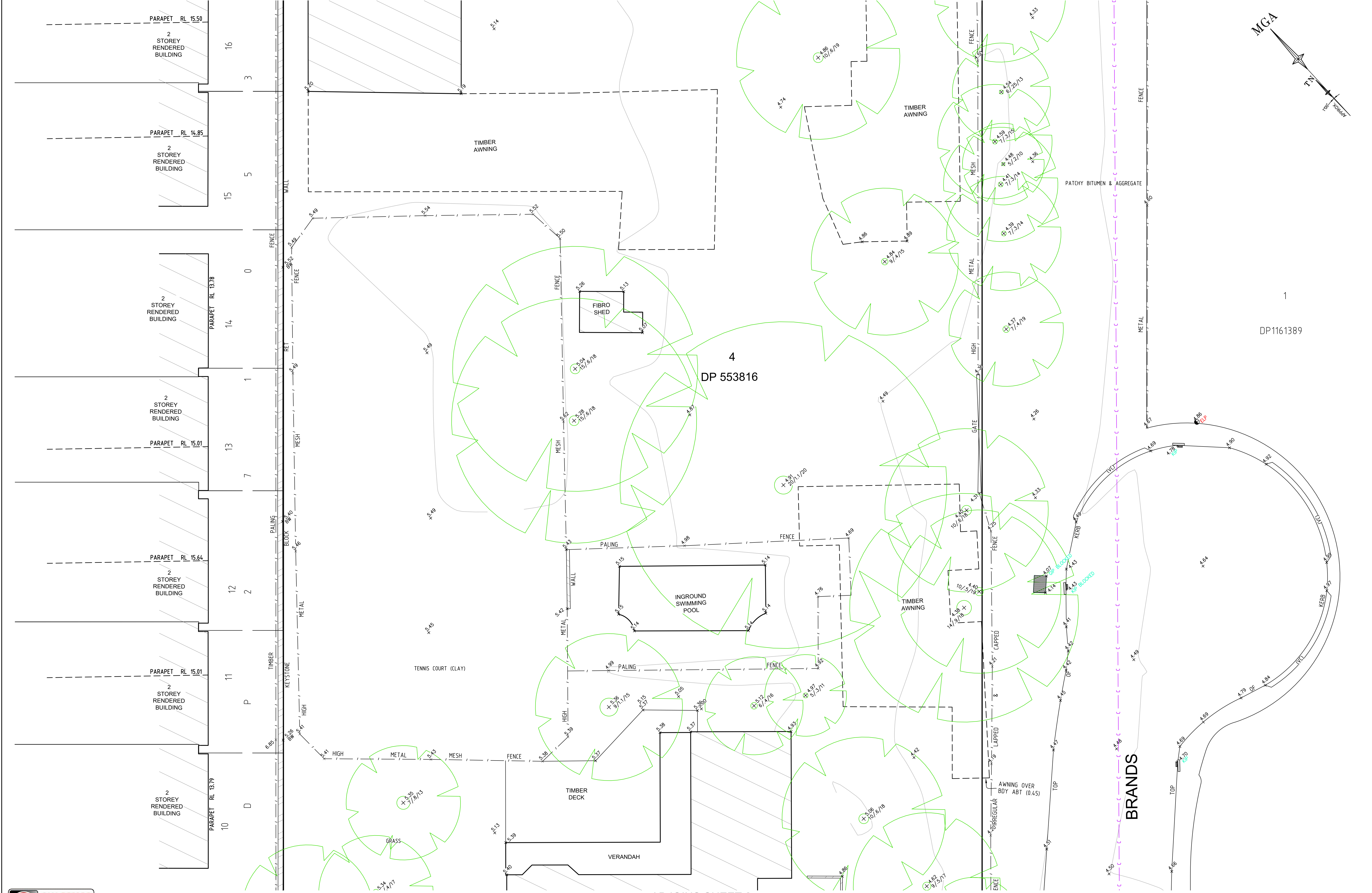
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date of survey
08/02/2022

SHEET
2



1
DP1161389

4
DP 553816



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F	00/00/00	-	00
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Revision	Date	Description	Reference

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C	00/00/00	-	00
B	00/00/00	-	00
A	00/00/00	-	00
Revision	Date	Description	Reference

Client - IPM PTY LTD

Drawing title
PLAN OF DETAIL AND LEVELS OVER LOT 4 IN DP553816
KNOWN AS 16 MACPHERSON STREET WARRIWOOD

datum
AHD

site Area
1.012ha

LGA
NORTHERN BEACHES

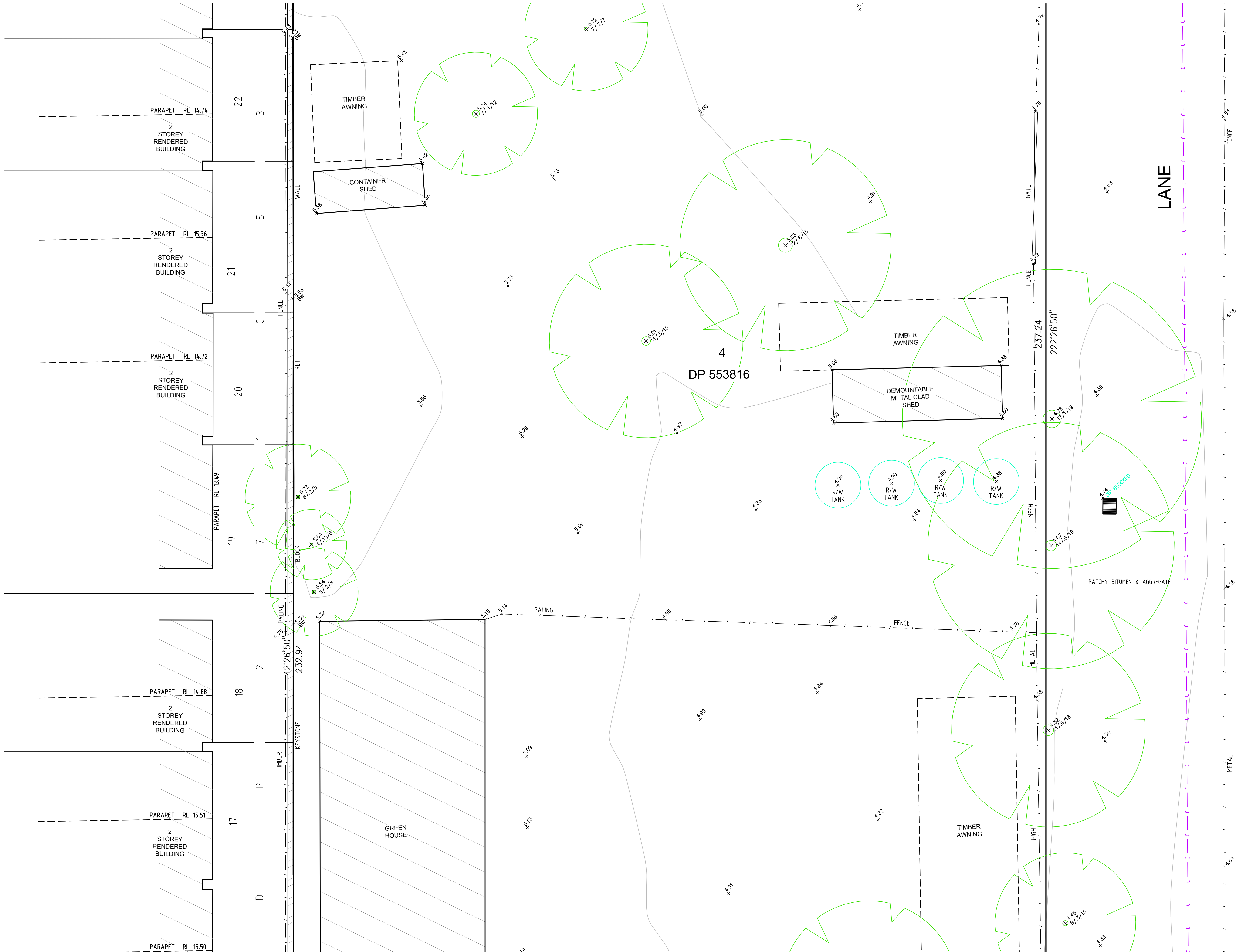
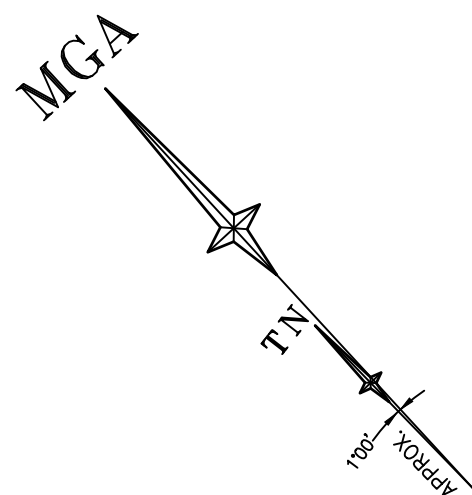
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date of survey
08/02/2022



SHEET
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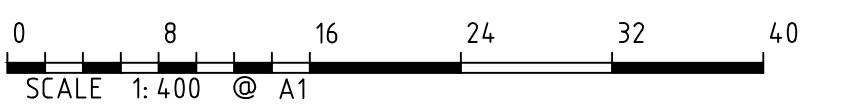
ADJOINS SHEET 5



ADJOINS SHEET 3

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DP1161389





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E	00/00/00	-	00
Revision	Date	Description	Reference

D	00/00/00	-	00
C	00/00/00	-	00
B	00/00/00	-	00
A	00/00/00	-	00
Revision	Date	Description	Reference



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Client - IPM PTY LTD

Drawing title

PLAN OF DETAIL AND LEVELS OVER LOT 4 IN DP553816
KNOWN AS 16 MACPHERSON STREET WARRIWOOD

datum
AHD

site Area
1.012ha

LGA
NORTHERN BEACHES

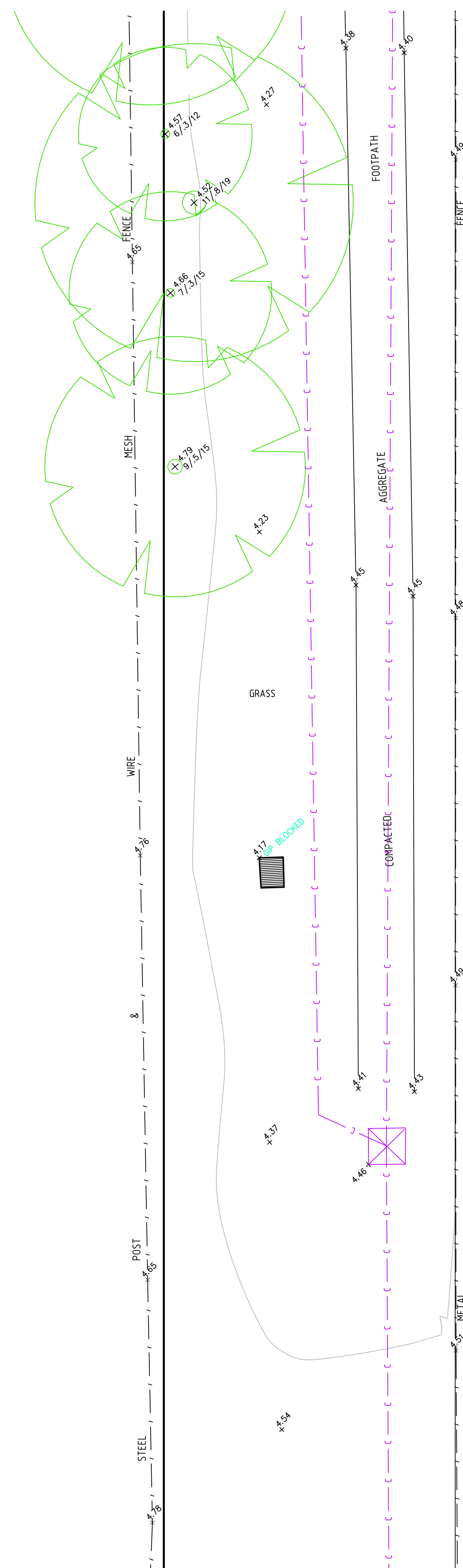
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08/02/2022

SHEET
6

OF
4



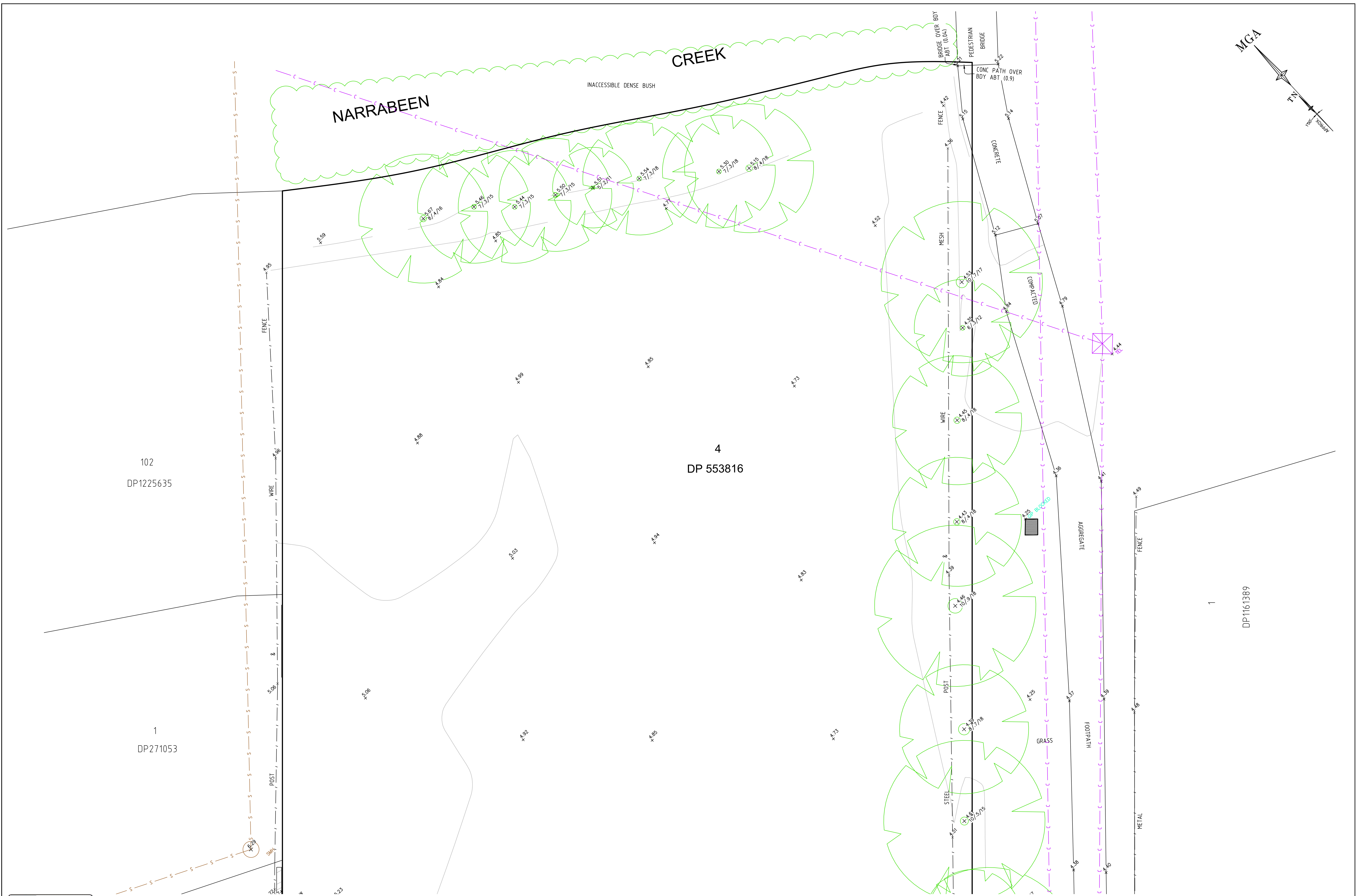
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A	00/00/00	-	00
Revision	Date	Description	Reference

 **LTS**
CONFIDENCE TOGETHER


.....
Registered Surveyor NSW
Surveyor ID: 8627

Client - IPM PTY LTD
Drawing title
PLAN OF DETAIL AND LEVELS OVER LOT 4 IN DP553816
KNOWN AS 16 MACPHERSON STREET WARRIEWOOD

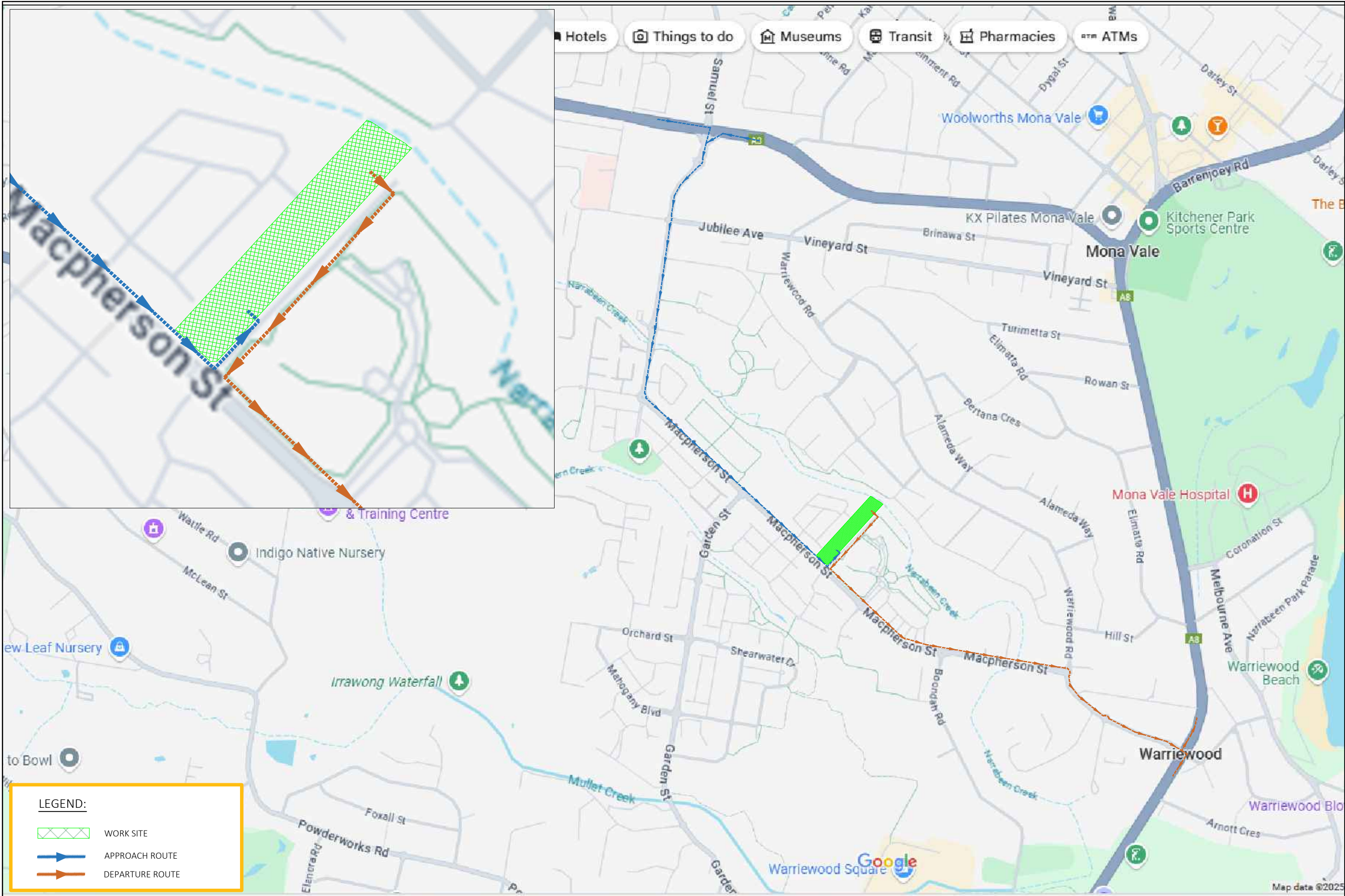
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site Area 1.012ha	scale 1:100	date of survey 08/02/2022
LGA NORTHERN BEACHES	SHEET OF	5



ADJOINS SHEET 5

Appendix D

Heavy Vehicle Route Map



Plotted by CJP CONSULTING ENGINEERS

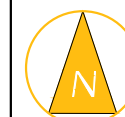


CJP Consulting Engineers
PO Box 1184
Hunters Hill NSW 2110
M: 0415 256 233
E: info@cjpconsultingengineers.com.au

PRELIMINARY PLAN
FOR DISCUSSION PURPOSES
ONLY SUBJECT TO CHANGE
WITHOUT NOTIFICATION

WARNING
THE LOCATIONS OF UNDERGROUND SERVICES
ARE APPROXIMATE ONLY.
THE EXACT LOCATIONS SHALL BE PROVIDED ON SITE.
ALL EXISTING SERVICES SHOWN ARE NOT GUARANTEED.

16 MACPHERSON STREET, WARRIEWOOD
HEAVY VEHICLE ROUTES
APPROACH AND DEPARTURE ROUTES



SCALE 0 100.0 200.0 1:10000 @ A3

DRAWING NO. 22131-D01-V1

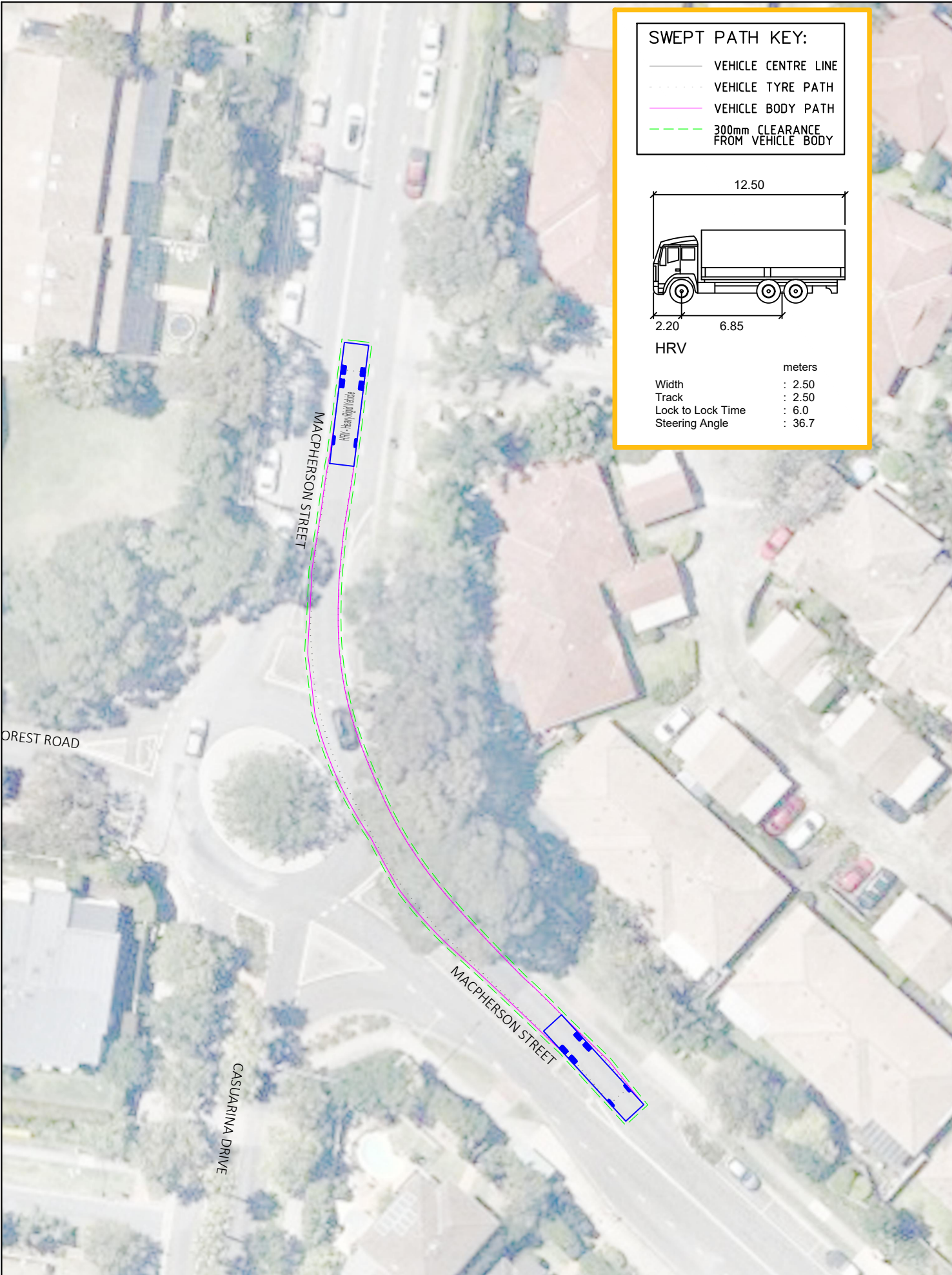
SHEET NO. 01 OF 07

ISSUE DATE 21 March 2025

DRAWN BY D. ALOC
REVIEWED BY C. PALMER

Appendix E

Swept Turn Paths



SWEPT PATH KEY:

— VEHICLE CENTRE LINE

- - - VEHICLE TYRE PATH

— VEHICLE BODY PATH

- - - 300mm CLEARANCE FROM VEHICLE BODY

12.50

HRV

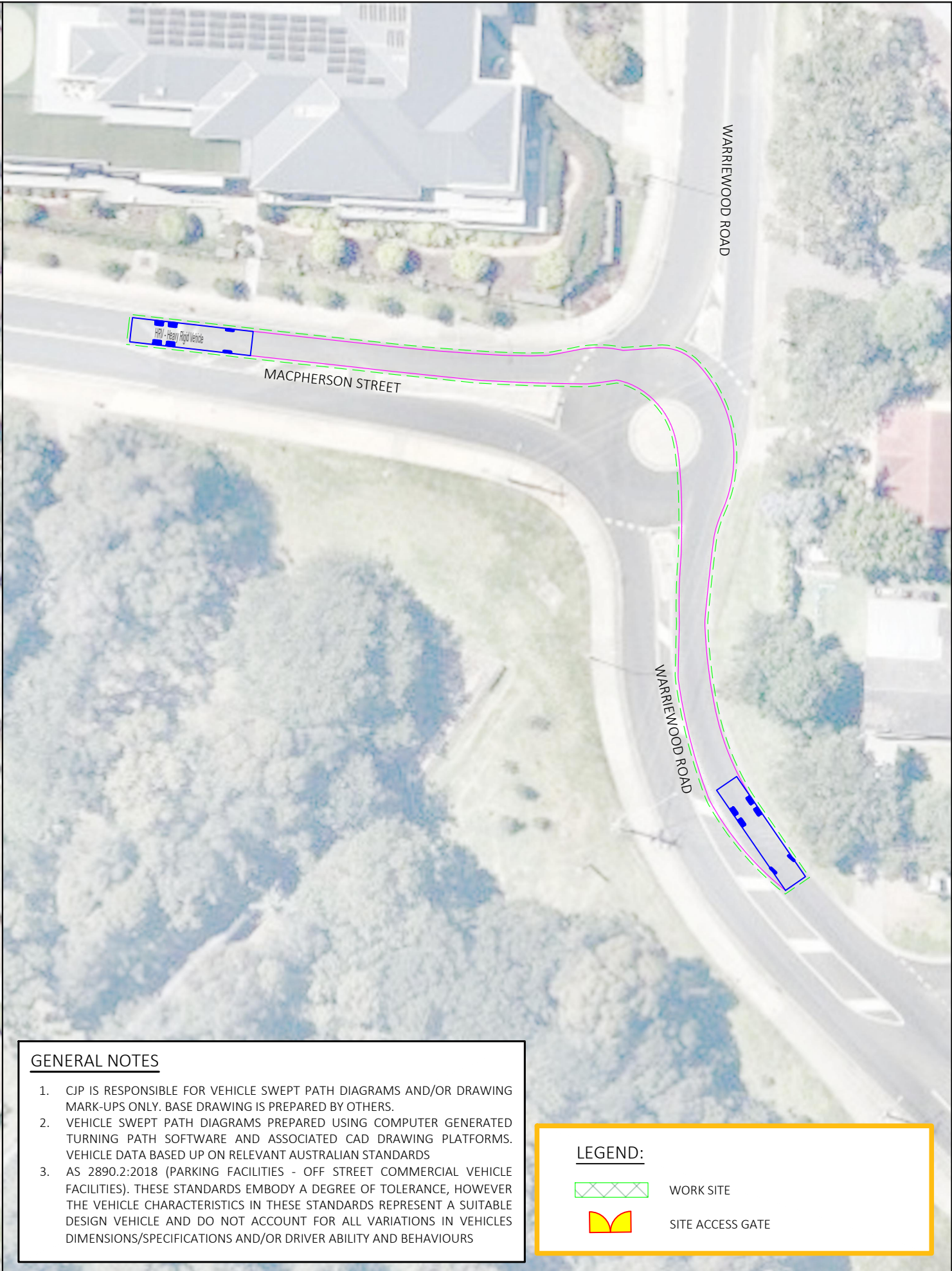
Width : 2.50

Track : 2.50

Lock to Lock Time : 6.0

Steering Angle : 36.7

meters



- GENERAL NOTES
1. CJP IS RESPONSIBLE FOR VEHICLE SWEEP PATH DIAGRAM AND/OR DRAWING MARK-UPS ONLY. BASE DRAWING IS PREPARED BY OTHERS.

2. VEHICLE SWEEP PATH DIAGRAMS PREPARED USING COMPUTER GENERATED TURNING PATH SOFTWARE AND ASSOCIATED CAD DRAWING PLATFORMS. VEHICLE DATA BASED UP ON RELEVANT AUSTRALIAN STANDARDS

3. AS 2890.2:2018 (PARKING FACILITIES - OFF STREET COMMERCIAL VEHICLE FACILITIES). THESE STANDARDS EMBODY A DEGREE OF TOLERANCE, HOWEVER THE VEHICLE CHARACTERISTICS IN THESE STANDARDS REPRESENT A SUITABLE DESIGN VEHICLE AND DO NOT ACCOUNT FOR ALL VARIATIONS IN VEHICLES DIMENSIONS/SPECIFICATIONS AND/OR DRIVER ABILITY AND BEHAVIOURS

LEGEND:

WORK SITE

SITE ACCESS GATE

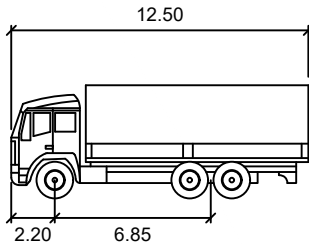
Plotted by CJP CONSULTING ENGRS





SWEPT PATH KEY:

- VEHICLE CENTRE LINE
- - - VEHICLE TYRE PATH
- VEHICLE BODY PATH
- - - 300mm CLEARANCE FROM VEHICLE BODY

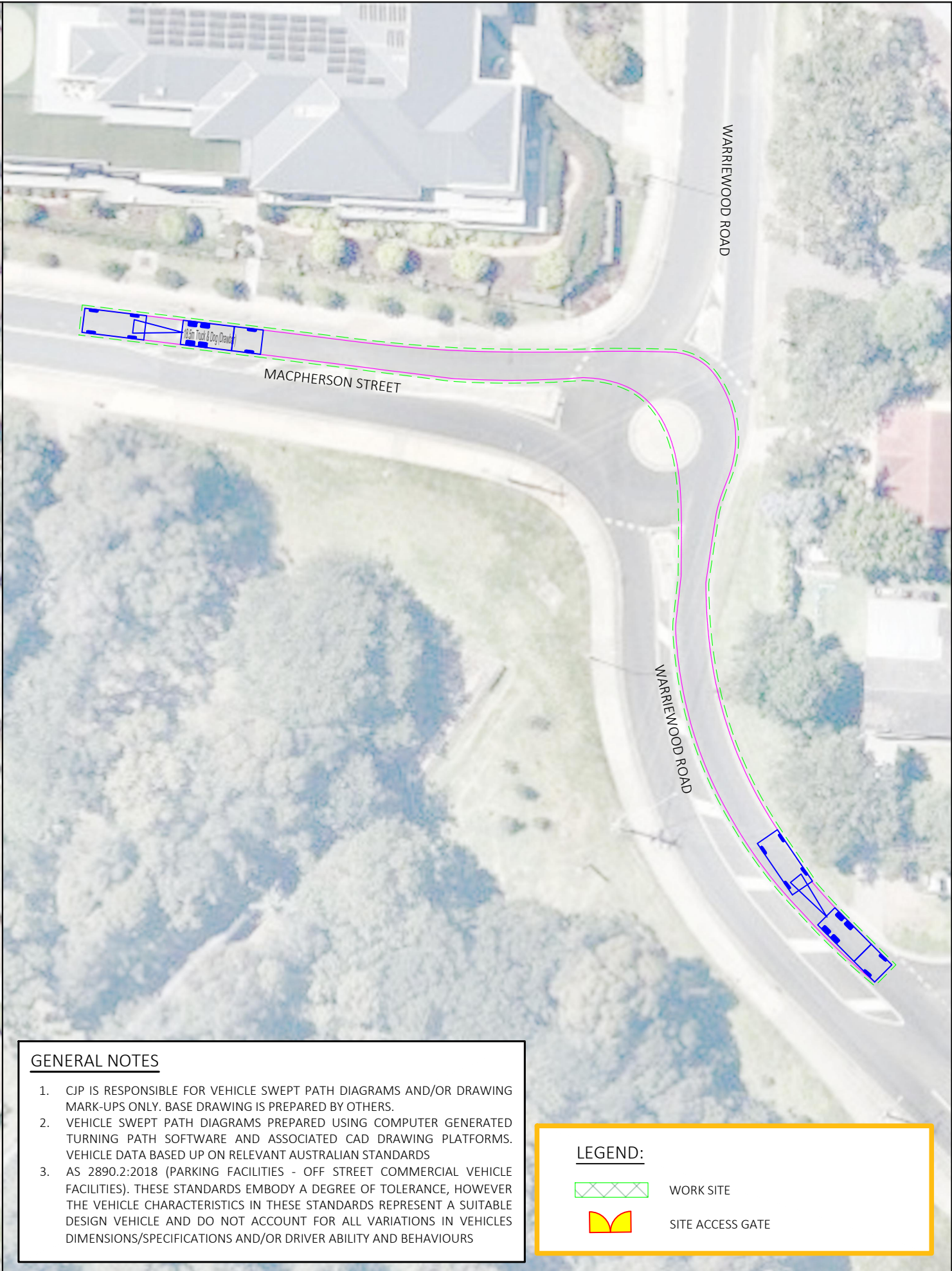
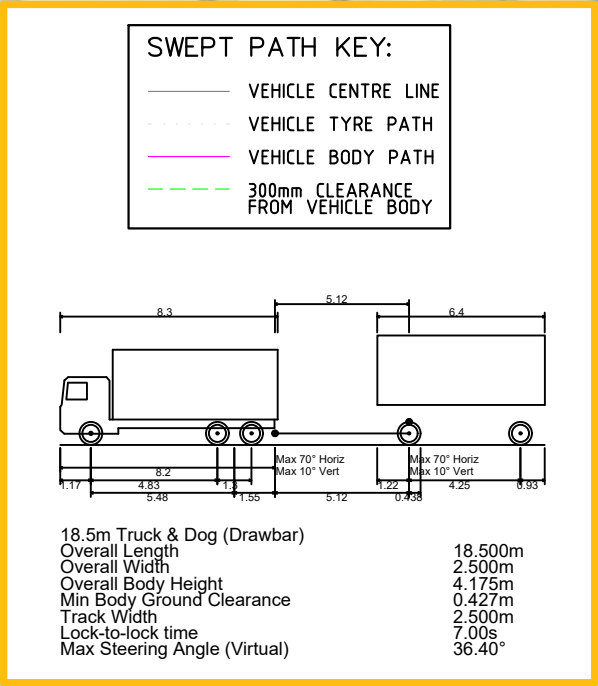
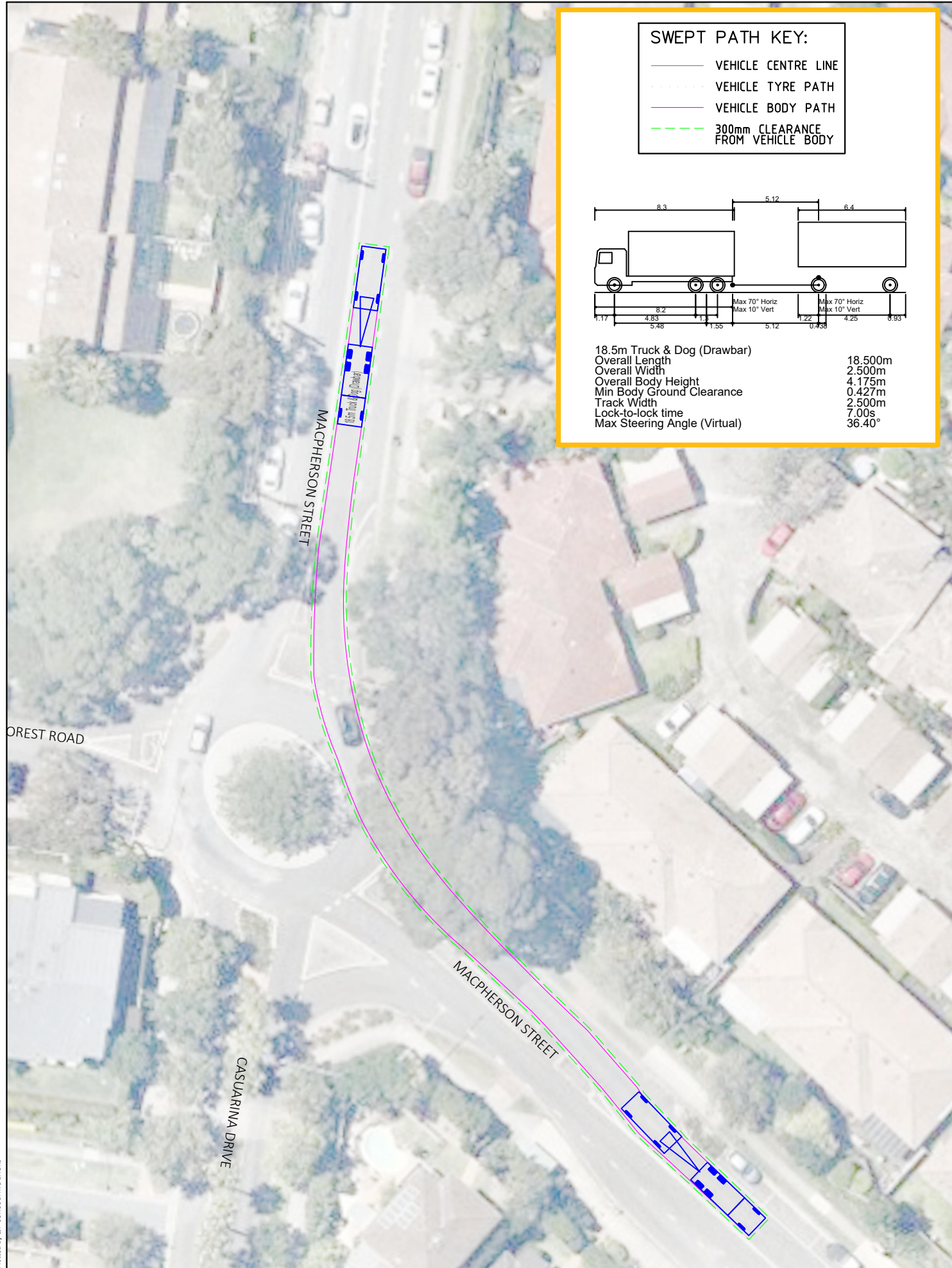


HRV	
	metres
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 36.7

- GENERAL NOTES**
1. CJP IS RESPONSIBLE FOR VEHICLE SWEPT PATH DIAGRAM AND/OR DRAWING MARK-UPS ONLY. BASE DRAWING IS PREPARED BY OTHERS.
 2. VEHICLE SWEPT PATH DIAGRAMS PREPARED USING COMPUTER GENERATED TURNING PATH SOFTWARE AND ASSOCIATED CAD DRAWING PLATFORMS. VEHICLE DATA BASED UP ON RELEVANT AUSTRALIAN STANDARDS
 3. AS 2890.2:2018 (PARKING FACILITIES - OFF STREET COMMERCIAL VEHICLE FACILITIES). THESE STANDARDS EMBODY A DEGREE OF TOLERANCE, HOWEVER THE VEHICLE CHARACTERISTICS IN THESE STANDARDS REPRESENT A SUITABLE DESIGN VEHICLE AND DO NOT ACCOUNT FOR ALL VARIATIONS IN VEHICLES DIMENSIONS/SPECIFICATIONS AND/OR DRIVER ABILITY AND BEHAVIOURS

LEGEND:

- WORK SITE
- SITE ACCESS GATE



- GENERAL NOTES**
1. CJP IS RESPONSIBLE FOR VEHICLE SWEPT PATH DIAGRAM AND/OR DRAWING MARK-UPS ONLY. BASE DRAWING IS PREPARED BY OTHERS.
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LEGEND:

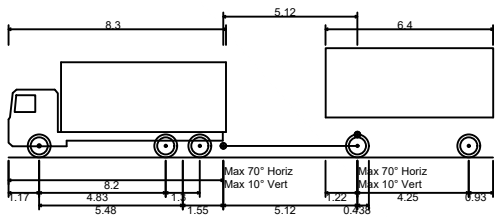
- WORK SITE
- SITE ACCESS GATE

Plotted by CJP CONSULTING ENGRS



SWEPT PATH KEY:

- VEHICLE CENTRE LINE
- - - VEHICLE TYRE PATH
- VEHICLE BODY PATH
- - - 300mm CLEARANCE FROM VEHICLE BODY



18.5m Truck & Dog (Drawbar)	
Overall Length	18.500m
Overall Width	2.500m
Overall Body Height	4.175m
Min Body Ground Clearance	0.427m
Track Width	2.500m
Lock-to-lock time	7.00s
Max Steering Angle (Virtual)	36.40°

GENERAL NOTES

1. CJP IS RESPONSIBLE FOR VEHICLE SWEEP PATH DIAGRAM AND/OR DRAWING MARK-UPS ONLY. BASE DRAWING IS PREPARED BY OTHERS.
2. VEHICLE SWEEP PATH DIAGRAMS PREPARED USING COMPUTER GENERATED TURNING PATH SOFTWARE AND ASSOCIATED CAD DRAWING PLATFORMS. VEHICLE DATA BASED UP ON RELEVANT AUSTRALIAN STANDARDS
3. AS 2890.2:2018 (PARKING FACILITIES - OFF STREET COMMERCIAL VEHICLE FACILITIES). THESE STANDARDS EMBODY A DEGREE OF TOLERANCE, HOWEVER THE VEHICLE CHARACTERISTICS IN THESE STANDARDS REPRESENT A SUITABLE DESIGN VEHICLE AND DO NOT ACCOUNT FOR ALL VARIATIONS IN VEHICLES DIMENSIONS/SPECIFICATIONS AND/OR DRIVER ABILITY AND BEHAVIOURS

LEGEND:

-  WORK SITE
-  SITE ACCESS GATE



Appendix F

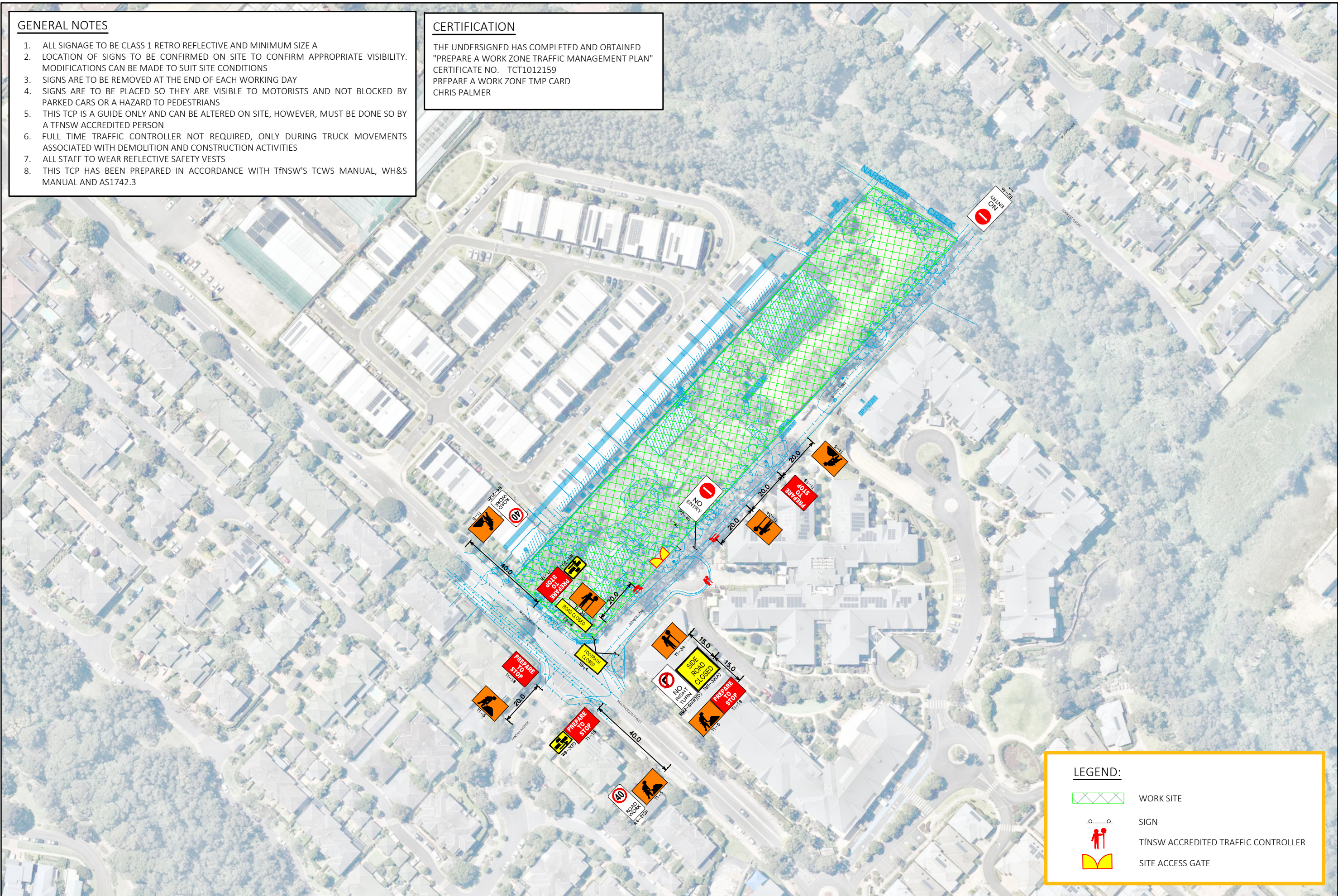
Traffic Control Plans

GENERAL NOTES

- 1. ALL SIGNAGE TO BE CLASS 1 RETRO REFLECTIVE AND MINIMUM SIZE A
- 2. LOCATION OF SIGNS TO BE CONFIRMED ON SITE TO CONFIRM APPROPRIATE VISIBILITY. MODIFICATIONS CAN BE MADE TO SUIT SITE CONDITIONS
- 3. SIGNS ARE TO BE REMOVED AT THE END OF EACH WORKING DAY
- 4. SIGNS ARE TO BE PLACED SO THEY ARE VISIBLE TO MOTORISTS AND NOT BLOCKED BY PARKED CARS OR A HAZARD TO PEDESTRIANS
- 5. THIS TCP IS A GUIDE ONLY AND CAN BE ALTERED ON SITE, HOWEVER, MUST BE DONE SO BY A TfNSW ACCREDITED PERSON
- 6. FULL TIME TRAFFIC CONTROLLER NOT REQUIRED, ONLY DURING TRUCK MOVEMENTS ASSOCIATED WITH DEMOLITION AND CONSTRUCTION ACTIVITIES
- 7. ALL STAFF TO WEAR REFLECTIVE SAFETY VESTS
- 8. THIS TCP HAS BEEN PREPARED IN ACCORDANCE WITH TfNSW'S TCWS MANUAL, WH&S MANUAL AND AS1742.3

CERTIFICATION

THE UNDERSIGNED HAS COMPLETED AND OBTAINED
"PREPARE A WORK ZONE TRAFFIC MANAGEMENT PLAN"
CERTIFICATE NO. TCT1012159
PREPARE A WORK ZONE TMP CARD
CHRIS PALMER



Plotted by CJP CONSULTING ENGINEERS

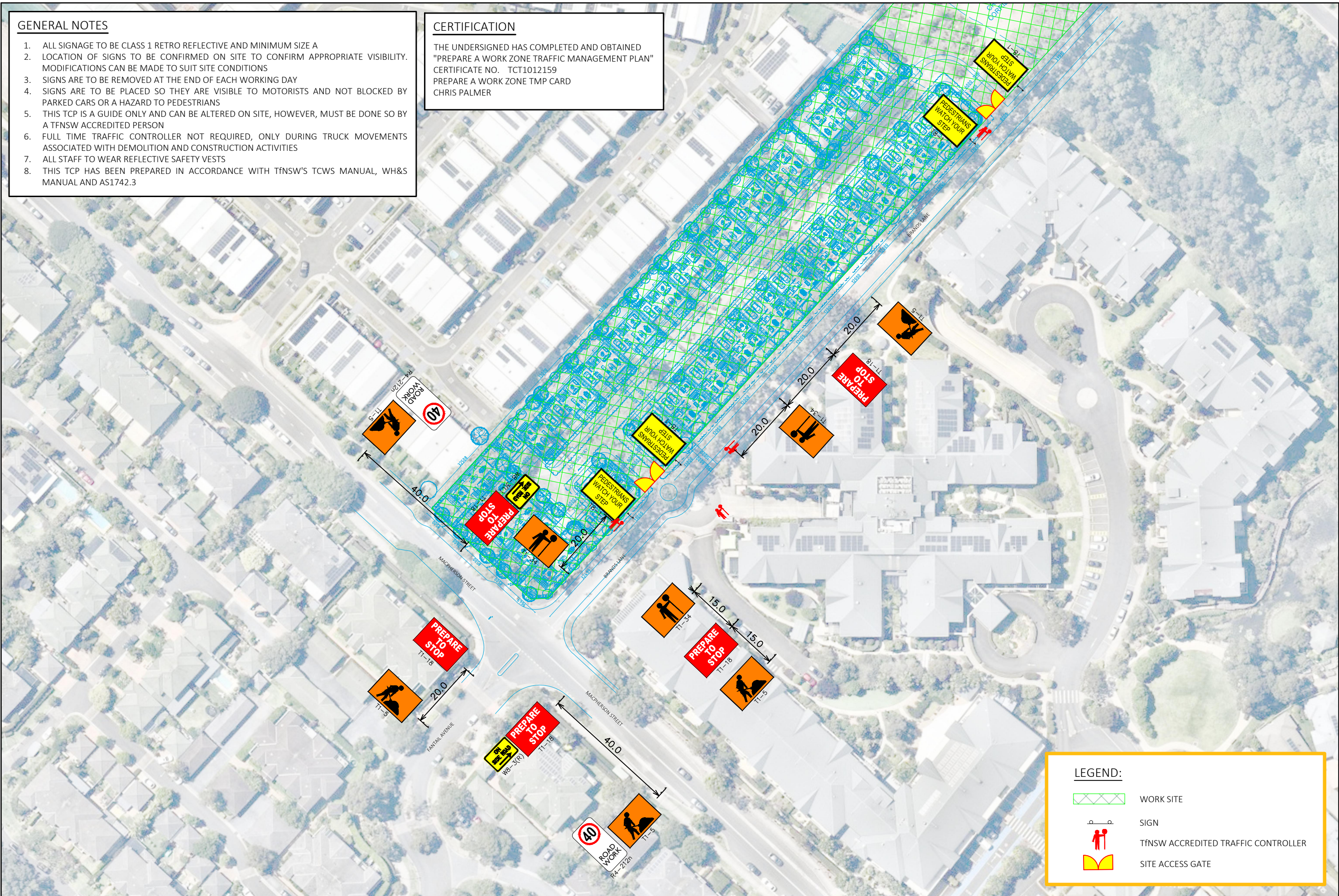


GENERAL NOTES

- 1. ALL SIGNAGE TO BE CLASS 1 RETRO REFLECTIVE AND MINIMUM SIZE A
- 2. LOCATION OF SIGNS TO BE CONFIRMED ON SITE TO CONFIRM APPROPRIATE VISIBILITY. MODIFICATIONS CAN BE MADE TO SUIT SITE CONDITIONS
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Plotted by CJP CONSULTING ENGRS