



# CONSTRUCTION TRAFFIC AND PEDESTRIAN MANAGEMENT PLAN

---


**Knox Grammar School – Ewan House**  
**1-3 Billyard Avenue, Wahroonga**

Reference: 23.421r02v01  
Date: November 2023

Suite 2.08, 50 Holt St  
Surry Hills, NSW 2010

t: (02) 8324 8700  
w: [www.traffix.com.au](http://www.traffix.com.au)

## DOCUMENT VERIFICATION

Job Number	23.421			
Project	Knox Grammar School – Ewan House			
Client	Knox Grammar School			
Revision	Date	Prepared By	Checked By	Signed
v01	30/11/2023	Andrew Baraket	Neil Caga	

## SAFEWORK NSW CERTIFICATES

Prepare a Work Zone Traffic Management Plan			
Name	Neil Caga	Certificate No.	TCT0054366

# CONTENTS

1. Introduction	1
2. CTPMP Requirements	2
2.1 Traffic Guidance Scheme	2
2.2 Council Requirements	2
3. Location and Site	3
4. Existing Traffic Conditions	6
4.1 Road Network	6
4.2 Public Transport	9
5. Overview of Construction Program	11
5.1 Times of Operation	11
5.2 Site Establishment Plan	11
5.3 Overview of Construction Works	11
6. Traffic Management Arrangements	13
6.1 Construction Access	13
6.2 Truck Routes	13
6.3 Crane Requirements	15
6.4 Pedestrian Control	15
6.5 Employee Vehicles	15
6.6 Traffic Control Plan	16
7. Conclusion	17

## Appendices

- Appendix A: Photographic Record
- Appendix B: Swept Path Analysis
- Appendix C: Traffic Guidance Scheme

# 1. INTRODUCTION

TRAFFIX has been commissioned by Knox Grammar School to prepare a preliminary Construction Traffic and Pedestrian Management Plan (PCTPMP) report in relation to the proposed Knox Grammar School Ewan House located at 1-3 Billyard Avenue, Wahroonga. The development is located within the Ku-ring-gai Council local government area (LGA) and has been assessed under that Council's controls.

This report documents the preliminary construction traffic management arrangements and should be read in conjunction with any other construction documentation prepared on behalf of Knox Grammar School. It should be noted that this CTPMP can be updated in response to conditions within the DA Conditions of Consent upon approval of the development.

The report is structured as follows:

- Section 2: Outlines the CTPMP requirements.
- Section 3: Describes the location and subject site.
- Section 4: Documents the existing traffic conditions.
- Section 5: Describes the overall construction program.
- Section 6: Describes the proposed traffic management arrangements.
- Section 7: Concludes the report.



## 2. CTPMP REQUIREMENTS

### 2.1 Traffic Guidance Scheme

The Traffic Guidance Scheme (TGS) included in this report, should be implemented taking due account of on-site conditions as will occur over the construction period. Accordingly, construction crews are expected to respond in a pro-active manner to ensure that this plan is implemented to maximum effect and with no obvious safety issues being overlooked. In particular, the following matters are considered noteworthy:

- All signs are to be placed where clear visibility is available;
- Installations should be checked intermittently during the course of the day/s; and
- SafeWork NSW certified Traffic Controllers shall be on-site during work hours to supervise vehicle, cyclist, and pedestrian movements.

To improve sign visibility, signs should be positioned utilising existing power poles and signage stems where possible, covered where not applicable, and not positioned between parked cars where possible (to avoid hazard to cyclists and improve visibility for vehicles).

It is noted that TRAFFIX is responsible for the preparation of this CTPMP only and not for its implementation, which is the responsibility of the head contractor.

### 2.2 Council Requirements

The Ku-ring-gai Council has requested the preparation of this preliminary CTPMP, noting that a detailed CTPMP can be prepared at a later stage in response to conditions within the DA Conditions of Consent, upon approval of the development.

### 3. LOCATION AND SITE

The Knox Grammar School is located at 1-3 Billyard Avenue, Wahroonga, approximately 370 metres east of Wahroonga Railway Station and is legally identified as Lot 272 in DP608835. More specifically, it is situated in the area between Billyard Avenue, Cleveland Street and Sutherland Avenue.

The site is irregular in configuration with a total area of approximately 2.7 hectares. It has a northern frontage of 150 metres to Billyard Avenue, an eastern frontage of 210 metres to Sutherland Avenue and a western frontage of 110 metres to Cleveland Street, while the remaining southern boundary of 265 metres are shared with additional school infrastructure and neighbouring residential properties.

The site currently accommodates the Knox Grammar School and accommodates vehicular access from Billyard Avenue, with the Ewan House vehicular access via Sutherland Avenue.

A Location Plan is presented in **Figure 1** with a Site Plan included in **Figure 2**. Reference should also be made to the Photographic Record presented in **Appendix A** which provides an appreciation of the general character of roads and other key attributes in proximity to the site.

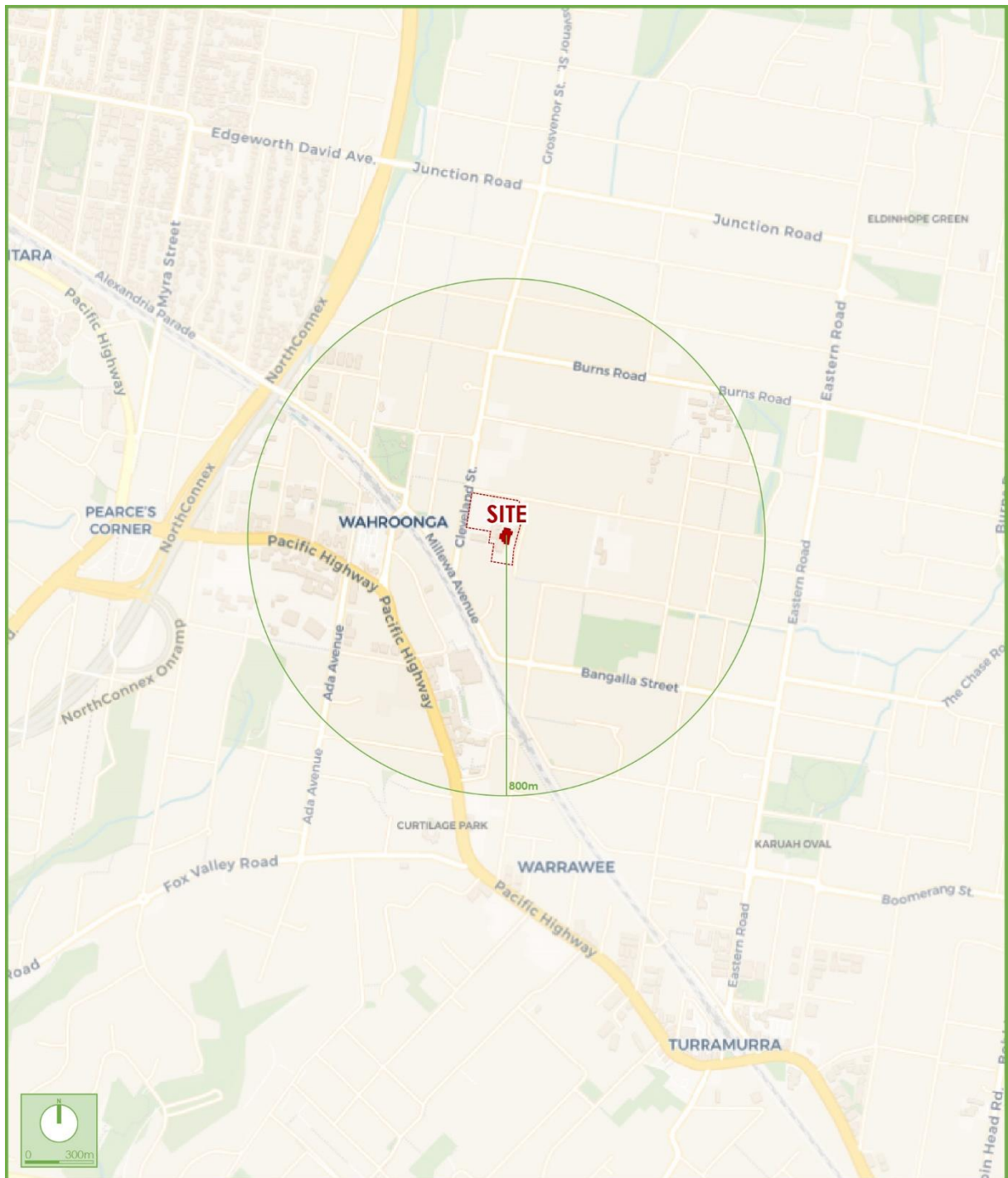


Figure 1: Location Plan





Figure 2: Site Plan

## 4. EXISTING TRAFFIC CONDITIONS

### 4.1 Road Network

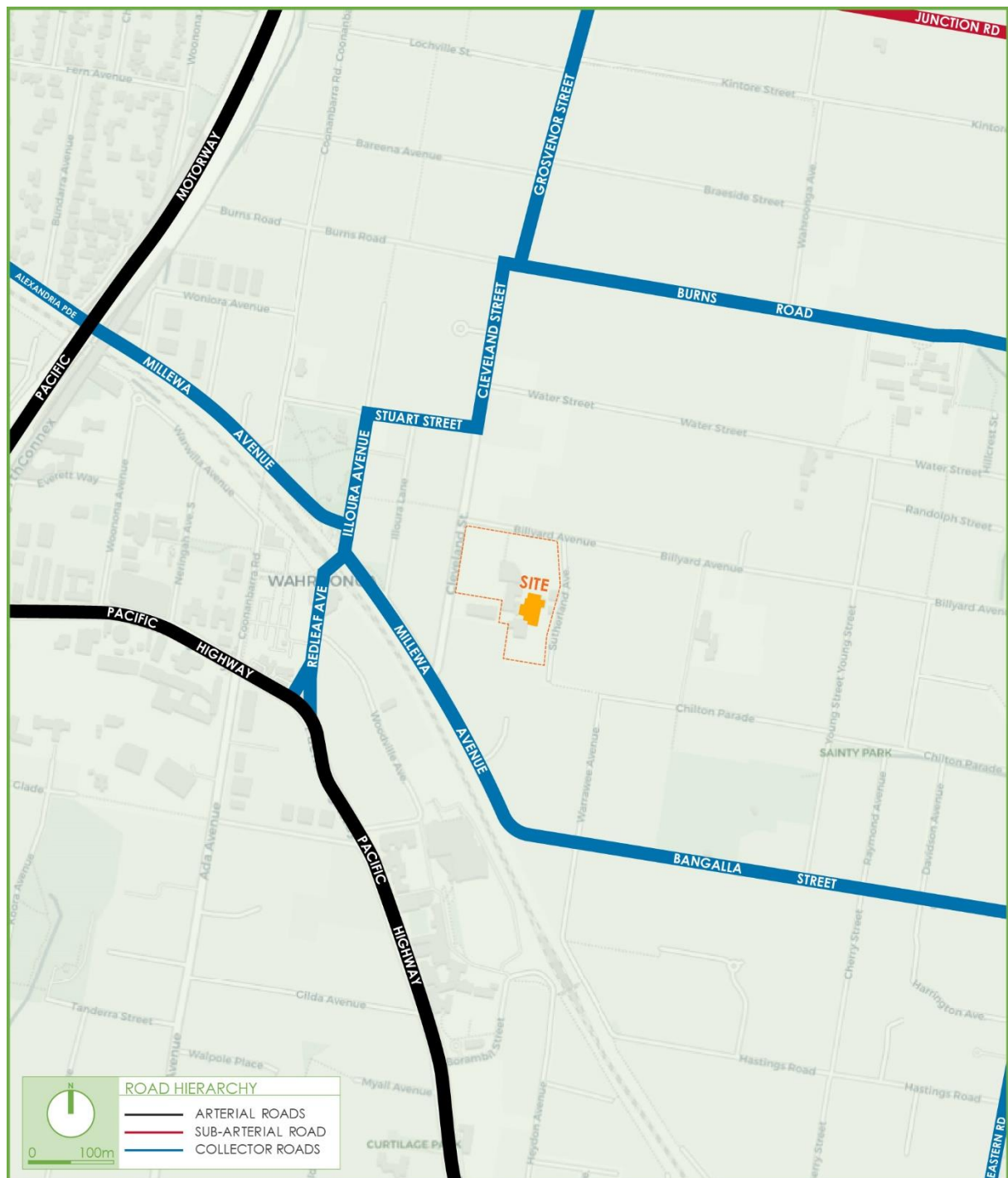
The road hierarchy in the vicinity of the site is shown in **Figure 3** with the following roads of particular interest:

- Pacific Highway: a TfNSW Highway (HW 10) that traverses north-south between Pennant Hills Road in the north and the Warringah Freeway in the south. Within the vicinity of the site, it is subject to 60km/h speed zoning and accommodates three (3) lanes of traffic in each direction. Pacific Highway is a TfNSW identified 26.0 metre B-double route.
- Eastern Road: forms part of an unclassified Regional Road (RR 7351) that traverses north-south between Boundary Road in the north and Rohini Street in the south. Within the vicinity of the site, it is subject to 60km/h speed zoning and accommodates a single lane of traffic in each direction. Eastern Road permits unrestricted on-street parking along both sides of the road.
- Billyard Avenue: a local road that traverses east-west between Eastern Road in the east and Cleveland Street in the west. Within the vicinity of the site it is subject to 40km/h speed zoning and accommodates a single lane of traffic in each direction. Billyard Avenue permits unrestricted on-street parking along both sides of the road.
- Cleveland Street: a local road that traverses north-south between Burns Road in the north and Millewa Avenue in the south. Within the vicinity of the site, it is subject to 40km/h speed zoning and accommodates a single lane of traffic in each direction. Cleveland Street permits unrestricted on-street parking along both sides of the road.

- Sutherland Avenue: a local road that traverses north-south between Billyard Avenue in the north and a cul-de-sac in the south. It is subject to 50km/h speed zoning and accommodates a single lane for two (2) way traffic. Sutherland Avenue permits unrestricted on-street parking along the east side of the road, with 'No Stopping' restrictions throughout the length of the west side and sections of the east side of the road that provide vehicle passing opportunities.

It can be seen from **Figure 3** that the site is conveniently located with respect to collector roads and the main arterial road serving the region, being the Pacific Highway. As such, traffic can effectively be distributed onto the wider road network, minimising traffic impacts.





### Figure 3: Road Hierarchy

## 4.2 Public Transport

The existing public transport services operating in the locality are presented in **Figure 4** and summarised as follows.

### 4.2.1 Train Services

The site is located approximately 370 metres (400 metres walking distance) east of Wahroonga Railway Station and 600 metres north of Warrawee Railway Station. These railway stations provide train services along the following lines:

- T1 – North Shore and Western Line; and
- T9 – Northern Line.

### 4.2.2 Bus Services

The site is located approximately 300 metres (350 metres walking distance) east of a bus stop on Illoura Avenue, near Millewa Avenue. This bus stop provides bus services during the morning and evening peak periods between Wahroonga and North Wahroonga (Bus Route 576).

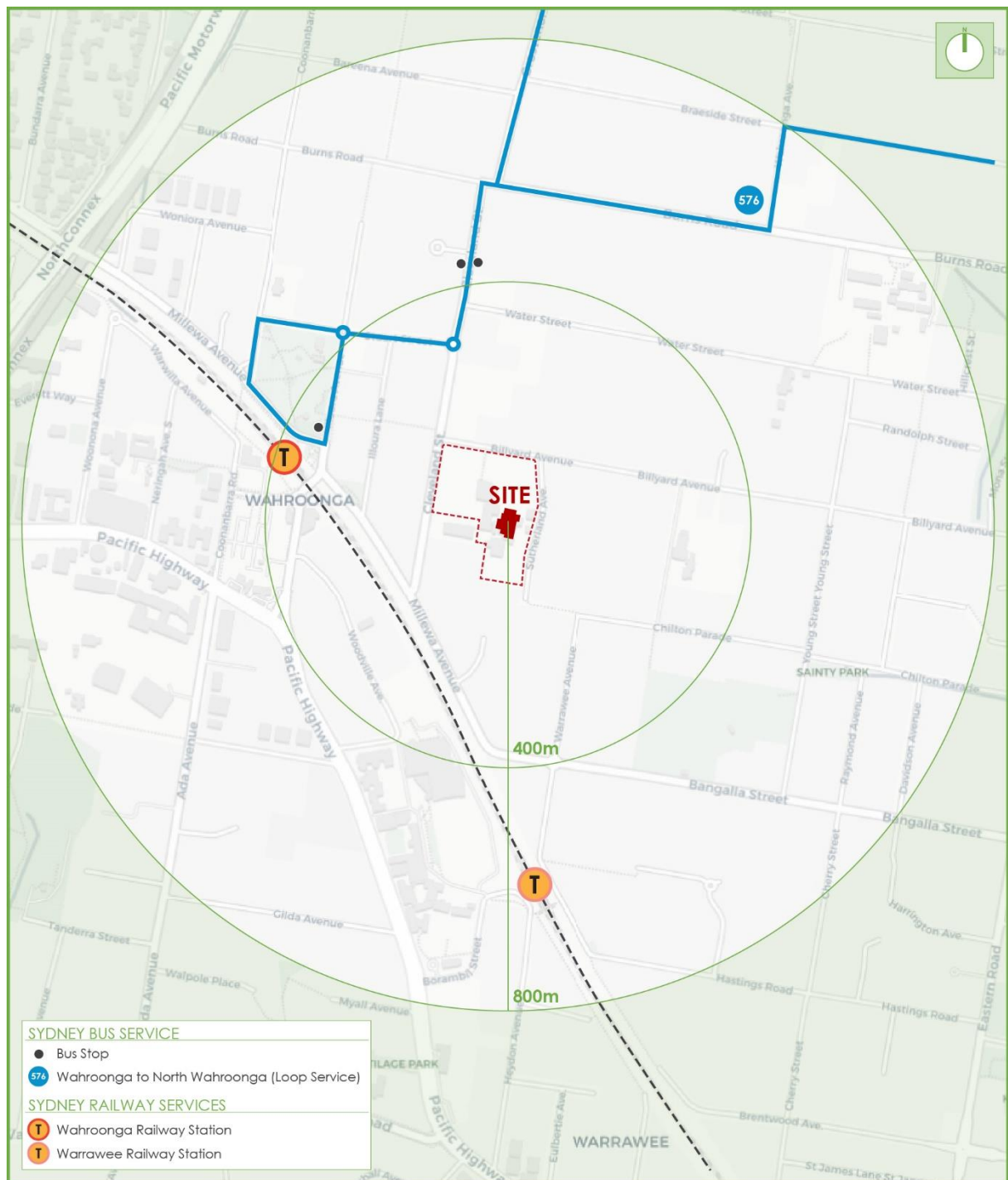


Figure 4: Public Transport

## 5. OVERVIEW OF CONSTRUCTION PROGRAM

### 5.1 Times of Operation

The construction works are anticipated to occur for approximately four (4) months, with the proposed hours of operation summarised as follows:

- Monday to Friday 7:00am to 5:00pm;
- Saturdays 8:00am to 4:00pm; and
- Sunday or Public Holiday No building activities to be carried out at any time.

It should be emphasised that construction vehicle movements are not permitted during the morning (8:00am-9:30am) and afternoon (2:30pm-4:00pm) school peak periods, with construction vehicle movements to be scheduled outside school peak periods.

### 5.2 Site Establishment Plan

A site establishment plan is to be provided within the detailed CTPMP upon finalisation of the construction methodology and is envisaged to include the proposed locations of the following:

- Site office and amenities;
- Site gate and permitter fencing;
- Materials and waste bin storage areas; and
- On-site loading and unloading areas.

### 5.3 Overview of Construction Works

#### 5.3.1 Demolition Stage

This stage will occur during a 2-week period and will involve a maximum of 20 workers on-site at any one time, with an average of 15 workers. The maximum sized truck to be utilised during this stage is an 8.8 metre long medium rigid vehicle (MRV), with construction vehicle access provided via the existing 'Gate 2' vehicular access accessible from Sutherland Avenue.

This stage will have an average of two (2) truck arrivals per day (2 in, 2 out), with a maximum of one (1) truck per hour during the peak period. This average truck volume would equate to

a single truck every 5-hours, which is considered minor and would have negligible impacts on the surrounding road network.

### **5.3.2 Bulk Excavation Stage**

This stage will occur during a 1-week period and will involve a maximum of 20 workers on-site at any one time, with an average of 15 workers. The maximum sized truck to be utilised during this stage is an 8.8 metre long MRV, with construction vehicle access provided via the existing 'Gate 2' vehicular access accessible from Sutherland Avenue.

This stage will have an average of three (3) truck arrivals per day (3 in, 3 out), with a maximum of one (1) truck per hour during the peak period. This average truck volume would equate to a single truck every 3-hours, which is considered minor and would have minimal impacts on the surrounding road network.

### **5.3.3 Structure Stage**

This stage will occur during a 7-week period and will involve a maximum of 30 workers on-site at any one time, with an average of 18 workers. The maximum sized truck to be utilised during this stage is an 8.8 metre long MRV, with construction vehicle access provided via the existing 'Gate 2' vehicular access accessible from Sutherland Avenue.

This stage will have an average of two (2) truck arrivals per day (2 in, 2 out), with a maximum of one (1) truck per hour during the peak period. This average truck volume would equate to a single truck every 5-hours, which is considered minor and would have negligible impacts on the surrounding road network.

### **5.3.4 Fit Out and Finishes Stage**

This stage will occur during a 10-week period and will involve a maximum of 45 workers on-site at any one time, with an average of 20 workers. The maximum sized truck to be utilised during this stage is an 8.8 metre long MRV, with construction vehicle access provided via the existing 'Gate 2' vehicular access accessible from Sutherland Avenue.

This stage will have an average of two (2) truck arrivals per day (2 in, 2 out), with a maximum of one (1) truck per hour during the peak period. This average truck volume would equate to a single truck every 5-hours, which is considered minor and would have negligible impacts on the surrounding road network.

## 6. TRAFFIC MANAGEMENT ARRANGEMENTS

### 6.1 Construction Access

Construction vehicles will utilise the existing 'Gate 2' vehicular access from Sutherland Avenue to access the proposed loading/unloading area, with SafeWork NSW certified traffic controllers on hand to manage vehicle movements. It should be emphasised that construction vehicle movements are not permitted during the morning (8:00am-9:30am) and afternoon (2:30pm-4:00pm) school peak periods, with construction vehicle movements to be scheduled outside school peak periods.

All trucks will be linked via CB radio and/or hands-free mobile and will only be called onto site when required and when there is sufficient capacity to accommodate the proposed trucks. A swept path analysis has been conducted and included in **Appendix B**, demonstrating satisfactory vehicle movements at the proposed construction vehicle access.

### 6.2 Truck Routes

A copy of the truck routes is to be provided to all drivers prior to attending the site, with all routes proposed to start or finish on Pacific Highway, a TfNSW 26.0 metre B-double route. The proposed truck routes throughout all stages of construction are presented in **Figure 5** and outlined as follows.

- Routes to the site:  
(Inbound)
  1. Trucks will arrive on Pacific Highway, any direction.
  2. Turn onto Rohini Street, north-westbound.
  3. Turn right onto Eastern Road, northbound.
  4. Turn left onto Billyard Avenue, westbound.
  5. Turn left onto Sutherland Avenue, southbound.
  6. Turn onto site via the existing vehicular access.
- Routes from the site:  
(Outbound)
  1. Trucks will depart onto Sutherland Avenue, northbound.
  2. Turn right onto Billyard Avenue, eastbound
  3. Turn right onto Eastern Road, southbound.
  4. Turn left onto Rohini Street, south-eastbound.
  5. Turn onto Pacific Highway, any direction.



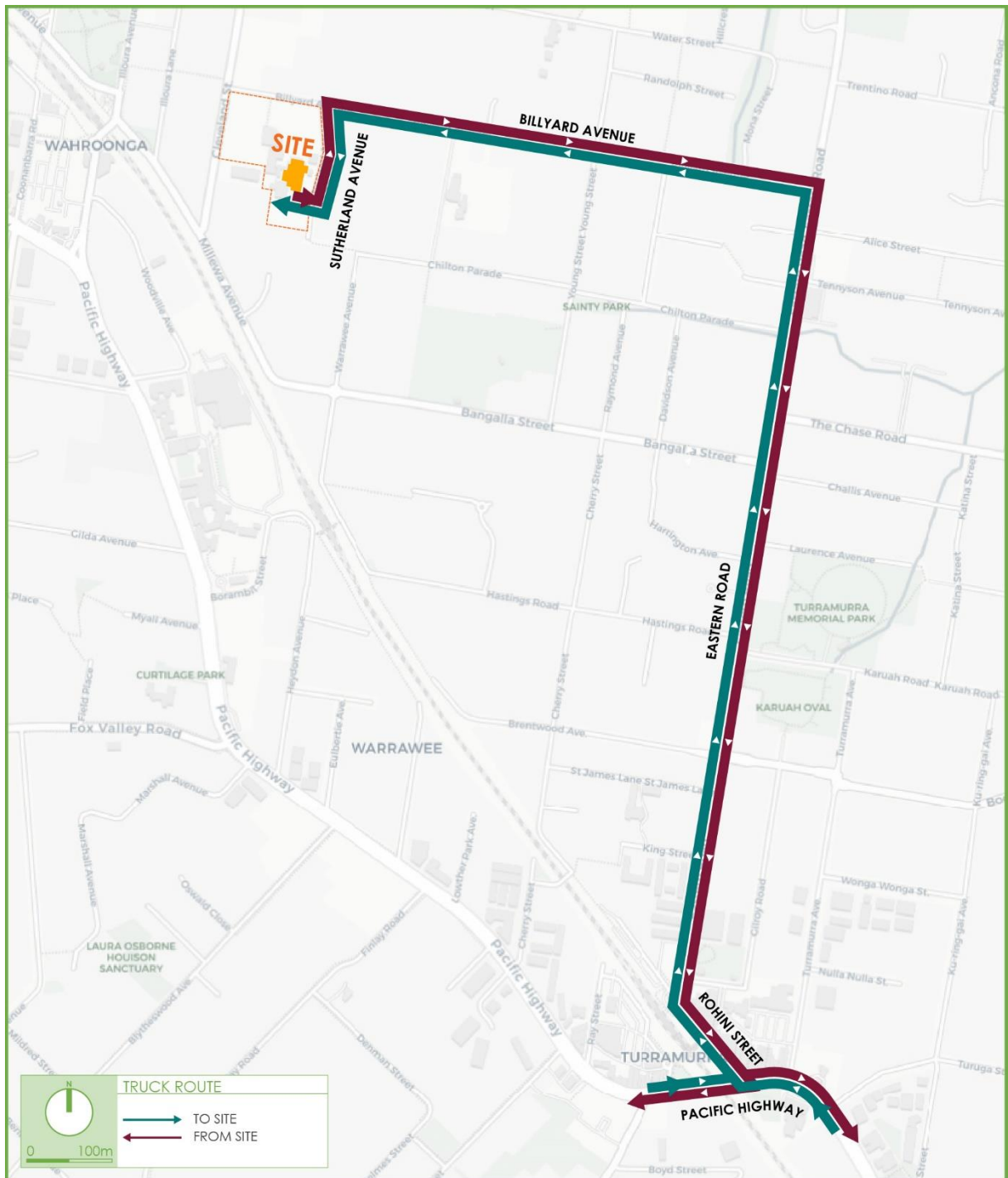


Figure 5: Proposed Truck Routes

### 6.3 Crane Requirements

A crane is proposed to be utilised throughout the construction works and is proposed to be installed within the at-grade carpark, with all crane movements and loading/unloading activities to be contained within the construction area.

### 6.4 Pedestrian Control

Pedestrian access surrounding the site will be managed safely during all stages of construction, noting the following aspects:

- Timber hoarding and gates are to be installed along the perimeter of the site/compound;
- Timber hoarding will separate Ewan House from the Gillespie House;
- Pedestrian access to neighbouring properties shall be maintained at all times;
- No building materials shall be placed, dumped or left on any Council roads/footpaths;
- Footpaths are to remain in a safe condition for use by pedestrians at all times;
- SafeWork NSW certified traffic controllers will be on hand to manage vehicle and pedestrian movements at the construction vehicle access.

These arrangements are considered acceptable and will ensure pedestrian safety is maintained at all times. The detailed pedestrian controls and management arrangements are to be discussed within the detailed CTPMP, upon finalisation of the construction methodology.

### 6.5 Employee Vehicles

Workers will be permitted to park on-site within the existing at-grade carpark adjacent Ewan House throughout all stages of construction. Nevertheless, workers will be encouraged to carpool and/or utilise available public transport within the vicinity of the site, noting that the subject site is located approximately 370 metres east of Wahroonga Railway Station.

The detailed worker parking arrangements are to be discussed within the detailed CTPMP, upon finalisation of the construction methodology.

## 6.6 Traffic Control Plan

The TGS included in **Appendix C** demonstrates the proposed signage and traffic management measures to be adopted throughout all stages of construction:

### ➤ **TGS 01 – Construction Vehicle Access**

*8.8m MRV maximum sized vehicles during all stages of construction*

*SafeWork NSW certified traffic controller to supervise vehicle and pedestrian movements*

This TGS has been designed in accordance with the requirements of the *TfNSW Traffic Control at Work Sites Technical Manual*, with copies of the TGS to be kept on-site at all times.

## 7. CONCLUSION

This report should be read in conjunction with any other documentation prepared on behalf of Knox Grammar School relating to the construction works associated with the Ewan House. It should be noted that this CTPMP can be updated in response to conditions within the DA Conditions of Consent, upon approval of the development.

The plan outlined above is considered satisfactory and will minimise any disruptions to neighbouring developments. This plan therefore meets all requirements of the TfNSW *Traffic Control at Work Sites Manual* and is recommended for adoption.

# APPENDIX A

---

Photographic Record





View looking northwest from Sutherland Avenue towards the subject site



View looking west from Sutherland Avenue towards the existing vehicular access





View looking north along Sutherland Avenue



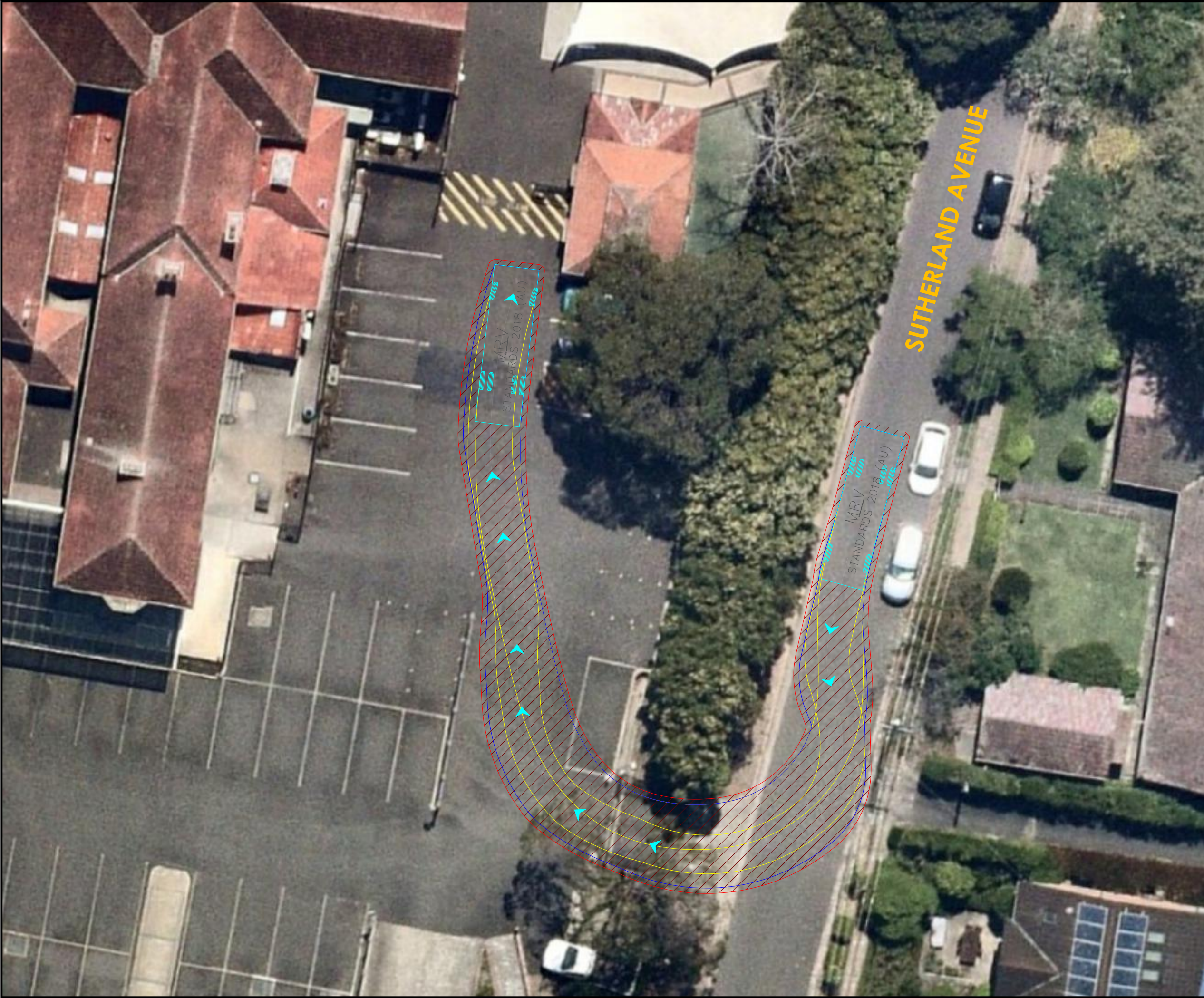
View looking south along Sutherland Avenue

## APPENDIX B

---

### Swept Path Analysis





Notes:

This drawing is prepared for information purposes only. It is not to be used for construction.

TRAFFIX is responsible for vehicle swept path diagrams and/or drawing mark-ups only. Base drawing prepared by others.

Vehicle swept path diagrams prepared using computer generated turning path software and associated CAD drawing platforms. Vehicle data based upon relevant Australian Standards (AS/NZS 2890.1:2004 Parking facilities - Off-street car parking; and/or AS2890.2:2002 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 vehicle dimensions / specifications and/or driver ability or behaviour.

Rev.

Revision Note

By.

Date

A

Swept Path Analysis

NC

30-11-2023

Swept Path Legend

Wheel Path

Vehicle Body Envelope

Clearance Envelope (300mm)

Architect

Client

Knox Grammar School

Scale / Plan Orientation

02468m

1:200 @ A3

Project Description

Knox Grammar School - Ewan House  
33 Bangalla Street, WARRAWEE NSW 2074

Drawing Prepared By

TRAFFIX

TRAFFIC AND TRANSPORT PLANNERS

Suite 2.08, 50 Holt Street  
Surry Hills, NSW 2010  
PO Box 1124  
Strawberry Hills, NSW 2012

t: +61 2 8324 8700  
f: +61 2 9830 4481  
w: www.traffix.com.au

Drawing Title

Swept Path Analysis  
Sutherland Avenue - Construction Vehicle Access  
8.8m Medium Rigid Vehicle  
Vehicle Entry Movements  
SafeWork NSW Traffic Controller Supervision

Drawn:

NC

Checked:

NC

Date:

30-11-2023

23.421d02v02 TRAFFIX [CTMP] - Swept Path Analysis.dwg

Project No.

Drawing Phase

Drawing No.

Rev.

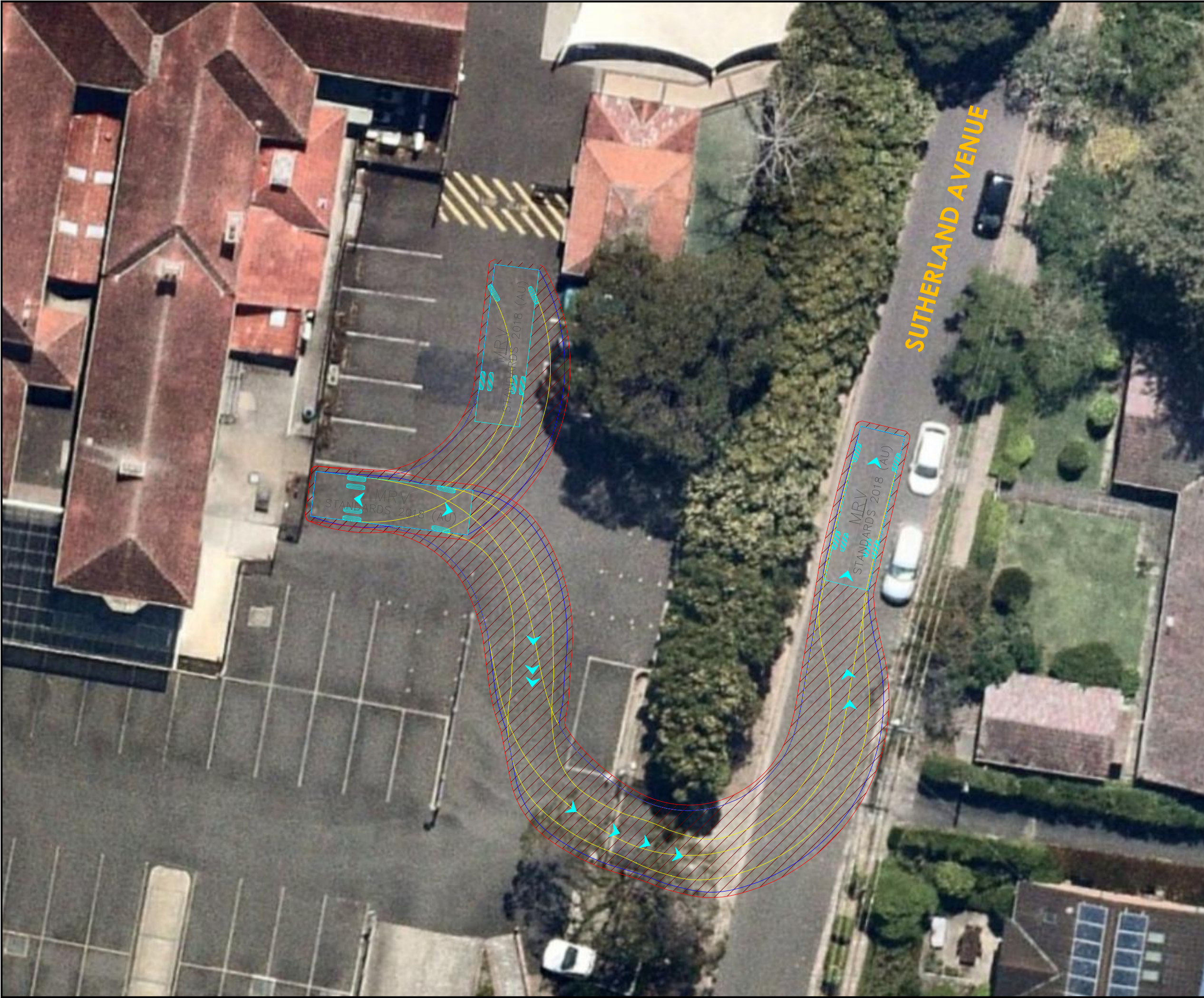
23.421

CTMP

TX.01

A





Notes:

This drawing is prepared for information purposes only. It is not to be used for construction.

TRAFFIX is responsible for vehicle swept path diagrams and/or drawing mark-ups only. Base drawing prepared by others.

Vehicle swept path diagrams prepared using computer generated turning path software and associated CAD drawing platforms. Vehicle data based upon relevant Australian Standards (AS/NZS 2890.1:2004 Parking facilities - Off-street car parking, and/or AS2890.2:2002 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 vehicle dimensions / specifications and/or driver ability or behaviour.

Rev.

Revision Note

By.

Date

A

Swept Path Analysis

NC

30-11-2023

Swept Path Legend

Wheel Path

Vehicle Body Envelope

Clearance Envelope (300mm)

Architect

Client

Knox Grammar School

Scale / Plan Orientation

0

2

4

6

8m

1:200 @ A3

Project Description

Knox Grammar School - Ewan House

33 Bangalla Street, WARRAWEE NSW 2074

Drawing Prepared By

TRAFFIX

TRAFFIC AND TRANSPORT PLANNERS

Suite 2.08, 50 Holt Street

Surry Hills, NSW 2010

PO Box 1124

Strawberry Hills, NSW 2012

t: +61 2 8324 8700

f: +61 2 9830 4481

w: www.traffix.com.au

Drawing Title

Swept Path Analysis

Sutherland Avenue - Construction Vehicle Access

8.8m Medium Rigid Vehicle

Vehicle Exit Movements

SafeWork NSW Traffic Controller Supervision

Drawn:

NC

Checked:

NC

Date:

30-11-2023

23.421d02v02 TRAFFIX [CTMP] - Swept Path Analysis.dwg

Project No.

Drawing Phase

Drawing No.

Rev.

23.421

CTPMP

TX.02

A

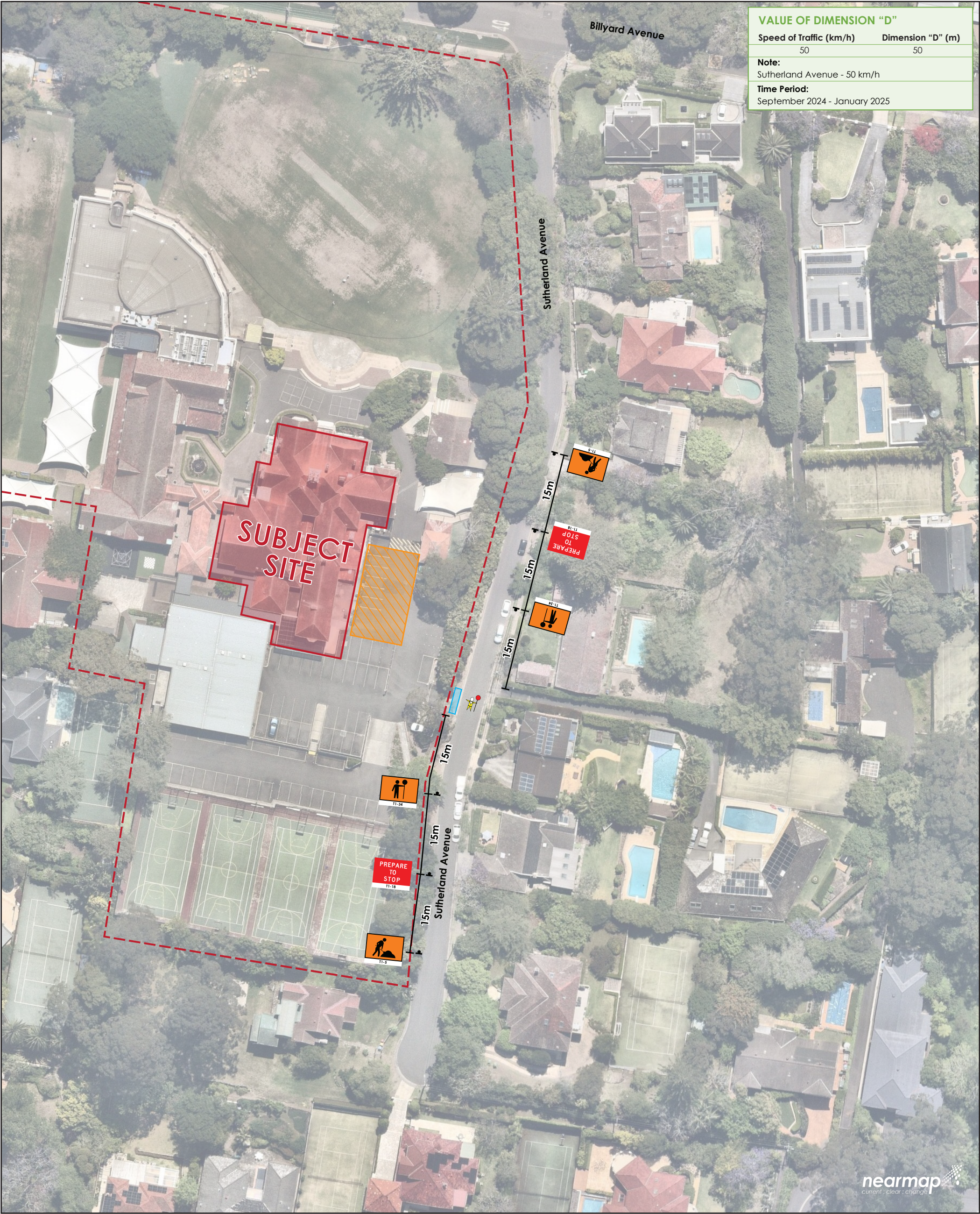


## APPENDIX C

---

### Traffic Guidance Scheme





VALUE OF DIMENSION "D"	
Speed of Traffic (km/h)	Dimension "D" (m)
50	50
<b>Note:</b> Sutherland Avenue - 50 km/h	
<b>Time Period:</b> September 2024 - January 2025	

**TRAFFIX**  
TRAFFIC AND TRANSPORT PLANNERS

📍 Suite 2.08, 50 Holt Street  
Surry Hills, NSW 2010  
☎ (02) 8324 8700  
✉ info@traffix.com.au

**LEGEND**

- Property Boundary
- Driveway
- Loading Bay Area

**GENERAL NOTES**

- Plan not to scale.
- All signage dimension D shall comply with the minimum requirements of TfNSW TCAWS Technical Manual.
- Qualified personnel to undertake a site inspection prior to implementation.
- It must be noted that TRAFFIX is not responsible for the implementation of this TGS, which is the responsibility of the on-site qualified traffic controller.

**PROJECT**  
KNOX GRAMMAR  
SCHOOL (EWAN HOUSE)

**PROJECT NUMBER**  
23.421

**DATE**  
29.11.2023

**CLIENT**  
THE APP GROUP

**TGS**  
**TGS 01:**  
**CONSTRUCTION VEHICLE ACCESS**

**PREPARED BY**  
NEIL CAGA

**APPROVED BY**  
NEIL CAGA

**SAFework NSW CARD NUMBER**  
TCT0054366

**SIGNATURE**