



17-23 Talavera Road, Macquarie Park Preliminary Construction Traffic Management Plan

Prepared for:
Macquarie Data Centres Pty Ltd

25 October 2021

The Transport Planning Partnership

17-23 Talavera Road, Macquarie Park

Preliminary Construction Traffic Management Plan

Client: Macquarie Data Centres Pty Ltd

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APPENDICES

A. SWEPT PATHS ANALYSIS

1 Introduction

1.1 Project Background

The Transport Planning Partnership (TPPP) has prepared this preliminary CTMP on behalf of Macquarie Data Centres Pty Ltd. It has been prepared to accompany a State Significant Development Application (SSDA) seeking approval for the proposed expansion of the Macquarie Data Centres' facility at 17-23 Talavera Road, Macquarie Park.

1.2 Purpose of the CTMP

The purpose of this CTMP is to assess the traffic and pedestrian implications and outline how vehicular, cyclist and pedestrian traffic and access will be managed during the construction period. This preliminary CTMP provides a structured approach to manage traffic and access during construction to provide a safe road environment, minimise impact on the surrounding road network and maintain access for all road users and the local community.

Specifically, the purpose of this CTMP is to:

- maintain vehicle and pedestrian access to/from adjacent properties at all times
- restrict construction vehicle movements to designated routes to/from the site
- manage and control construction vehicle activity in the vicinity of the site
- provide an appropriate and convenient environment for pedestrians and cyclists around the construction site
- minimise the impact of construction activity on traffic flows, emergency vehicle access and pedestrian movements
- maintain appropriate public transport access
- carry out construction activity in accordance with the approved work hours.

1.3 SEARs Assessment

As part of the SSDA 24299707 application related to the site, City of Ryde Council and Transport for NSW have outlined the Secretary's Environmental Assessment Requirements (SEARs) for the proposed development.

Matters particularly related to construction traffic have been outlined in Table 1.1, alongside reference to the addressing section of the report.

Table 1.1: SEARs Requirements

SEARs item	Report Address
<i>The preparation of a preliminary Construction Pedestrian and Traffic Management Plan (CPTMP) to demonstrate the proposed management of the impact in relation to construction traffic addressing the following:</i>	-
Assessment of cumulative impacts associated with other construction activities (if any):	Section 4.2
An assessment of road safety at key intersections and locations subject to heavy vehicle construction traffic movements and high pedestrian activity	Section 4
Details of construction program detailing the anticipated construction duration and highlighting significant and milestone stages and events during the construction process	Section 3.2
Details of anticipated peak hour and daily construction vehicle movements to and from the site	Section 4.1
Details of on-site car parking and access arrangements of construction vehicles, construction works to and from the site, emergency vehicles and service vehicle (sic)	Section 4.7
Details of temporary cycling and pedestrian access during construction	Section 4.3

1.4 Project Manager Contacts

Contact details of the project manager will be provided once the Contractor has been appointed.

2 Existing Conditions

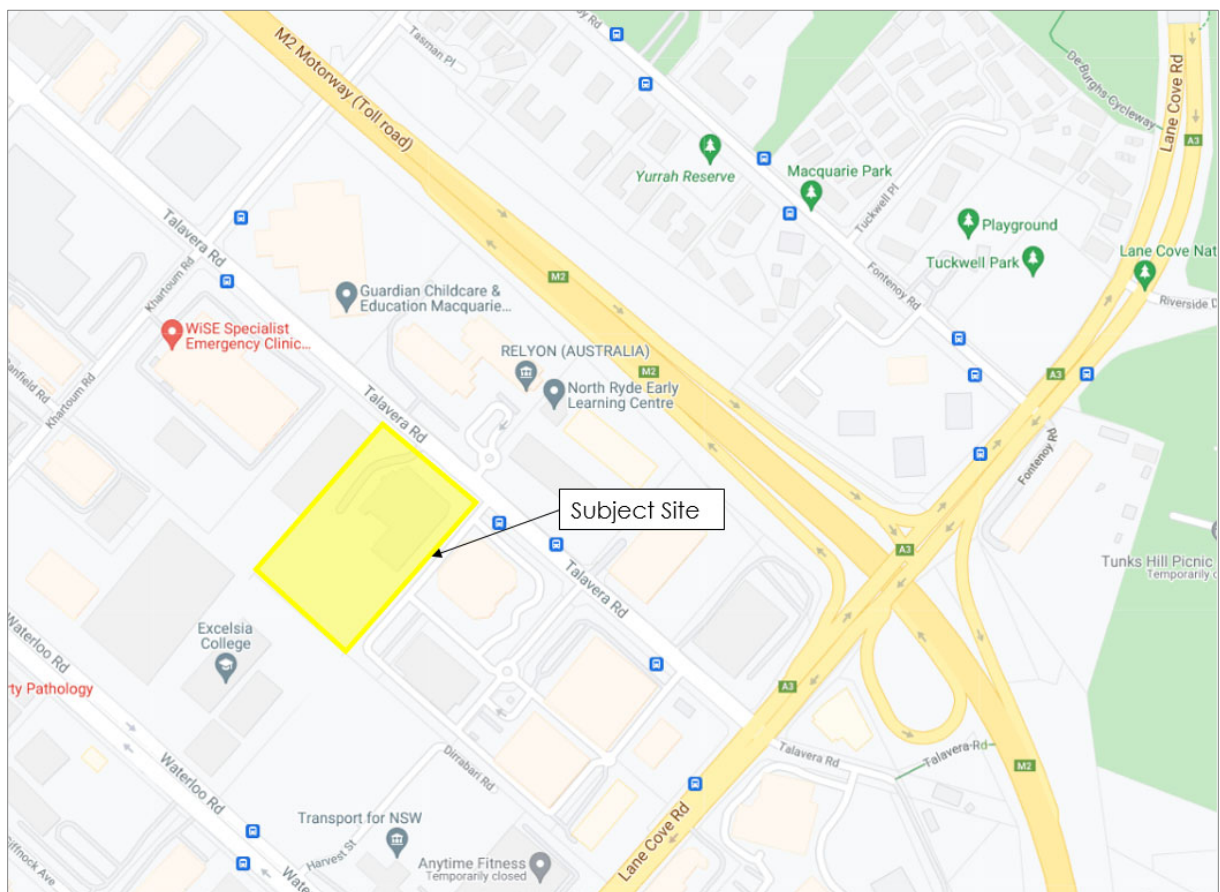
2.1 Site Description

The Site is located at 17-23 Talavera Road within the Ryde Local Government Area and is zoned B7 Business Park under the provisions of Ryde Local Environmental Plan 2014. The land uses surrounding the Site comprise of B7 Business Park, B3 Commercial Core, B4 Mixed Use and SP2 Infrastructure zones.

Access to the Site is currently provided via Talavera Road along the eastern boundary of the subject site.

The location of the site is shown in Figure 2.1.

Figure 2.1: Location Plan



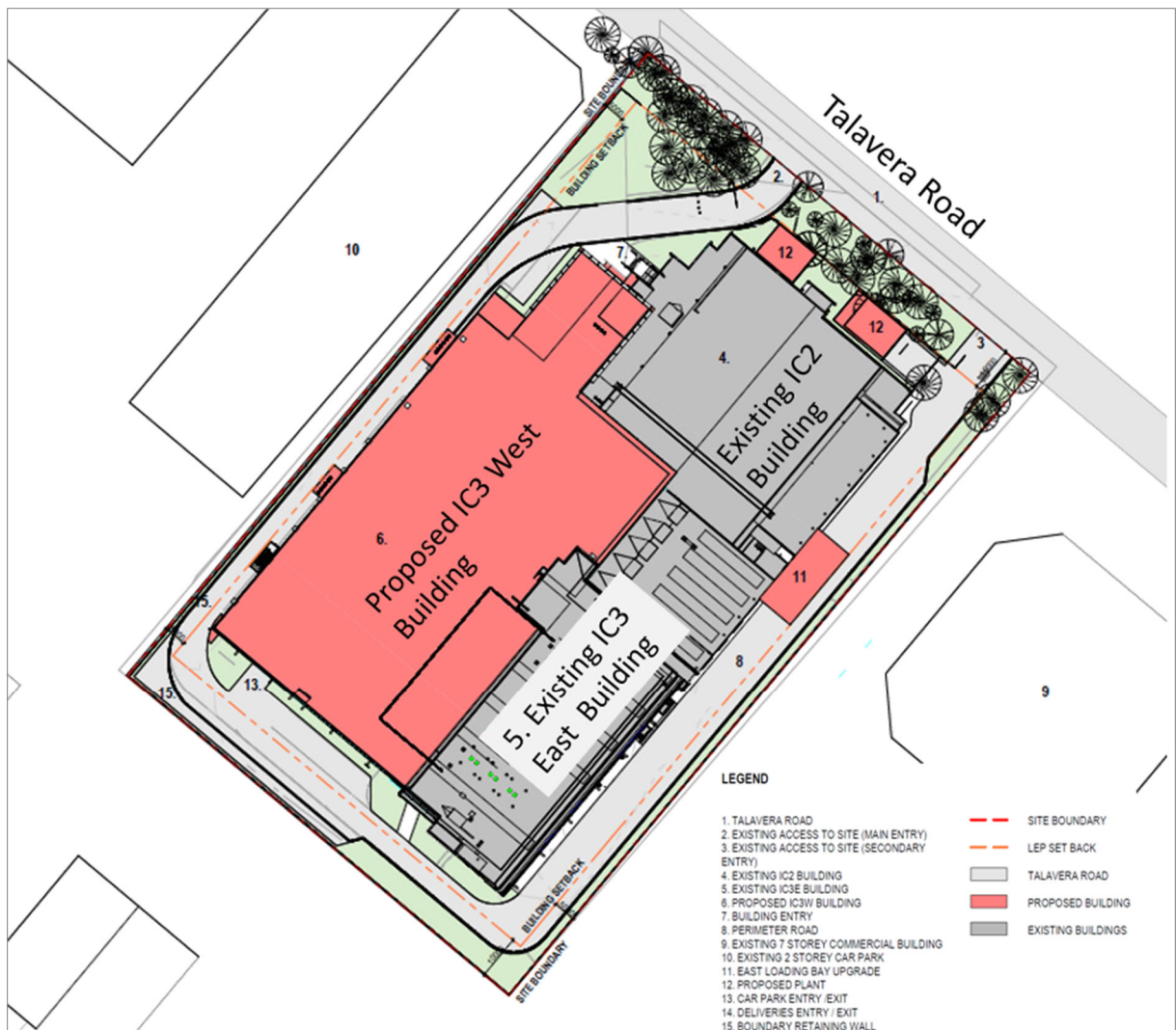
Base Map Source: Nearmap – viewed online 30/07/21

The most recent approval related to the Site is LDA2018/0322 which granted consent for a two (2) staged construction of data centre. This approval was granted by the Land and Environment Court (LEC) of NSW under a Section 34 agreement.

The proposed preliminary site plan is shown in Figure 2.2.

Stage 1, that is, IC3 East building has been completed, while Stage 2, that is, proposed IC3 West building has not yet commenced. The IC2 and IC3 east facilities are completed. The DA for IC3 west has been approved. As part of current proposal, it is proposed to expand the approved footprint by 2,366m².

Figure 2.2: Proposed Preliminary Site Plan



2.2 Road Network

The local road network surrounding the subject site includes Lane Cove Road, Talavera Road and Khartoum Road. These roads are discussed below.

2.2.1 Lane Cove Road

Lane Cove Road is an RMS classified State Road (A3) and forms one of the major north-south arterial links in the northern/ north-western suburbs. The road provides good connectivity to

the wider arterial road network, notable to Ryde Road, M2 Motorway, Victoria Road and Devlin Street. Within the vicinity of the site, Lane Cove Road runs in a north-east to south-west direction. The road provides three through traffic lanes in each direction separated by a central median. The road has a posted speed limit of 70 km/h in both directions within the vicinity of the site.

2.2.2 Talavera Road

Talavera Road is a regional road, generally aligned in the north-west to south-east direction along the frontage of the site. The road carriageway measures approximately 15m kerb to kerb with restricted kerbside parking permitted along both sides of the road near the site. This includes ticketed parking for five hours between 10:00am and 3:00pm, Monday to Friday. Talavera Road has a posted speed limit of 50km/h.

2.2.3 Khartoum Road

Khartoum Road is a local road, generally aligned in the north-east to south-west direction. The road carriageway measures approximately 12m kerb to kerb with restricted kerbside parking permitted along both sides of the road. This includes ticketed parking for five hours between 10:00am and 3:00pm, Monday to Friday and parking for twelve hours between 7:00am and 7:00pm, Monday to Friday. Khartoum Road has a posted speed limit of 50km/h.

2.3 Public Transport

The closest metro station is Macquarie Park Station, located 950m walking distance from the site (a 13-minute walk). Macquarie Park Station services the Tallawong to Chatswood line with services running every 4 minutes during the peak hours and every 10 minutes in the off-peak hours.

The subject site is located within proximity to both high frequency bus services. There are several bus stops close to the site, located on Talavera Road and Lane Cove Road.

Table 2.1 presents a summary of the existing public transport services near the site, including their respective frequencies.

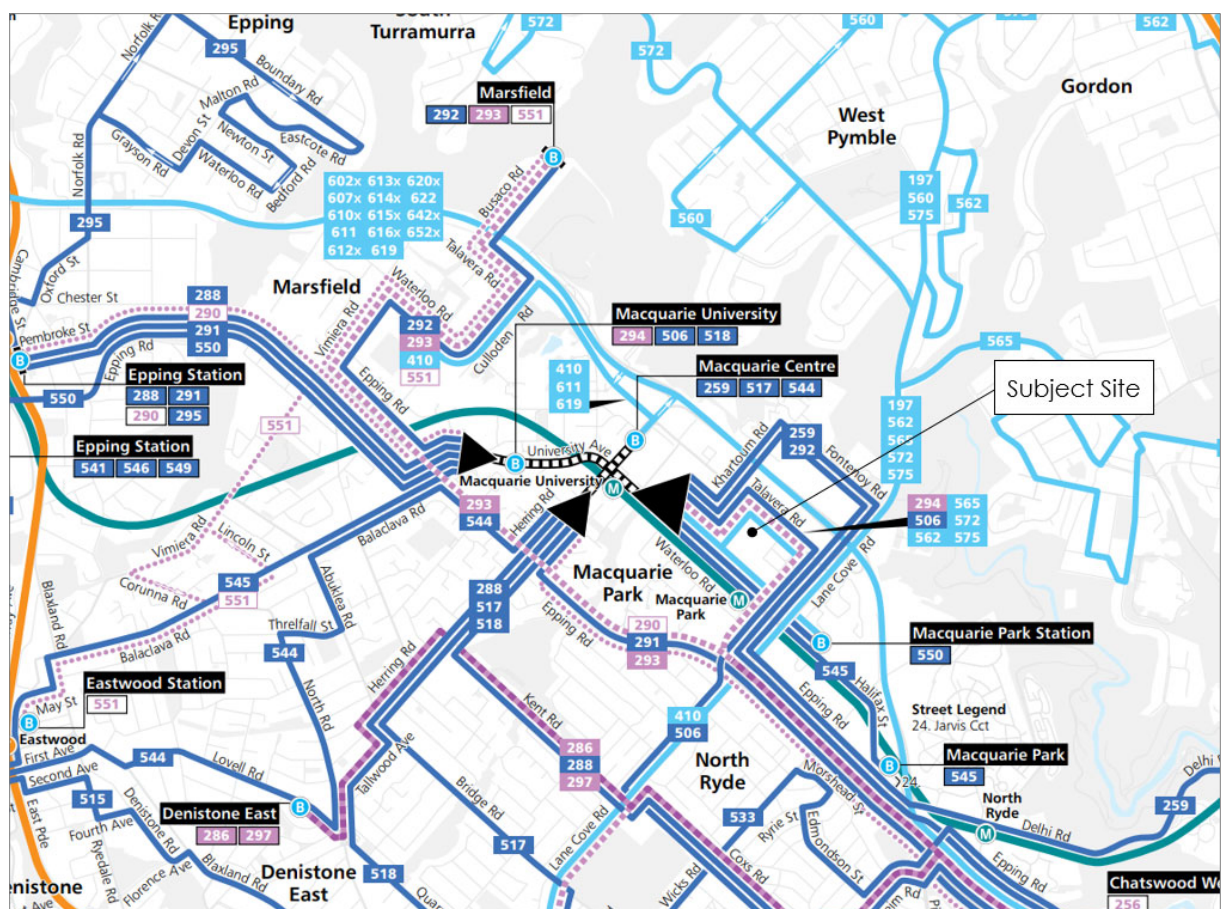
Table 2.1: Existing Public Transport Services

Service	Route Description	Location of Service	Frequency
Rail	Metro North West Line	Macquarie Park Station	Peak (every 4 mins) Off-Peak (every 10 mins)
Bus	294	15 Talavera Road	Every 15-30 minutes (AM)
	506	15 Talavera Road	Every 15-30 minutes
	562	15 Talavera Road	3 services
	565	15 Talavera Road	Every 60 minutes
	572	15 Talavera Road	Every 10-30 minutes
	575	15 Talavera Road	Every 15-30minutes

As indicated above, there is sufficient public transport provision in the immediate vicinity of the site.

Figure 2.3 shows a map of the existing bus network surrounding the site.

Figure 2.3: Existing Bus Network



Source: TfNSW - State Transit North Shore and West Network Map – viewed online 30/07/21

2.4 Pedestrian and Cycling Facilities

In the immediate vicinity of the subject site, pedestrian paths are provided on both sides of Talavera Road. Footpaths along these roads extend onto the wider network, providing passage on foot onto Lane Cove Road and Khartoum Road.

An extract of Council's existing cycle network map is shown in Figure 2.4.

Figure 2.4: Existing Cycle Network



Source: Extract of the City of Ryde Existing Cycle Map – viewed online 30/07/2021

Figure 2.4 demonstrates that there are a number of off-road shared cycle paths near the site, with the main routes providing travel to Macquarie Park University, Epping and North Ryde. On-road cycle lanes surrounding the site also provide good cycle connectivity to the wider road network.

3 Proposed Construction Activities

3.1 Description of Construction Activities

The proposed construction works at 17-23 Talavera Road will primarily involve the following:

- Site establishment and civil works
- Building construction
- Building fit-out.

The extent of the work site shall generally be wholly contained within the site boundary, with minimal impact on the surrounding road network.

3.2 Duration and Staging of Works

The construction is expected to occur for a total period of 21 months.

The indicative construction staging, and estimated duration of construction is summarised in Table 3.1. The staging of these construction works periods may change subject to confirmation from the appointed Contractor.

Table 3.1: Indicative Construction Program

Construction Stage	Construction Activities	Description	Duration
1	Site Establishment and civil works	Enabling works and civil works, including piling	6 months
2	Building construction	Construction of the main building structure	6 months
3	Building fit-out	Deliveries and fitout of the data centre, deliveries of operational plant and equipment	9 months

3.3 Construction Work Hours

It is noted that the Council's standard hours of construction are:

- Monday to Friday: 7am-7pm
- Saturday: 8am-4pm
- No work is to be undertaken on Sundays or Public Holidays.

The proposed development, that is, an expansion to an existing data centre seeks to operate 24 hours per day, seven (7) days per week.

It is proposed to extend the construction work hours to the following:

- Monday to Friday: 6am-7pm
- Saturday: 6am-5pm
- Sunday: 7am-3pm

It is expected that further hours will be required for internal works.

3.4 Site Access Arrangements

Construction vehicle access to the site will be provided via both the existing driveways on Talavera Road.

All construction vehicles will use the existing internal access road to travel within the works site. This construction site access and internal access road will facilitate the following vehicles:

- Small utility vehicles (to enter/exit via both driveways)
- Concrete agitators (to enter/exit via both driveways)
- Medium Rigid Vehicles (to enter/exit via both driveways)
- Heavy Rigid Vehicles (to enter and exit via eastern driveway)
- 19m long truck and dogs (to enter via eastern driveway and exit via western driveway)
- 19m long semi-trailers (to enter via eastern driveway and exit via western driveway).

All construction activities will generally be carried out by small to heavy rigid vehicles, no larger than a 12.5m long heavy rigid vehicle. It may also be necessary to use 19m long articulated vehicles for larger deliveries to/from the works site (e.g. delivery of plant equipment).

Swept path analysis has been undertaken using a 12.5m long heavy rigid vehicle and 19m long articulated vehicle. This is provided in **Appendix A**.

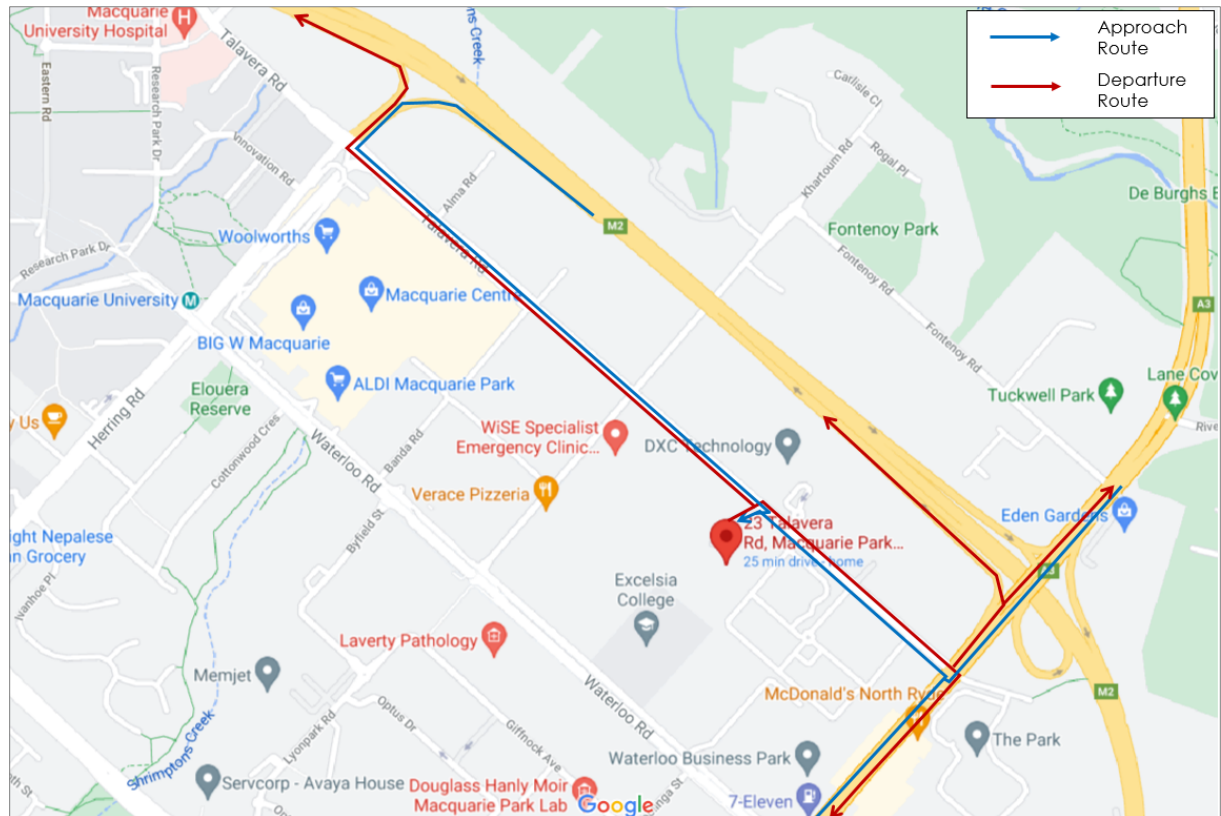
3.5 Construction Vehicle Routes

Generally, construction vehicles would have origins and destinations throughout Sydney. Dedicated construction vehicle routes have been developed to provide the shortest distances to/from the arterial road network, whilst minimising the impact of construction traffic on local streets within the vicinity of the site.

All truck drivers will be advised of the designated truck routes to/from the site and be required to adhere to the nominated routes.

On a local level, the designated truck routes to/from the works site shall be provided off Talavera Road in order to travel to/from the wider arterial road network via Lane Cove Road and the M2 Motorway as shown in Figure 3.1.

Figure 3.1: Nominated Construction Vehicle Routes



Base Map Source: Google Maps – viewed online 30/07/21

3.6 Materials and Handling Area

All materials handling and plant equipment, including waste storage, are expected to be wholly stored on-site within the work site. It is not expected that any public road will be required for such purposes. However, if temporary use of any public road is required for temporary storage purposes or the like, prior consultation with Council will be undertaken. All relevant permit approvals will also be obtained prior to the commencement of such activities.

3.7 Work Zone Requirements

No works zone will be required as part of the works. All loading and unloading will occur wholly within the site.

4 Construction Traffic Assessment and Implications

4.1 Construction Traffic Generation

The construction traffic generated by the proposed construction activities in each stage are presented in Table 4.1.

Table 4.1: Construction Traffic Generation

Construction Stage	Construction Activities	Daily Construction Traffic Generation
1	Site Establishment and civil works	Up to 30 construction vehicles
2	Building construction	40 construction vehicles
3	Building fit-out	Up to 50 construction vehicles for material delivery

From Table 4.1, it is anticipated that there would be up to 50 construction vehicles generated from the proposed construction activities of the site.

In addition, it is anticipated that there would up to 7 vehicles (7 in; 7 out) per hour during the busiest period.

With the proposed extension of the construction hours as mentioned in Section 3.3, the additional traffic movements from the proposed construction activities are not expected to cause any discernible adverse impacts to the state road network.

4.2 Cumulative Impacts of Nearby Developments

Developments near the site as shown in Table 4.2 have been sourced from the Major Projects website and the City of Ryde DA tracker.

Table 4.2: Nearby Developments

Project	Location	Project Details	Construction Timeframe	Movements per hour
Macquarie University Central Courtyard Precinct Redevelopment	Macquarie University	Construction of a new multi-storey student hub, two student accommodation buildings and shared basement with parking	Approved on 18 April 2019	15 two-way truck trips per hour
New University Office and Laboratory Building	8-12 University Avenue, Macquarie University	The proposal is for a new commercial building of 49,445m ² GFA that provides A-grade office, laboratory and collaboration spaces.	Completion no earlier than December 2021	3-4 two-way light vehicle trips per hour 4 two-way heavy vehicle trips per hour

Project	Location	Project Details	Construction Timeframe	Movements per hour
Ivanhoe Estate Redevelopment - Stage 1	Corner of Epping Road and Herring Road, Macquarie Park	Construction and use of Buildings A1 and C1 comprising residential uses (including social housing), a childcare centre, and retail / community spaces.	Unknown Approved 30 April 2020	64 two-way light vehicle trips per hour 18 two-way heavy vehicle trips per hour
Ivanhoe Estate Redevelopment - Stage 2	Corner of Epping Road and Herring Road, Macquarie Park	Construction of Village Green and community centre (Building C2) and two residential apartment, (Buildings C3 and C4) containing a total of 672 apartments.	Unknown	48 two-way light vehicle trips per hour 12 two-way heavy vehicle trips per hour
LDA2018/0171	159-161 Epping Rd MACQUARIE PARK NSW 2113	Construction of 2 x 15 storey residential apartment buildings comprising 317 dwellings over 3 basement levels of car parking for 308 car spaces	Approved 22 May 2019	Unknown
LDA2020/0433	85-91 Waterloo Road, Macquarie Park	Demolition and the construction of a new commercial building of 22,550m ² and 15 storeys in height including associated landscaping and parking.	Unknown Approved 2 August 2021	Unknown
LDA2020/0315	40-52 Talavera Road, Macquarie Park	Concept Development for the whole site comprising 3 commercial buildings equating to 37,542m ² GFA, including detailed application for Stage 1 to enable demolition and construction of Building A (GFA of 11,639m ² - office & café)	Unknown Lodged 18 November 2020	Unknown
LDA2021/0184	63-71 Waterloo Road, Macquarie Park	Demolition, amalgamation of lots and staged construction of a mixed-use development comprising 2 towers with basement parking and provision of a new Road	Unknown Lodged 2 June 2021	Unknown

Table 4.2 shows that for the projects with known construction traffic trips the cumulative impacts are expected to be minimal considering the low number of traffic movements generated by those projects and the proposal. Although, the remainder of the projects in Table 4.2 have no available information on construction vehicle trip generation, it is unlikely that there will be adverse cumulative impacts.

4.3 Pedestrian and Cycle Access

Pedestrian and cycle safety shall be maintained at all times, particularly when trucks are entering and exiting the site. If applicable, all relevant permit approvals will be obtained from Council, prior to the commencement of any work.

4.4 Public Transport Facilities

The proposed construction activities would not impact existing public transport services.

4.5 Emergency Vehicles and Heavy Vehicles

No special provisions for emergency service vehicles or heavy vehicles are required as part of the proposed construction works. Emergency and heavy vehicle access shall be maintained at all times.

4.6 Adjoining Properties and Local Access

Access to adjoining properties will not be affected by the works.

4.7 Construction Staff Parking

Limited on-site vehicle parking will be available during construction. The existing site will be in operation and parking will be utilised by the employees. All construction workers will be encouraged and expected to use public transport and/or carpool to travel to/from the site. This will be incorporated in the workers induction program to ensure minimal parking impact on surrounding streets.

5 Construction Traffic Management Measures

5.1 Traffic Control Plan

A site-specific Traffic Control Plan (TCP) will be prepared in accordance with TfNSW's *Traffic Control at Work Sites Manual* once detailed construction staging is completed post-approval and if the vehicle haulage routes that utilises manoeuvres with traffic control are required.

The TCPs will need to display the management of traffic and pedestrians along the frontage of the site.

The proposed construction vehicle movements to/from the site will be accompanied by advisory traffic control signage to minimise the traffic impact on the surrounding road network. All advisory signage will be installed in accordance with *AS1742.3 Manual of uniform traffic control devices – Traffic control devices for works on roads* and the *Traffic Control at Worksites Manual*. Signs will be installed and maintained throughout on days that truck movements are scheduled to occur.

Temporary traffic controls will be inspected by the contractor prior to construction works commencing to identify potential safety hazards to enable implementation of corrective solutions.

The Site Supervisor will check all relevant traffic control management measures are in place prior to commencement of works.

5.2 Vehicle Access

Construction vehicles shall radio / call the site office on approach to the site to ensure access to the works site is available. All loading and unloading shall be undertaken within the site during the approved work hours. As noted previously, the queuing or marshalling of construction vehicles shall not be permitted on public roads.

Notwithstanding this, if there are any materials spilt onto the road, site personnel and equipment shall rectify the issue accordingly, subject to appropriate OH&S provision.

5.3 Truck Routes

Protocols must be in place to ensure:

- site induction shall include procedures for accessing the site
- drivers shall adhere to the nominated truck routes, as shown in Figure 3.1
- drivers shall be aware of pedestrians and cyclists in the immediate vicinity of the site
- drivers shall be aware of existing sign posted speed limits.

5.4 Site Inspections and Record Keeping

The construction works will be monitored to ensure that it proceed as set out in the CTMP. A daily inspection before the start of any construction activity shall take place to ensure that conditions accord with those stipulated in the plan and that there are no potential hazards. Any possible adverse impact shall be recorded and dealt with as they arise.

5.5 Site Induction

All staff employed on the site by the construction contractor shall be required to undergo a site induction. The induction shall include permitted access routes to and from the proposed work site for site personnel and construction vehicles as well as standard environmental, OH&S, driver protocols and emergency protocols. The workers will be encouraged to use public transport to travel to/from the site during the induction.

5.6 Heavy Vehicle Load Requirements

All drivers will be required to adhere with the posted vehicle load limits on all roads and not overload vehicles beyond its maximum loading limits and/or relevant approvals.

5.7 Spoil Management

Truck wheels will be washed prior to exiting site to avoid tracking any spoil onto adjacent roadways. Street sweepers will used where required.

The roadway (including footpath) will be kept in a serviceable condition for the duration of demolition. Remedial treatments such as patching will be undertaken at the direction of Council.

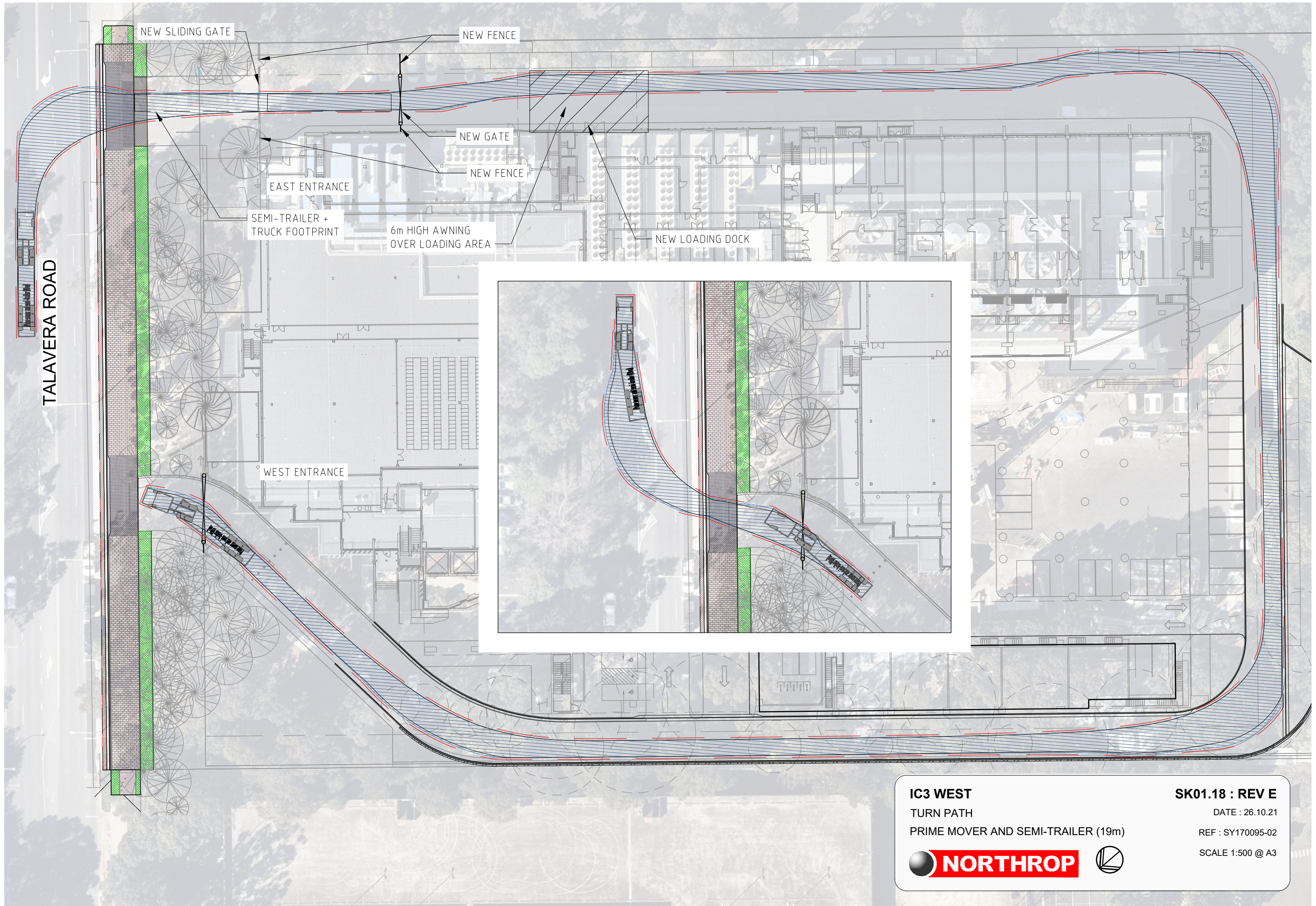
5.8 Permit Approvals

It is noted that the following permit approvals may be applicable, which will be submitted prior to the construction activities being undertaken:

- **Road Use Permit** – The applicant to obtain a Road Use Permit where any area of the public road or footpath is to be occupied as construction workspace, other than activities covered by a Road Opening Permit or if a Work Zone Permit is not obtained. The permit does not grant exemption from parking regulations.
- **Elevated Tower, Crane or Concrete Pump Permit** – The applicant to obtain an Elevated Tower, Crane or Concrete Pump Permit where any of these items of plant are placed on Council's roads or footpaths. This permit is in addition to either a Road Use Permit or a Work Zone Permit.
- **Crane Airspace Permit** – The applicant to obtain a Crane Over Airspace Permit where a crane on private land is operating in the air space of a Council road or footpath. Approval from the Transport for NSW for works on or near State Roads is required prior to lodgement of an application with Council. A separate application for a Work Zone Permit is required for any construction vehicles or plant on the adjoining road or footpath associated with use of the crane.
- **Hoarding Permit** – The applicant to obtain a Hoarding Permit and pay the required fee where erection of protective hoarding along the street frontage of the property is required. The fees payable is for a minimum period of 6 months and should the period be extended an adjustment of the fee will be made on completion of the works. The site must be fenced to a minimum height of 1.8 metres prior to the commencement of construction and throughout excavation and must comply with WorkCover (New South Wales) requirements.

Appendix A

Swept Paths Analysis



TALAVERA ROAD

EAST ENTRANCE

WEST ENTRANCE

NEW GATE

REMOVE EXISTING
WALLS AND GATES

10.0m MIN VERTICAL
CLEARANCE ZONE

PAINTED MEDIAN

NEW GATE

NEW RETRACTABLE
BOLLARDS

4.5m MIN VERTICAL
CLEARANCE ZONE

IC3 WEST

TURN PATH DELIVERY TRUCK - INBOUND

SINGLE UNIT TRUCK (12.5m) HRV



SK01.27 : REV C

DATE : 26.10.21

REF : SY170095-02

SCALE 1:500 @ A3

TALAVERA ROAD

EAST ENTRANCE

WEST ENTRANCE

NEW GATE

REMOVE EXISTING
WALLS AND GATES

10.0m MIN VERTICAL
CLEARANCE ZONE

PAINTED MEDIAN

NEW GATE

NEW RETRACTABLE
BOLLARDS

4.5m MIN VERTICAL
CLEARANCE ZONE

IC3 WEST

DELIVERY TRUCK ACCESS - OUTBOUND

HRV



SK01.28 : REV D

DATE : 26.10.21

REF : SY170095-02

SCALE 1:500 @ A3

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