# Construction Environmental Management Plan

## St Anthony of Padua Austral ECS

## Document Control

| Version | Date Approved | Brief Description | Approved By |
|---|---|---|---|
| 1 | 16/02/2026 | Plan Created | LZ |
| 2 | 25/06/2026 | Review and Updates | LZ |
| 3 | 07/07/2026 | Review and Updates | LZ |
| 4 | 24/07/2026 | CNVMP Update and Plans Review | LZ |

# Contents

# 1. General

## 1.1. Introduction

This Construction Environmental Management Plan (CEMP) has been prepared by Trinity Fitout and Construction for the St Anthony of Padua ECS Development. This CEMP and its sub-plans are developed in accordance with the SSD-8865-Mod 6 Conditions of Consent.

The project forms a later stage of the overall development with previous stages under the SSD-8865 which have been already completed.

Trinity Construction environmental management systems, the relevant project approval documentation. The purpose of this Construction Environmental Management Plan is to: Identify the environmental issues (aspects and impacts) for this project;

- Maintain Compliance with the SSDA;
- Establish, communicate & implement environmental operational controls to reduce any adverse impacts on the environment from Trinity activities, products and services.
- implement and Monitor compliance by Trinity and its suppliers & subcontractors with the requirements of all relevant environmental legislation, conditions of any applicable licence, approval and permit, regulatory requirements and this EMP.
- Action any outcomes from incidents or accidents, project audits or other identified non-conformances to continually improve the Trinity environmental management system.

Trinity Fitout and Construction is committed to being an environmentally and socially responsible organisation while meeting the needs of our clients without hindering future generations. To achieve this goal we require all persons involved in any way with this project to comply with the requirements of this CEMP. Any person found to be in breach of these requirements will be subject to appropriate action which may include expulsion from the Site.

We encourage all persons to be actively involved in limiting our impact on the environment, including reporting and resolving environmental related issues. If you identify any problems while on the Site, you must report them immediately to your supervisor or Site Management.

This EMP is to be read in conjunction with the Trinity Management System (IMS), documents referenced in this CEMP unless indicated otherwise form part of the IMS.

## 1.2. Description of Project

Client:  Sydney Catholic Early Childhood Services (SCECS)

Scope:
The project, located at 140 Eleventh Ave, Austral, involves the design and construction of a new single level early learning centre for children aged 0 – 5 Years old for SCECS adjacent to St Anthony of Padua Catholic College Austral. This project comprises construction of:

- Demolition of Existing Modular Structure
- Construction of New Early Childhood Services Building
- Hard and soft Landscaping

This CEMP will apply to all construction activities relating to the project, including:

- Site establishment and installation of fencing and gates
- Demolition & Earthworks
- Construction of the New Building
- Construction of new Landscaping
- Installation of new services and internal finishes

Indicative plant and equipment to be utilised:

- Excavators
- Rollers
- Mobile cranes
- Trucks
- Concrete pumps
- Concrete trucks

The project will be delivered in a single stage and delivered over a 12-month period.

## 2. Operating Hours

Construction activities are to generally comply with the SSD conditions. Generally, the working hours shall be as follows, in accordance with the approved SSD:

- **Monday to Friday:** 7:00 am to 6:00 pm
- **Saturday:** 8:00 am to 1:00 pm
- **Sunday & Public Holidays**: No work permitted

## 3. Project Contact Details

**Position:** Project Manager
**Name:** Luke Zammit
**Contact number:** 0435 001 373

**Position**: Site Manager (24hr contact)
**Name:** Robert Blazevic
**Contact number:** 0402 624 104

**Principle Contractor:** Trinity Fitout and Construction Pty Ltd
**Address:** L1/15 Forest Rd, Hurstville NSW 2220
**Contact number:** 02 9587 2299

# 4. Site Management

A Site Establishment Plan has been developed, refer Appendix A. This plan has been developed in consultation with the client and St Anthony's of Padua Catholic College. The main driver of the plan was the safety of the school's students and staff. Trinity has strategically placed access points and fencing/hoarding to ensure limited interactions between construction staff and school stakeholders. This in turn should ensure the ongoing safety the school. A Construction Traffic and Pedestrian Management Plan has been developed (Refer Appendix) to provide a solution for traffic and pedestrian access to the construction site.

# 5. Project Planning

## 5.1. Strategy

Construction of Austral ECS will be via a Design and Construct Contract and the other Project/Site Specific Management Plans.

The Project management team will be responsible for:

- Site establishment
- Temporary fencing of compound to ensure security
- Hoarding off to any existing facilities
- Environmental protection apparatus being correctly installed and or maintained ready for use in case of emergency
- Site inductions, environmental & safety meetings
- Production, review and approval of work method statements and Waste management plans
- Monitoring adherence to Waste Management plans
- Monitoring inspection and testing methods and records

## 5.2. Project Designers and Consultants

Contact details for project designers and consultants are established and distributed by the superintendent on initiation of the project. Some of these are displayed on the wall of the site office, as well as filed in the appropriate folder.

| **Project Disciplines** | **Consultant Company and Name** |
|---|---|
| Council | Liverpool Council |
| Client | Sydney Catholic Early Childhood Services (SCECS) |
| Superintendent | Platform Projects |
| Project Architect | Neeson Murcutt Neille |
| Head Contractor | Trinity Fitout & Construction |
| PCA Certifier | Construction Certification Solutions |

### 5.3. Neighbour Notification and Community Consultation Strategy

Managing Neighbour interfaces with the construction process is an important part of the process of environment interaction. The following processes will be undertaken by Trinity to inform neighbours of the work as well as provide a contact point:

- Site Sign will be erected giving contact details of the site manager to be contacted for any concerns/queries regarding the construction works
- Ensure a communication objective to keep the community informed of construction impacts. This objective will be achieved through several approaches including:
    - Building key college community stakeholder relationships and maintain good will with impacted communities
    - Managing community expectations and building trust by effectively managing enquiries and complaints
    - Providing timely information to impacted stakeholders and broader communities
    - Addressing and correcting misinformation within the public domain
    - Reducing the risk of project delays caused by negative third-party intervention
    - Leaving a positive legacy in each community

Trinity will also provide a construction sign board alongside the main entrance to the site providing the details of a 24-hour contact to ensure the surrounding community have direct contact regarding site related queries throughout the duration of the project. The project website also displays current documents and status of the project publicly and facility to contact the project team for complaints / enquiries :
https://www.scecsaustral.com.au/

# 6. Environmental Impact Issues

#### 6.1.1. Air Quality and Dust Management

To minimise the adverse effects on stakeholders of air quality (airborne dust and pollutants) in and around the construction site. Implementation of the following controls to be maintained at or above acceptable levels throughout the construction period.

The following activities may cause excessive dust or otherwise affect air quality:

- Demolition
- Excavation
- Landscaping
- High winds

Dust minimisation techniques are to be employed as needed during construction, including the use of water carts/sprinklers as necessary. Air quality is to be managed through the proper maintenance of all machinery on site (refer to Trinity Construction Safety Management Plan). Any incidents where poor air quality becomes an issue is to be assessed on a case by case basis and managed according to all relevant legislation.

The measures in the below table are required to be implemented and maintained to demonstrate compliance with the conditions listed to reduce the impact, if any, on surrounding neighbours and workers.

Table 1 – Management of Dust Impacts

| Potential source | Potential impacts | Mitigation | Responsibility | Performance measures |
|---|---|---|---|---|
| **Excavation/Demolition** | Neighbourhood Complains, Worker Exposure | Water Suppression during dry conditions. Daily water suppression during earthworks activities. Site shade cloth installed to fence if not solid hoarding. | Principal Contractor, Subcontractor | Onsite Observation of Dust and visual monitoring. |
| **Asbestos Dust (Unexpected Finds)** | Neighbourhood Complains, Worker Exposure | Air Monitoring for air quality, Suppression with water. | Principal Contractor, Subcontractor | Onsite Observation, Implementation of AMP and compliance. |
| **Dirt Stockpiles** | Wind Driven Dust to Neighbourhood, | Covering of stockpiles with tarps/fabric and water suppression. Site shade cloth installed to fence. | Principal Contractor, Subcontractor | Visual Evidence, or replacement of fabric |
| **Truck Loads** | Neighbourhood Complains, Worker Exposure | Ensure Trucks entering and leaving site have loads covered. | Principal Contractor, Subcontractor | Surveillance of trucks entering and exiting site. |

## 6.2. Noise & Vibration

Noise impacts from construction are an ongoing concern for all construction projects. Construction noise management will be in accordance with the Construction Noise and Vibration Assessments and will be the responsibility of the Principal Contractor to enforce.

Trinity Fitout and Construction will be sure to manage and ensure all noise and vibration will meet the NSW Environmental Protection Authority and local council guidelines. All site activities which have the potential to create noise and vibration omissions will be controlled and suitable equipment is utilised to mitigate the associated disruption to the school and surrounding neighbours.

Excessive vibration can negatively impact the surrounding environment with potential disruption to wildlife and discomfort to people. Continuous or high intensity vibrations can weaken structures and prolonged vibration can lead to soils compaction, landslides or changes to groundwater flow. Assessment of the risk due to vibration is to be undertaken and controls implemented. Minimal high impact works are expected for this construction to cause excessive vibrations.

Please refer to Appendix Construction Noise & Vibration Management Plan. All noise and vibration mitigation measures identified within this report are being implemented during this project.

We will implement a noise and vibration complaints procedure and in the event of a complaint, we will implement noise or vibration monitoring, whichever is applicable. These services will be provided by our acoustic consultant as required. We will then provide reports back to the client with the findings.

## 6.3. Traffic

Traffic management will be in accordance with the Construction Traffic Management Plan and will be the responsibility of the Principal Contractor to enforce.

A Construction Traffic Management Plan (CTMP) is to be developed prior to the commencement of construction, outlining measures to minimise disruption to the local traffic flow, ensure the safety of workers and road users, and reduce the environmental impact of construction-related traffic. The CTMP should include strategies such as clearly marked detours, traffic control devices (e.g., signs, barriers), and appropriate scheduling of deliveries and construction activities to avoid peak traffic hours. Where necessary, temporary road closures, diversions, or lane reductions should be implemented with sufficient notification to the public and relevant authorities. Traffic management also considers pedestrian and cyclist safety around the construction zone.

Compliance with the TMP is essential to minimise congestion, accidents, and delays, and failure to adhere to traffic management guidelines may result in fines, project delays, or other enforcement actions. Traffic management will be as per the developed Traffic Management Plan (incorporated under the Site Specific Management Plan) and will be the responsibility of the Site Manager to enforce.

The effectiveness of the TMP control measures will be monitored regularly, in particular the Environmental Inspection conducted weekly will formally prompt the inspection of the effectiveness of the control measures in addition to the informal observations made by Site Management in their day to day operations.

## 6.4. Waste Management

Waste Management will be in accordance with the Waste Management Plan. A waste management plan will be developed in conjunction with the selected waste contractor for the project and will be audited at random intervals throughout the course of the project.

Waste classification is required to all areas where soil is being removed from site. A waste classification for the Childcare site confirms no Contaminated Soils on the site. Previous stages of the SSD for the School project addressed Contamination issues however the Childcare portion of the site was not part of the contaminated areas.

## 6.5. Acid Sulphate Soils

Acid sulphate soils (ASS) pose a significant environmental risk when disturbed, as they can generate sulfuric acid upon exposure to oxygen, leading to soil degradation, water contamination, and harm to aquatic life. If ASS is present, mitigation measures should be implemented, including soil management plans, controlled excavation techniques, and the application of neutralising agents such as lime to prevent acidification. Additionally, water runoff from disturbed areas must be carefully managed to avoid the release of acidic leachate into surrounding ecosystems.

### 6.6. Groundwater

As per the site Geotechnical Report groundwater inflows are not expected within the lower ground excavations. However, as long-term monitoring has not been undertaken to date, groundwater seepage may fluctuate with seasonal weather patterns, and as such, should minor groundwater be encountered, the inflows should be managed using simple sump & pump techniques. In the unlikely event groundwater is encountered works will cease and the principal contractor will consult with relevant consultants to assess and implement applicable measures.

### 6.7. Other Contaminates

Other contaminants such as heavy metals, hydrocarbons, and chemical pollutants must be managed to prevent environmental harm. Organisations should conduct site assessments to identify legacy contamination or potential pollutant sources, implementing appropriate containment, remediation, or waste management strategies. Spill prevention and response plans should be in place to minimise the risk of accidental discharges, while stormwater management systems can help prevent contamination of water bodies.

## 7. Sediment and Erosion Control

This section identifies sediment control systems to be implemented on the project. The sediment control systems are designed to minimise erosion on-site and retain sediment eroded by water and wind.

Sediment and erosion control will be as per the sediment and erosion control plan. These plans have been prepared in accordance with Landcom's guide on Managing Urban Stormwater (the "Blue Book")

The erosion and sediment control devices described will be installed during site preparation works along with the site fences and sheds. These devices will be in place throughout all construction phases, especially excavation.

## 7.1. Sediment and Erosion Control Devices

Unnecessary disturbance of the site shall not occur and all cuts are to be stabilised as soon as possible after the completion of site earthworks. Extra care will be taken to prevent sediment run off into all neighbouring lots and stormwater. Any collected silt will be disposed of in accordance with all other relevant codes and standards.

## 7.2. Silt Fences

Silt fences are to be installed to all site boundaries. Geotextile fabric will be fixed to the temporary construction fencing to the 'downhill' boundaries of the site. The fabric will be turned down under the existing ground line and secured at regular intervals not exceeding 3m.

## 7.3. Vehicle Access

Vehicular access will be controlled to prevent sediment being tracked. This will be done by maintaining an all weather access/driveway composed of an approved course aggregate surface or concrete. Also if the need arises a shaker grid will be installed to the main access by Trinity during the construction works. Any sediment that is tracked onto the surrounding roads will be cleaned off in a timely manner.

## 7.4. Stormwater Inlets

All stormwater inlets are to be covered with geotextile fabric in a roll or other format to ensure that no sediment enters into the stormwater system. This will be the responsibility of the Site Manager to enforce. The rolls will not only be placed directly at the inlets, they will also be placed at regular intervals in the gutters 'upstream' from the inlets creating multiple barriers.

## 7.5. Stockpiles

If appropriate topsoil is to be stockpiled on site then the following measures will be put in place. If stockpiling is required, stockpiles shall be stored at least 2 meters clear of drainage lines, natural watercourse and established trees.

Stockpiles will have temporary silt fences in place around the stockpiles to create an enclosure and if necessary they will be covered will shade cloth or tarpaulin to retain the materials on the stock pile. The location of stock piles will be determined on site.

## 7.6. Dust Control

The shade cloth to the boundary fences will be maintained throughout all stage of construction to assist in dust control. Also if the need arises due to excessive dust being created, the site will be watered down by a water truck where possible, and/or sprinklers and

hoses. Also all stockpiled soils will be covered during periods of high wind to reduce the dust created from on site storage.

### 7.7. Monitoring

In order to maintain the various erosion and sediment control devices, regular inspections, repairs and cleaning will be carried out on the silt fences to the boundaries, stockpiles, waste enclosures, and to the stockpile covers in accordance with the Construction Soil and Water Management Plan.

Inspections of the site erosion and sediment control devices will be carried out in accordance with Environmental Inspections, conducted weekly pending tasks being executed.

## 8. Incident Management

All incidents no matter how minor must be reported to Site Management as soon as practical. The incident scene is not to be disturbed until directed otherwise by Site Management and or as required to make the scene safe to assist an injured person or prevent immediate further damage to the environment or property.

In the event of an incident, first priority is the health and safety of persons involved and secondly the protection of the environment and property.

In the event of an incident, the applicable Emergency Response Plan is to be implemented, typically the following is to immediately occur:

- Trinity become aware of incident
- Scene isolated
- Situation evaluated, if required evacuation procedure activated
- Scene made safe to prevent further injury and or damage
- First aid provided
- Further environment and property damage prevented and or minimised

As soon as practical all significant/critical incidents such as a fatality, serious injury, permanent or serious environmental and or property impact/damage or a near miss with the potential to have been any of those, the WHSEQ Manager is to be immediately notified.

Upon the incident being controlled and the scene made safe, Incident/Accident Reporting and Investigation Procedure and Environmental Emergency Response, is to be actioned.

### 8.1. Emergency Contacts

Site Emergency Contact Details details the key contacts that may be required in the event of an emergency. The details are available at the beginning of this plan and on the site entry sign.

## 8.2. Emergency Response Plans

| Potential Emergency | What to Do | Relevant Authorities and Persons |
|---|---|---|
| Injury caused by:<br>• Fire<br>• Explosion<br>• Machinery accidents<br>• Minor injuries | • For serious injuries call an ambulance. You should also have the contact details of the nearest doctor, Medical Centre and Hospital.<br>• Immediately inform the site First Aid Officer.<br>• Follow the procedures as detailed in the Site Safety plan.<br>• For major injuries contact the Site Manager or Project Manager | • Emergency Services<br>• Nearest Doctor<br>• Medical Centre<br>• Site Manager<br>• Project Manager |
| Fire<br>• Fire at the diesel tank<br>• Fire at any of the machineries<br>• Fire caused by vandalism | • Evacuate all personnel to a safe area immediately.<br>• Call the Fire Brigade (Emergency Services).<br>• If the fire is likely to damage neighbouring property inform the adjacent residents.<br>• Follow the procedures as detailed in the Site Safety plan.<br>• For major fire emergencies, contact the Site Manager or Project Manager | • Emergency Services<br>• Site Manager<br>• Project Manager<br>• Adjacent residents |
| Explosion (e.g. rupture in a gas line) | • Evacuate all personnel to a safe area immediately.<br>• Call the Emergency Services immediately.<br>• Contact the neighbouring residents.<br>• If service related, call the relevant service provider (e.g. AGL)<br>• Follow the procedures as detailed in the Site Safety Plan<br>• Contact the Site Manager or Project Manager | • Emergency Services<br>• AGL<br>• Site Manager<br>• Project Manager<br>• Adjacent residents |
| Spills<br>• Major spill when filling the diesel tank<br>• Major spill from the diesel tank stored on-site<br>• Spill or release of other hazardous chemicals of material | • For major spills, immediately call the Fire Brigade.<br>• Identify the source of the spill.<br>• Refer to the Material Safety Data Sheet (MSDS) and quickly evaluate the hazards of the material.<br>• If the material is dangerous, evacuate the site immediately and notify the neighbours.<br>• If it is safe, stop the source of the spill immediately.<br>• Contain the spill and control its flow.<br>• Block storm water drains downstream of the spill. | • Emergency Services (fire brigade)<br>• DEC<br>• Council Officer<br>• Site Manager<br>• Project Manager<br>• DNR |

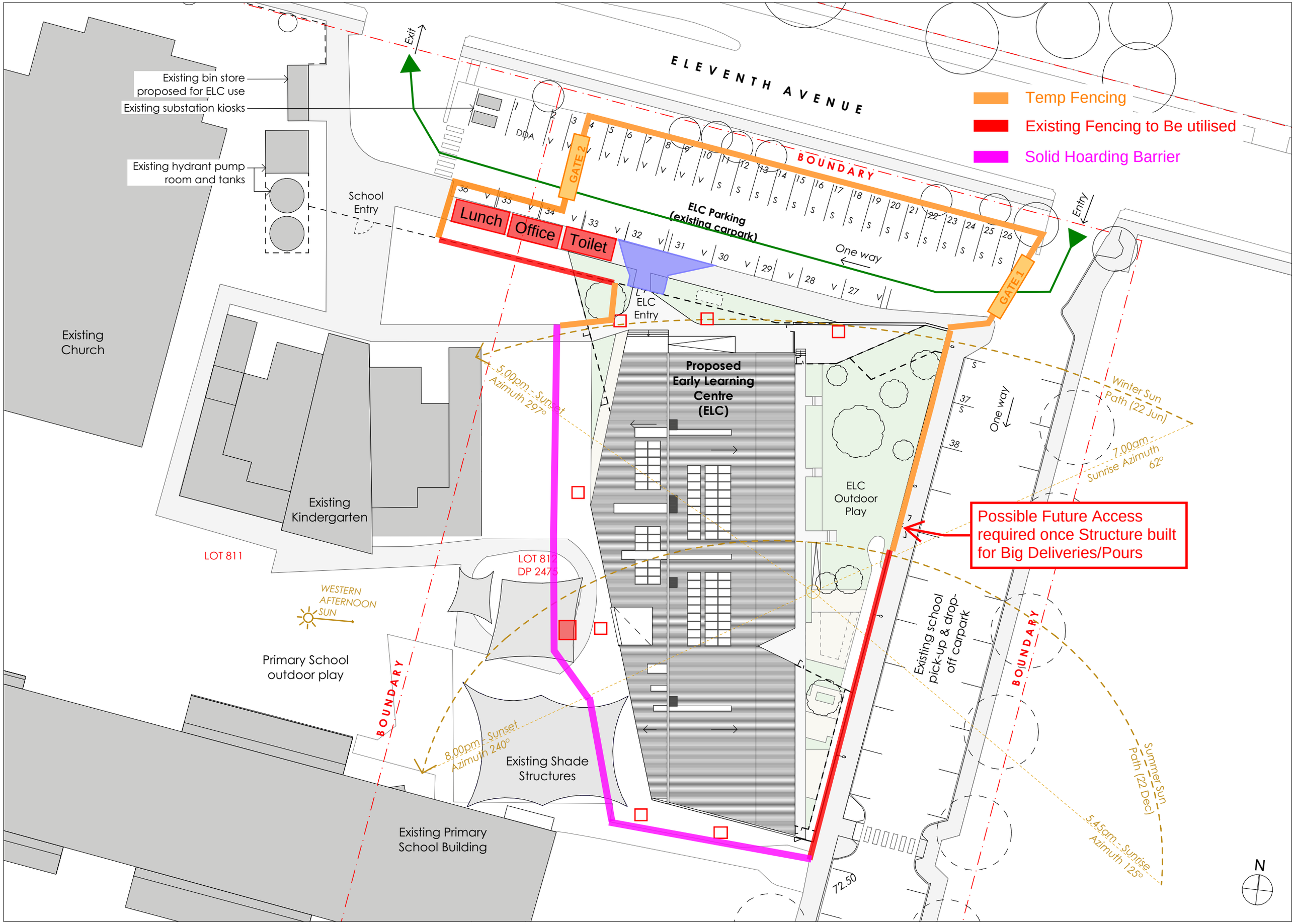
| Potential Emergency | What to Do | Relevant Authorities and Persons |
|---|---|---|
| | • EPA and local council must be notified about any spills that are likely to threaten the environment.<br>• If the spill is likely to impact on the catchments, contact Department of Natural Resources (DNR) immediately.<br>• Clean up small spills promptly to prevent run-off into the storm water system.<br>• Contact the Site Manager or Project Manager | |
| Heavy rainstorm and flood – beyond the capacity of the sediment and erosion controls on-site. Or, failure of the sedimentation control measures. | • Contain/minimise the flow.<br>• Contact Council immediately.<br>• Investigate reasons for failure and prepare an incident report including details of five-day rainfall figures.<br>• Contact the Project Manager | • Council<br>• Site Manager<br>• Project Manager |
| Discovery of items of conservation value (e.g. flora & fauna, heritage) | • Fence off the area as "no go" zone and contact the Site Manager or Project manager immediately for further action. | • Site Manager<br>• Project Manager |
| Discovery of contaminated material on-site (e.g. underground fuel storage tanks) | • Fence off the area as "no go" zone and contact the Site Manager or Project manager immediately for further action. | • Site Manager<br>• Project Manager |
| Rupture of Authority pipelines (water pipes, sewerage pipes) | • Contain/minimise the flow<br>• Ensure all spilled materials are contained on site or if running off site are directed through sediment control measures<br>• Block storm water drains downstream of the spill.<br>• Contact relevant authority as soon as possible<br>• EPA and local council must be notified about any spills that are likely to threaten the environment.<br>• If the spill is likely to impact on the catchments, contact Department of Natural Resources (DNR) immediately. | • Relevant Authority<br>• DEC<br>• Council Officer<br>• Site Manager<br>• Project Manager<br>• DNR |
| Waste contractor not submitting waste dockets and illegally disposing | • Immediate contact with contractor to establish reasons<br>• Hold all payments to contractor<br>• Request waste dockets for approved facility | • Site Manager<br>• Project Manager |

| Potential Emergency | What to Do | Relevant Authorities and Persons |
|---|---|---|
| of waste in an unauthorized facility | • Notify local council where waste is being deposited (section 148 POEO Act 1997) | • Environment Manager<br>• Council Officer |

## 9. External Lighting C18a(vii)

All external lighting on the project is to be in accordance with AS 4282-2019 Control of obtrusive effects of outdoor lighting. Refer to Appendix 10 for Design Certificate.

# Appendix 1: Site Establishment Plan




2 **Site Plan**
1:500

# Appendix 2: Construction Traffic and Pedestrian Management Sub-Plan

TRAFFIX
TRAFFIC AND TRANSPORT PLANNERS

# CONSTRUCTION TRAFFIC AND PEDESTRIAN MANAGEMENT SUB-PLAN

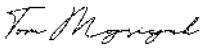
**St Anthony of Padua Catholic College – Early Learning Centre**
**140 Eleventh Avenue, Austral**

Reference: 22.212r04v02
Date: March 2026

Suite 2.08, 50 Holt St
Surry Hills, NSW 2010

**t:** (02) 8324 8700
**w:** www.traffix.com.au

# DOCUMENT VERIFICATION

| Job Number | 22.212 | | | |
|---|---|---|---|---|
| **Project** | 140 Eleventh Avenue, Austral | | | |
| **Client** | Trinity Construction & Fitout | | | |
| Revision | Date | Prepared By | Checked By | **Signed** |
| v02 | 03/03/2026 | Andrew Baraket | Tom Mojsiejuk |  |

# SAFEWORK NSW CERTIFICATES

| Prepare a Work Zone Traffic Management Plan | | | |
|---|---|---|---|
| **Name** | Tom Mojsiejuk | **Certificate No.** | 5201837 |

Reference should be made to the Curriculum Vitae (CV) provided in **Appendix A**.

TRAFFIX

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## Appendices

# 1. INTRODUCTION

TRAFFIX has been commissioned Trinity Fitout & Construction to prepare a Construction Traffic and Pedestrian Management Sub-Plan (CTPMSP) report for St Anthony of Padua Catholic College at 140 Eleventh Avenue, Austral, specifically the construction of a Catholic Early Learning Centre (CELC). This State Significant Development (SSD) has been approved by the NSW Department of Planning (DPE) under SSD-8865.

This report documents the construction traffic management arrangements, methodology and traffic impacts associated with the demolition, bulk excavation, structure, and fitout & finishes stages of construction. This report should be read in conjunction with any other construction documentation prepared by Trinity Fitout & Construction.

The report is structured as follows:

- Section 2: Outlines the CTPMSP requirements
- Section 3: Documents existing traffic conditions
- Section 4: Describes the overall construction program
- Section 5: Describes the proposed traffic management arrangements
- Section 6: Concludes the report

# 2. CTPMSP REQUIREMENTS

## 2.1 Traffic Guidance Scheme

The Traffic Guidance Scheme (TGS) that is included in this report, should be implemented taking due account of on-site conditions as will occur over the construction period. Accordingly, construction crew 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 movements, should vehicle movements equate to or exceed 10 truck movements (5 in, 5 out) per hour.

It is noted that TRAFFIX is responsible for the preparation of the TGS only and not for its implementation, which is the responsibility of the project manager/builder.

## 2.2 Development Consent

The Development Consent outlines a requirement for the preparation of a CTPMSP and in particular, Condition C20 states:

> *A Construction Traffic and Pedestrian Management Sub-Plan (CTPMSP) must be prepared to achieve the objective of ensuring safety and efficiency of the road network and address, but not be limited to, the following:*
>
> *a) Be prepared by a suitably qualified and experienced person(s);*
> **Refer to the 'Document Verification' page at the start of this report and Appendix A, which provides the SafeWork NSW Certificates and CV, respectively.**
>
> *b) Be prepared in consultation with Council;*
> **Refer to Section 2.3 and Appendix B, which outlines the consultation and correspondence with Council.**

c) *Detail the measures that are to be implemented to ensure road safety and network efficiency during construction in consideration of potential impacts on general traffic, cyclists and pedestrians and bus services; and*

**Refer to Section 5 and Appendix E, which details the Traffic Management Arrangements and Traffic Guidance Scheme to manage vehicular access and pedestrian traffic, respectively.**

d) *Detail heavy vehicle routes, access and parking arrangements.*

**Refer to Sections 5.1, 5.2 and 5.5, which details the heavy vehicle routes, construction access and parking arrangements, respectively.**

## 2.3 Council Consultation

In accordance with Condition C20 (b) of the Development Consent, this CTPMSP has been prepared in consultation with Council. Reference should be made to the correspondence with Council, dated 18 May 2022 and provided in **Appendix B**, noting the following aspects:

- CTPMSP to be in accordance with Liverpool City Council's *Assessment of Construction Traffic Management Plan*; and
- Submission of the CTPMSP to Council is sufficient to satisfy Condition C20.

Accordingly, this CTPMSP has been prepared in accordance with Liverpool City Council's *Assessment of Construction Traffic Management Plan* and has been updated to take into consideration construction vehicle access from Fourth Avenue.

## 2.4 Other Applications

Other applications will be required to be prepared at a later stage and submitted online to Council's Transport Management Unit for approval (where applicable):

- Road occupancy approval (including placement of construction plant) is required for any works within the public road reserve;
- Works zone applications and associated signposting plan;
- Footpath occupancy and hoarding installation;
- Road opening approval (including connections to existing services); and
- Each application will require work/site specific TGS plans.

# 3. EXISTING CONDITIONS

## 3.1 Location and Site

The subject site known as St Anthony of Padua Catholic College is located at 140 Eleventh Avenue, Austral is located approximately 11.0 kilometres west of Liverpool Railway Station and is legally identified as Lots 811 and 812 of DP2475. More specifically, the site is situated on the southern side of Eleventh Avenue, approximately 2.0 kilometres north of Bringelly Road.

The site is rectangular in configuration and has a site area of approximately 26,300m$^2$**.** It has a northern boundary of approximately 160 metres to Eleventh Avenue, and an eastern boundary of approximately 150 metres to nearby rural property, while the western frontage of 150 metres and southern frontage of 160 metres to adjoining lots that form part of St Anthony of Padua Catholic College, respectively. The location of the construction works identified within this plan relates to the north-eastern portion of the site where the proposed Early Learning Centre is proposed.

The site currently contains structures associated with the St Anthony of Padua Catholic College and an at-grade carpark with access to and from Eleventh Avenue and Tenth Avenue.

A Location Plan is presented in **Figure 1**, with a Site Plan presented in **Figure 2**.

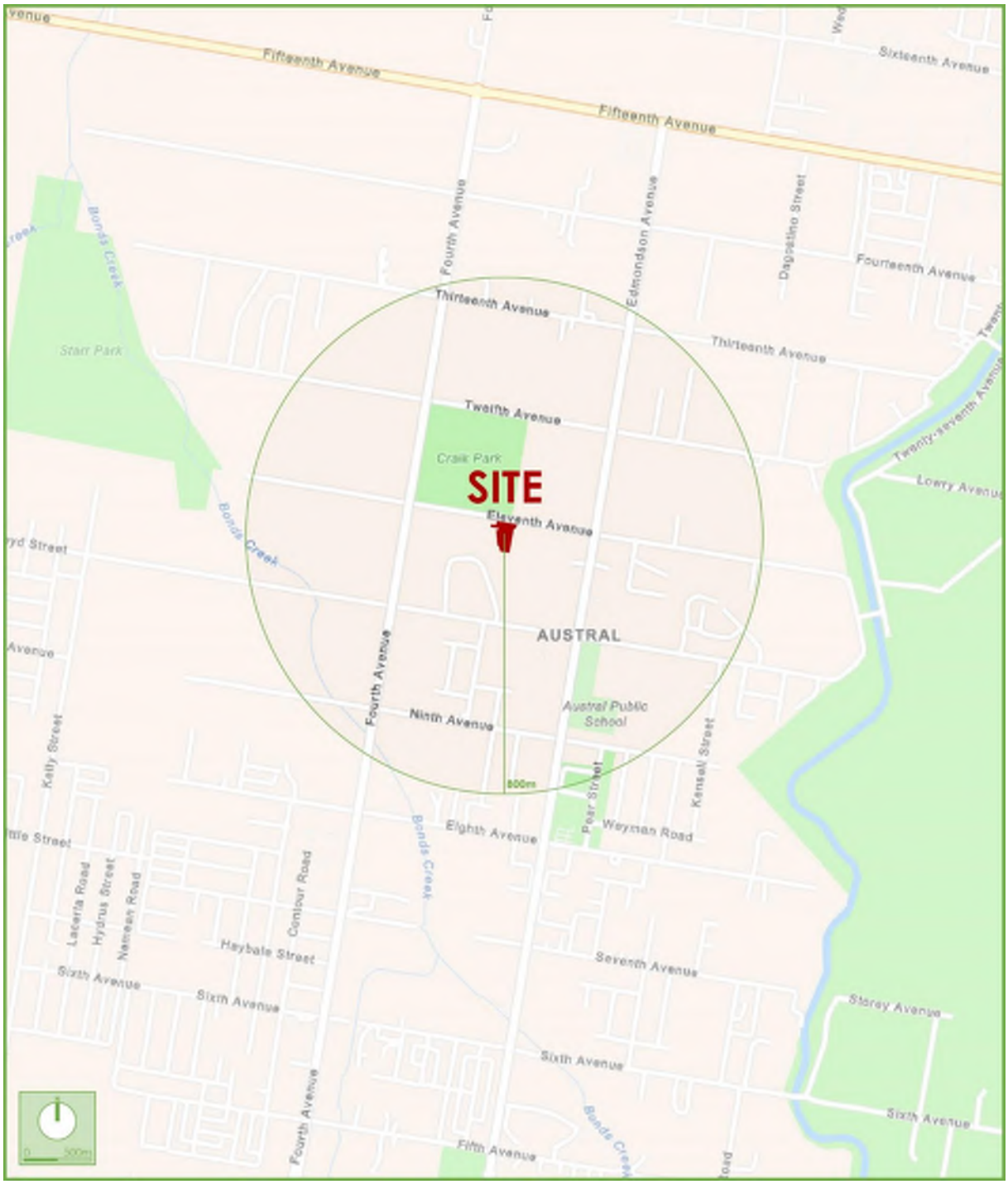



**Figure 1: Location Plan**


**Figure 2: Site Plan**

## 3.2 Road Network

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

- Bringelly Road: a TfNSW Main Road (MR 647) that traverses east-west between Camden Valley Way in the east and Greendale Road in the west. Within the vicinity of the site, it is subject to 80km/h speed zoning and accommodates three (3) lanes of traffic in each direction. Bringelly Road does not permit on-street parking on either side of the road and has been identified by TfNSW as a 26.0 metre B-double route.
- Edmondson Avenue: a local road that traverses north-south between Fifteenth Avenue in the north and Bringelly Road in the south. It is subject to 60km/h speed zoning and accommodates a single lane of traffic in each direction. Edmondson Avenue permits unrestricted on-street parking along both sides of the road.
- Fourth Avenue: a local road that traverses north-south between a dead-end after Gurner Avenue in the north and Bringelly Road in the south. It is subject to 60km/h speed zoning and accommodates a single lane of traffic in each direction. Fourth Avenue permits unrestricted on-street parking along both sides of the road, with the northern section of the road identified by TfNSW as a 26.0 metre B-double route (between Fifteenth Avenue and Seventh Avenue).
- Tenth Avenue: a local road that traverses east-west between Twenty Ninth Avenue in the east and Kelly Street in the west. It is subject to 60km/h speed zoning and accommodates a single lane of traffic in each direction. Tenth Avenue permits unrestricted on-street parking along both sides of the road.

- Eleventh Avenue: a local road that traverses east-west between Twenty Ninth Avenue in the east and forms a dead-end after Fourth Avenue in the west. It is subject to 60km/h speed zoning and accommodates a single lane of traffic in each direction. Eleventh Avenue permits unrestricted on-street parking along both sides of the road.
- Fifteenth Avenue: a local road that traverses east-west between Cowpasture Road in the east and a dead-end after Wishart Road in the west. It is subject to 60km/h speed zoning and accommodates a single lane of traffic in each direction. Fifteenth Avenue permits unrestricted on-street parking along both sides of the road, with the western section of the road identified by TfNSW as a 26.0 metre B-double route (between Fourth Avenue and Ramsay Road)

It can be seen from **Figure 3** that the site is conveniently located with respect to the main collector road servicing the region, being Edmondson Avenue. As such, traffic can effectively be distributed onto the wider road network, minimising traffic impacts.

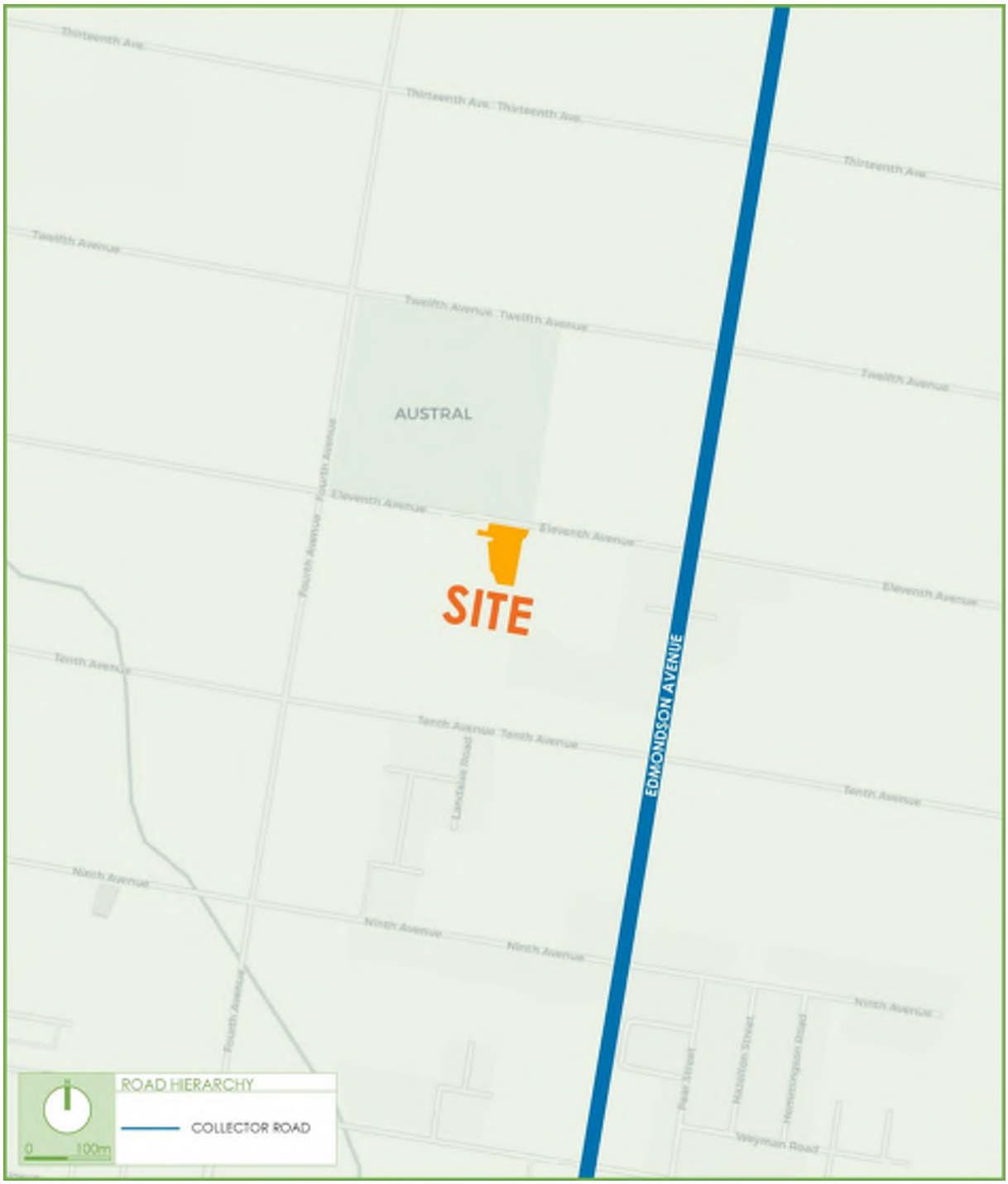



**Figure 3: Road Hierarchy**

## 3.3 Public Transport

The existing bus services operating within 400 metres (optimum walking distance) of the site is presented in **Figure 4**, with the closest situated along the southern frontage of the site. These bus stops provide regular services to the following routes:

- 855 – Rutleigh Park to Liverpool via Austral and Leppington Station
- 861 – Denham Court to Carnes Hill via Austral

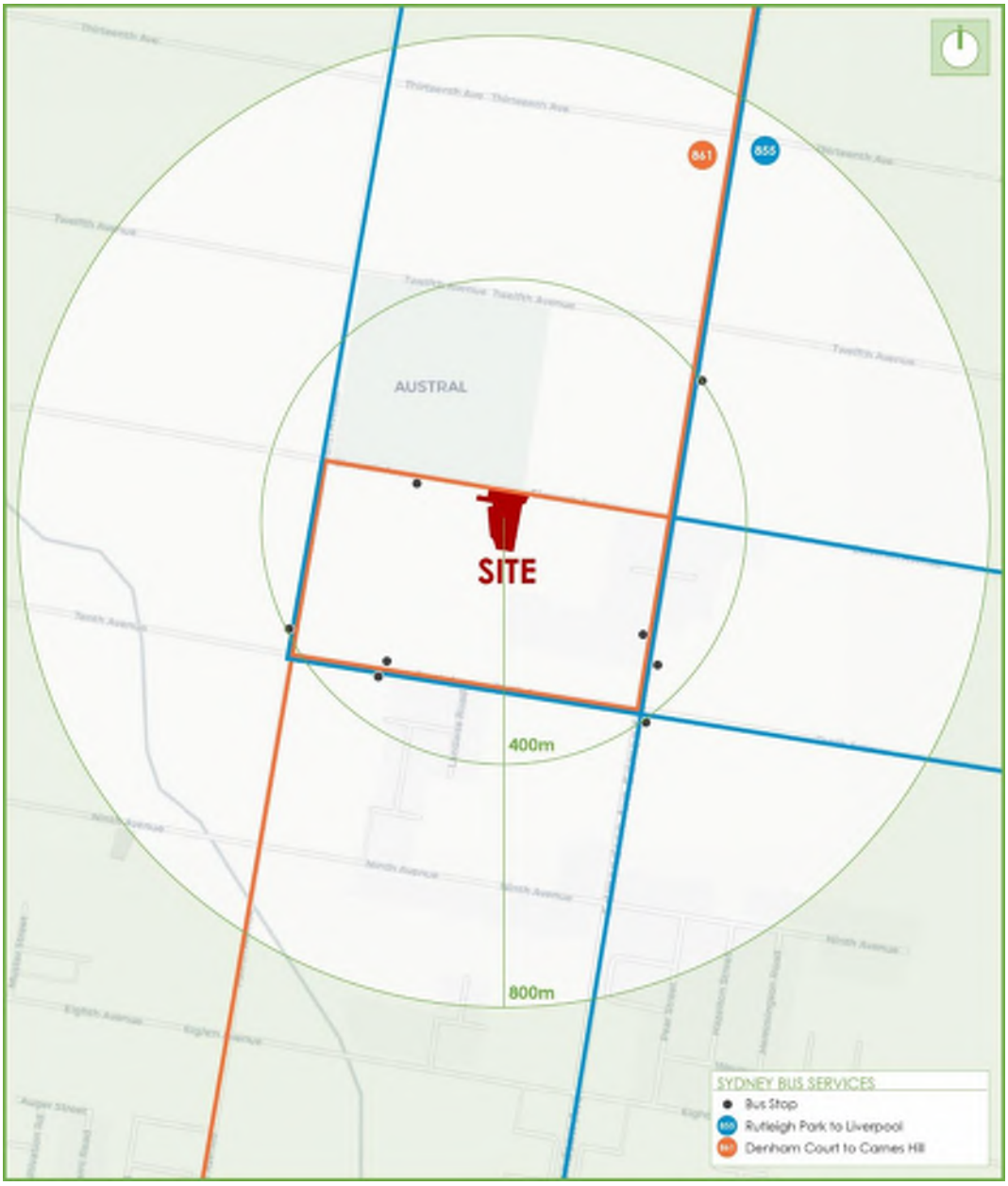



**Figure 4: Public Transport**

# 4. OVERVIEW OF CONSTRUCTION PROGRAM

## 4.1 Times of Operation

The proposed construction hours of operation are summarised below.

- Monday to Friday 7:00am to 6:00pm;
- Saturday 8:00am to 1:00pm; and
- Sunday or Public Holiday No building activities are to be carried out at any time.

## 4.2 Site Establishment Plans

Reference should be made to the Site Establishment Plans presented in **Appendix C**, which includes the proposed locations of:

- Site offices, sheds, amenities and pedestrian access;
- Materials laydown area;
- Light and heavy vehicle accesses; and
- Contractor parking area.

## 4.3 Overview of Construction Works

The proposed construction works during all stages of construction are summarised below.

### 4.3.1 Demolition Stage

This stage is anticipated to occur over a 4-week period, pending the approval of this CTMP. A maximum of 15 workers will be on site at any given time, with an average of 10 workers. The maximum sized truck to be utilised during this stage will be 12.5 metre long heavy rigid vehicles (HRVs). All demolition works are proposed to occur within the site, with construction vehicle access proposed from a dedicated construction vehicle access off Eleventh Avenue.

This stage will have an average of 20 trucks per day (20 in, 20 out) and a maximum of five (5) trucks per hour (5 in, 5 out). This truck volume would equate to an average of two (2) trucks per hour, which is considered minor and will have negligible impacts on the surrounding key intersections.

### 4.3.2 Bulk Excavation Stage

This stage is anticipated to occur over a 5 week period and will involve a maximum of 15 workers on site at any given time, with an average of 10 workers. The maximum sized truck to be utilised during this stage will be 12.5 metre long heavy rigid vehicles (HRVs). All bulk excavation works are proposed to occur within the site, with construction vehicle access proposed from a dedicated construction vehicle access off Eleventh Avenue.

This stage will have an average of 20 trucks per day (20 in, 20 out) and a maximum of five (5) trucks per hour (5 in, 5 out). This truck volume would equate to an average of two (2) trucks per hour, which is considered minor and will have negligible impacts on the surrounding key intersections.

### 4.3.3 Structure Stage

This stage is anticipated to occur over a 6 week period and will involve a maximum of 30 workers on site at any given time, with an average of 20 workers. The maximum sized truck to be utilised during this stage will be 12.5 metre long heavy rigid vehicles (HRVs). All structure works are proposed to occur within the site, with construction vehicle access proposed from a dedicated construction vehicle access off Eleventh Avenue.

This stage will have an average of 20 trucks per day (20 in, 20 out) and a maximum of five (5) trucks per hour (5 in, 5 out). This truck volume would equate to an average of two (2) trucks per hour, which is considered minor and will have negligible impacts on the surrounding key intersections.

### 4.3.4 Fitout & Finishes Stage

This stage is anticipated to occur over a 32 week period and will involve a maximum of 30 workers on site at any given time, with an average of 20 workers. The maximum sized truck to be utilised during this stage will be 12.5 metre long heavy rigid vehicles (HRVs). All fitout and finishes works are proposed to occur within the site, with construction vehicle access proposed from a dedicated construction vehicle access off Eleventh Avenue.

This stage will have an average of 15 trucks per day (15 in, 15 out) and a maximum of five (5) trucks per hour (5 in, 5 out). This truck volume would equate to an average of two (2) trucks per hour, which is considered minor and will have negligible impacts on the surrounding key intersections.

# 5. TRAFFIC MANAGEMENT ARRANGEMENTS

## 5.1 Truck Routes

The proposed truck routes make use of TfNSW approved 26.0 metre B-double routes where possible, with a copy of the routes provided to all drivers prior to attending the site. The proposed truck routes are presented in **Figures 5** and **6** below and summarised as follows.

### 5.1.1 Site Compound (Gates 1 and 2)

- Ingress to subject site: (*Inbound*)
  1. Trucks will arrive on Cowpasture Road/Hoxton Park Road.
  2. Turn onto Fifteenth Avenue, westbound.
  3. Turn left onto Fourth Avenue, southbound.
  4. Turn left onto Eleventh Avenue, eastbound
  4. Turn right onto site.

- Egress from the subject site: (*Outbound*)
  1. Trucks will depart onto Eleventh Avenue, westbound.
  2. Turn right onto Fourth Avenue, northbound.
  3. Turn right onto Fifteenth Avenue, eastbound.
  4. Turn onto Cowpasture Road/Hoxton Park Road.

### 5.1.2 Pours and Large Deliveries (Gate 3)

- Ingress to subject site: (*Inbound*)
  1. Trucks will arrive on Cowpasture Road/Hoxton Park Road.
  2. Turn onto Fifteenth Avenue, westbound.
  3. Turn left onto Fourth Avenue, southbound.
  4. Turn left onto Eleventh Avenue, eastbound
  4. Turn right onto site.

- Egress from the subject site: (*Outbound*)
  1. Trucks will depart onto Tenth Avenue, westbound.
  2. Turn right onto Fourth Avenue, northbound.
  3. Turn right onto Fifteenth Avenue, eastbound.
  4. Turn onto Cowpasture Road/Hoxton Park Road.


**Figure 5: Proposed Truck Routes to/from Gates 1 and 2**


**Figure 6: Proposed Truck Routes to/from Gate 3**

## 5.2 Construction Access

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. This management of loading / unloading or deliveries is envisaged to be the same throughout all stages of construction and will ensure no trucks would be required to queue or park on-street. The construction accesses to be utilised throughout all stages are outlined as follows:

### 5.2.1 General Works

- Eleventh Avenue Access
  - Situated on Eleventh Avenue, approximately 310 metres east of Fourth Avenue;
  - 9.0 metre wide vehicular access at the property boundary;
  - Connected to the existing car parking area which will be utilised as material laydown area;
  - Maximum sized vehicle accessing the site will be 12.5 metre long heavy rigid vehicles (HRV).

Typically, vehicles will be expected to exit the site via the egress only driveway onto Eleventh Avenue. However, it is expected that for big deliveries and pours vehicles will be incapable of circulating within the car park. As such they are expected to egress the site via Fourth Avenue at the southern boundary of the site.

A swept path analysis has been undertaken and included in **Appendix D**, demonstrating satisfactory vehicle movements of the largest size vehicle to be accommodated on-site being 12.5m heavy rigid vehicles (HRV).

### 5.2.2 Other Comments

In addition to the above, all construction vehicles will be restricted to the following:

- All vehicles will be required to enter and egress the site in a forward direction;
- Heavy vehicles with a length of 12.5 metres will be restricted to a maximum of 6 trucks per hour (6 in, 6 out) on school days between 7:00am-10:00am and 3:00pm-7:00pm, with intermittent stoppages for construction access to be minimised;
- No construction vehicle movements will be permissible during school peak drop-off and pick-up periods, being 8:00am-9:00am and 2:30pm-3:30pm; and

- Stoppages or delays to buses will not be permissible, with bus stop access to be maintained at all times throughout all stages of construction.

## 5.3 Crane Requirements

Temporary cranes are proposed to be utilised during all construction stages. It is understood that all cranes and pumps will be wholly contained on-site at all times.

## 5.4 Pedestrian Control

Pedestrian and cyclists access surrounding the site will be managed safely during all construction stages, with A-Class hoarding and Cyclone fencing. As mentioned above, SafeWork NSW certified Traffic Controllers would be on hand at Eleventh Avenue & Tenth Avenue vehicular accesses to manage vehicle and pedestrian movements, should vehicle movements equate to or exceed 10 truck movements (5 in, 5 out) per hour. These arrangements are considered acceptable and will ensure pedestrian safety is maintained at all times.

## 5.5 Employee Parking

In accordance with the DA Consent Condition C28, construction workers will be permitted to park on-site throughout all stages of construction, with a dedicated contractor parking area, within the site compound accessed from Eleventh Avenue. Reference should be made to the Site Establishment Plans in **Appendix C**, with an extract presented in **Figure 6** that shows sufficient area to accommodate all contractor parking on-site.

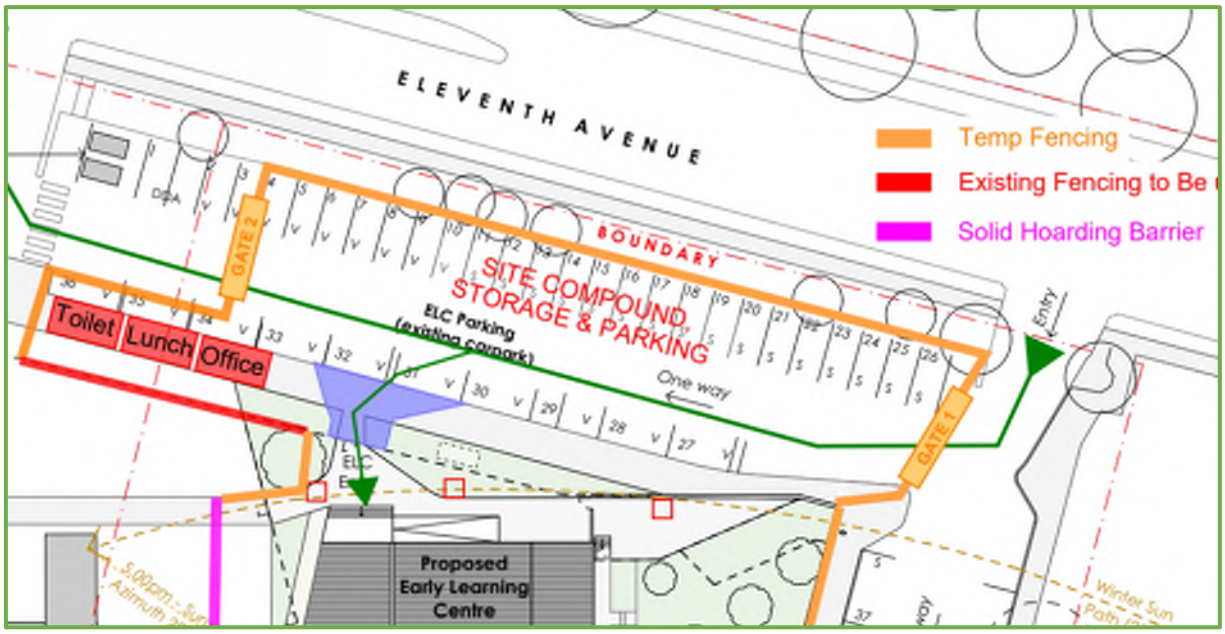



**Figure 6: Contractor Parking Area**

Accordingly, parking for all construction workers will be accommodated on- site. Nevertheless, workers will be encouraged to car-pool and utilise available public transport services in order to minimise the demand for surrounding on-street parking spaces. In the unlikely event workers park on-street, workers are to adhere to the signposted parking restrictions, NSW Road Rules and not obstruct residential access.

## 5.6 Community Contact

Appropriate signage with contact details (phone number and email) is to be installed at the site to allow local community members to make contacts in relation to work activities.

## 5.7 Driver Code of Conduct

All drivers will be required to adhere to the following driver code of conduct:

a) Minimise the impacts of earthworks and construction on the local and regional road network;
b) Minimise conflicts with other road users;
c) Minimise road traffic noise; and
d) Ensure truck drivers use specified routes – this will be addressed through the induction process.

## 5.8 Traffic Guidance Scheme

The TGS included in **Appendix E** demonstrate the proposed signage and traffic management measures to be adopted during all stages of construction. This TGS will ensure all vehicular access and pedestrian traffic is managed safely and efficiently, with copies of the TGS to be kept on-site at all times. This TGS has been designed in accordance with the *TfNSW Traffic Control at Works Sites Technical Manual*.

# 6. CONCLUSION

This report should be read in conjunction with other construction documentation prepared by Trinity Fitout & Construction relating to the internal construction activities. The plan outlined above is considered satisfactory and will minimise any disruptions to the neighbouring developments. This plan meets all required of the *TfNSW Traffic Control at Work Sites Technical Manual* and is recommended for adoption.

# APPENDIX A

Curriculum Vitae

TRAFFIX
TRAFFIC AND TRANSPORT PLANNERS

# TOM MOJSIEJUK
SENIOR ENGINEER

## Qualifications and Associations

- Bachelor of Planning - Macquarie University
- Master of Traffic and Transport Engineering – Monash University
- Prepare A Work Zone Traffic Management Plan

## Areas of Expertise

Tom, is an urban planner and traffic engineer who joined TRAFFIX in 2024 and has experience in areas related to the preparation of traffic impact assessments, planning proposals, green travel plans, strategic transport planning, construction traffic management plans (CTMPs) and internal management plans.

Tom is proficient in the analysis of traffic generation, trip distribution and traffic modelling using SIDRA Intersection. He has extensive knowledge of Australian Standards, Austroads Guidelines and Transport for NSW (TfNSW) requirements.

## Relevant Experience

### Western Sydney University – Parramatta South Campus Strategy

Involvement in the preparation of a strategic development plan to inform the future Parramatta South Campus Strategy.

This study involved the review of existing site conditions utilising traffic survey data and identifying key transport routes in line with the One University approach to inform the future development strategy.

### University of Sydney - TIA

Involvement in the production of a Traffic Impact Assessment report for the refurbishment and repurposing of existing buildings on campus for an interim retail and place precinct.

This traffic study involved reviewing existing travel data and campus facilities to support additional retail and ancillary uses on site.

### Maddens Plains Subdivision - TIA

Involvement in the preparation of a Traffic Impact Assessment report for a 175 lot residential subdivision on greenfield land with a focus on swept path analysis and SIDRA intersection modelling for both light and commercial vehicles.

This traffic study was primarily aimed at two (2) key intersections, in particular their performance and condition. The model was developed to assess the impacts of the proposed 175 lot residential development over the existing network conditions.

### Forestville RSL redevelopment – TIA

Involvement in the preparation of a Traffic Impact Assessment report for the Forestville RSL club and seniors living redevelopment.

This study involved a review of existing conditions surrounding the proposed site, trip distribution analysis and SIDRA 9.1 modelling.

### Campbelltown Arts Centre – Design and Car Parking Strategy

Involvement in the preparation of a site specific design and car parking strategy.

This study involved the review of existing site conditions utilising traffic survey data of existing car parks to identify parking demand and requirements to inform the future Campbelltown Arts Centre development.

### UPA Wahroonga SSDA – TAIA, CTMP, GTP

Involvement in the production Traffic Impact Assessment report, Construction Management Plan and Green Travel Plan for the UPA Wahroonga SSDA.

The TAIA element involved a review of existing conditions surrounding the proposed site, trip distribution analysis and SIDRA 9 modelling. The CTMP element involves the analysis of several routes noting the constrained nature of the site to develop a feasible plan for construction vehicles.

# APPENDIX B

## Council Consultation

## Neil Caga

**Subject:** FW: SCS - St Anthony of Padua Catholic School - Stage 4 - SSDA Condition C20 [22.212]

**From:** Mahavir Arya
**Sent:** Wednesday, 18 May 2022 4:13 PM
**To:** Rocco Bombardiere; Charles Wiafe
**Cc:** Tim Calpito; Jim Gilvarry; Robin Merrick; Billy Vasiliou
**Subject:** Re: SCS - St Anthony of Padua Catholic School - Stage 4 - SSDA Condition C20

Hi Rocco

To satisfy this condition, please provide a copy of Construction Traffic Management Plan (CTMP) for Council comments. Please use Assessment of Construction Traffic Management Plan application form which is available on Council website indicates required information to be included with the CTMP. Submission of the CTMP will satisfy the consent condition C20.

In addition, Traffic Operational Plan is also required. This plan is to include pedestrian and traffic movements following completion of the construction activities and is regularly been reviewed in consultation with Council's Road Safety Officer to ensure road safety in and around the school.

Please contact me should you be having any further questions.

Regards
Mahavir

**Mahavir Arya**
Transport Engineer

LIVERPOOL CITY COUNCIL

02 8711 7592 | | AryaM@liverpool.nsw.gov.au
Customer Service: 1300 36 2170 | 33 Moore Street Liverpool, NSW 2170, Australia
www.liverpool.nsw.gov.au




**From:** Rocco Bombardiere
**Sent:** Wednesday, 18 May 2022 3:46 PM
**To:** Mahavir Arya; Charles Wiafe
**Cc:** Tim Calpito; Jim Gilvarry; Robin Merrick; Billy Vasiliou
**Subject:** SCS - St Anthony of Padua Catholic School - Stage 4 - SSDA Condition C20

Hi Mahavir & Charles,

Seek your assistance on a contact in Council who would assist with consultation on the Construction Traffic & Pedestrian Management Plan review.

| | |
|---|---|
| C20 | A Construction Traffic and Pedestrian Management Sub-Plan (CTPMSP) must be prepared to achieve the objective of ensuring safety and efficiency of the road network and address, but not be limited to, the following: |
| | (a) be prepared by a suitably qualified and experienced person(s); |
| | (b) be prepared in consultation with Council; |
| | (c) detail the measures that are to be implemented to ensure road safety and network efficiency during construction in consideration of potential impacts on general traffic, cyclists and pedestrians and bus services; and |
| | (d) detail heavy vehicle routes, access and parking arrangements. |
| | |
| | **AED REQUIREMENTS** |
| | • ***Provide a copy of the Construction Traffic and Pedestrian Management Sub-Plan (CTPMSP), prepared in accordance with this condition.*** |

Kind regards

Rocco

**Rocco Bombardiere**
**Associate Director**

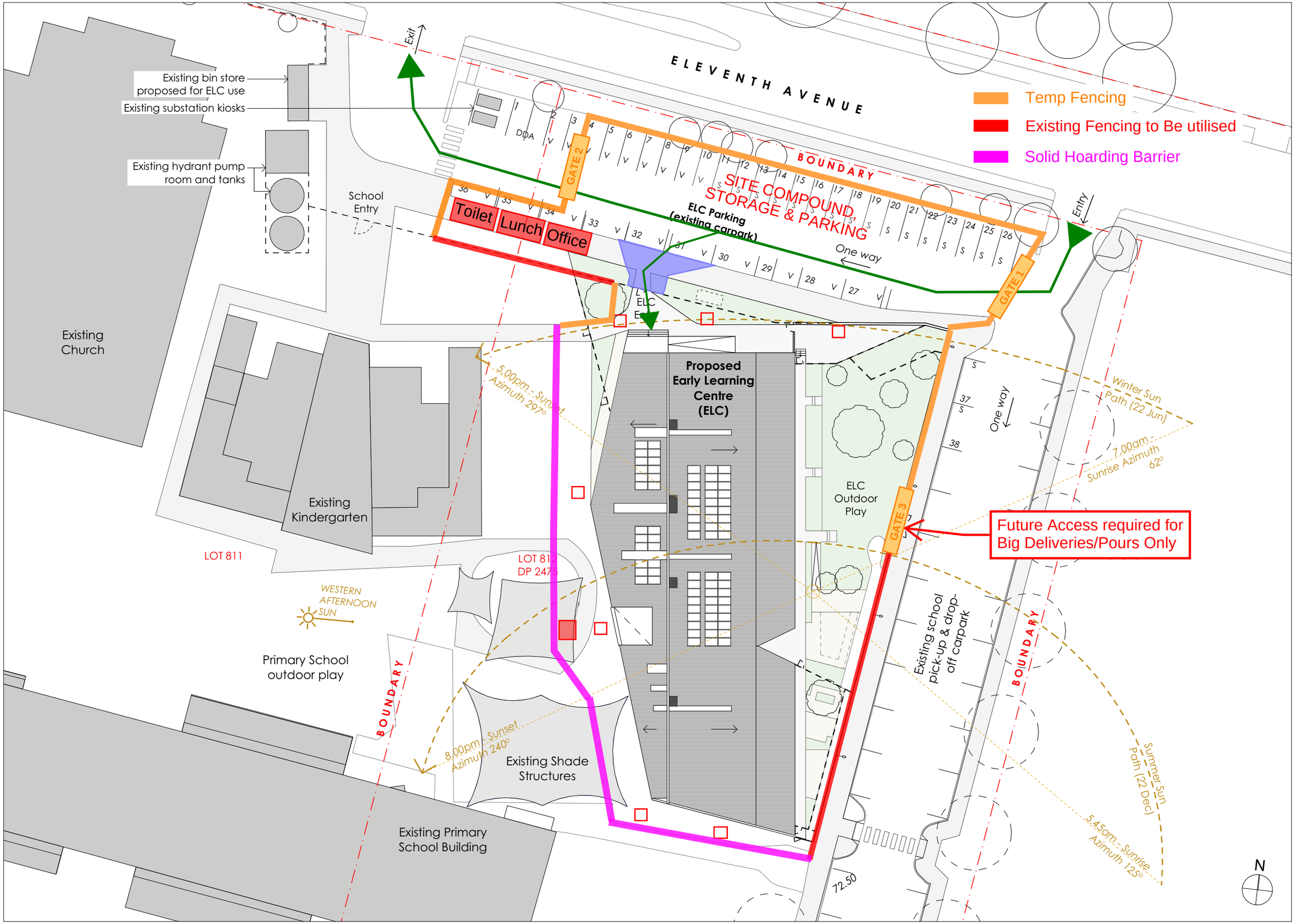
ctpg

Carmichael Tompkins Property Group
Suite 14.04, Level 14 Aurora Place, 88 Phillip Street, Sydney NSW 2000
T: +61 (0)2 9160 6305
M: +61 (0)438 678 912
E: rocco.bombardiere@ctpg.com.au
www.ctpg.com.au

Sydney | Melbourne

# APPENDIX C

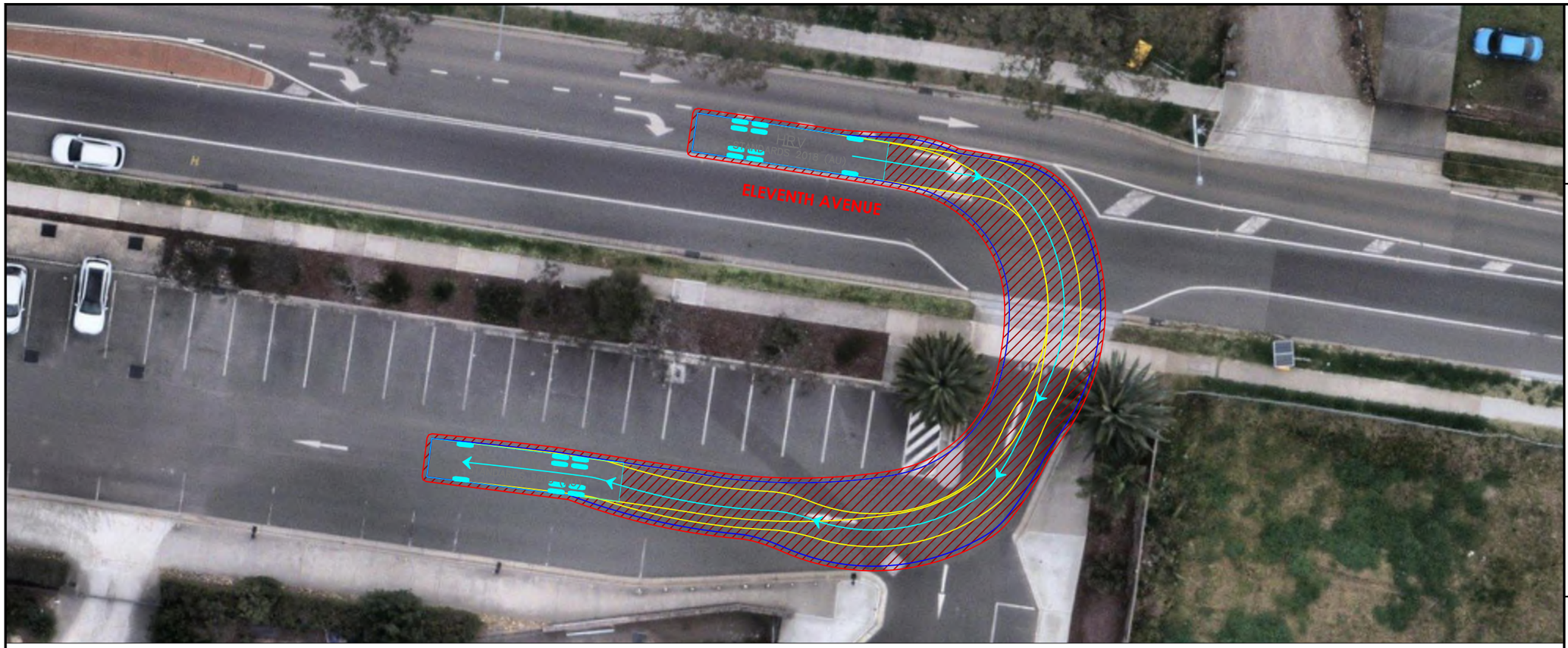
Site Establishment Plans

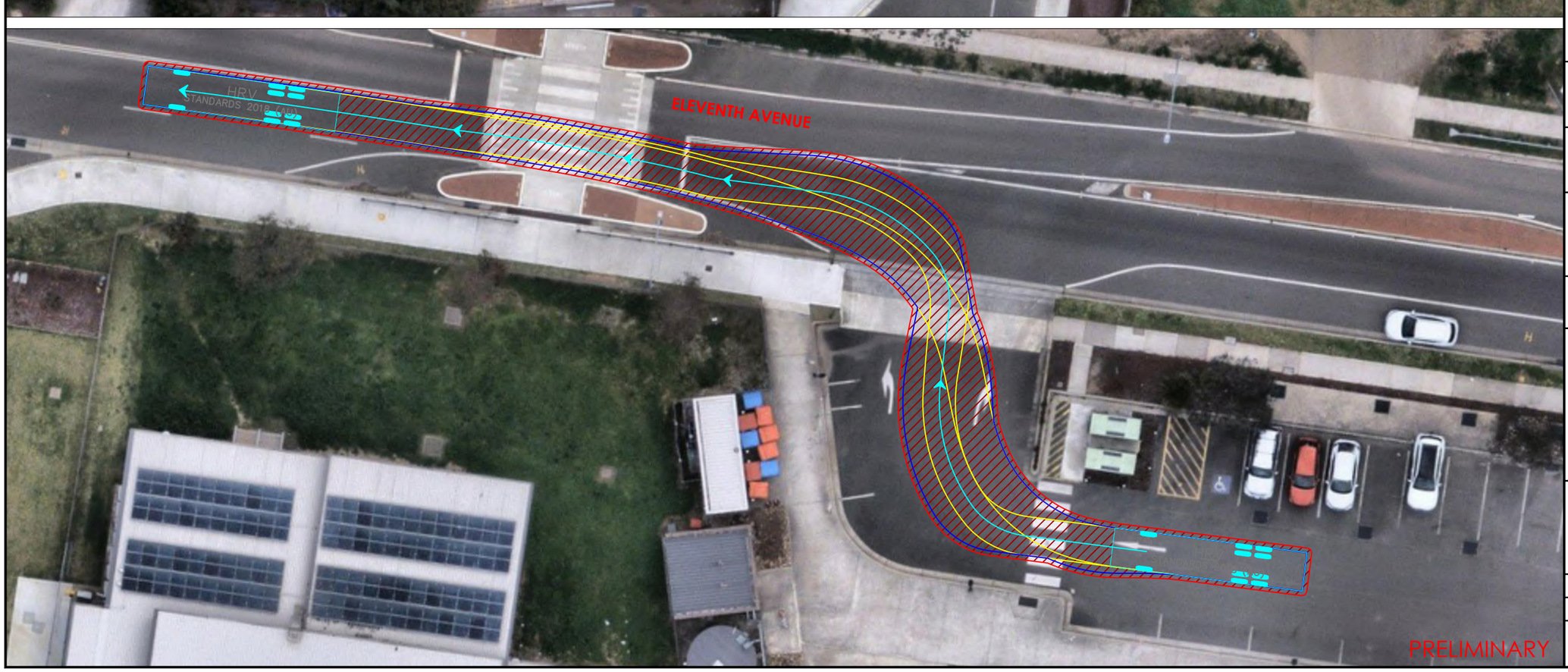



2 **Site Plan**
1:500

# APPENDIX D

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 | AB | 26-02-26 |

Swept Path Legend

- Wheel Path
- Vehicle Body Envelope
- Clearance Envelope (300mm)

Architect

Client
Trinity Fitout & Construction

Scale / Plan Orientation

0 3 6 9 12m
1:300 @ A3

Project Description
St Anthony of Padua Catholic College
140 Eleventh Avenue, AUSTRAL NSW 2179

Drawing Prepared By

TRAFFIX
TRAFFIC AND TRANSPORT PLANNERS

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Surry Hills, NSW 2010
PO Box 1124
Strawberry Hills, NSW 2012

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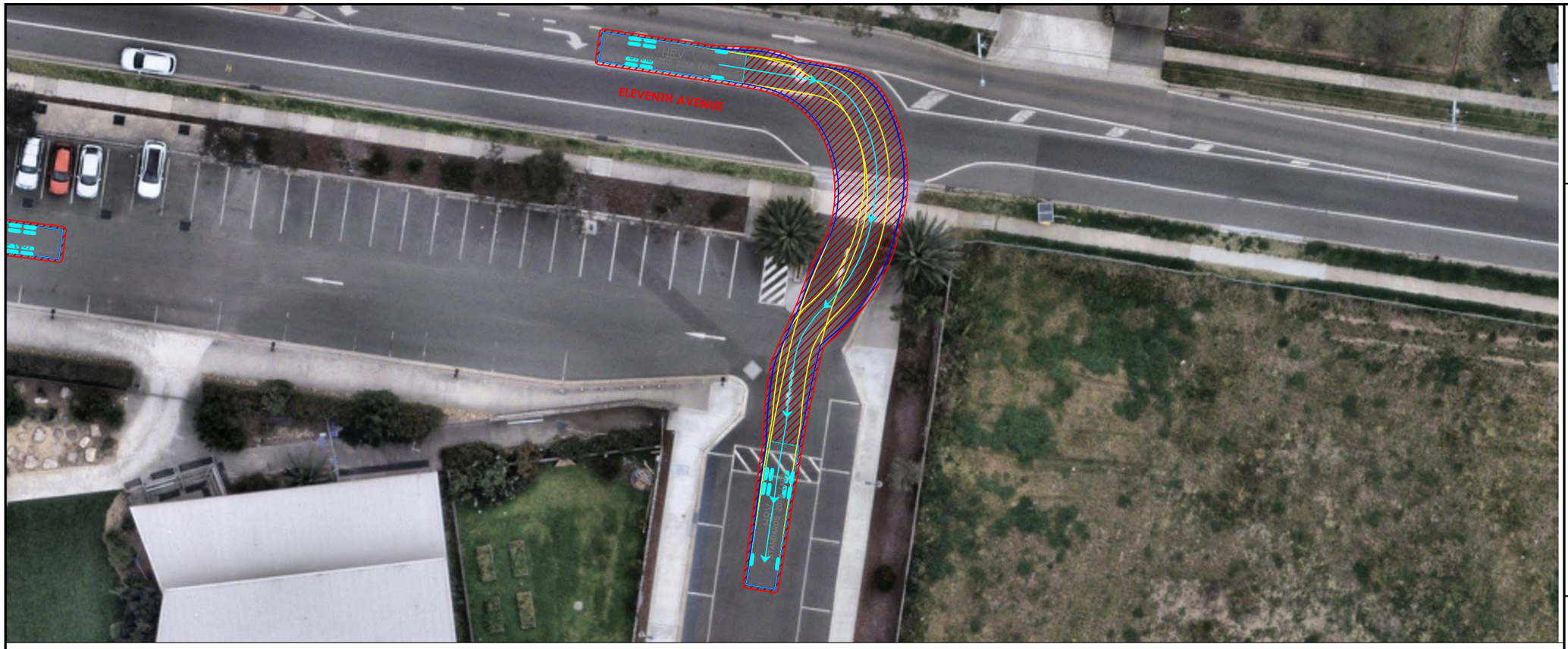
f: +61 2 9830 4481
w: www.traffix.com.au

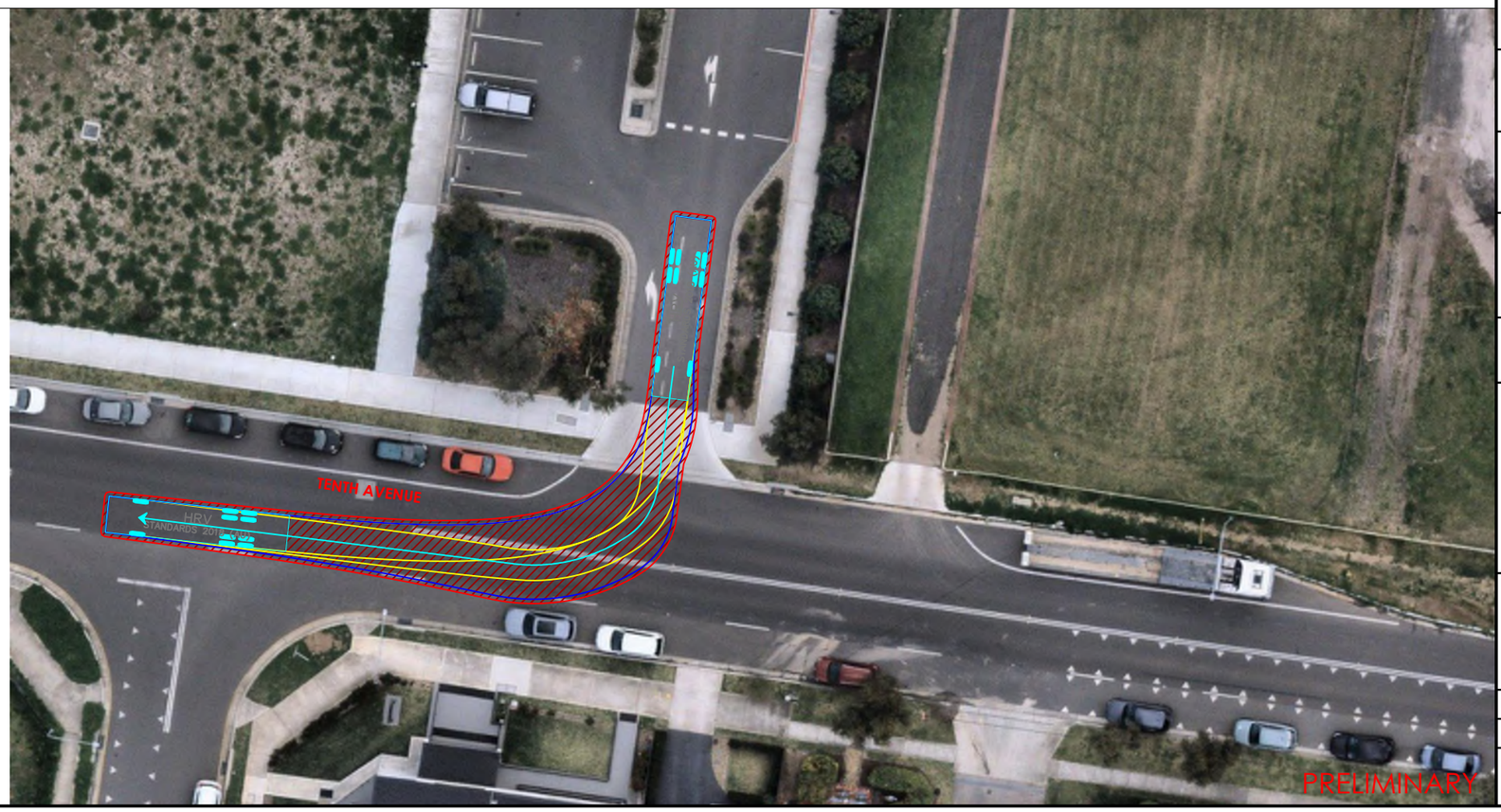
Drawing Title
Swept Path Analysis
Construction Vehicle Access - Rigid Vehicles
12.5m HRV
Top: Site Entry from Eleventh Avenue
Bottom: Site Egress to Eleventh Avenue

| Drawn: | Checked: | Date: |
|---|---|---|
| AB | TM | |

22.212d05v01 TRAFFIX [CTPMSP] - Swept Path Analysis_9275.SV$.dwg

| Project No. | Drawing Phase | Drawing No. | Rev. |
|---|---|---|---|
| 22.212 | CTPMSP | TX.01 | A |

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| Rev. | Revision Note | By. | Date |
|---|---|---|---|
| A | Swept Path Analysis | AB | 26-02-26 |

Swept Path Legend

- Wheel Path
- Vehicle Body Envelope
- Clearance Envelope (300mm)

Architect

Client
Trinity Fitout & Construction

Scale / Plan Orientation

0 4 8 12 16m
1:400 @ A3

Project Description
St Anthony of Padua Catholic College
140 Eleventh Avenue, AUSTRAL NSW 2179

Drawing Prepared By

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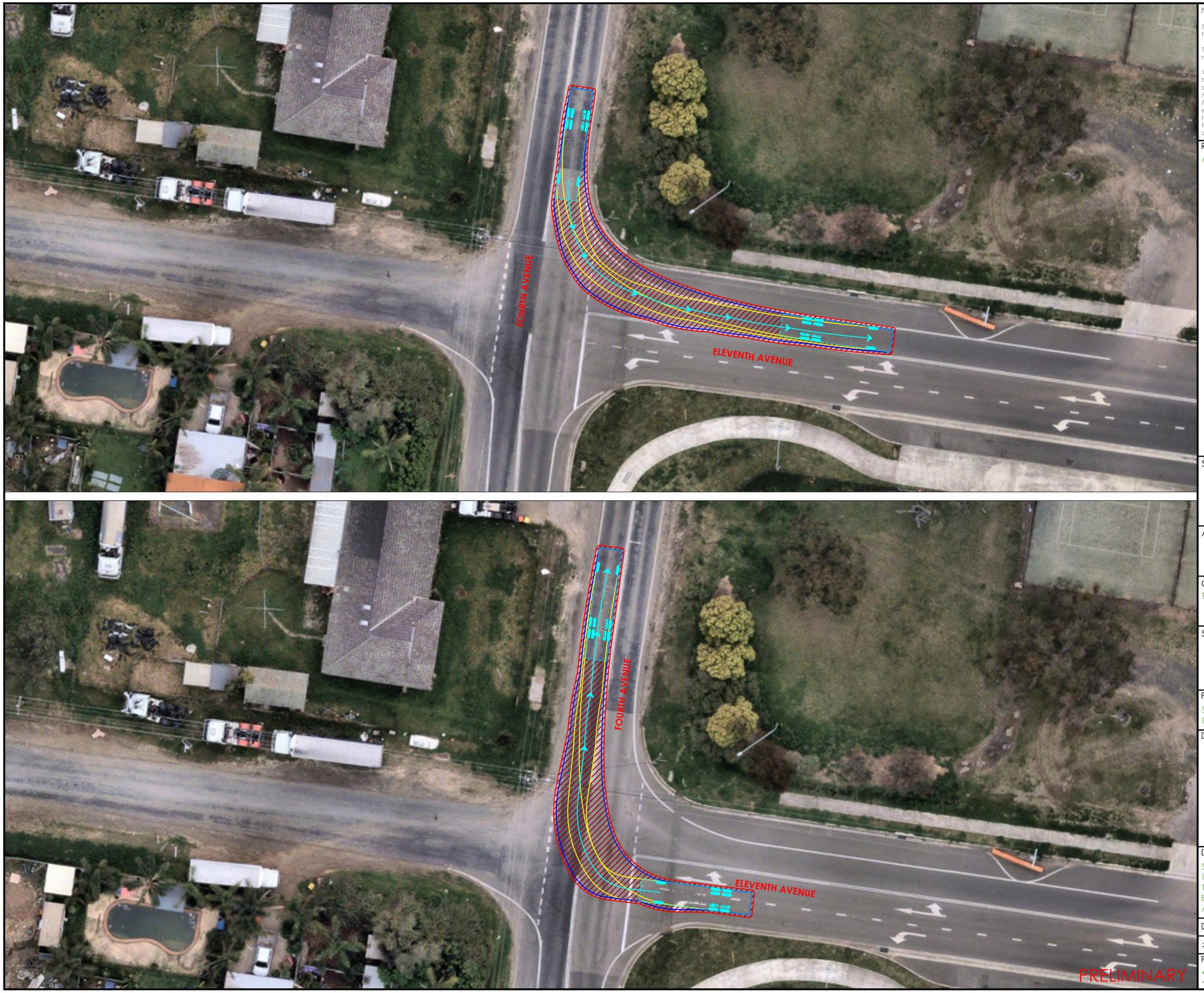
w: www.traffix.com.au

Drawing Title
Swept Path Analysis
Construction Vehicle Access - Pours
12.5m HRV
Top: Site Entry from Eleventh Avenue
Bottom: Site Egress to Tenth Avenue

| Drawn: | Checked: | Date: |
|---|---|---|
| AB | TM | |

22.212d05v01 TRAFFIX [CTPMSP] - Swept Path Analysis_9275.SV$.dwg

| Project No. | Drawing Phase | Drawing No. | Rev. |
|---|---|---|---|
| 22.212 | CTPMSP | TX.02 | A |

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| Rev. | Revision Note | By. | Date |
|---|---|---|---|
| A | Swept Path Analysis | AB | 26-02-26 |

Swept Path Legend

- Wheel Path
- Vehicle Body Envelope
- Clearance Envelope (300mm)

Architect

Client
Trinity Fitout & Construction

Scale / Plan Orientation

0 4 8 12 16m
1:400 @ A3

Project Description
St Anthony of Padua Catholic College
140 Eleventh Avenue, AUSTRAL NSW 2179

Drawing Prepared By

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Strawberry Hills, NSW 2012
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f: +61 2 9830 4481
w: www.traffix.com.au

Drawing Title
Swept Path Analysis
12.5m HRV
Top: Left turn from Fourth Avenue to Eleventh Avenue
Bottom: Right turn from Eleventh Avenue to Fourth Avenue

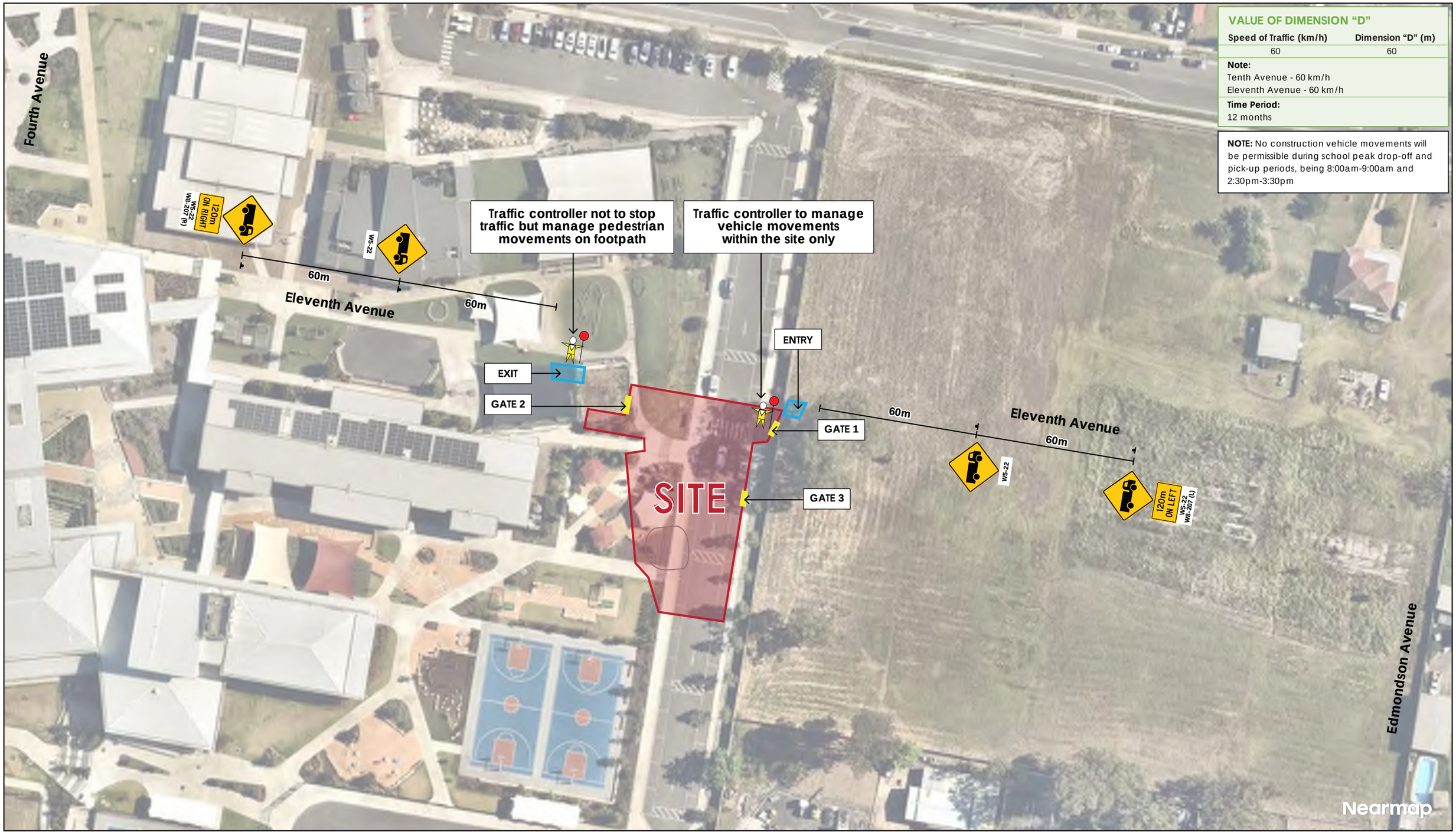
| Drawn: | Checked: | Date: |
|---|---|---|
| AB | TM | |

22.212d05v01 TRAFFIX [CTPMSP] - Swept Path Analysis_9275.SV$.dwg

| Project No. | Drawing Phase | Drawing No. | Rev. |
|---|---|---|---|
| 22.212 | CTPMSP | TX.03 | A |

# APPENDIX E

Traffic Guidance Scheme




## VALUE OF DIMENSION "D"

| Speed of Traffic (km/h) | Dimension "D" (m) |
|---|---|
| 60 | 60 |

**Note:**
Tenth Avenue - 60 km/h
Eleventh Avenue - 60 km/h

**Time Period:**
12 months

**NOTE:** No construction vehicle movements will be permissible during school peak drop-off and pick-up periods, being 8:00am-9:00am and 2:30pm-3:30pm


TRAFFIX
TRAFFIC AND TRANSPORT PLANNERS

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Surry Hills, NSW 2010
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info@traffix.com.au


LEGEND Vehicle Access

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
140 ELEVENTH AVENUE AUSTRAL

PROJECT NUMBER
22.212

DATE
27.02.2026

CLIENT
TRINITY FITOUT AND CONSTRUCTION

TGS
**TGS 01: ALL STAGES OF CONSTRUCTION**

PREPARED BY
TOM MOJSIEJUK

APPROVED BY
TOM MOJSIEJUK

SAFEWORK NSW CARD NUMBER
5201837

SIGNATURE


## VALUE OF DIMENSION "D"

| Speed of Traffic (km/h) | Dimension "D" (m) |
|---|---|
| 60 | 60 |

**Note:**
Tenth Avenue - 60 km/h

**Time Period:**
12 months


TRAFFIX
TRAFFIC AND TRANSPORT PLANNERS

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


LEGEND Exit Point

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
140 ELEVENTH AVENUE AUSTRAL

PROJECT NUMBER
22.212

DATE
27.02.2026

CLIENT
TRINITY FITOUT AND CONSTRUCTION

TGS
**TGS 02: ALL STAGES OF CONSTRUCTION**

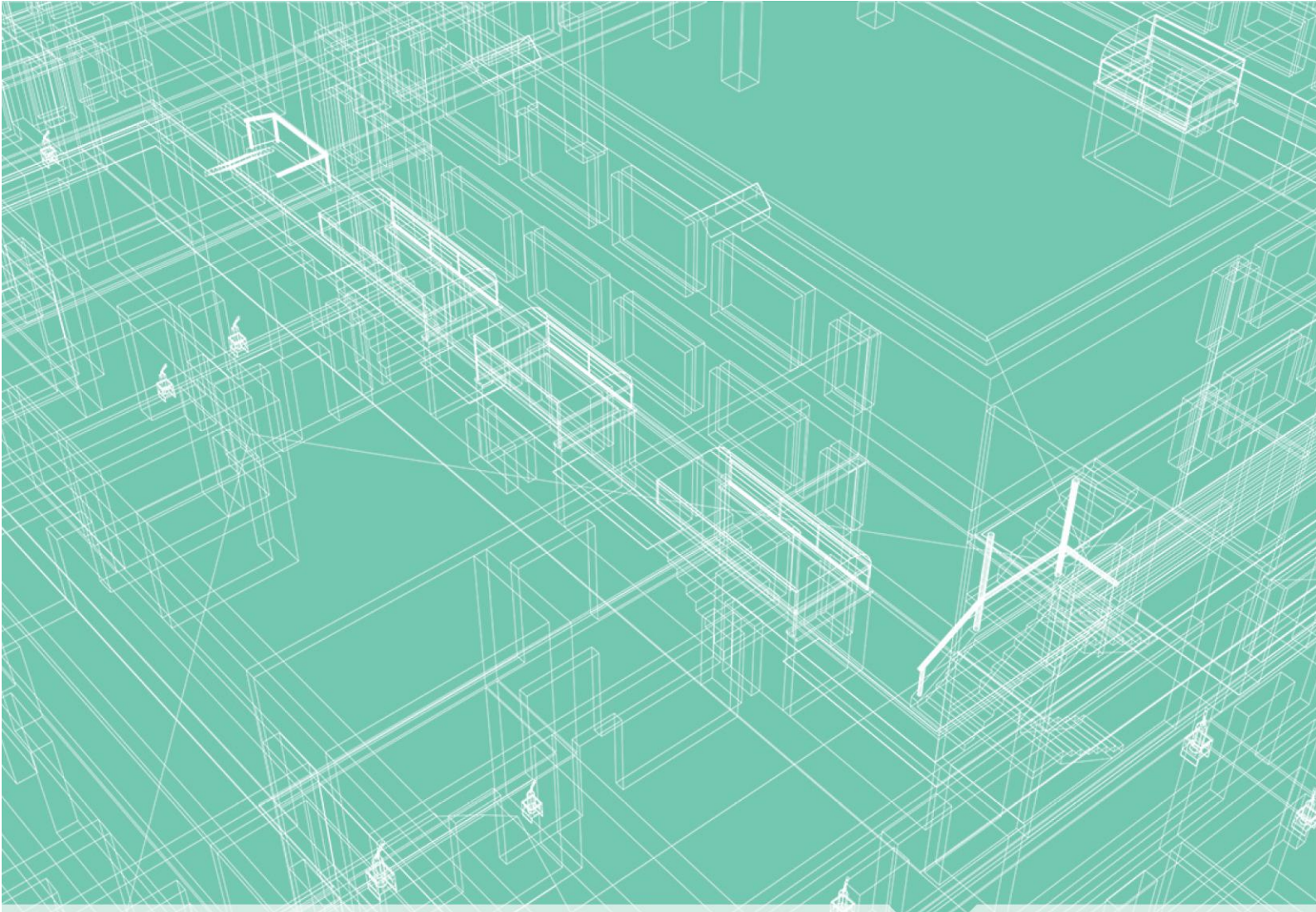
PREPARED BY
TOM MOJSIEJUK

APPROVED BY
TOM MOJSIEJUK

SAFEWORK NSW CARD NUMBER
5201837

SIGNATURE

# Appendix 3: Construction Noise and Vibration Management Sub-Plan



CONSTRUCTION NOISE AND VIBRATION MANAGEMENT PLAN

# EARLY LEARNING CENTRE

# ST ANTHONY OF PADUA CATHOLIC SCHOOL, AUSTRAL

## ACOUSTIC SERVICES

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## DOCUMENT CONTROL SHEET

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# 1 INTRODUCTION

## 1.1 OVERVIEW

This Construction Noise and Vibration Management Plan (CNVMP) has been prepared by JHA Consulting Engineers on behalf of Trinity Fitout & Constructions Pty Ltd to address the Condition of Consent (SSD-8865-Mod-6) Clauses C21 for the proposed Early Learning Centre (Childcare Centre) at 140 Eleventh Avenue, Austral.

The development work is divided into two stages, which incorporate the following:

- Demolition of structures,
- Construction of a single storey building with outdoor space for 0–6 year-olds.

This document and related work have been prepared following JHA Consulting Engineers Quality and Environmental Management Systems, which are based on ISO 9001:2015 and ISO 14001:2015, respectively. These frameworks ensure consistent processes, reliable outputs, and responsible environmental practices throughout our service delivery.

## 1.2 PURPOSE OF THE CNVMP

The purpose of this CNVMP is to ensure that noise and vibration impact due to construction activities are appropriately managed in accordance with relevant legislation and standards, plus protection of the nearby sensitive receivers. The objectives of this acoustic assessment are:

- Comply with the relevant Conditions of Consent as per SSD-8865-Mod-6 (dated 22 July 2025), particularly in relation to Condition C21.
- Identify noise-sensitive receivers that will potentially be affected by the works.
- Establish the appropriate noise level and vibration criteria in accordance with the relevant standards, guidelines and legislation.
- Determine whether the relevant criteria can be achieved based on assumed construction works and plant for the noise assessments. Where applicable, provide recommendations for any necessary acoustic control measures that will need to be incorporated into the development or use in order to ensure the assessment criteria.
- Provide recommendations for Construction Noise and Vibration Planning.

This CNVMP identifies the Contractor's obligations and the requirements to manage noise and vibration during construction such that the necessary allowances within the construction costs, programmes and work methodologies can be made. Relevant legislation, guidelines and standards are identified in this CNVMP.

## 1.3 CONSENT CONDITION C21 REQUIREMENTS

Requirements of Consent Condition 21 have been addressed in this report as per Table 1.

| *Condition* | *Description* | *Report Section* |
|---|---|---|
| *21(a)* | *C21. The Construction Noise and Vibration Management Sub-Plan must address, but not be limited to, the following:*<br>*(a) be prepared by a suitably qualified and experienced noise expert;* | 1.6 |

| Condition | Description | Report Section |
|---|---|---|
| *21(b)* | *(b) describe procedures for achieving the noise management levels in EPA's Interim Construction Noise Guideline (DECC, 2009);* | 7 |
| *21(c)* | *(c) incorporate the measures as recommended in the Noise and Vibration Impact Assessment report for (SSDA 8865) (Project No. 200489, Revision B dated 31 March 2021) prepared by JHA, as amended by Noise Impact Assessment (SSD-8865) Revision B prepared by JHA and dated 25 September 2024;* | It is noted that the recommendations of Construction noise and vibration in the NIA report Rev B, dated 21/03/2021, is to conduct a detailed CNVMP during the construction stages. |
| *21(e)* | *(e) describe the measures to be implemented to manage high noise generating works such as piling, in close proximity to sensitive receivers* | 7 |
| *21(f)* | *(f) include strategies that have been developed with the community for managing high noise generating works;* | 7.4, 7.5 |
| *21(g)* | *(g) describe the community consultation undertaken to develop the strategies in Schedule 3 condition C21(c)* | 7.4 |
| *21(h)* | *(h) include a complaints management system that would be implemented for the duration of the construction* | 7.4 |
| *21(i)* | *(i) include a program to monitor and report on the impacts and environmental performance of the development and the effectiveness of the management measures in accordance with Schedule 3 condition C21(c).* | 7.8 |

Table 1: requiements of Consent Condition C21 and relevant Sections of the CNVMP report.

## 1.4 NOISE AND VIBRATION ISSUES

This CNVMP addresses all works from construction works associated with the proposed development. The construction works will contribute noise and vibration emissions to the surrounding environment. Typically, this will comprise of continuous and intermittent noise and vibration from on-site construction equipment and plant equipment.

Construction noise associated with the project may include airborne and ground-borne noise impacts as follows:

- Airborne Noise: Proposed construction works will generate noise that will propagate through the air. Airborne noise generated by external construction activities is likely to impact surrounding sensitive receivers.
- Ground-borne noise and vibration impacts: Construction works have the potential to generate noise and vibration that propagates through the ground and building structural elements, which is then radiated by vibrating wall and floor surfaces of nearby sensitive receivers.

## 1.5 RESPONSIBILITIES

The Main Contractor must be responsible for ensuring that the noise and vibration from activities carried out on-site are minimised as far as practical. The Main Contractor is responsible for:

- Ensuring that any site noise and vibration levels, plus any complaints, are monitored, investigated, managed and controlled in accordance with the recommendations provided in this plan.
- Ensuring procurement documents specify any requirements in relation to the management of noise and vibration.
- Ensuring all works are undertaken in accordance with the requirements of the contract documents and this plan.
- Ensuring all project personnel and sub-contractors employed are aware of their responsibilities regarding the management of noise and vibration during construction and assume the responsibilities assigned to them within the plan.
- Monitoring and managing exceedances of the noise and vibration impacts on sensitive receivers in accordance with the requirements of the relevant guidelines and standards.
- Consulting with the occupants of surrounding buildings to inform them of the nature of the construction works, to determine any specific noise and vibration sensitivity they may have and to negotiate respite times during noisier works.

## 1.6 AUTHORS

This report was prepared by Abhishek Ray Mohapatra and Shahrokh Sepehrirahnama has reviewed the report for Quality Assurance (QA). Both Abhishek and Shahrokh are Member of the Australian Acoustical Society (MAAS).

# 2 DESCRIPTION OF THE PROPOSAL

## 2.1 SITE DETAILS

Austral is a suburb located in the local government area of the City of Liverpool, in the state of New South Wales. It is 42 kilometres south-west of the Sydney central business district. The childcare centre site is located on 140 Eleventh Avenue, and it is legally known as Lot 812/DP2475.

The surrounding developments are single, and two storey detached houses with the surrounding land uses as follows:

- *North:* Public recreation and low density residential.
- *East:* Medium density residential development.
- *South:* Premises of the St Anthony of Padua School.
- *West:* Premises of the St Anthony of Padua School.

Figure 1 shows the proposed development site and surrounding areas.


**Figure 1:** Proposed development site and surrrounding areas.

## 2.2 NOISE-SENSITIVE RECEIVER DETAILS

A summary of the nearest noise-sensitive receivers, grouped into Noise Catchment Areas (NCAs), surrounding the site is shown in Table 2, including approximate distances from the site to the NCAs' boundaries, noting also the type of receiver and if the receiver is existing or future within the NCAs.

| ID | Sensitive Receiver | Receiver Status | Receiver Type | Approx. Distance, m |
|---|---|---|---|---|
| 1 | 146 Eleventh Ave | Existing School building | Educational | 13 |
| 2 | 125 Eleventh Ave | Existing | Public recreation | 100 |
| 3 | 125B Eleventh Ave | Existing | Residential | 55 |
| 4 | 127 Tenth Ave | Existing | Residential | 100 |

Table 2: Receivers surrounding the site and the approximate distances from boundaries.

It is noted that if noise and vibration impacts associated with the proposed development are controlled at the nearest noise-sensitive receivers, then compliance with the recommended criteria at all noise-sensitive receivers should be achieved.

Figure 2 shows the proposed development site and surrounding noise-sensitive receivers and their types.


Figure 2: Proposed development and surrounding sensitive receivers (Noise Catchment Areas).

# 3 SITE MEASUREMENTS

Unattended noise survey was conducted by JHA Consulting Engineers from 7th February to 14th February 2023. The location and the results of the noise survey have been extracted from the JHA Noise and Vibration Impact Assessment report[1] and summarised in Table 3.


**Figure 3:** Noise survey locations and boundary of the development. Source: JHA Acoustic Report[1].

| *Location* | *Rating Background Levels, dB(A)* | | | *Ambient Noise Levels, dB(A)* | | |
|---|---|---|---|---|---|---|
| | *Day 7am-6pm* | *Evening 6pm-10pm* | *Night 10pm-7am* | *Day 7am-6pm* | *Evening 6pm-10pm* | *Night 10pm-7am* |
| *L1* | 38 | 38 | 35 | 63 | 54 | 51 |

**Table 3:** Results of the long-term noise monitoring. Source: JHA Acoustic Report[1].

[1] Noise Impact Assessment for SSDA (SSDA-8865) by JHA Consulting Engineers (Ref: 230020-AC-DA, Rev B), dated 25 September 2024.

# 4 NOISE AND VIBRATION CRITERIA

## 4.1 RELEVANT CODES AND STANDARDS

In preparing this CNVMP, the following documentation, including legislation, codes, standards, and guidelines have been considered:

- Regulatory Framework:
  - Environmental Planning and Assessment (EP&A) Act 1979.
  - Protection of the Environmental Operations (POEO) Act 1997.
  - NSW Environment Protection Authority (EPA) '*Noise Guide for Local Government*' (NGLG) 2023.
- Construction Noise and Vibration:
  - NSW Department of Environment and Climate Change (DECC) *'Interim Construction Noise Guideline'* (ICNG) 2009.
  - NSW DECC '*Assessing Vibration: A Technical Guideline*' 2006.
  - TfNSW EMF-NV-GD-0056 Construction Noise and Vibration Guideline (Roads) 2026.
  - Australian Standard AS 2436:2010 *'Acoustics – Guide to Noise Control on Construction, Maintenance & Demolition Sites'*.
  - British Standards Institution BS 6472.1:2008 *'Guide to evaluation of human exposure to vibration in buildings - Vibration sources other than blasting'*.
  - British Standards Institution BS 7385.2:1993 *'Evaluation and Measurement for Vibration in Buildings. Guide to Damage Levels from Ground-borne Vibration'*.
  - DIN 4150.3:2016 *'Structural Vibration – Effects of vibration on structures'*, German Institute for Standardisation.

## 4.2 REGULATORY FRAMEWORK

### 4.2.1 ENVIRONMENTAL PLANNING AND ASSESSMENT (EP&A) ACT 1979

The Environmental Planning and Assessment Act 1979 (EP&A Act) provides the regulatory framework for the protection of the environment in NSW. The EP&A Act is relevantly about planning matters and ensuring that "environmental impact" associated with the proposed development is properly considered and reasonable before granting development consent to develop.

The assessment of "environmental impact" relies upon the identification of acceptable noise criteria which may be defined in a Development Control Plan or derived from principles using guidelines like NSW EPA Noise Policy for Industry (NPI 2017) or Noise Guide for Local Government (NGLG 2023).

### 4.2.2 PROTECTION OF THE ENVIRONMENTAL OPERATIONS (POEO) ACT 1997

The Protection of the Environment Operations (POEO) Act 1997 has the objective to protect, restore and enhance the quality of the NSW environment. Abatement of noise pollution is underpinned by the definition of *"offensive noise"* as follows:

*"...*

*(a) that, by reason of its level, nature, character or quality, or the time at which it is made, or any other circumstances:*

*(i) is harmful to (or is likely to be harmful to) a person who is outside the premises from which it is emitted, or*

*(ii) interferes unreasonably with (or is likely to interfere unreasonably with) the comfort or repose of a person who is outside the premises from which it is emitted, or*

*(b) that is of a level, nature, character or quality prescribed by the regulations or that is made at a time, or in other circumstances, prescribed by the regulations.*

*..."*

Noise Guide for Local Government (NGLG) 2023, provides a consideration checklist to determine an *"offensive noise"*.

## 4.3 DEVELOPMENT CONDITIONS OF CONSENT (SSD-8865-MOD 6)

Clause C.21 of Section *Construction Environmental Management Plan* of the Development Conditions of Consent (SSD-8865-mod-6) states the following:

*"...*
*C21. The Construction Noise and Vibration Management Sub-Plan must address, but not be limited to, the following:*

*(a) be prepared by a suitably qualified and experienced noise expert;*

*(b) describe procedures for achieving the noise management levels in EPA's Interim Construction Noise Guideline (DECC, 2009);*

*(c) incorporate the measures as recommended in the Noise and Vibration Impact Assessment report for (SSDA 8865) (Project No. 200489, Revision B dated 31 March 2021) prepared by JHA, as amended by Noise Impact Assessment (SSD-8865) Revision B prepared by JHA and dated 25 September 2024;*

*(d) (deleted);*

*(e) describe the measures to be implemented to manage high noise generating works such as piling, in close proximity to sensitive receivers;*

*(f) include strategies that have been developed with the community for managing high noise generating works;*

*(g) describe the community consultation undertaken to develop the strategies in Schedule 3 condition C21(c);*

*(h) include a complaints management system that would be implemented for the duration of the construction; and*

*(i) include a program to monitor and report on the impacts and environmental performance of the development and the effectiveness of the management measures in accordance with Schedule 3 condition C21(c).*

*..."*

Construction hours of work for the project shall be as per clauses D12 to D15 under Section '*Construction Hours*' of the Development Conditions of Consent states the following:

*"...*

*D12. Construction, including the delivery of materials to and from the site, may only be carried out between the following hours:*

*(a) between 7am and 6pm, Mondays to Fridays inclusive; and*

*(b) between 8am and 1pm, Saturdays.*

*No work may be carried out on Sundays or public holidays.*

*D13. Construction activities may be undertaken outside of the hours in Schedule 3 condition D12 if required:*

*(a) by the Police or a public authority for the delivery of vehicles, plant or materials; or*

*(b) in an emergency to avoid the loss of life, damage to property or to prevent environmental harm; or*

*(c) where the works are inaudible at the nearest sensitive receivers; or*

*(d) where a variation is approved in advance in writing by the Planning Secretary or his nominee if appropriate justification is provided for the works.*

*D14. Notification of such construction activities as referenced in Schedule 3 condition D13 must be given to affected residents before undertaking the activities or as soon as is practical afterwards.*

*D15. Rock breaking, rock hammering, sheet piling, pile driving and similar activities may only be carried out between the following hours*

*(a) 9am to 12pm, Monday to Friday;*

*(b) 2pm to 5pm Monday to Friday; and*

*(c) 9am to 12pm, Saturday.*

..."

Clauses D21 to D23 of Section *Construction Noise Limits* of the Development Conditions of Consent states the following:

"...
*D21. The development must be constructed to achieve the construction noise management levels detailed in the Interim Construction Noise Guideline (DECC, 2009). All feasible and reasonable noise mitigation measures must be implemented and any activities that could exceed the construction noise management levels must be identified and managed in accordance with the management and mitigation measures identified in the approved CNVMSP (Schedule 3 condition C21).*

*D22. The Applicant must ensure construction vehicles (including concrete agitator trucks) do not arrive at the site or surrounding residential precincts outside of the construction hours of work outlined under Schedule 3 condition D12.*

*D23. The Applicant must implement, where practicable and without compromising the safety of construction staff or members of the public, the use of 'quackers' to ensure noise impacts on surrounding noise sensitive receivers are minimised.*

..."

Clauses D24 to D26 of Section *Vibration Criteria* of the Development Conditions of Consent states the following:

"...
*D24. Vibration caused by construction at any residence or structure outside the site must be limited to:*

*(a) or structural damage, the latest version of DIN 4150-3 (1992-02) Structural vibration - Effects of vibration on structures (German Institute for Standardisation, 1999); and*

*(b) for human exposure, the acceptable vibration values set out in the Environmental Noise Management Assessing Vibration: a technical guideline (DEC, 2006) (as may be updated or replaced from time to time).*

*D25. Vibratory compactors must not be used closer than 30m from residential buildings unless vibration monitoring confirms compliance with the vibration criteria specified in Schedule 3 condition D24.*

*D26. The limits in conditions D24 and D25 apply unless otherwise outlined in a CNVMSP (schedule 3 condition C21) approved as part of the CEMP required by Schedule 3 condition C18 of this consent.*

..."

## 4.4 NSW INTERIM CONSTRUCTION NOISE GUIDELINE

The ICNG suggests construction noise management levels that may minimise the likelihood of annoyance being caused to noise-sensitive residential receivers depending on the duration of work. The Noise Management Levels (NMLs) for long-term duration works are as follows for residential receivers.

| *Time of Day* | *NML $L_{Aeq,15min}$* | *How to Apply* |
|---|---|---|
| **ICNG Criteria for Recommended Standard Hours:**<br>Mon-Fri 7am-6pm<br>Sat 8am-1pm<br>No work on Sundays or public holidays | Noise affected:<br>**48dB(A)**<br>(RBL + 10dB) | The noise affected level represents the point above which there may be some community reaction to noise.<br>▪ Where predicted or measured $L_{Aeq,15min}$ is greater that the noise affected level, the proponent should apply all feasible and reasonable work practices to meet the noise affected level.<br>▪ The proponent should also inform all potentially impacted residents of the nature of works to be carried out, the expected noise levels and duration, as well as contact details. |
| | Highly noise affected:<br>**75dB(A)** | The highly noise affected level represents the point above which there may be strong community reaction to noise.<br>▪ Where noise is above this level, the relevant authority may require respite periods by restricting the hours that the very noisy activities can occur, taking into account:<br>1. Times identified by the community when they are less sensitive to noise.<br>2. If the community is prepared to accept a longer period of construction in exchange for restrictions on construction times. |
| **ICNG Criteria for Outside Recommended Standard Hours**<br>[*Refer to approved hours from the Consent Conditions*] | Noise affected:<br>**43dB(A)**<br>(RBL + 5dB) | ▪ A strong justification would typically be required for work outside the recommended standard hours.<br>▪ The proponent should apply all feasible and reasonable work practices to meet the noise affected level.<br>▪ Where all feasible and reasonable practices have been applied and noise is more than 5dB(A) above the noise affected level, the proponent should negotiate with the community. |

**Table 4**: ICNG construction airborne noise criteria for residential receivers surrounding the construction site.

In order to establish the airborne construction noise criteria, noise levels from the unattended noise monitoring have been used for the noise-sensitive receivers – refer to Section 3. Table 5 below summarises the airborne construction noise criteria for most affected noise-sensitive receivers surrounding the development site.

| *Sensitive Receiver* | | *Noise Management Levels (NMLs) $L_{Aeq}$ dB(A)* | |
|---|---|---|---|
| | | *Within Standard Hours* | *Outside Standard Hours* |
| *Residential* | Noise affected / External | 48 | 43 |
| | Highly noise-affected / External | 75 | N/A |
| *Educational* | Internal* | 45 | 45 |
| *Public Recreation* | External | 65 | 65 |

**Table 5:** ICNG construction airborne noise criteria for noise-sensitive receivers surrounding the site. Note*: ICNG recommends a conservative estimation of 10dB difference between external and internal noise levels for buildings other than residences, e.g., educational receivers.

The ICNG recommends maximum internal ground-borne noise levels at residences affected by nearby construction activities. Ground-borne noise is the noise generated by vibration transmitted through the ground into a structure and can be more noticeable than airborne noise for some sensitive receivers. The ground-borne noise levels presented below from the ICNG are for residential receivers during evening and night-time periods only, as the objective is to protect the amenities and sleep of people when they are at home.

- Evening (6 pm to 10 pm): $L_{Aeq,15min}$ 40dB(A) (internal)
- Night (10 pm to 7 am): $L_{Aeq,15min}$ 35dB(A) (internal)

The internal noise levels are assessed at the centre of the most affected habitable room. No assessments of ground borne noise have been conducted as no out-of-standard-hours work is proposed to occur during evening time and night-time.

## 4.5 VIBRATION CRITERIA

There are two items that shall be considered in the assessment of vibration impacts from construction works. These include vibration impacts in terms of human comfort and building damage.

### 4.5.1 HUMAN COMFORT

The Department of Environment and Climate Change (DECC) developed the document *'Assessing Vibration: A Technical Guideline'* in February 2006 to assist in preventing people from exposure to excessive vibration levels within buildings. It is based on the guidelines contained in BS 6472.1:2008 *'Guide to evaluation of human exposure to vibration in buildings – Vibration sources other than blasting'*. The guideline does not, however, address vibration-induced damage to structures or structure-borne noise effects.

Vibration and its associated effects are usually classified as follows:

- *Continuous vibration*. An uninterrupted vibration for a defined period. This type of vibration is assessed based on weighted root-mean-squared (rms) acceleration values.
- *Impulsive vibration*. A vibration that has a rapid buildup to a peak followed by a damped decay may or may not involve several cycles of vibration (depending on the frequency and damping).

- *Intermittent vibration*. An interrupted periodic vibration of continuous or repeated periods of impulsive vibration, or continuous vibration that varies significantly in amplitude. This type of vibration is assessed on the basis of Vibration Dose Values (VDV).

Vibration criteria for continuous and impulsive vibration are presented in Table 6, in terms of vibration velocity levels. The values are assessed for the most critical frequency range (higher than 8 Hz, assuming sinusoidal motion). When assessing intermittent vibration comprising several events, it is recommended that the Vibration Dose Value (VDV) is used. Table 7 shows the acceptable VDV values for intermittent vibration.

| *Receiver Type* | *Time* | *RMS velocity, mm/s [dB ref $10^{-9}$mm/s]* | | | |
|---|---|---|---|---|---|
| | | *Continuous Vibration* | | *Impulsive Vibration* | |
| | | *Preferred* | *Maximum* | *Preferred* | *Maximum* |
| *Residences* | Day-time | 0.20 [106 dB] | 0.40 [112 dB] | 6.00 [136 dB] | 12.00 [142 dB] |
| | Night-time | 0.14 [103 dB] | 0.28 [109 dB] | 2.00 [126 dB] | 4.00 [132 dB] |
| *Educational* | When in use | 0.40 [112 dB] | 0.80 [118 dB] | 13.00 [142 dB] | 26.00 [148 dB] |

**Table 6:** Continuous and impulsive vibration criteria applicable to the site. Note: Day-time is 07:00am to 10:00pm and night-time is 10:00pm to 07:00am.

| *Place* | *Time* | *Vibration Dose Values, $m/s^{1.75}$* | |
|---|---|---|---|
| | | *Preferred* | *Maximum* |
| *Residences* | Day-time | 0.20 | 0.40 |
| | Night-time | 0.13 | 0.26 |
| *Educational* | When in use | 0.40 | 0.80 |

**Table 7:** Intermittent vibration criteria applicable to the site.

### 4.5.2 STRUCTURAL BUILDING DAMAGE

Ground vibration from construction activities can damage surrounding buildings or structures. For unoccupied buildings, or during periods where the buildings are unoccupied, the vibration criteria for building damage suggested by German Standard DIN 4150.3:2016 *'Structural Vibration – Effects of Vibration on Structures'* and British Standard BS 7385.2:1993 *'Evaluation and Measurement for Vibration in Buildings'* are to be adopted. Guideline values from BS 7385.2:1993 and DIN 4150.3:2016 and are presented in Table 8 and Table 9 respectively.

| *Structural type* | *Peak particle velocity, mm/s* | |
|---|---|---|
| | *4 to 15Hz* | *15Hz and above* |
| *Unreinforced or light framed structures Residential or light commercial type buildings* | 15mm/s @ 4Hz increasing to 20mm/s @ 15Hz | 20mm/s @ 15Hz increasing to 50mm/s @ 40Hz and above |

**Table 8:** BS 7385.2:1993 Guideline values of vibration velocity for evaluating cosmetic damage.

| *Structural type* | *Vibration velocity, mm/s (Peak Particle Velocity - PPV)* | | | | |
|---|---|---|---|---|---|
| | *Foundation* | | | *Plane of floor uppermost full storey in horizontal direction* | *Floor slabs, vertical direction* |
| | *1Hz to 10Hz* | *10Hz to 50Hz* | *50Hz to 100Hz* | *All frequencies* | *All frequencies* |
| *Type 1: Buildings used for commercial purposes, industrial buildings and buildings of similar design* | 20 | 20 to 40 | 40 to 50 | 40 | 20 |
| *Type 2: Residential buildings and buildings of similar design and/or occupancy* | 5 | 5 to 15 | 15 to 20 | 15 | 20 |
| *Type 3: Structures that because their particular sensitivity to vibration, cannot be classified under Type 1 and 2 and are of great intrinsic value (e.g. heritage buildings)* | 3 | 3 to 8 | 8 to 10 | 8 | 20 |

**Table 9:** DIN 4150.3:2016 Guideline values of vibration velocity (PPV) for evaluating the effects of short-term vibration.

# 5 CONSTRUCTION ACTIVITIES

Construction impact assessment has been carried out based on the information provided by Trinity Fitout & Construction on typical construction work stages plus associated construction plant.

## 5.1 DESCRIPTION OF WORKS

The overall stages of work for the construction of the Childcare Centre are planned for 12 months from the date of commencing work.

The assumed activities and plant relevant to the typical stage of works are summarised below in Table 10.

| *Stage of Works* | *Main Activities* | *Typical Plant* |
|---|---|---|
| *Demolition / Excavation [2 months]* | Site Strip | Excavators with bucket<br>Rollers<br>Trucks and Dogs |
| | Bulk Excavation | |
| | Fill and Compact | |
| *Structure [3 months]* | Foundation and columns | Forklift<br>Excavators with bucket<br>Powered Hand Tools (electric)<br>Concrete Pencil Vibrators<br>Concrete Boom Pump<br>Trucks and Concrete Trucks |
| | Ground Floor | |
| *Roofing/Façade Works [2 months]* | Install plantroom equipment | Mobile Cranes<br>Powered Hand Tools (electric)<br>Elevated Work Platform (Boom Lift) |
| | Install façade and roof | |
| *Fit-out / Landscaping [5 months]* | Outdoor lawn and playground | Delivery Trucks<br>Small Front-End Loaders (Bobcat type)<br>Powered Hand Tools (electric) |
| | Ceiling and wet areas | |
| | Fit-off services | |

Table 10: Assumed Stage of Works, related activities and typical plant used.

## 5.2 TYPICAL EQUIPMENT AND NOISE LEVELS

In accordance with the information provided and to assess the potential noise and vibration impacts during works from a quantitative point of view, the construction noise sources for the works occurring during the project and the associated equipment noise levels are listed in Table 11.

Sound power levels are based on the databases published by Australian Standard AS 2436:2010 *'Guide to Noise Control on Construction, Maintenance & Demolition Sites'*, Roads and Maritime Services '*Construction Noise and Vibration Guideline*' and the UK Department for Environmental, Food and Rural Affairs (DEFRA).

| *Stage of works* | *Item* | *Typical Sound Power Level $L_{WAeq}$ (dB ref 1pW)* | *Typical Sound Pressure Level $L_{Aeq}$ at 10m (dB ref 20μPa)* |
|---|---|---|---|
| *Demolition / Excavation* | Excavator with bucket | 105 | 80 |
| | Smooth Drum Roller | 109 | 84 |
| | Truck and Dog | 105 | 80 |
| *Structure* | Forklift | 103 | 78 |
| | Excavators with bucket | 105 | 80 |
| | Mobile Crane | 115 | 90 |
| | Powered Hand Tool (Electric) | 99 | 74 |
| | Concrete Pencil Vibrator | 102 | 77 |
| | Concrete Pump | 110 | 85 |
| | Truck | 104 | 89 |
| | Concrete Truck | 113 | 88 |
| *Roofing/Façade Works* | Mobile Crane | 115 | 90 |
| | Powered Hand Tool (Electric) | 99 | 74 |
| | EWP (Boom Lift) | 102 | 77 |
| *Fit-out / Landscaping* | Delivery Trucks | 105 | 80 |
| | Small Front End Loaders (Bobcat type) | 110 | 85 |
| | Powered Hand Tool (Electric) | 99 | 74 |

Table 11: Anticipated maximum airborne noise levels for the construction plant used during the different stages of the works.

## 5.3 CONSTRUCTION WORK HOURS

To comply with Consent Condition D12, no works outside of the standard will be undertaken. Therefore, the airborne construction noise impact will be assessed against the criteria for Standard hours as per Table 4.

# 6 CONSTRUCTION NOISE AND VIBRATION ASSESSMENT

A construction noise and vibration assessment has been carried out based on the plant and machinery expected throughout the works associated as per Section 5. The Contractor will be responsible for preparing a Construction Works Plan and Schedule, which include all relevant noise and vibration information.

## 6.1 ASSESSMENT METHODOLOGY

An assessment of the likely noise and vibration impacts of the assumed stage of works on the most affected NCAs surrounding the site has been carried out. The assessment has considered the following:

- Typical construction activities considered in the noise impact are detailed in Section 5.1.
- Typical noise source levels considered in the noise impact are detailed in Section 5.2.
- Proposed construction hours as per 5.3.
- Project specific noise and vibration criteria at sensitive receivers as outlined in Section 4.

The predictions represent the 'reasonable' worst periods of construction activities to assess the noise impact from the site during construction. The assumptions that were made within the assessment include the following:

- The predictions consider continuous operation of the construction plant over the 15-minute assessment period within proximity to site boundaries.
- Height of the noise receiver at 1.5m above ground level.
- Atmospheric propagation conditions were modelled with neutral conditions.
- Construction noise sources (listed in Table 11) spread around the construction site.

The predicted noise levels at the surrounding sensitive receivers have been based on the assumptions and sound power levels of the equipment. It should be noted that the predicted noise levels generated during the construction works may vary depending on many factors, including:

- Final selection of plant and equipment which could differ from the plant presented in Table 11.
- Exact location of equipment and plant on site – relative to the noise-sensitive receivers.
- Shielding of noise provided by hoardings on site.
- Reflections provided by existing structures on and around the site.

## 6.2 SOLID HOARDING PLAN

As per the information provided by Trinity Fitout & Construction, a solid hoarding/barrier has been installed at the location shown in Figure 4 between the existing school building, which is part of NCA1, and the construction site. It is understood that the barrier is currently 2.4m high with no gaps.


Figure 4: Site with proposed location and extent of solid hoarding. Source Trinity Fitout & Construction Pty Ltd.

## 6.3 CONSTRUCTION AIRBORNE NOISE ASSESSMENT

Refer to the sections below for the predicted noise levels for the stages of work as detailed in Table 11. The ICNG requires and is usual practice, a reasonable worst-case noise level to be predicted.

### 6.3.1 NEAREST RESIDENTIAL RECEIVERS

The following predicted noise levels are conservative as they assume the typical worst-case sound power levels presented in Table 11 for construction plant continuously operating. Table 12 presents the predicted worst-case construction noise levels without acoustic screening at the most affected residential receiver in NCA3 as per Table 2.

| *Stages of Works* | *Construction Noise Levels at Residential Receivers $L_{Aeq,15m}$ dB(A)* | | |
|---|---|---|---|
| | *NCA3 (55 – 120m)* | *Complies with NML?* | *Complies with High Noise Affected?* |
| *Demolition / Excavation* | 62 - 69 | No | Yes |
| *Structure* | 65 - 72 | No | Yes |
| *Roofing/Façade Works* | 60 - 67 | No | Yes |
| *Fit-out / Landscaping* | 62 - 69 | No | Yes |

Table 12: Summary of predicted airborne noise levels at residential receiver (NCA3) for equipment / plant used during the noisiest stages of the construction works.

The assessment has been carried out with all construction plant operating continuously for all the construction stages, being a non-realistic case. It is expected that noise impacts to the school premises due to practical operation of the construction plant plus working distances will be less than the above predicted value.

Based on the results above, the construction noise levels are predicted to exceed the NMLs (red font); whilst highly noise affected criteria will be met for residential receiver in NCA3. The predicted exceedance of the

NMLs at the residential receivers will trigger the contractor to apply reasonable and feasible work practices to minimise the noise as much as possible, as per the requirements of the ICNG. Refer to Section 7 for details.

### 6.3.2 EXISTING SCHOOL BUILDINGS

Table 13 presents the predicted noise level at the façade of the educational receiver, NCA1, considering the existing hoarding/barrier, and the construction plant noise levels as per Table 11.

| *Stages of Works* | *Construction Noise Levels at Educational Receivers $L_{Aeq,15m}$ dB(A)* | |
|---|---|---|
| | *Group C (15 – 50m)* | *Complies with NMLs?* |
| *Demolition / Excavation* | 53 - 61 | No |
| *Structure* | 56 - 64 | No |
| *Roofing/Façade Works* | 50 - 59 | No |
| *Fit-out / Landscaping* | 52 - 61 | No |

Table 13: Summary of predicted airborne noise levels at Educational receivers (NCA1) for equipment / plant used during the noisiest stages of the construction works and with the proposed hoarding / acoustic barrier.

The assessment has been carried out with all construction plant operating continuously for all the construction stages, being a non-realistic case. It is expected that noise impacts to the school premises due to practical operation of the construction plant plus working distances will be less than the above predicted value.

As shown above, the worst-case cumulative noise level with the hoarding is predicted to exceed the NMLs criterion. Therefore, further noise management plan will be recommended for the nearest noise sensitive receivers in NCA1. The predicted exceedance of the NMLs at the educational receivers will trigger the contractor to apply reasonable and feasible work practices to minimise the noise as much as possible, as per the requirements of the ICNG. Refer to Section 7 for details.

## 6.4 VIBRATION ASSESSMENT

The vibration-intensive plant used during the construction works may impact adjacent sensitive receivers. The TfNSW EMF-NV-GD-0056 *Construction Noise and Vibration Guideline (Roads)* provides safe working distances for vibration intensive plant and are quoted for both 'cosmetic' damage (in accordance with BS 7385.2:1993) and human comfort (in accordance with DECC's '*Assessing Vibration: A Technical Guideline*'). The recommended safe working distances for typical construction plant are provided inTable 14.

| *Plant Item* | *Description* | *Cosmetic Damage* | *Human Response* |
|---|---|---|---|
| *Vibratory Roller* | 200 kN (Typically 4-6 tonnes) | 12m | 40m |
| | 300 kN (Typically 7-13 tonnes) | 15m | 100m |

Table 14: Recommended minimum working distances for vibration intensive plant from sensitive receivers.

The minimum working distances are indicative and will vary depending on the plant item and local geotechnical conditions. They are applicable to cosmetic damage of typical buildings under typical geotechnical conditions. The construction methods are to be reviewed to ensure that safe working distances are achieved.

In relation to human comfort (response), the minimum working distances in Table 14 relate to intermittent vibration (VDV parameter) as for most construction activities, vibration emissions are intermittent in nature. Where the predicted vibration levels will exceed the human comfort objectives, the procedures in Section 7.2.2 are to be followed in order to mitigate the potential impacts on sensitive receivers.

If the contractor has concerns for the disruptions at the nearest sensitive receivers due to vibration-intensive plant use, it is recommended that prior to the commencement of the works, to undertake a preliminary vibration survey on each key vibration-generating activity / equipment to assess and define working distances and unattended vibration monitoring locations.

# 7 NOISE AND VIBRATION CONTROL RECOMMENDATIONS

This section of the Construction Noise and Vibration Planning provides general recommendations only and provides applicable criteria together with the best noise and vibration control practices to be observed during the proposed works.

Any noise from construction activities to be carried out on site must not result in *'offensive noise'* to any noise-sensitive receiver. To this end, the Contractor employed to undertake the construction works is responsible for ensuring that any site noise and, in particular, any complaints shall be monitored, investigated, managed and controlled.

## 7.1 RESPITE PERIODS

Respite periods should generally be implemented into the work methodology in order to reduce the impact onto the surrounding NCAs, as detailed in Section 7.6. Refer to Consent Condition D12 in Section 5.3.

## 7.2 GENERAL CONTROLS FOR NOISE AND VIBRATION

According to ICNG and AS 2436:2010 *'Guide to Noise Control on Construction, Maintenance & Demolition Sites'*, the following techniques could be applied to minimise the spread of noise and vibration to the nearest sensitive receivers.

### 7.2.1 NOISE

If a process that generates significant noise levels cannot be avoided, the amount of noise reaching the receiver should be minimised. Two ways of achieving this are to either increase the distance between the noise source and the receiver or to introduce noise reduction measures such as screens.

Physical methods to reduce the transmission of noise between the site works and residences or other sensitive land uses are generally suited to works where there is longer-term exposure to the noise. Generic practices that will reduce noise from the site include:

- Increasing the distance between noise sources and sensitive receivers.
- Restrict areas in which mobile plants can operate so that they are away from residences and other sensitive land uses at particular times.
- Reducing the line-of-sight noise transmission to residences or other sensitive land uses.
- Constructing barriers that are part of the project design early in the project to introduce the mitigation of site noise.
- Installing purpose-built noise barriers and enclosures.

### 7.2.2 VIBRATION

Vibration can be more difficult to control than noise, and there are few general comments that can be made about its control. It should be kept in mind that vibration may cause disturbance by causing structures to vibrate and radiate noise in addition to perceptible movement. Impulsive vibration can, in some cases, provide a trigger mechanism that could result in the failure of building components that had previously been in a stable state.

During the erection of the new structure, some vibrations (transmitted through the existing structures near the demolition sites) are expected, which are more of a concern for the surrounding sensitive receivers.

It can also trigger annoyance being elevated into action by occupants of exposed buildings and should, therefore, be included in the planning of communication with impacted communities. It should be remembered that failures, sometimes catastrophic, can occur as a result of conditions not directly connected with the transmission of vibrations, e.g. the removal of supports from retaining structures to facilitate site access.

Where site activities may affect existing structures, a thorough engineering appraisal should be made at the planning stage.

General principles of seeking minimal vibration at receiving structures should be followed in the first instance. Predictions of vibration levels likely to occur at sensitive receivers are recommended when they are relatively close, depending on the magnitude of the source of the vibration or the distance associated. Relatively simple prediction methods are available in texts, codes of practice or other standards, however it is preferable to measure and assess site transmission and propagation characteristics between source and receiver locations.

Guidance for measures available for the mitigation of vibration transmitted can be sought in more detailed standards, such as BS5228.2:2009+A1:2014 *'Code of practice for noise and vibration control on construction and open sites. Vibration'* or policy documents, such as the NSW DEC *'Assessing Vibration: A technical guideline'*.

Identifying the strategy best suited to the control of vibration follows a similar approach to that of noise avoidance, control at the source, control along the propagation path, control at the receiver, or a combination of these. It is noted that vibration sources can include stationary plants (pumps and compressors), portable plants (jackhammers and pavement vibrators), mobile plants, pile-drivers, tunneling machines and activities, and blasting, amongst others. Unusual ground conditions, such as a high water-table, can also cause a difference in the expected or predicted results, especially when considering the noise propagated from piling.

## 7.3 UNIVERSAL WORK PRACTICES

To minimise construction noise complaints due to preventable activities at any time of the day, the following work practices shall be considered:

- Regularly train workers and contractors (such as toolbox talks) to use equipment in ways to minimise noise.
- Ensure site managers periodically check the site and nearby residences and other sensitive land use for noise problems so that solutions can be quickly applied.
- Include in tenders, employment contracts, subcontractor agreements and work method statements clauses that require minimisation of noise and compliance with directions from management to minimise noise.
- Avoid the use of radios or stereos outdoors where noise sensitive receivers can be affected.
- Avoid shouting and minimise talking loudly and slamming vehicle doors.
- Keep truck drivers informed of designated vehicle routes, parking locations, acceptable delivery hours or other relevant practices.
- Develop a one-page summary of approval or consent conditions that relate to relevant work practices and pin it to a noticeboard so that all site operators can quickly reference noise information.

- Workers may at times need to discuss or negotiate practices with their managers.
- Schedule high noise generating works outside of exam time or non-sensitive periods – i.e. during weekends or school holidays - to ensure the acoustic amenity of students.

For work practices during night-time, the following shall be considered:

- Avoid the use of equipment which generates impulsive noise.
- Minimise the need for reversing or movement alarms.
- Avoid dropping materials from a height.
- Avoid metal-to-metal contact on equipment.
- Schedule truck movements to avoid residential streets if possible.
- Avoid mobile plant clustering near residences and other sensitive land uses.
- Ensure periods of respite are provided in the case of unavoidable maximum noise level events.

## 7.4 COMMUNITY CONSULTATION AND NOTIFICATION

The community is more likely to be understanding and accepting of noise if the information provided is frank, does not attempt to understate the likely noise level, and if commitments are firmly adhered to. Recommended actions before and during construction:

- Provide, reasonably ahead of time, information such as total building time, what works are expected to be noisy, their duration, what is being done to minimise noise and when respite periods will occur. For works outside standard hours, inform affected residents and other sensitive land use occupants between 5 and 14 days before commencement.
- Provide information to neighbours before and during construction through communication channels outlined in Section 5 of the CCS report (Appendix A).
- Use a site information board at the front of the site with the name of the organisation responsible for the site and their contact details, hours of operation and regular information updates. The signage should be clearly visible from the outside and include after-hours emergency contact details.
- Maintain good communication between the community and project staff.
- Provide general contact details, e.g., phone numbers and email address, and site manager's contact details for stakeholders to submit feedback, enquiries and complaints in relation to the project, as per Section 5.3 of the CSS report (Appendix A).
- Facilitate contact with people to ensure that everyone can see that the site manager understands the potential issues, that a planned approach is in place and that there is an ongoing commitment to minimise noise.
- Community forums to enable information and feedback as per Section 5.2 of the CCS Report (Appendix A).
- Complaints management system shall be established as per Section 5.4 and Appendix A of the CCS Report (Appendix A).

To assist in the management of noise and vibration complaints, various procedures are to be followed. These include:

- Clearly visible signage identifying any key personnel along with their contact details to be erected along the perimeter of the building site including a 24-hour contact name, phone number and email address provided for the resident to address any complaint.
- Give complaints a fair hearing.
- Have a documented complaint process, including an escalation procedure so that if a complaint is not satisfied there is a clear path to follow.
- Call back as soon as possible to keep people informed of action to be taken to address noise problems. Call back at night-time only if requested by the complainant to avoid further disturbance.
- Provide a quick response to complaints, with complaint handling staff having both a good knowledge of the project and ready access to information.
- Assign the issue to the appropriate staff for resolution.
- Try to ascertain from the complaint which equipment / plant is causing the problem.
- Where necessary, establish from the monitoring equipment and or attended monitoring if the allowable noise and vibration levels have been complied with.
- Establish if the equipment / plant positioning has previously been highlighted as a problem area. If not, and the noise levels are above the allowable limits, then the equipment / plant and its position shall be noted.
- Implement all feasible and reasonable measures to address the source of the complaint plus advise the individual who raised the issue of the resolution.
- Follow-up corrective measures after seven days to ensure that they are satisfactory.
- The Communications Register is to be kept by the Contractor to keep a record of complaints and detail any information associated with them. The registration of a particular item will remain open until the compliant has been appropriately dealt with. The contents of the register will include:
  - The name and the address of the complaint
  - Time and date of the complaint
  - The nature of the complaint (Noise/Vibration)
  - Subsequent details
  - Remedial action undertaken

The contents of the Communications Register will be maintained and updated with any new complaint without delay. The report will be reported to both Authority and the Contractor. The investigation of the complaint and any remedial actions will be performed by the builder and/or client representative. Client representative will need to be informed of any and all complaints regarding noise and remedial actions undertaken.

## 7.5 MANAGING NOISE LEVELS AND MAINTENANCE PROGRAM FOR PLANT AND EQUIPMENT

In terms of both cost and results, controlling noise at the source is one of the most effective methods of minimising the noise impacts from any construction activities. Recommendations for managing noise levels from plant and equipment are as follows:

- Use quieter methods:
  - Examine and implement, where feasible and reasonable, alternatives to rock-breaking work methods, such as hydraulic splitters for rock and concrete, hydraulic jaw crushers, chemical rock and concrete

splitting, and controlled blasting such as penetrating cone fracture. The suitability of alternative methods should be considered on a case-by-case basis.

- Use alternatives to diesel and petrol engines and pneumatic units, such as hydraulic or electric controlled units where feasible and reasonable. Where there is no electricity supply, use an electrical generator located away from residences.

- Use quieter equipment:
  - Examine different types of machines that perform the same function and compare the noise level data to select the least noisy machine. For example, rubber wheeled tractors can be less noisy than steel tracked tractors.
  - Noise labels are required by NSW legislation for pavement breakers, mobile compressors, chainsaws and mobile garbage compactors. These noise labels can be used to assist in selecting less noisy plant.
  - Pneumatic equipment is traditionally a problem – select super silenced compressors, silenced jackhammers and damped bits where possible.
  - When renting, select quieter items of plant and equipment where feasible and reasonable.
  - When purchasing, select, where feasible and reasonable, the most effective mufflers, enclosures and low-noise tool bits and blades. Always seek the manufacturer's advice before making modifications to plant to reduce noise.
- Operate plant in a quiet and efficient manner:
  - Reduce throttle setting and turn off equipment when not being used.
  - Examine and implement, where feasible and reasonable, the option of reducing noise from metal chutes and bins by placing damping material in the bin.

The Contractor shall prepare and implement a regular plant and equipment use and maintenance program. This is to ensure that 'noisy' equipment or tools are not used. This program should ensure that the contractor will:

- Regularly inspect and maintain equipment to ensure it is in good working order. Also check the condition of mufflers.
- Equipment must not be operated until it is maintained or repaired, where maintenance or repair would address the annoying character of noise identified.
- For machines with enclosures, check that doors and door seals are in good working order and that the doors close properly against the seals.
- Return any hired equipment that is causing noise that is not typical for the equipment – the increased noise may indicate the need for repair.
- Ensure air lines on pneumatic equipment do not leak.

## 7.6 WORKS TIMING RESTRICTIONS AND SCHEDULING

Works should be carried out during periods specified by the approved Construction Hours. Scheduling noisy work during periods when people are least affected reduces noise impact on those. Recommendations for work scheduling are as follows:

- Provide respite periods.
- Schedule activities to minimise noise impacts:
  - Organise work to be undertaken during the recommended standard hours where possible.

- When works outside the recommended standard hours are planned, avoid scheduling on Sundays or public holidays.
- Schedule work when residential receivers are not present (for example, commercial residential receivers).
- Schedule noisy activities around times of high background noise (local road traffic or when other local noise sources are active) where possible to provide masking or to reduce the amount that the construction noise intrudes above the background.
- Consult with affected residential receivers about scheduling activities to minimise noise impacts.

- Organise deliveries and access:
  - Nominate an off-site truck parking area, away from residences, for trucks arriving prior to gates opening.
  - Amalgamated loads can lead to less noise and congestion in nearby streets.
  - Optimise the number of vehicle trips to and from the site – movements can be organised to amalgamate loads rather than using a number of vehicles with smaller loads.
  - Inform, and consult where possible, the potentially noise-affected residences or other sensitive land uses of designated access routes to and from site, and make drivers aware of nominated vehicle routes.
  - Schedule deliveries to nominated hours only.

## 7.7 ADDITIONAL NOISE AND VIBRATION CONTROLS

There will likely be times or situations when construction works exceed the stated criteria at the nearest receivers, particularly when works occur in the areas closer to the receiver(s). Therefore, all feasible and reasonable noise control measures should be considered.

If, during construction, an item of equipment exceeds either the noise criteria at any location or the equipment noise level limits, the following noise control measures, together with construction best practices presented in this Section shall be considered to minimise the noise and vibration impacts of the project on the surrounding noise sensitive receivers:

- Schedule noisy activities to occur outside of the most sensitive times of the day for each nominated receiver. For example, the residential receivers are likely to be more sensitive to noise before 8am and after 6pm.
- Consider implementing equipment specific temporary screening for noisy equipment, or other noise control measures recommended in Appendix C of AS2436:2010. This will most likely apply to noisier hand-held items such as jack-hammers and circular saws.
- Locate specific activities such as carpentry areas (use of circular saws, etc.) to internal spaces or where shielding is provided by existing structures or temporary screening.
- Limit the number of trucks and heavy vehicles on site at any given time through scheduling deliveries at differing times.
- Traffic rules should be prepared to minimise the noise impact on the community.
- When loading and unloading trucks, adopt best practice noise management strategies to avoid materials being dropped from height.
- Avoid unnecessary idling of trucks and equipment. Vehicles and equipment to be turned off when not in use.

- Ensure that any miscellaneous equipment (extraction fans, hand tools, etc.) not specifically identified in this plan incorporates silencing/shielding equipment as required to meet the noise criteria.
- Notify the nearest educational receivers to close the windows during high noise activity and construction work in general.

If the measured construction vibration levels exceed the appropriate criteria during the works, one or more of the following measures should be taken:

- Modifications to construction equipment used.
- Modifications to methods of construction.
- Rescheduling of activities to less sensitive times.

If the measures given cannot be implemented or have no effect on noise or vibration levels or impact generated, a review of the criteria should be undertaken, and the noise and vibration strategy amended.

## 7.8 MONITORING PROGRAM

Where noise and vibration criteria are being exceeded or in response to valid complaints, noise and/or vibration monitoring should be undertaken. This would be performed inside the premises of the affected property and on site adjacent to the affected receivers.

Monitoring is to be undertaken by an experienced noise and vibration monitoring professional or an acoustic consultant. The results of any noise or vibration monitoring are to be provided to the relevant party or person in a timely manner allowing the builder to address the issue and respond to the complaints.

Noise and vibration monitoring can take two forms:

- Short-term monitoring: Short-term monitoring consists of attended monitoring when critical stages of the construction are occurring. This normally provides real-time assistance and guidance to the sub-contractor on site letting them know when the noise and vibration criteria are exceeded allowing the selection of alternative method on construction or equipment selection in order to minimise noise and vibration impacts.
- Long-term monitoring: Similarly long-term monitoring uses noise and vibration loggers providing real-time alerts to the builder / site manager when the noise and vibration criteria are exceeded. Typically, the noise and vibration loggers stay on site for a period of several months for the critical construction stages of the project. Sometimes the period of construction noise and vibration monitoring is dictated by the local authorities through the Conditions of Consent if applicable.

Both methodologies are complementary and normally used simultaneously providing a significant amount of data via long-term monitoring but also providing information on the sources of noise and vibration generating exceedances via the short-term or attended monitoring.

The following may be included in a noise monitoring report:

- The type of monitoring conducted (for example, at a particular project stage or following complaints) and a brief statement of the measurement method.
- The noise / vibration conditions on the consent / licence, or the relevant noise management objectives.
- Descriptions of the nearest affected residences and other sensitive land uses or, in the case of complaints, description of the complainant location and complaint.
- Plan or diagram showing the location of the monitoring and the noise generating works.

- Description of the instrumentation used.
- Name and relevant qualifications or professional memberships of monitoring personnel.
- The weather conditions during monitoring.
- The time(s) and duration(s) of monitoring, including dates – in the case of complaints.
- A clear description of the construction activities taking place during the monitoring.
- The results of monitoring at each monitoring location, including a comparison with the consent conditions or relevant noise management objectives.
- A clear statement outlining the project's compliance or non-compliance with the conditions or objectives.
- Where the monitored level is higher than the conditions or objectives, the reasons for non-compliance should be stated, strategies for minimising noise identified and stated, and the appropriate actions to implement the strategies.

## 7.9 WORKERS' TRAINING AND AWARENESS

The Contractor shall provide all project personnel and subcontractors with training on the environmental obligations through project inductions, toolbox talks, and through Safety Works Methods (SWMs).

All Project work personnel and subcontractors shall undergo a general project induction prior to commencing work. This should include a noise component to reinforce the importance of noise issues and the measures that will be implemented to protect the environment.

All inductions shall be carried out by the site manager, or his designate in the site office as appropriate. During the induction, each contractor / worker shall be taken around the site to ensure they are fully aware of the exclusion zones and site-specific environment.

Site inductions and daily SWMs and toolbox talks will highlight the specific environmental requirements and activities being undertaken at each work area which will include relevant noise management matters.

## 7.10 OCCUPATIONAL HEALTH AND SAFETY

In addition to potential noise and vibration impacts on the community and structures, construction noise and vibration can also have an adverse impact upon the health of workers. It is important that Contractors adopt noise management strategies to prevent or minimise worker exposure to excessive noise and vibration. Such measures will also assist in reducing noise and vibration impacts on the surrounding community.

The National Occupational Health and Safety Commission (NOHSC) recommends a maximum acceptable workplace noise exposure level of 85dB(A) ($L_{Aeq,8h}$) for an eight-hour time period.

Personnel involved in operations should be issued with ear plugs or earmuffs which must be used whenever noise levels interfere with normal speech when individuals are standing at a distance of 1m from each other, or when the $L_{Aeq,8hr}$ exceeds 85dB(A).

Signs should be erected and made visible at the entry to all areas where noise levels will exceed 85dB(A).

## 7.11 CONSTRUCTION TRAFFIC ROUTES

The Contractor shall establish and implement traffic routes for deliveries to the site, which minimise the noise impact on surrounding noise-sensitive receivers as best possible.

# 8 SUMMARY AND CONCLUSIONS

A construction noise and vibration assessment has been carried out for the proposed works for the Early Learning Centre development at 140 Eleventh Avenue, Austral NSW 2179. This report addresses the Development Conditions of Consent (SSD-8865-Mod-6) Clauses C21, and D21-D26.

In particular, this report identifies the Contractor's obligations and the requirements to manage noise and vibration during construction such that the Contractor can make the necessary allowances within the construction costs, programmes and work methodologies.

The responsibilities of all stakeholders are identified, and a framework for the management of noise and vibration during construction works is provided.

This report establishes relevant noise level criteria, details the acoustic assessment and provides comments and recommendations for the proposed development.

Potential construction noise and vibration impacts on the surroundings have been presented in this report, and recommendations based on the relevant guidelines have been provided. It is expected that the predicted exceedance of the NMLs in the surrounding receivers triggers the proponent to apply all reasonable and feasible work practices to minimise the noise as much as possible, as well as community consultation, as per the requirements of the ICNG. Refer to Section 6 for details.

Based on the assessment, the conservative worst-case estimation of noise level at the nearest residential receiver is predicted to comply with Highly Affected noise level criterion. However, the predicted noise level based on the existing solid hoarding/barrier at the educational receiver is predicted to exceed the NML criterion. The Contractor is responsible to provide the noise management plan based on the recommendations in Section 7 to minimise the intrusion to the classrooms and learning units.

For each of the work stages and associated plant, assuming that they are exceeding the noise level criteria, the noise control measures presented in Section 7 shall be considered and implemented wherever reasonable and feasible in order to minimise any potential noise impact. Operation time and respite period restrictions shall be applied to 'noisy' construction plants to minimise noise impact to the nearest sensitive receivers.

The information presented in this report shall be reviewed if any modifications to the selection of equipment / machinery, construction methodologies and modifications to the works construction program.

## APPENDIX A: COMMUNITY COMMUNICATION STRATEGY

# ST ANTHONY OF PADUA CATHOLIC COLLEGE

Community Communications Strategy

Prepared for
**LIPMAN ON BEHALF OF SYDNEY CATHOLIC SCHOOLS AND CARMICHAEL TOMPKINS PROPERTY GROUP (CTPG)**
30 May 2022

URBIS

**URBIS STAFF RESPONSIBLE FOR THIS REPORT WERE:**

| | |
|---|---|
| Associate Director | Stephanie Potter |
| Consultant | Hayley Kardash |
| Project Code | P0040242 |
| Report Number | Final |

**Urbis acknowledges the important contribution that Aboriginal and Torres Strait Islander people make in creating a strong and vibrant Australian society.**

**We acknowledge, in each of our offices, the Traditional Owners on whose land we stand.**

# CONTENTS



**FIGURES**



**TABLES**

# 1. INTRODUCTION

Sydney Catholic Schools is delivering a master plan for its St Anthony of Padua Catholic College campus at 140 Eleventh Ave, Austral NSW 2179 in City of Liverpool Council.

This Community Communication Strategy (CCS) has been prepared by Urbis Engagement, an engagement consultant, appointed by Lipman on behalf of Sydney Catholic Schools and Carmichael Tompkins Property Group (CTPG) (the proponent).

This Community Communication Strategy (CCS) has been prepared in line with the development consent C10 as part of the Development Consent for SSD-8865-Mod 1.

Sydney Catholic Schools received development consent on its Mod1 State Significant Development Application (SSDA) in January 2022.

**The Mod1SSDA sought approval for the following:**

- Updated project phasing relating to construction works and student capacities
- Amened built form
- Reduced total gross floor area
- Altered composition of recreational facilities
- Amended configuration of carparks and drop-off / pick-up area.

The modification application also sought approval for a minor modification to the site layout including relocation of the trade centre and to reflect the above amendments.

## 1.1. SCOPE OF THE COMMUNITY COMMUNICATION STRATEGY

A portion of work approved as part of the original SSD-8865 for Stage 1 has already been completed.

The table below shows all Stage 1 work that has been approved as part of the Mod1 SSDA and outlines the scope of construction work covered in this CCS. The CCS will be updated (or recreated) in line with future development consent to cover the additional approved elements of SSD-8865-Mod 1

Table 1 Scope of CCS

| Approved SSD-8865-Mod 1 (Stage 1) | Stage 1 scope covered by this CCS |
|---|---|
| ▪ Carpark 2 and carpark extensions<br>▪ Construction of all build forms and external works including carpark 4<br>▪ Early learning centre extension<br>▪ External road works and intersection upgrades<br>▪ Piazza<br>▪ Removal of temporary buildings<br>▪ Sports courts<br>▪ Sports ovals, carpark 3 and maintenance area<br>▪ Community garden and woodland retention<br>▪ Relocation furniture staff and students. | ▪ Construction of all build forms and external works including carpark 4<br>▪ Piazza<br>▪ Removal of temporary buildings<br>▪ Sports courts<br>▪ Sports overs, carpark 3 and maintenance area<br>▪ Community garden and woodland retention<br>▪ Relocation furniture staff and students |

## 1.2. CROSS-REFERENCE OF CONSENT REQUIREMENTS

Table 1 identifies the reference/s within this Strategy as they relate to the requirements under Development Consent Condition 8865 – Community Communication Strategy.

Table 2 Development Consent Condition 8865

| Consent condition Reference | Consent condition | Report reference |
|---|---|---|
| C10 | No later than two weeks before the commencement of any construction works on the site, a Community Communication Strategy must be submitted to the Planning Secretary for information prior to the commencement of construction or within another timeframe agreed with the Planning Secretary. The Community Communication Strategy must provide mechanisms to facilitate communication between the Applicant, the relevant Council and the community (including adjoining affected landowners and businesses, and others directly impacted by the development), during the design and construction of the development and for a minimum of 12 months following the completion of construction of all construction phases within Stage<br><br>The Community Communication Strategy must: | This document submitted on 30 May 2022 |
| C10. a) | identify people to be consulted during the design and construction phases; | Refer to section 4 of this document |
| C10. b) | set out procedures and mechanisms for the regular distribution of accessible information about or relevant to the development; | Refer to section 5 of this document |
| C10. c) | provide for the formation of community-based forums, if required, that focus on key environmental management issues for the development; | Refer to section 5.2 of this document |
| C10. d) | Set out procedures and mechanisms: | See below |
| C10. D.i.) | through which the community can discuss or provide feedback to the Applicant; | Refer to section 5 of this document |
| C10. D.ii.) | through which the Applicant will respond to enquiries or feedback from the community; and | Refer to section 5.3 of this document |
| C10. D.iii.) | to resolve any issues and mediate any disputes that may arise in relation to construction and operation of the development, including disputes regarding rectification or compensation. | Refer to section 5.4 of this document |
| C10. e) | include any specific requirements around traffic, noise and vibration, visual impacts, amenity, flora and fauna, soil and water and contamination. | Refer to section 5 of this document |

# 2. PROJECT OVERVIEW

## 2.1. THE SITE

St Anthony of Padua Catholic College is located at 125-165 Tenth Avenue and 140-170 Eleventh Avenue, Austral (the site) in the Liverpool City Local Government Area (LGA). It is surrounded by a mix of newly constructed medium density homes, with some low density and semi-rural homes. It is located around 37 kilometres from Sydney's CBD and 10km west of Liverpool CBD.

The current land use mix reflects the area's transition as it reflects the 'Austral and Leppington North Precinct' of the South West Growth Area (SWGA), which is an emerging greenfield corridor with planned urban development for a range of residential, commercial and community uses.

The site is directly bound by Eleventh Avenue to the north, Tenth Avenue to the south, residential development to the east and Fourth Avenue to the west. To the north of the site and on the opposite side of Eleventh Avenue, is Craik Park, an open space with tennis courts and playing fields.

An existing church (St Anthony of Padua Church) adjoins to the east of Craik Park. The surrounding area is currently undergoing a significant transition from a semi-rural residential to a low to medium density residential area as part of NSW Government's plans for South West Growth Area (SWGA).

Figure 1 The site


## 2.2. THE PROJECT

Sydney Catholic Schools has developed a master plan for its St Anthony of Padua Catholic College campus at 125-165 Tenth Avenue and 140-170 Eleventh Avenue, Austral (the site) in the Liverpool City Local Government Area (LGA). The master plan is for a contemporary new campus with multipurpose kindergarten, primary and secondary College buildings. The overall it aims for the expansion of the college to up to 2,480 students and 200 staff.

Austral is a fast-growing suburb in Sydney's South West Growth Area, with over 75,000 students expected to be accommodated within the growth area over the next 20 years. Investment and planning in education infrastructure are required now to meet the demands of the community now and into the future.

### 2.2.1. SSDA history

The College prepared a master plan for a contemporary new campus with multipurpose kindergarten, primary and secondary college buildings. This State Significant Development Application (SSDA 8865) was approved in April 2020.

Since receiving this approval, Sydney Catholic Schools commissioned a new architect who has reduced the building footprint to maximize the use of space and create superior learning and recreational spaces, with improved pedestrian flow on campus. Because of this, Sydney Catholic Schools then lodged a modification to the approved SSDA.

# 3. OBJECTIVE AND APPROACH

The communication objective is to keep the community informed of construction impacts. To achieve this objective, the approach involves:

- Building key college community stakeholder relationships and maintain good will with impacted communities
- Managing community expectations and building trust by effectively managing enquiries and complaints
- Providing timely information to impacted stakeholders and broader communities
- Addressing and correcting misinformation in the public domain
- Reducing the risk of project delays caused by negative third-party intervention
- Leaving a positive legacy in each community.

## 3.1. COMMUNICATIONS INTERFACE (ROLES AND RESPONSIBILITIES)

The successful delivery of the project is contingent on a coordinated, consistent and considered approach to community communication and stakeholder engagement.

From the community's point of view, response on issues should appear seamless. In order to achieve this objective, the Community Relations Manager (point of contact) will work collaboratively with the Project Director and Construction Manager and the Colleges internal communications team to ensure all internal and external communications are in lockstep.

This approach will be implemented during Stage 1 (scope covered by this CCS) and for 12 months following completion.

# 4. STAKEHOLDERS – PEOPLE TO BE CONSULTED DURING DESIGN AND CONSTRUCTION

St Anthony of Padua Catholic College is surrounded by a mix of newly constructed medium density homes, with some low density and semi-rural homes. To the south is Tenth Avenue, to the east is Edmondson Avenue and to the west is Fourth Avenue. Other sites nearby of significance include:

- St Anthony's Catholic Church Austral
- RSL LifeCare - Tobruk Retirement Living
- Outer Liverpool Community Services
- Austral Community Preschool
- Kantarra Lifestyle Resort.

For the purpose of this CCS, people to be consulted during construction are referred to as stakeholders and the surrounding community.

It will be important to ensure that stakeholders and the surrounding community (including adjoining affected landowners and others directly impacted by the development) are well informed about construction activity and impacts. The near neighbours outlined in the figure below have been identified as the surrounding community due to their proximity to the site and likely impact during construction and operation.

This includes the nearby residents that could potentially be impacted by noise, traffic and access as a result of construction. The surrounding community are familiar with this development as St Anthony of Padua Catholic College undertook a comprehensive stakeholder engagement program throughout each stage of planning.

Therefore, engagement with stakeholders and the surrounding community will focus on the specific potential impacts of construction work associated with the scope of Stage 1 works included in this CCS. Likely impacts of construction include:

- Noise and traffic during construction
- Disruption to traffic flows on the local street system
- Out of hours of work
- Pedestrian safety as a result of changes to traffic flow in and around the College
- Perceived property damage due to dust
- Day-to-day operational impacts to the College community as a result of construction work on site.

Figure 2 The surrounding community


People who will be informed and consulted during construction (stakeholders and the surrounding community) are outlined in the table below. The table also outlines the dedicated engagement interface, communications activities, the potential concerns and their involvement. This table will be reviewed and updated as needed.

Table 3 Stakeholders, activities, and concerns

| People to be consulted (Stakeholders) | Communication activities (see Section 4) | Concerns |
|---|---|---|
| **Liverpool City Council**<br>▪ Mayor Ned Mannoun<br>**North Ward Councillors, including:**<br>▪ Councillor Mazhar Hadid<br>▪ Councillor Mel Goodman<br>▪ Councillor Nathan Hagarty<br>▪ Councillor Peter Harle<br>▪ Councillor Ali Karnib | ▪ Enquires and feedback response<br>▪ Issues resolution and mediation of disputes<br>▪ Incident management<br>▪ Construction notifications as required<br>▪ Construction signage | ▪ Traffic management<br>▪ Visual impacts<br>▪ Community concerns<br>▪ Permit approvals<br>▪ Impacts on local characteristics<br>▪ Impacts of construction activities including noise, dust and vibrations<br>▪ Impact on local on and off-street parking availability |

| People to be consulted (Stakeholders) | Communication activities (see Section 4) | Concerns |
|---|---|---|
| **Surrounding community, including individual households and businesses**:<br>▪ Thirteenth Avenue<br>▪ Twelfth Avenue<br>▪ Eleventh Avenue<br>▪ Tenth Avenue<br>▪ Ninth Avenue<br>▪ Eighth Avenue<br>▪ Edmondson Avenue<br>▪ Fourth Avenue<br>▪ Kelly Street | ▪ Enquires and feedback response<br>▪ Issues resolution and mediation of disputes<br>▪ Incident management<br>▪ Construction notifications as required<br>▪ Construction signage | During Environmental Impact Statement (EIS) consultation, local residents and businesses identified very little concern regarding the proposed master plan.<br>**Potential likely concerns during construction could be:**<br>▪ Traffic management<br>▪ Visual impacts<br>▪ Impacts on local characteristics, such as tree clearing<br>▪ Impacts of construction activities including noise, dust and vibrations<br>▪ Impact on local on and off street parking availability<br>▪ Concerns regarding the increase in pedestrian activity<br>▪ Construction timing including the expected finished date |
| **St Anthony of Padua Catholic College**<br>▪ Current and future parents<br>▪ Current and future staff<br>▪ Current and future students | ▪ Enquires and feedback response<br>▪ Issues resolution and mediation of disputes<br>▪ Incident management<br>▪ Construction notifications as required<br>▪ Face to face meetings as required<br>▪ Construction signage. | ▪ Day-to-day operational impacts as a result of construction<br>▪ Student safety as a result of changes to traffic flow and pedestrian infrastructure<br>▪ Impact on teaching as a result of construction noise and disturbances<br>▪ Changes to staff parking conditions<br>▪ Impacts of construction activities including noise, dust and vibrations |

# 5. PROCEDURES AND MECHANISMS

## 5.1. INFORMATION PROVISION

Information about the project will be provided to stakeholder and the surrounding community in line with the requirements of Development Consent Condition C10 through the communication activities outlined in the Table 4 Communication activities for information provision.

Table 4 Communication activities for information provision.

| Activity | Description | Stakeholder | Timing |
|---|---|---|---|
| Establishment of website, phone number and email | Project contact details and up to date project information will be provided for all communication activities.<br>The college website will provide an overview of project details, construction related management documents, construction updates, and enquiry contact details.<br>See Section 5.3 Table 5 Contact point for Stage 1 construction. Process for responding is outlined in Section 5.3 Table 6. | All stakeholders and the surrounding community | Information will be available online no less than 14 days before construction.<br>Ongoing enquiry management and website content available for a minimum of 12 months following the completion of construction. |
| Access to Information | In accordance with Development Consent Condition A21, at least 48 hours before the commencement of construction until the completion of all works under this consent, or such other time as agreed by the Planning Secretary, information, and documents (as they are obtained or approved) will be made publicly available on the website. | Stakeholders and the surrounding community | No less than 48 hours before construction. Information available online (College's website) for a minimum of 12 months following the completion of construction. |
| Signage (site notices) | The community feedback, enquiries and complaints phone and email will be included on signage at the front of the site. In accordance with Development Consent Condition D1, the signage will be prominently displayed at the boundaries of the site during construction for the purposes of informing the public of project details. | Stakeholders and the surrounding community | Information and signage available on site throughout the duration of Stage 1 construction included in the scope outlined in the CCS. |
| Start of construction notification | In line with Development Consent C1, a community newsletter outlining construction timeline, impacts and mitigations, and community feedback, | Surrounding community (Individual | No less than 48 hours before start of construction. |

| Activity | Description | Stakeholder | Timing |
|---|---|---|---|
| letterbox drop (newsletter letter) | enquiries and complaints phone number and email. | households and businesses) | |
| Face-to-face meetings | Face-to-face project briefing with key stakeholders and community groups provide project information about environmental management issues for the development. | Stakeholders and the surrounding community | As required depending on the level of community interest and feedback. |
| Construction notification letterbox drop (out-of-hours and unplanned work) | Letter notification to inform changes to construction (out-of-hours and unplanned work). The letter would outline works, impacts and mitigations, and community feedback, enquiries and complaints phone number and email. In accordance with Development Consent Condition D13 and D14, notification of out of hours construction activities must be given to residents before undertaking the activities or as soon as is practical afterwards. | Immediate neighbours<br>College community (parents, students and staff) | At least 72 hours before undertaking the activities or as soon as is practical afterwards. |
| Sensitive receiver consultation procedure | In line with Development Consent Condition C10 (e), for high noise generating works, vibration intensive activities or potential traffic disruptions, visual impacts, amenity, flora and fauna, soil and water, contamination, heritage, sensitive receivers will be informed via letterbox drop ahead of time. | Stakeholders and the surrounding community and the College community (parents, students, teachers) | Before undertaking the activities or as soon as is practical afterwards. |

## 5.2. COMMUNITY BASED FORUMS

Depending on the level of stakeholder interest and feedback in the first three months of construction of Stage 1 works covered in this CCS, the principal contractor or their authorised representative will consider the establishment of community-based forums to enable deeper focus on key environmental management issues for the project.

Following the first three months of Stage 1 works covered in this CCS, this process will be reassessed every six months through to completion of these works. If required, public meetings and presentations will be held as frequently as required.

Meetings would include:

- Updating the community on the environmental management of the development works.
- Providing a direct face to face consultation between the project team and the concerned community members.
- Meetings and presentations will be held on a required basis to raise concerns by the local community members.

The above forums are considered appropriate to the scale of the development works. If required, we would recommend community-based forums be held on site at the College attended by at least one College representative, relevant technical leads and project managers.

Depending on the level of stakeholder interest and feedback in the first three months of construction, the principal contractor or their authorised representative will consider the establishment of community-based forums to enable deeper focus on key environmental management issues for the Project.

## 5.3. ENQUIRIES AND FEEDBACK RESPONSE

As outlined in Table 5, website, phone number and email will be established and maintained for design, construction and operation of the project.

Table 5 Project contact points

| Channel | Details |
|---|---|
| Point of contact | Tim Calpito<br>Project Manager<br>Lipman |
| Mailing address | Level 6, 66 Berry St North Sydney NSW 2060 |
| Phone number | (02) 9955 7000 |
| Email | stanthonyofpadua@lipman.com.au |
| Website | www.stapaustral.catholic.edu.au/ |

While this CCS covers only a portion of work included in Stage 1 Mod, all enquiries and feedback relating to Stage 1 Mod works will be recorded in a Complaints Register managed by Lipman. Lipman will direct the enquiry to the relevant consultant. Refer to Section 5.4 for the details regarding the complaints, issues and disputes resolution process.

All feedback and enquiries during construction will be answered in accordance with the timeframes below.

Feedback and enquiries in relation to day-to-day College operations will be recorded and passed on to the College. The College will manage operational enquiries through the existing communications mechanism. All feedback and enquires will be answered in accordance with the timeframes below:

Table 6 Response times

| Channel | Response time |
|---|---|
| Email | One business day (if contact is made outside of businesses hours, a response will be provided on the next business day) |
| On-site inquiry (in-person) | One business day (if contact is made outside of businesses hours, a response will be provided on the next business day) |
| Site phone line | Thirty minutes - during business hours (if contact is made outside of businesses hours, a response will be provided on the next business day) |

| Channel | Response time |
|---|---|
| Website contact | Three business days (if contact is made outside of businesses hours, a response will be provided on the next business day) |

## 5.4. ISSUES RESOLUTION AND MEDIATION OF DISPUTES

Robust and timely enquiry and complaints management is integral to building and maintaining trust in the community. The College can build and maintain good will within the community through careful management of enquiries and complaints.

The below diagram outlines the enquiry and complaints management process. This plan provides a procedure for issues resolution and the mediation of disputes, targeting resolution within seven days from the date the issue was first raised.

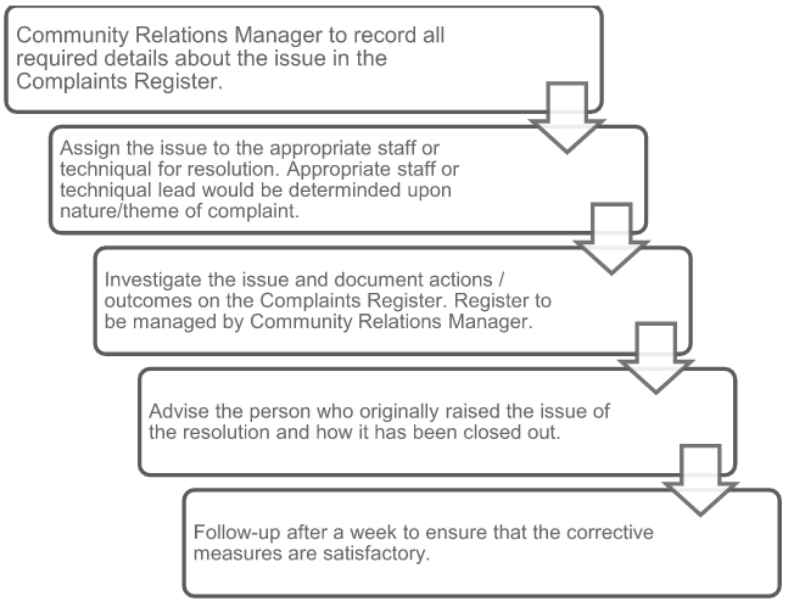
This mechanism in Figure 3 Complaints, issues, and disputes resolution process' allows for the identification and implementation of corrective measures in response to issues raised by the community, to minimise the likelihood of recurrence. All complaints will be recorded in a Complaints Register.

The following process will be implemented during Stage 1 works covered in this CCS and for 12 months following completion. Complaints, issues and disputes regarding School operations will be recorded and passed on to the College. The College will manage operational enquiries through the College's existing mechanism. Complaints, issues, and disputes that may require the implementation of this process if a reoccurring or unavoidable complaint is received.

Nature/ theme of concerns may include, but are not limited to the following:

- Noise and traffic during construction
- Disruption to traffic flows on the local street system
- Out of hours of work
- Pedestrian safety as a result of changes to traffic flow in and around the College
- Perceived property damage due to dust
- Day-to-day operational impacts to the College community as a result of construction work on site.

Figure 3 Complaints resolution process



# 6. DISCLAIMER

This report is dated 30 May 2022 and incorporates information and events up to that date only and excludes any information arising, or event occurring, after that date which may affect the validity of Urbis Pty Ltd **(Urbis)** opinion in this report. Urbis prepared this report on the instructions, and for the benefit only, of LIPMAN ON BEHALF OF SYDNEY CATHOLIC SCHOOLS AND CARMICHAEL TOMPKINS PROPERTY GROUP (CTPG) **(Instructing Party)** for the purpose of Community Communications Strategy **(Purpose)** and not for any other purpose or use. To the extent permitted by applicable law, Urbis expressly disclaims all liability, whether direct or indirect, to the Instructing Party which relies or purports to rely on this report for any purpose other than the Purpose, and to any other person which relies or purports to rely on this report for any purpose whatsoever (including the Purpose).

In preparing this report, Urbis was required to make judgements which may be affected by unforeseen future events, the likelihood and effects of which are not capable of precise assessment.

All surveys, forecasts, projections and recommendations contained in or associated with this report are made in good faith and on the basis of information supplied to Urbis at the date of this report, and upon which Urbis relied. Achievement of the projections and budgets set out in this report will depend, among other things, on the actions of others over which Urbis has no control.

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This report has been prepared with due care and diligence by Urbis and the statements and opinions given by Urbis in this report are given in good faith and in the reasonable belief that they are correct and not misleading, subject to the limitations above.

All enquiries, complaints and issues in relation to the Childcare Centre stage of works are to be sent to the below contact details for recording, response and resolution:

**Email:** Luke.zammit@trinityfc.com.au

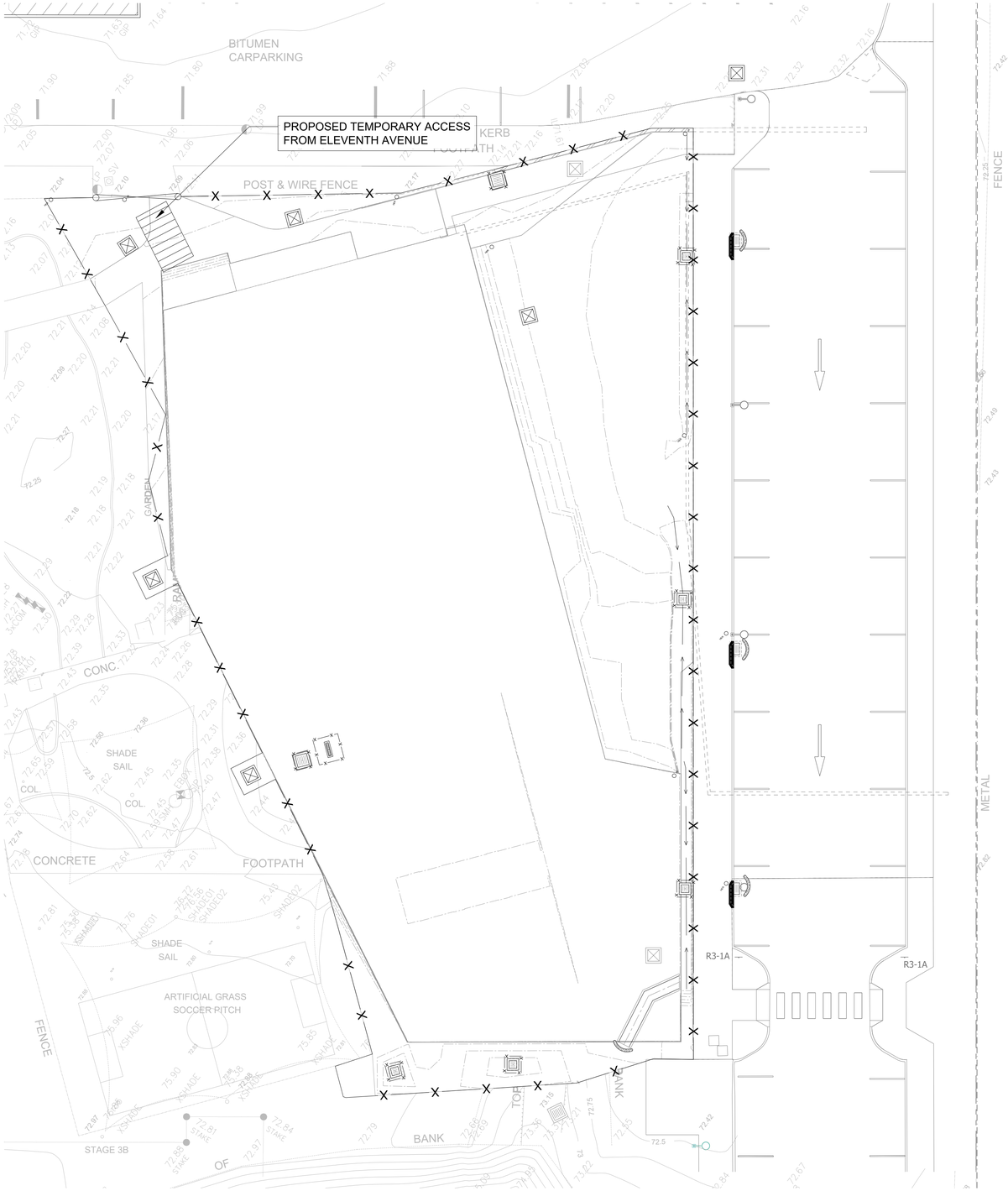
**24/7 Contact Number:** 0435 001 373

A project website is available in the below link:

*https://www.scecsaustral.com.au/*

URBIS.COM.AU

# Appendix 4: Erosion and Sediment Control Plans




## LEGEND

- EXISTING BOUNDARY
- SITE FENCE
- SEDIMENT FENCE
- SITE GATE
- VEHICLE ENTRY SHAKER GRID
- GEOTEXTILE INLET FILTER (FOR PITS WITHIN LANDSCAPED AREAS)
- SEDIMENT TRAP FOR KERB INLET - WIRE MESH AND GRAVEL
- EXISTING TREES TO BE REMOVED
- OVERLAND FLOW PATH

## NOTES:

1. GEOTEXTILE INLET FILTER BAGS TO BE FITTED IN ALL EXISTING STORMWATER GRATED PITS WITHIN THE DEVELOPMENT AREA.
2. PROPOSED LEVEL CHANGES IN THE VICINITY OF EXISTING TREES TO BE REVIEWED AND APPROVED BY PROJECT ARBORIST.
3. IMPACTS AROUND EXISTING TREES SHOULD BE MINIMISED.
4. ALL WORKS AROUND EXISTING TREE ROOT PROTECTION ZONES TO BE CONFIRMED WITH PROJECT ARBORIST PRIOR TO COMMENCEMENT ON SITE.

## SOIL AND WATER MANAGEMENT NOTES:

1. ALL EROSION CONTROL MEASURES TO BE INSTALLED IN ACCORDANCE WITH LANDCOM MANAGING URBAN STORMWATER: SOILS AND CONSTRUCTION ('BLUE BOOK').
2. SEDIMENT FENCING TO BE PROVIDED IN ACCORDANCE WITH STANDARD DETAILS AS REQUIRED TO PREVENT SEDIMENT FROM LEAVING THE SITE. TEMPORARY CONSTRUCTION ENTRY/ EXIT SEDIMENT TRAPS ARE TO BE PROVIDED AT ENTRY/ EXIT LOCATIONS.
3. PIT INLET SEDIMENT TRAPS ARE TO BE PROVIDED AT ALL EXISTING STORMWATER INLET PITS LOCATED WITHIN AREA OF WORK.

## SEDIMENT CONTROL CONDITIONS:

1. SEDIMENT FENCES WILL BE INSTALLED AS SHOWN AND ELSEWHERE AT THE DISCRETION OF THE SITE MANAGER TO CONTAIN COARSER SEDIMENT FRACTIONS INCLUDING AGGREGATED FINES AS CLOSE TO THE SOURCE AS PRACTICABLE.
2. SEDIMENT REMOVED FROM ANY TRAPPING DEVICE WILL BE RELOCATED WHERE FURTHER POLLUTION TO DOWNSTREAM LANDS AND WATERWAYS CANNOT OCCUR.
3. STOCKPILES TO BE PLACED AT THE DISCRETION OF THE SITE MANAGER, NOT WITHIN 5m OF ANY HAZARDOUS AREAS INCLUDING LIKELY AREAS OF HIGH VELOCITY FLOWS SUCH AS WATERWAYS, PAVED AREAS & DRIVEWAYS.
4. PIT INLET FILTERS (SEE DETAILS) WILL PREVENT WATER FROM DIRECTLY ENTERING THE PERMANENT DRAINAGE SYSTEM UNLESS IT IS FREE OF SEDIMENT.
5. TEMPORARY SEDIMENT TRAPS WILL BE RETAINED UNTIL AFTER THE LANDS THEY ARE PROTECTING ARE COMPLETELY REHABILITATED.

## CONSTRUCTION WORK MANAGEMENT IN WET-WEATHER EVENTS:

- ALL STOCKPILES TO BE CAPPED.
- STABLISED ACCESS ROADS TO BE INSTALLED FROM CARPARK 5 TO RELEVANT WORKFACES.
- AFTER EVERY RAIN EVENT, SAFETY INSPECTION TO BE CARRIED OUT PRIOR TO WORKS RECOMMENCING.

FOR CONSTRUCTION

DO NOT SCALE FROM DRAWINGS, CHECK & VERIFY ALL DIMENSIONS & LEVELS BEFORE COMMENCEMENT OF ANY WORK.

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| REVISION | AMENDMENT | DATE | REVISION | AMENDMENT | DATE |
|---|---|---|---|---|---|
| A | ISSUE FOR CONSTRUCTION CERTIFICATE | 23/03/2026 | | | |

CLIENT
Sydney Catholic early childhood services
TRINITY

PROJECT
AUSTRAL - EARLY CHILDHOOD SERVICE

PREPARED BY
WSCE
Driven by excellence, built on experience.

TITLE
# SOIL AND WATER MANAGEMENT PLAN

| SCALE | DRAWN | DESIGNED | CHECKED | APPROVED |
|---|---|---|---|---|
| AS SHOWN | S.C. | I.S. | J.G | J.G. |

| JOB No. | DRAWING No. | ISSUE |
|---|---|---|
| 5914009 | C2.01 | A |

| DATE | STATUS |
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| SEPTEMBER 2024 | ISSUE FOR CC |

Xrefs: X:\5914008.SU-Utilities_X-5914008.SU_Existing Boundary_X-5914008_TB_A1H_X-5914004-AR_Site Plan-CPS_X-5914004-SW_Layout_Carpark Extension_X-5914006-SU-Ground_X-5914006-SU-Trees_X-5914006-SW_Layout ECS_5914009-WSCE-CS-MO-03 - Bulk Earthworks Surface
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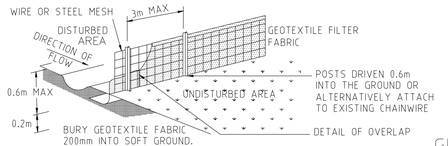


## SEDIMENT CONTROL FENCE

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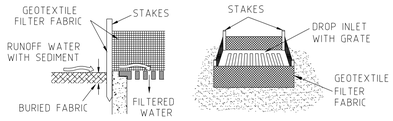
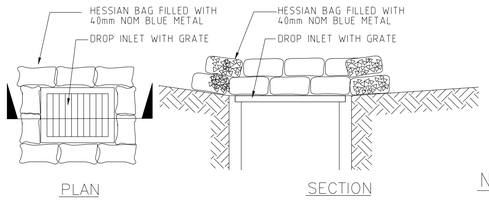


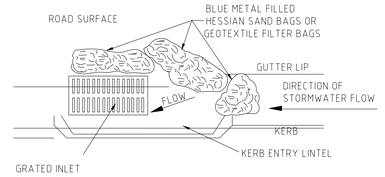

## GEOTEXTILE FILTER FABRIC DROP INLET SEDIMENT TRAP

NTS



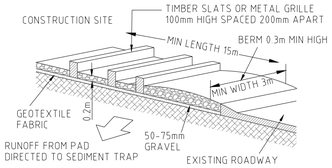

## HESSIAN BAG DROP INLET SEDIMENT TRAP

NTS




## NEW/EXISTING GRATED KERB ENTRY PIT SEDIMENT CONTROL BARRIER

NTS

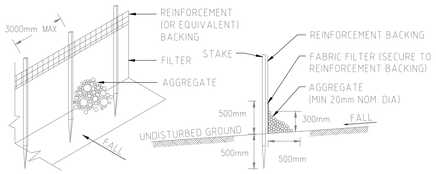



## STABILIZED CONSTRUCTION SITE VEHICLE ENTRY/EXIT

NTS

### SITE ENTRY/EXIT NOTES:-

1. ALL VEHICLE ENTRANCES & EXITS TO THE CONSTRUCTION SITE MUST BE STABILIZED TO PREVENT THEM BECOMING A SOURCE OF SEDIMENT, BY PROVIDING A VEHICLE SHAKE AREA. THIS MAY CONSIST OF A TIMBER, CONCRETE OR STEEL SHAKER GRID OR RUBBLE AREA.
2. THE VEHICLE EXIT AREA IS TO BE MAINTAINED IN A CLEAN & SERVICEABLE CONDITION DURING THE TOTAL TIME OF USAGE.
3. ANY UNSEALED ROAD BETWEEN THE DEVICE AND COUNCILS ROADWAY IS TO BE TOPPED WITH 100mm THICK, 40mm NOMINAL SIZE AGGREGATE.
4. PUBLIC ROADS MUST BE KEPT FREE OF DIRT AND MUD. SEDIMENT TRACKED ONTO THE PUBLIC ROADWAY BY VEHICLES LEAVING THE CONSTRUCTION SITE IS TO BE SWEPT UP IMMEDIATELY.
5. FENCES SHOULD BE ERECTED TO ENSURE VEHICLES CAN NOT BYPASS THE STABILIZED ACCESS POINTS, UNLESS COMING FROM A STABILIZED AREA.

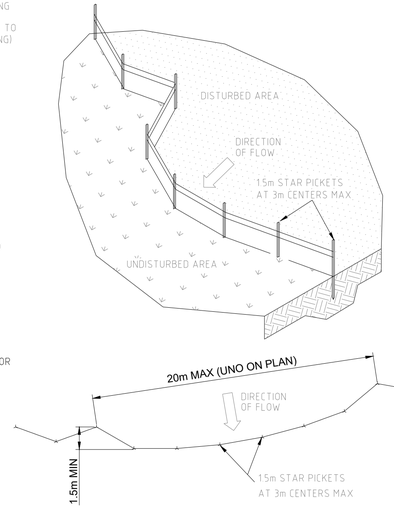



## SEDIMENT FENCE DETAIL FOR ROCKY GROUND

NTS

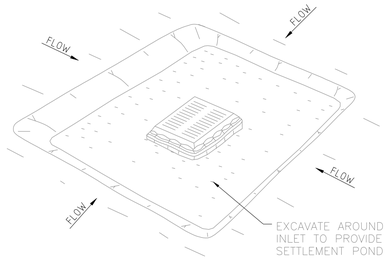
### SEDIMENT FENCE NOTES:-

1. CONSTRUCT SEDIMENT FENCE AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE OR AT THE TOE OF A SLOPE.
2. DRIVE 1.5 METRE LONG STAR PICKETS INTO GROUND SUFFICIENT TO PROVIDE RIGID SUPPORT, 3 METERS APART. WHERE THERE IS INSUFFICIENT SOIL DEPTH OVER ROCK, HOLES ARE TO BE DRILLED INTO ROCK TO ACCEPT THE STAR PICKETS.
3. ON SOFT GROUND MATERIALS, DIG A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
4. BACKFILL TRENCH OVER BASE OF FABRIC & COMPACT.
5. FIX SELF-SUPPORTING GEOTEXTILE TO UPSLOPE SIDE OF POSTS WITH WIRE TIES OR AS RECOMMENDED BY THE GEOTEXTILE MANUFACTURER. USE A REINFORCEMENT BACKING WITH NON SELF-SUPPORTING GEOTEXTILE FABRIC.
6. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.
7. ON HARD OR ROCKY GROUND, SMOOTH A 500mm WIDE STRIP UPSLOPE OF THE FENCE LINE. TURN THE BOTTOM 500mm OF THE FABRIC UPSLOPE AND ANCHOR IN PLACE WITH SUITABLE AGGREGATE.
8. WHERE A SEDIMENT FENCE IS CONSTRUCTED DOWN SLOPE FROM A DISTURBED BATTER THE FENCE SHOULD BE LOCATED 1.5 TO 2.0 METERS DOWN SLOPE FROM THE TOE OF THE BATTER.




## SEDIMENT FENCE LAYOUT PLAN

NTS

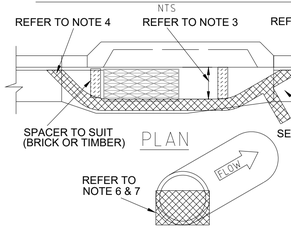



## EXCAVATED SEDIMENT TRAP

NTS

### EXCAVATED SEDIMENT TRAP NOTES:-

1. REMOVE THE SEDIMENT WHEN IT HAS ACCUMULATED TO HALF THE DESIGN DEPTH OF THE TRAP AND RESTORE THE TRAP TO ITS ORIGINAL DIMENSIONS.
2. PROVIDE 50 cu.m/Ha OF SEDIMENT STORAGE VOLUME.
3. REFER TO THE MAINTENANCE REQUIREMENTS.

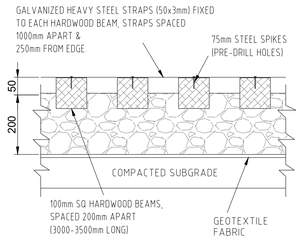



## GEOTEXTILE FILTER BAGS

NTS

### SEDIMENT BARRIER FOR PITS & PIPES, NOTES:-

1. SLEEVES ARE TO BE MADE FROM GEOTEXTILE FABRIC LONGER THEN THE LENGTH OF THE INLET PIT.
2. FILL SLEEVE WITH 5 OR 10mm CLEAN GRAVEL.
3. PLACE THE SLEEVE AT THE OPENING OF THE KERB INLET LEAVING A 100mm GAP TO ACT AS AN EMERGENCY OVERFLOW.
4. SLEEVE MUST BE PLACED AGAINST THE KERB TO PREVENT BYPASS.
5. FIT SLEEVE TO ALL INLETS DOWNSTREAM OF THE WORKS.
6. FOR DRAINAGE WORKS FIT GEOTEXTILE FABRIC OR GEO BAGS TO UPSTREAM FACE OF ALL OPEN PIPES.
7. MAINTAIN AN OPENING AT THE TOP OF THE PIPE OF 1/3 OF THE PIPE DIAMETER.
8. THE FILTERS ARE TO BE CLEANED AND MAINTAINED DAILY.
9. ALL CARE SHOULD BE TAKEN TO MINIMIZE SEDIMENT REACHING THE STORMWATER SYSTEM BY MINIMIZING EXCAVATION WORKS AND PREVENTING EXCESS WATER FLOW THROUGH WORKS.

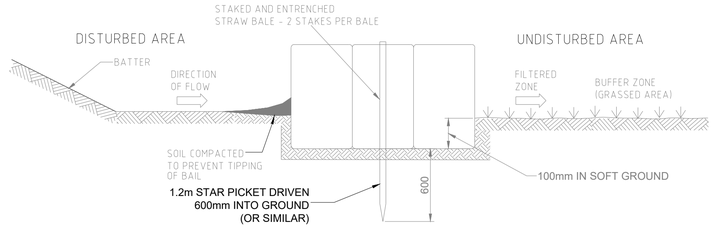



## VEHICLE SHAKER GRID

NTS

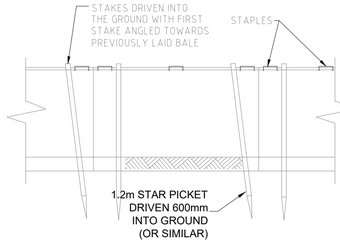
### SITE ENTRY/EXIT CONSTRUCTION NOTES:-

1. STRIP TOP SOIL & LEVEL SITE. PROVIDE CATCH DRAIN AT SIDES TO DIRECT RUNOFF WATER TO SEDIMENT TRAPS.
2. COMPACT SUBGRADE AND REMOVE ANY HIGH POINTS.
3. COVER AREA WITH GEOTEXTILE FABRIC. THIS MAY BE WOVEN OR NEEDLE PUNCHED PRODUCT WITH A MINIMUM CBR BURST STRENGTH (AS3706.4-90) OF 2500 N.
4. CONSTRUCT 200mm THICK RUBBLE PAD OVER GEOTEXTILE USING ROAD BASE OR 30-40mm AGGREGATE. MINIMUM LENGTH 15 METRES OR TO BUILDING ALIGNMENT. MINIMUM WIDTH 3 METRES. CONSTRUCT 300mm HIGH HUMP IMMEDIATELY WITHIN BOUNDARY TO DIVERT WATER TO A SEDIMENT TRAP.
5. WHERE GRIDS ARE USED FIRST CONSTRUCT A 150 THICK PAD OVER GEOTEXTILE FABRIC. LEVEL THIS IN BOTH DIRECTIONS. LOWER GRID ON TO THE PREPARED BASE AND ENSURE THAT NO PART IS SITTING ON ANY HIGH POINTS. BACKFILL THE SPACES BETWEEN THE GRIDS TO WITHIN 50mm OF THE TOP.
6. PROVIDE RAMPS AT ENDS AND SIDE OF GRIDS. IF DEPRESSIONS OCCUR IN THE RAMPS DURING USE. ADD ADDITIONAL MATERIAL.



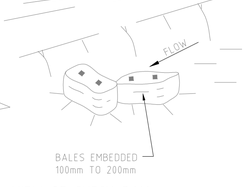

## TYPICAL STRAW BALE SECTION

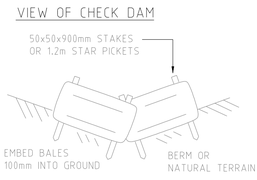
NTS

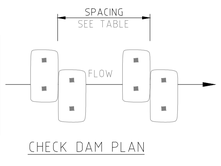



## TYPICAL STRAW BALE DETAIL

NTS




CHECK DAM SPACING TABLE

| LONGITUDINAL GRADE (%) | SPACING (METERS) |
|---|---|
| 0 - 5 | 40 |
| 5 -10 | 30 |
| 10 - 15 | 20 |
| GREATER THAN 15 | 10 |

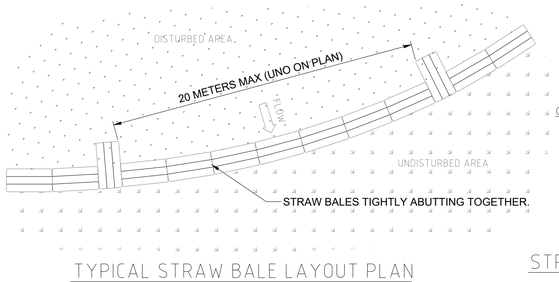
## STRAW BALE CHECK DAM DETAILS

NTS

### STRAW BALE NOTES:-

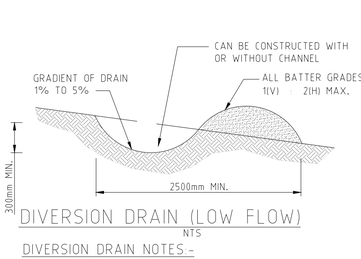
1. CONSTRUCT STRAW BALE FILTER AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE OR AT THE TOE OF A SLOPE.

   PLACE BALES LENGTHWISE IN A ROW WITH ENDS TIGHTLY ABUTTING.
2. USE STRAW TO FILL ANY GAPS BETWEEN BALES. STRAWS TO BE PLACED PARALLEL TO GROUND.
3. MAXIMUM HEIGHT OF FILTER IS ONE BALE.
4. ON SOFT MATERIALS, EMBED EACH BALE IN THE GROUND 75mm TO 100mm AND ANCHOR WITH TWO 1.2 METRE STAR PICKETS. ANGLE THE FIRST STAKE IN EACH BALE TOWARDS THE PREVIOUSLY LAID BAIL. DRIVE STAKES 600mm INTO THE GROUND AND FLUSH WITH THE TOP OF THE BALES.
5. WHERE A STRAW BALE FILTER IS CONSTRUCTED DOWN SLOPE FROM A DISTURBED BATTER THE BALES SHOULD BE LOCATED 1.5 TO 2.0 METERS DOWN SLOPE FROM THE TOE OF THE BATTER.
6. WHERE REQUIRED WRAP GEOTEXTILE FILTER FABRIC AROUND BALES AND STAPLE IN POSITION.




## TYPICAL STRAW BALE LAYOUT PLAN

NTS




## DIVERSION DRAIN (LOW FLOW)

NTS

### DIVERSION DRAIN NOTES:-

1. CONSTRUCT WITH GRADIENT OF 1 PER CENT TO 5 PER CENT.
2. AVOID REMOVING TREES AND SHRUBS IF POSSIBLE.
3. DRAINS TO BE OF CIRCULAR, PARABOLIC OR TRAPEZOIDAL CROSS SECTION NOT V-SHAPED.
4. EARTH BANKS TO BE ADEQUATELY COMPACTED IN ORDER TO PREVENT FAILURE.
5. PERMANENT OR TEMPORARY STABILIZATION OF THE EARTH BANK TO BE COMPLETED WITHIN 10 DAYS OF CONSTRUCTION.
6. ALL OUTLETS FROM DISTURBED LANDS ARE TO FEED INTO A SEDIMENT BASIN OR SIMILAR.
7. DISCHARGE RUN OFF COLLECTED FROM UNDISTURBED LANDS ONTO EITHER A STABILIZED OR AN UNDISTURBED DISPOSAL SITE WITHIN THE SAME SUBCATCHMENT AREA FROM WHICH THE WATER ORIGINATED.
8. COMPACT BANK WITH A SUITABLE IMPLEMENT IN SITUATIONS WHERE THEY ARE REQUIRED TO FUNCTION FOR MORE THAN FIVE DAYS.
9. EARTH BANKS TO BE FREE OF PROJECTIONS OR OTHER IRREGULARITIES THAT WILL IMPEDE NORMAL FLOW.

## MAINTENANCE REQUIREMENTS:-

1. ACCUMULATED SILT & SEDIMENT MUST BE REMOVED AT REGULAR INTERVALS AND AFTER EACH MAJOR STORM.
2. SILT & SEDIMENT MUST BE REMOVED FROM OFF THE SITE OR TO A COUNCIL APPROVED LOCATION WITHIN THE SITE, WHERE IT WILL NOT ERODE.
3. THE SEDIMENT FENCES, BALES & TRAPS SHALL BE REGULARLY INSPECTED, ESPECIALLY AFTER RAIN AND KEPT IN GOOD REPAIR AND FUNCTIONING CONDITION AT ALL TIMES.
4. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT SEDIMENT, EROSION & WATER POLLUTION SHALL BE MINIMIZED.
5. THE SEDIMENT TRAPS SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE CONSTRUCTION AREA HAS BEEN PROPERLY STABILIZED.

FOR CONSTRUCTION

DO NOT SCALE FROM DRAWINGS, CHECK & VERIFY ALL DIMENSIONS & LEVELS BEFORE COMMENCEMENT OF ANY WORK.

THIS DRAWING IS NOT TO BE COPIED IN PART OR WHOLE WITHOUT WRITTEN PERMISSION FROM WARREN SMITH CONSULTING ENGINEERS.

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| REVISION | AMENDMENT | DATE | REVISION | AMENDMENT | DATE |
|---|---|---|---|---|---|
| A | ISSUE FOR CONSTRUCTION CERTIFICATE | 23/03/2026 | | | |

CLIENT

Sydney Catholic early childhood SERVICES

TRINITY

PROJECT

AUSTRAL - EARLY CHILDHOOD SERVICE

PREPARED BY

WSce Driven by excellence, built on experience.

TITLE

**SOIL AND WATER MANAGEMENT DETAILS**

| SCALE | DRAWN | DESIGNED | CHECKED | APPROVED |
|---|---|---|---|---|
| AS SHOWN | S.C. | I.S. | J.G | J.G. |

| JOB No. | DRAWING No. | ISSUE |
|---|---|---|
| 5914009 | C2.02 | A |

| DATE | STATUS |
|---|---|
| SEPTEMBER 2024 | ISSUE FOR CC |

Cad File: T:\5914009\Civil\Drawings\CAD\Civil 25\C2.02 Soil and Water Management Details.dwg
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Xrefs: X-5914008_TB_A1H
Plot Date: 23.03.2026@14:41:30

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

A 1

# Appendix 5: Construction Waste Management Sub-Plan

# Waste and Recycling Management Plan

## St Anthony's of Padua Austral Early Childhood Services

Prepared by Trinity Fitout and Contruction Pty Ltd

Luke Zammit 16/2/26

## TABLE OF CONTENTS

## 1.0 INTRODUCTION

This Waste and Recycling Management Plan (WRMP) has been prepared to manage waste generated from the construction stage of the St Anthony's of Padua Early Childhood Services project, in accordance with the relevant regulations, SSD consents and Client requirements.

The implementation of this WRMP provides for the effective management of solid and liquid waste, and details management practices for the reuse, recycling and lawful disposal of waste generated during construction.

The requirements of the following legal requirements have been addressed in this document:

- NSW Protection of the Environment Operations Act 2000,
- Waste Classification Guidelines Part 1: Classifying Waste, NSW EPA (2009) Aim or objective, and
- NSW Waste Avoidance and Recovery Act 2001.

## 2.0 DEFINITIONS

ASS - Acid Sulphate Soils.

EPA - NSW Environment Protection Authority.

POEO Act - Protection of the Environment

SDS - Operations Act Safety Data Sheet

WRMP - Project specific Waste and Recycling Management Plan (this document).

## 3.0 PURPOSE & OBJECTIVES

The purpose of the WRMP is to implement a waste management strategy for the effective management of waste generated during construction.

The goals for effective management of construction waste include:

- Prevention importing of waste on to the site,
- Prevent or mitigate construction generated waste in the following priority order.
  - Avoiding waste, then
  - Reusing materials, then
  - Recycling and reprocessing, then
  - Disposing waste (if first three measures are not possible).
- Continually monitor and improve waste management on the project,
- Ensure disposal of chemical, fuel and lubricant containers, solid and liquid wastes comply with requirements of the EPA and Council.
- Ensure resource recovery is undertaken effectively, and
- Ensure recycling is undertaken efficiently.

## 4.0 RESPONSIBILITIES & ACCOUNTABILITIES

Responsibilities for the effective implementation of the WRMP are provided below.

| Action | [redacted] |
|---|---|
| Implementation of the WRMP | Project Manager & Site Manager |
| Document and implement control measures through project risk assessment. | Project Manager, Site Manager, Supervisors and Subcontractors |
| Supervise the implementation of mitigation measures. | Site Manager |
| Implement methodology for managing and/or disposing construction waste. | Site Manager and/or Subcontractor |
| Monitor and report on performances and effectiveness of waste and recycling strategies. | Site Manager, Project Manager and waste removal contractor |
| Maintain internal records of inspection, monitoring, and reviews. | Project Manager & Site Manager |
| Identify and report on non-conformances and incidents. | All project stakeholders |
| Investigate and implement corrective actions to prevent incidents from re-occurring. | Project Manager and/or Subcontractor (as applicable) |

## 5.0 WASTE MANAGEMENT

### 5.1 Identification and Classification

The EPA provides guidance on the classification of waste into groups that pose similar risks to the environment and human health and are classified under the Waste Classification Guidelines Part 1: Classifying Waste (EPA, 2009).

"General solid waste (non-putrescible)" class of waste is identified as the most significant contributor to waste generated during the construction phase.

The generation of any "Liquid Waste" is not anticipated other than wastewater from onsite amenities, which will be managed in accordance with Council requirements and applicable permits.

Typical wastes and quantities that are anticipated to be generated during the construction phase of the project are indicated in the table below.

| **Waste Type** | **Classification** | **Expected quantity** | **Treatment** |
|---|---|---|---|
| Cardboard, paper | General Solid Waste | 1 Tonnes | Recycle |

| | | | |
|---|---|---|---|
| Timber (treated and untreated) | General Solid Waste | 1 Tonnes | Reuse/Recycle where possible/Dispose |
| Glass and Plastics | General Solid Waste | 2 Tonnes | Recycle where possible/Dispose |
| Metal | General Solid Waste | 5 Tonnes | Recycle |
| Waste paints/ glues & solvents | Liquid | 10 Litres | Treatment/Dispose |
| Fill (Soil, clay, sand etc.) | General Solid Waste | 300m3 | Reuse/Recycle/Dispose |
| Concrete, Bricks, Blocks Rocks, tiles, etc. | General Solid Waste | 50 Tonnes | Reuse/Recycle/Dispose |
| ACM | General Solid Waste (VENM if not oxidised) | Not Expected | Not Expected |
| Green waste (cleared vegetation) | General Solid Waste | 150m3 | Mulch/Reuse where possible/Recycle |
| Other general building waste | General Solid Waste | 100 Tonnes | Dispose/re use |

## 5.2 Objectives and Targets

The following targets have been established to minimise the volume of material that is disposed of in landfill. These targets will be documented within the Project Plan, responsibilities assigned and reviewed monthly to ensure the targets are being met.

| Waste Type / Classification | Treatment Target | Treatment Location |
|---|---|---|
| General Solid Waste (Demolition, Excavation, and Construction) | Recycle 80% total volume | Waste Facility |
| Excavated fill | Reuse total Volume where possible | On site |

## 5.3 Separation, Storage and Handling

Sorting and Separation

Wastes of different classifications will be kept separate at all times. If small amounts become mixed with other wastes, the entire quantity of waste will be classified as the highest risk of classification of the waste stream.

Recyclable waste shall be kept separate in a designated area for later disposal at an appropriate recycling facility.

Storage/Handling

All general solid waste generated shall be stored in waste containers within the construction site and sent to the authorised waste facility for disposal, as appropriate.

Handling, storage and transport of hazardous materials and waste that may be encountered, shall be in accordance with the relevant Safety Data Sheet (SDS). Hazardous waste shall be stored in the dedicated waste containers located within the construction site compound and removed as required by a licensed waste contractor to an approved waste facility.

Waste shall be stored in an environmentally safe manner and shall not be stored or allowed to come in contact with any incompatible waste, where possible.

Storage of fuels and chemicals shall be in a purpose built secured bunded area. The capacity of the bunded area is to be at least 110% of the largest container stored within as per EPA requirements. An emergency response spill kit shall be located adjacent to the bunded area.

All storage containers and locations for the various wastes shall be clearly labelled to ensure that mixing of wastes is avoided.

Lipman's site Supervisor shall be consulted if the nature of a waste if it is unknown.

Recycling

Where appropriate, recycling of materials may be performed during the construction phase the project.

Where relevant and feasible, recyclable material generated from the project may be collected in designated bins for transport to an appropriate recycling facility. Where appropriate, recycled materials will be incorporated into the construction works

Scrap metal bins will be provided for the collection of any scrap metal. This metal will then be transported to a metal recycling facility.

Timber formwork shall be reused as many times as possible to avoid the excessive generation of timber waste.

Concrete (waste and/or rejected) shall be stored separately in a designated area within the site. Wherever possible, this concrete may either be utilised on site in the form of fill or disposed of in an appropriate recycling facility.

Excavated material from site shall be stored separately according to material type and either used to backfill or disposed within an approved waste facility.

Contaminated excavated materials from throughout the project will be stockpiled and then stored within a burrow pit below the sporting fields as per the Remediation Action Plan. The burrow pit will then be capped with geofabric material and VENM/ENM.

## 5.4 Energy Use

The most significant sources of energy consumption during construction will be from plant and equipment using diesel and other fuels, and from electricity use in the site offices facilities, if not generated onsite.

In order to limit the consumption of energy on the project the following measures may be implemented.

- Limit idling time of plant and equipment whilst on site.
- Maintenance and servicing of plant and equipment is to be undertaken as required by manufacturers' specifications to ensure maximum operation efficiency.
- Energy efficient equipment in office and amenities will be utilised where appropriate.

## 6.0 TRAINING & AWARENESS

All workers will undergo a Site Induction, outlining environmental aspects and controls to be implemented on the project. The induction will provide necessary awareness of waste and the procedures to follow for proper waste recycling and disposal on site.

Toolbox meetings will also be held to reinforce a positive attitude towards waste management.

## 7.0 EMERGENCY RESPONSE

In the event of an emergency such as a chemical spillage, it will be handled in accordance with the Emergency Response management procedures detailed in the Project Plan.

Incidents which are notifiable to authorities or requires evacuation of the project shall be investigated, reported and corrective actions implemented to prevent re-occurrence.

## 8.0 WASTE RECORDING AND REPORTING

Waste disposal records (including weighbridge dockets and monthly waste/recycling reports) will be obtained, filed, stored, and archived in accordance with the records control procedure.

The following information in relation to the storage, treatment and disposal of waste will be recorded in accordance with EPA requirements:

- Amount and type of waste transported,
- Name and licence plate number of the transporter,
- Date of transportation, and
- Name and location of the receiving waste facility.

Waste will be transported to an approved waste facility only.

Documentation including Transport Certificates will be completed if required. The transporter will be informed of the nature of waste to be transported.

The EPA will be informed of any suspected breaches in the POEO Act with respect to transportation of waste.

Monthly project reports shall be prepared and provided to the Client outlining the project's performances against established objectives and targets (Refer Clause 5.2 above).

# Appendix 6: Construction Soil and Water Management Sub-Plan

# CONSTRUCTION SOIL & WATER MANAGEMENT PLAN

## St Anthony's of Padua Austral ECS

140 Eleventh Avenue, Austral

**Document Control**

| Version | Date Approved | Brief Description | Approved By |
|---|---|---|---|
| 1 | 16/02/2026 | Plan Created | LZ |
| | | | |
| | | | |
| | | | |

# Contents

**Introduction**

The project is a design and construct project for Sydney Catholic Early Childhood Services involving the construction of an Early Learning Centre (ECS) in the North East Corner of the previously completed stages of the St Anthony of Padua School. Trinity are responsible for the delivery of the ELC building works only. Carpark and Roadworks have previously been completed by others.

**SSD Consent – Construction Soil & Water Requirements**

The following conditions of consent relating to Construction Soil & Water Requirements within SSDA-8865 Modification 6 include,

**C24.** *The Applicant must prepare a Construction Soil and Water Management Plan (CSWMSP) and the plan must address, but not be limited to the following:*

*(a) be prepared by a suitably qualified expert, in consultation with Council;*

*(b) describe all erosion and sediment controls to be implemented during construction in accordance with the publication Managing Urban Stormwater: Soils & Construction (4th edition, Landcom 2004) commonly referred to as the 'Blue Book';*

*(c) provide a plan of how all construction works will be managed in a wet-weather events (i.e. storage of equipment, stabilisation of the Site);*

*(d) detail all off-Site flows from the Site; and*

*(e) describe the measures that must be implemented to manage stormwater and flood flows for small and large sized events, including, but not limited to 1 in 1-year ARI, 1 in 5-year ARI.*

**C26.** *Prior to the commencement of construction of a relevant stage, the Applicant must:*

*(a) install erosion and sediment controls on the site to manage wet weather events in accordance with the CSWMSP (Schedule 3 condition C24); and*

*(b) divert existing clean surface water around operational areas of the site.*

**C27.** *Prior to the commencement of construction of a relevant stage, the Applicant must implement measures to manage Acid Sulfate Soils. These measures must include handling, treatment, monitoring of water quality at treatment areas and disposal of Acid Sulfate Soils.*

**D33**. *Adequate provisions must be made to collect and discharge stormwater drainage during construction of the building to the satisfaction of the Certifier. The prior written approval of Council must be obtained to connect or discharge site stormwater to Council's stormwater drainage system or street gutter.*

**Purpose of the Construction Soil & Water Management Plan**

The purpose of the Dewatering Management Plan is to;

- Provide a comprehensive soil & water management plan for the St Anthony's of Padua – ELC project during its construction stage;
- Provide a practical and logical staging program for the implementation of erosion and sediment control measures;
- Protect water quality, by preventing sediment laden surface water generated by storms from entering sensitive receptors; and
- Comply with the relevant regulatory requirements including the DA/SSD conditions as referenced above.

Trinity responsibilities include;

- Overall implementation of the CSWMP
- Overall compliance with Trinity System Procedures for Erosion & Sedimentation Control
- Induct site personnel on the site safety & environmental requirements of the CSWMP prior to commencing any work on site, develop specific work methods (as required) and create excavation permits for each activity
- Coordinate site environmental monitoring through site inspections & compile/maintain internal records.
- Identify non-conformances and notify relevant authorities should any occur.

**Erosion & Sediment Control Plan**

In accordance with regulatory requirements, the Erosion and Sediment Control Plan (ESCP) for the construction phase of the project has been prepared to detail the following:

- Identification of construction activities on site causing soil erosion and generating sediment;
- Implementation of measures to minimise soil erosion and transport of sediment downstream of the project during its construction phase;
- Identification of the location, function and capacity of any erosion and sediment control structures; and
- Maintenance of structures during construction.

The following erosion & sediment controls will be implemented on site during construction of the project and are described in the following sub-sections;

- Stabilised Entry/Exit Point – Use of hardstands where possible
- Temporary Sediment Basins (where applicable)
- Sediment Filter Fences
- Swales
- Stockpiles

Soil & Water Management Plans & Details have been prepared by WSCE and are appended to this plan as **Appendix B.** These plans will be reviewed and amended, if required, during construction stages.

Stabilised Entry/Exit Point

A stabilised entry/exit points will be established to reduce the likelihood of vehicles tracking soil materials onto the site access way and public roads. The nominated point is to be kept clean of any loose material by regular sweeping and cleaning. It is important to note that all vehicles entering or leaving the site will not be tracking across any excavated areas unnecessarily. Wheels of all vehicles will be cleaned prior to exiting the construction site to prevent the tracking of mud. In the unlikely event of spillage on public roads because of site construction activities, the area will be cleaned immediately. Existing hardstand areas will be utilized to minimize impacts.

Sediment Filter Fences

Sediment filter fences shall be installed, as required, around the perimeter of areas where the project is to be constructed, with either the use of star pickets and filters to intercept water or the filters installed against the perimeter fence.
The filter fences will be checked after each storm event for damage or clogging by silt or debris and appropriate maintenance and/or repair actions taken.

Stockpile Management

Stockpiles will be constructed away from areas of drainage flows, as and when required. Stockpiles will be minimised through effective management of excavated or incoming fill material.
Where practicable, stockpile will be stabilised, if in place for more than ten days, and will be formed with sediment filters in place immediately downslope.

Other Site Controls

Other site controls to be employed may include:

- Receptacle bins will be provided for any lightweight litter with bins removed on a regular basis;
- Any concrete and mortar slurries will be collected and stockpiled at designated locations on site for incorporating into fill areas of the site or disposed of at a Licenced facility;
- Washout of concrete agitators (if necessary) is to be undertaken only in areas nominated by the Trinity;
- Any material removed during site stripping and grubbing works will be disposed of in an appropriate manner at an appropriately licensed facility, if not suitable for reuse;
- Temporary soil and water management structures will be removed only after the lands they are protecting are stabilised.

**Dust Control**

All practicable measures should be taken to reduce dust emanating from the site. Factors that contribute to dust production are:

- Wind over a cleared surface;
- Wind over stockpiled material; and
- Movement of machinery in unpaved areas.

Visible dust should not be present at the site boundary. Proposed measures to minimise the potential for dust generation include:

- Use of water sprays on unsealed or exposed soil surfaces;
- Covering/stablising of stockpiled materials and excavation faces (particularly during periods of site inactivity and/or during windy conditions);
- Establishment of dust screens consisting of a 1.8m high shade cloth or similar material secured to a chain wire fence at the perimeter of the site;
- Maintenance of dust control measures to keep the facilities in good operating condition;
- Stopping earthworks during strong winds where excessive dust is present; and
- Loading or unloading of dry soil as close as possible to stockpiles to prevent spreading of loose material around the development area.

Where stockpiles remain on-site or soil remains exposed for a period of longer than several days, dust monitoring should be undertaken at the site.

Dust is also produced during the transfer of material to and from the site. All material should be covered during transport and should be properly disposed of on delivery. No material is to be left in an exposed, un-monitored condition.

All equipment and machinery should be brushed or washed down before leaving the site to limit dust and sediment movement off-site. In the event of prolonged rain and lack of paved areas all vehicles should be washed down prior to exit from the site, and any soil or dirt on the wheels of the vehicles removed. Water used to clean the vehicles will be appropriately disposed as per the requirements of the relevant waste classification guidelines.

**Dewatering**

**Surface Water**

The following plans & details by Warren Smith Consulting Engineers document the required erosion & sediment control measures to be implemented for the project;

- WSCE- C2.01 Soil and Water Management Plan
- WSCE- C2.02 Soil and Water Management Details

As the construction site is less than 2500m2 a sediment basin is not required. Dewatering is to be undertaken in accordance with the Department of Planning, Housing and Infrastructure - Guidelines for erosion and sediment control on building sites.
https://www.planningportal.nsw.gov.au/draftplans/made-and-finalised/guidelines-erosion-and-sediment-control-building-sites

However, during excavation works a temporary sediment basin may be utilised as required to manage water during storm events. This would be in accordance with the WSCE plans and details provided. All dewatering is to be completed in accordance with Landcom's "Managing Urban Stormwater - Soils and Construction (4th edition, Landcom 2004) commonly referred to as the 'Blue Book'". All overland flows will be conveyed to the sediment basins, which will subsequently be released to the schools existing infrastructure (drainage, road).

All stormwater runoff from the construction area will be stored within the site and treated prior to any controlled discharge offsite. No uncontrolled discharge off-site will occur unless the design capacity for the sediment basins is exceeded during intensive rainfall events. Based on Environmental Protection Authority and Australian & New Zealand Guidelines for Fresh & Marine Water Quality and 'Urban Stormwater: Soils and Construction "The Blue Book" 2004 (4th edition), all controlled water releases off-site must meet the flowing requirements prior to discharge:

- pH within the range of 6.5 to 8.5;
- Suspended solids - no greater than 50mg/L;
- Oils and grease – no visible films or odour;
- Litter – no visible litter washed (or blown) from the site.

Water contained within the site will be treated with a coagulating/flocculating agent such as Aluminium Sulphate which will be distributed to the sediment basin in accordance with the relevant manufacturer's recommendations (Quantity added, Wait time prior to testing etc.).

Following this the water will be tested to the requirements of Environmental Protection Authority and Australian & New Zealand Guidelines for Fresh & Marine Water Quality using a pH meter, turbidity test tubes & via visual inspection to confirm no oils, grease & or litter present to confirm compliance with the requirements noted above. If the required criteria are met, then the water will be discharged from site.

**Acid Sulphate Soils**

Based on the findings in Alliance Geotechnical Report, it is not expected that Acid Sulphate Soils will be encountered within the project site. As such, development of measure for handling, treatment & monitoring of water will not be required.

**Small and Large Rainfall Events**

In the event of small and large sized rain events including but not limited to 1 in 1-year ARI, 1 in 5-year ARI. Additional measures and preparation will take place prior to ensure sediment fences and controls are in place to avoid unnecessary site runoff. Preparations in accordance with the Department of Planning, Housing and Infrastructure - Guidelines for erosion and sediment control on building sites.
https://www.planningportal.nsw.gov.au/draftplans/made-and-finalised/guidelines-erosion-and-sediment-

control-building-sites

- All stockpiles to be capped
- Stabilised access roads to be installed from carpark to relevant workfaces
- Safety inspection to be carried out prior to works recommencing.

Additional risks and considerations below have been made.

4.4.1 Assessment of Erosion Hazard

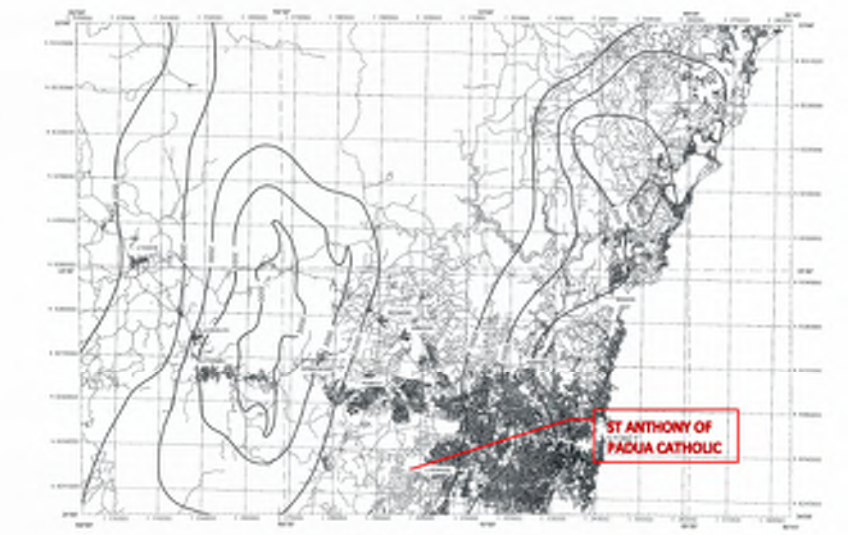
(a) A simple procedure is provided to identify those sites of low erosion hazard, where the normal suite of erosion control measures, defined in earlier sections of this Chapter, is considered adequate.

(b) The potential erosion hazard associated with a specific site can be simply determined from figure 4.6, based on:

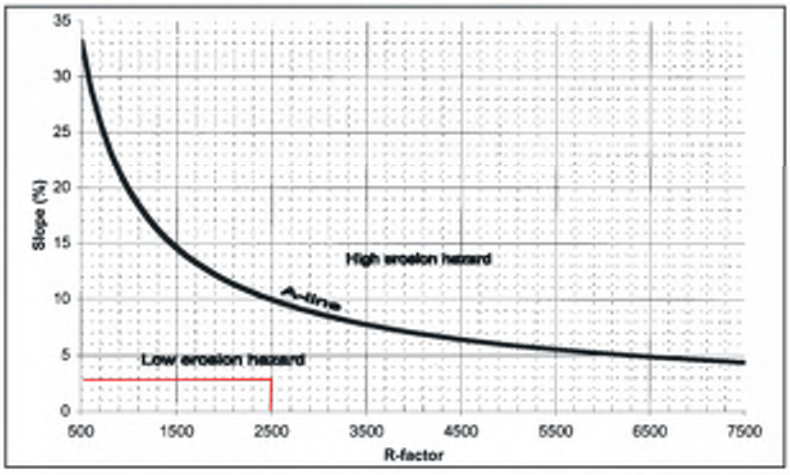
- the R-factor (rainfall erosivity) that relates to your site location, determined from the maps provided in Appendix B; and
- the typical upper slope gradient (measured in percent) of the site landform.

(i) Sites below the A-line on figure 4.6 have low potential erosion hazards and the standard erosion control measures defined in earlier sections of this Chapter are considered adequate. Planners of such sites need not undertake the tasks outlined in the remainder of Section 4.4[1].

(ii) Sites above the A-line have high potential erosion hazards and designers should apply the guidelines in Section 4.4.2, below.




The site slope is in average 2.8%, so the level of erosion hazard as per section 4.4.1 is low, see below:




$R_{(5\text{-day})}$ as per appendix L, assuming a design for a 85th percentile, 5-day depth we have a 32.2mm rainfall depth:

| Location | 2-day rainfall depths (mm) | | | | | 5-day rainfall depths (mm) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 75% %ile | 80% %ile | 85% %ile | 90% %ile | 95% %ile | 75% %ile | 80% %ile | 85% %ile | 90% %ile | 95% %ile |
| **North Coast** | | | | | | | | | | |
| Coffs Harbour | 18.3 | 23.8 | 31.8 | 44.4 | 70.8 | 33.6 | 42.7 | 55.8 | 74.9 | 117.6 |
| Kempsey | 22.1 | 27.9 | 36.4 | 49.0 | 77.0 | 40.3 | 49.3 | 63.7 | 84.8 | 132.0 |
| Grafton | 14.0 | 17.8 | 23.9 | 31.2 | 48.9 | 23.3 | 29.0 | 37.2 | 50.1 | 75.4 |
| Lismore | 16.3 | 20.6 | 26.4 | 36.3 | 57.0 | 28.6 | 35.3 | 45.2 | 60.2 | 95.3 |
| Port Macquarie | 18.0 | 22.9 | 29.8 | 41.4 | 65.3 | 32.0 | 40.1 | 51.8 | 70.0 | 106.2 |
| Taree | 15.0 | 19.0 | 24.9 | 35.5 | 56.4 | 25.0 | 31.7 | 41.2 | 55.9 | 90.6 |
| Tweed Heads | 23.4 | 29.5 | 37.8 | 50.8 | 78.7 | 39.6 | 48.5 | 62.5 | 82.5 | 128.8 |
| **Central Coast/Hunter** | | | | | | | | | | |
| Cessnock | 13.4 | 16.5 | 21.1 | 28.5 | 46.0 | 20.3 | 24.4 | 31.0 | 42.6 | 63.0 |
| Gosford (Narara) | 16.7 | 21.3 | 28.4 | 39.8 | 63.0 | 27.9 | 35.9 | 45.8 | 62.2 | 99.3 |
| Nelson Bay | 17.5 | 22.3 | 28.9 | 39.4 | 58.9 | 30.4 | 38.1 | 48.3 | 63.5 | 91.5 |
| Newcastle | 13.7 | 17.6 | 23.0 | 31.8 | 48.1 | 24.4 | 30.5 | 38.9 | 51.8 | 76.7 |
| Scone | 12.4 | 15.3 | 19.3 | 25.0 | 37.8 | 19.0 | 22.6 | 27.7 | 35.9 | 51.3 |
| Wyong | 16.9 | 20.8 | 26.9 | 37.2 | 58.8 | 26.8 | 33.8 | 43.2 | 58.7 | 90.1 |
| **Sydney/Blue Mountains** | | | | | | | | | | |
| Berkshawe | 11.4 | 14.5 | 19.6 | 27.0 | 42.0 | 18.4 | 24.4 | 31.5 | 42.6 | 66.6 |
| Blacktown | 12.0 | 15.8 | 20.3 | 28.0 | 43.6 | 19.0 | 24.6 | 32.2 | 43.2 | 70.8 |
| Camden | 13.6 | 16.8 | 21.6 | 29.2 | 44.8 | 20.2 | 25.1 | 32.0 | 43.4 | 68.3 |
| Campbelltown | 12.2 | 15.2 | 19.0 | 26.9 | 42.1 | 19.3 | 23.9 | 30.6 | 43.2 | 63.3 |
| Hornsby | 15.7 | 20.6 | 27.4 | 38.1 | 61.0 | 25.9 | 32.8 | 43.3 | 60.0 | 92.5 |
| Katoomba | 16.5 | 20.6 | 26.7 | 37.6 | 60.2 | 28.0 | 35.2 | 45.4 | 63.0 | 99.6 |
| Lithgow | 11.4 | 14.8 | 18.3 | 24.2 | 35.3 | 19.5 | 23.6 | 29.4 | 37.8 | 56.4 |
| Liverpool | 12.2 | 15.5 | 20.0 | 28.4 | 43.2 | 19.2 | 24.4 | 32.2 | 43.8 | 70.2 |
| Mona Vale | 19.0 | 23.6 | 29.2 | 38.7 | 62.0 | 29.0 | 35.2 | 44.0 | 61.2 | 92.9 |
| Mosman | 15.2 | 19.3 | 25.4 | 35.9 | 57.7 | 26.2 | 32.9 | 43.2 | 59.6 | 91.5 |
| Parramatta North | 11.7 | 15.2 | 20.6 | 28.2 | 45.5 | 20.3 | 25.8 | 33.1 | 45.8 | 74.1 |
| Penrith | 14.0 | 18.2 | 23.6 | 31.5 | 48.5 | 21.8 | 27.4 | 35.0 | 47.6 | 74.6 |
| Richmond | 10.2 | 13.5 | 18.0 | 24.9 | 39.2 | 17.5 | 22.4 | 29.5 | 39.7 | 61.4 |
| Ryde | 14.7 | 18.3 | 24.9 | 34.3 | 53.5 | 23.4 | 29.5 | 38.8 | 53.6 | 80.5 |
| Springwood | 15.5 | 20.1 | 25.9 | 35.0 | 55.6 | 25.2 | 31.4 | 40.4 | 55.0 | 84.1 |
| Sutherland | 15.0 | 18.8 | 24.9 | 34.8 | 55.0 | 23.4 | 29.7 | 38.9 | 54.6 | 85.1 |
| Sydney 12.7 | | 18.8 | 22.4 | 31.6 | 52.1 | 23.3 | 29.7 | 38.8 | 55.2 | 84.3 |
| Wallacia | 14.0 | 17.8 | 23.0 | 31.4 | 48.8 | 22.1 | 27.6 | 36.6 | 48.8 | 76.2 |
| Wilberforce | 11.4 | 14.9 | 19.8 | 27.7 | 46.4 | 19.8 | 24.6 | 33.2 | 46.7 | 69.4 |
| **Illawarra/South Coast** | | | | | | | | | | |
| Albion Park | 16.5 | 21.1 | 27.9 | 39.1 | 67.4 | 25.2 | 31.8 | 41.9 | 59.8 | 101.2 |
| Batemans Bay | 13.7 | 17.8 | 24.1 | 34.2 | 54.9 | 22.1 | 28.0 | 37.4 | 52.4 | 84.4 |
| Bega | 12.6 | 16.1 | 21.3 | 30.5 | 51.1 | 19.5 | 24.8 | 32.5 | 46.2 | 77.2 |
| Cooma | 7.6 | 9.8 | 13.0 | 17.8 | 27.2 | 12.5 | 15.8 | 20.0 | 25.8 | 39.1 |
| Helensburgh | 23.1 | 28.7 | 36.1 | 53.0 | 81.3 | 35.6 | 45.0 | 57.4 | 79.2 | 124.6 |
| Kiama | 14.7 | 19.1 | 24.9 | 35.5 | 57.2 | 25.5 | 32.2 | 42.1 | 58.3 | 90.7 |
| Kangaroo Valley | 16.8 | 21.4 | 29.2 | 41.7 | 70.6 | 26.8 | 34.2 | 45.7 | 67.0 | 115.6 |
| Wollegong | 14.7 | 18.3 | 23.4 | 31.8 | 49.1 | 22.9 | 28.0 | 36.2 | 49.0 | 75.2 |
| Robertson | 15.8 | 20.3 | 27.9 | 38.2 | 67.3 | 28.4 | 36.0 | 46.1 | 67.3 | 113.0 |
| Wollongong | 13.8 | 18.0 | 24.8 | 36.6 | 61.3 | 25.4 | 33.0 | 43.5 | 60.8 | 95.6 |
| **Northern Tablelands and Northwestern Slopes** | | | | | | | | | | |
| Armidale | 12.6 | 15.2 | 18.3 | 25.0 | 35.3 | 18.8 | 24.1 | 29.2 | 37.4 | 52.9 |
| Gunnedah | 14.2 | 17.3 | 21.3 | 27.7 | 39.2 | 20.0 | 24.1 | 30.2 | 38.4 | 53.0 |
| Tamworth | 15.2 | 18.3 | 23.2 | 27.7 | 39.8 | 21.6 | 25.2 | 30.8 | 39.2 | 54.2 |
| Tenterfield | 18.8 | 22.3 | 26.7 | 33.8 | 46.0 | 26.7 | 31.4 | 38.1 | 47.4 | 63.3 |
| **Central Tablelands and Central Western Slopes** | | | | | | | | | | |
| Bathurst | 12.7 | 15.2 | 18.5 | 21.4 | 30.4 | 18.8 | 20.8 | 24.9 | 31.4 | 43.7 |
| Cowra | 12.0 | 14.7 | 18.0 | 22.9 | 32.8 | 18.1 | 21.6 | 26.1 | 32.5 | 44.9 |
| Dubbo | 12.7 | 16.8 | 20.2 | 26.1 | 36.0 | 18.8 | 22.8 | 28.4 | 35.6 | 50.7 |
| **Southern Tablelands and Southwestern Slopes** | | | | | | | | | | |
| Albury | 11.8 | 14.4 | 17.4 | 22.4 | 31.6 | 20.0 | 23.7 | 28.4 | 35.3 | 45.2 |
| Goulburn | 7.8 | 10.8 | 13.2 | 18.0 | 27.4 | 14.2 | 17.8 | 22.2 | 28.6 | 40.8 |
| Jindabyne | 11.9 | 14.2 | 17.3 | 22.6 | 33.4 | 17.3 | 20.6 | 24.9 | 32.0 | 46.8 |
| Queanbeyan | 12.7 | 15.2 | 18.8 | 24.2 | 34.3 | 18.0 | 21.3 | 25.8 | 33.0 | 45.1 |
| Wagga | 9.2 | 11.4 | 14.4 | 19.3 | 27.6 | 15.6 | 18.8 | 23.4 | 29.4 | 40.2 |
| **Northwestern, Southwestern and Far Western Plains** | | | | | | | | | | |
| Bourke | 11.7 | 14.6 | 18.3 | 24.8 | 35.6 | 19.3 | 19.0 | 23.9 | 30.9 | 44.5 |
| Broken Hill | 7.1 | 9.1 | 12.0 | 16.9 | 25.9 | 9.7 | 12.2 | 16.2 | 21.6 | 33.0 |
| Griffith | 9.5 | 11.7 | 14.0 | 18.5 | 28.2 | 13.8 | 16.4 | 20.6 | 25.4 | 34.8 |
| Moree | 12.6 | 15.8 | 19.3 | 25.1 | 36.8 | 18.0 | 21.9 | 26.8 | 36.3 | 51.4 |
| Nyngan | 12.2 | 15.2 | 19.1 | 25.6 | 37.3 | 16.5 | 20.4 | 25.8 | 33.8 | 47.8 |

**Implementation of the CSWMP**

**Inspection**

Trinity will inspect the site, providing particular attention to the following matters:

- Ensure the site is cleaned of any loose materials such as soil, sand and debris (or other materials) that may be a source of sediment or pollution.
- Construct additional erosion and/or sediment control works as might become necessary to ensure the desired protection is given to down slope lands and waterways.
- Remove trapped sediment from upslope of sediment fences and bales.
- Maintain erosion and sediment control measures in a functioning condition until all construction and other activities are completed and the site is rehabilitated.
- If any runoff is accidentally bypassing the sediment control structure, rectify immediately by diverting runoff to function as intended.
- Remove temporary soil conservation structures as a last activity in the rehabilitation program.

**Recording**

Trinity will keep the following records via our site diary system/site inspection sheets:

- Weather conditions (such as rainfall and wind speed/direction), if any.
- The condition of any soil and water management works.
- Any corrective actions or remedial works undertaken.

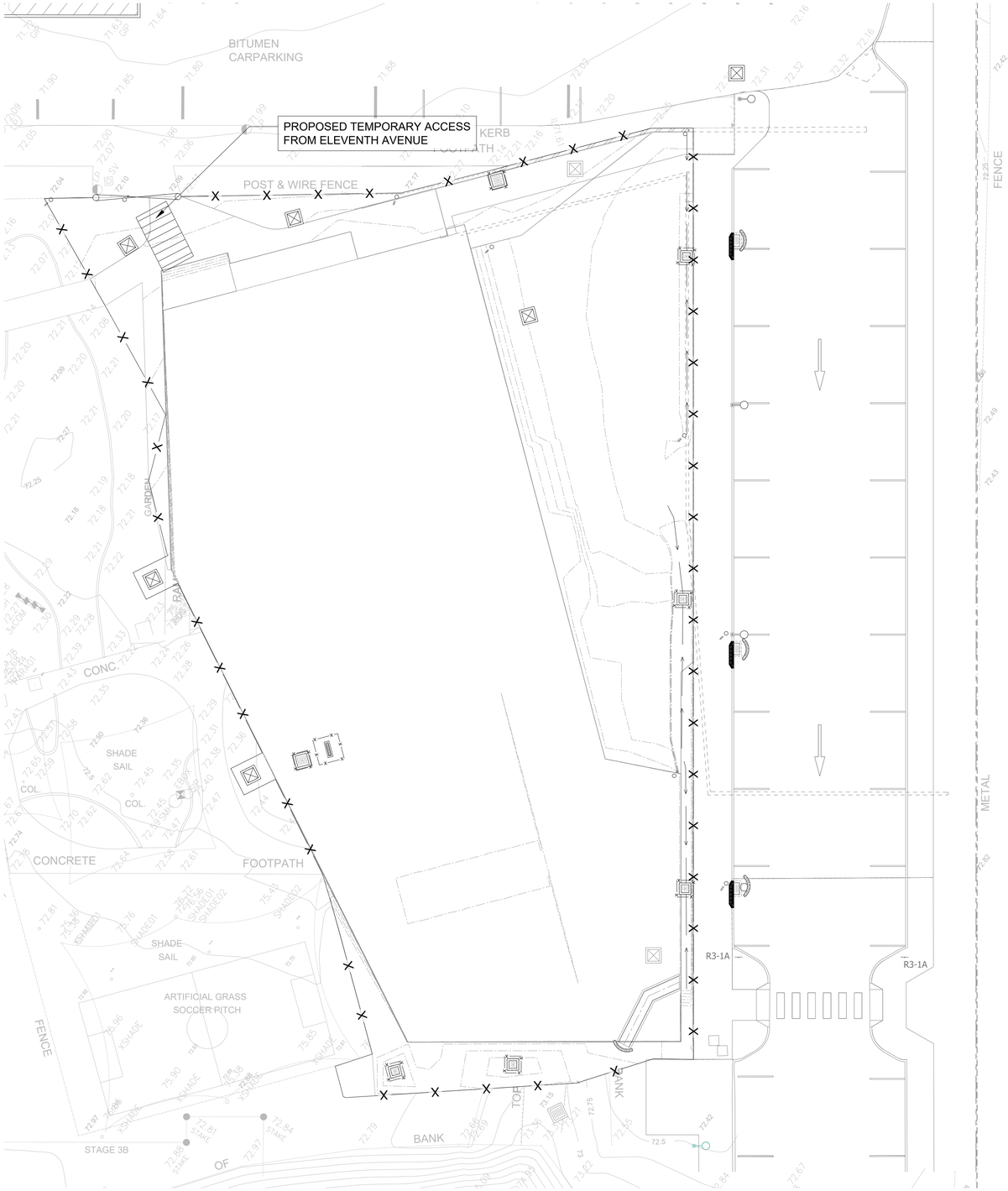
All records entered will be kept on-site and made available to Liverpool City Council as well as to the relevant authorities and/or any other authorised person on request.

**Additional Management Practices**

In addition to the management practices specified above, Trinity will further ensure that:

- The CSWMP is being implemented correctly;
- Erosion and sediment control measures are maintained in an effective condition until all earthwork activities are completed and the site stabilised;
- Essential modifications are made to the CSWMP, if and when necessary, to ensure the desired protection is given to down slope lands and waterways;
- Waste bins will be emptied as necessary and in an approved manner.
- The stormwater system that is constructed (temporary or permanent) will be kept in good, working condition.
- Any pollutants removed from the nominated storage and/or treatment devices will be disposed of in an approved manner, where further pollution to down slope lands and waterways should not occur.

**Appendix A – Soil and Water Management Plans Prepared by WSCE**




## LEGEND

- EXISTING BOUNDARY
- SITE FENCE
- SEDIMENT FENCE
- SITE GATE
- VEHICLE ENTRY SHAKER GRID
- GEOTEXTILE INLET FILTER (FOR PITS WITHIN LANDSCAPED AREAS)
- SEDIMENT TRAP FOR KERB INLET - WIRE MESH AND GRAVEL
- EXISTING TREES TO BE REMOVED
- OVERLAND FLOW PATH

## NOTES:

1. GEOTEXTILE INLET FILTER BAGS TO BE FITTED IN ALL EXISTING STORMWATER GRATED PITS WITHIN THE DEVELOPMENT AREA.
2. PROPOSED LEVEL CHANGES IN THE VICINITY OF EXISTING TREES TO BE REVIEWED AND APPROVED BY PROJECT ARBORIST.
3. IMPACTS AROUND EXISTING TREES SHOULD BE MINIMISED.
4. ALL WORKS AROUND EXISTING TREE ROOT PROTECTION ZONES TO BE CONFIRMED WITH PROJECT ARBORIST PRIOR TO COMMENCEMENT ON SITE.

## SOIL AND WATER MANAGEMENT NOTES:

1. ALL EROSION CONTROL MEASURES TO BE INSTALLED IN ACCORDANCE WITH LANDCOM MANAGING URBAN STORMWATER: SOILS AND CONSTRUCTION ('BLUE BOOK').
2. SEDIMENT FENCING TO BE PROVIDED IN ACCORDANCE WITH STANDARD DETAILS AS REQUIRED TO PREVENT SEDIMENT FROM LEAVING THE SITE. TEMPORARY CONSTRUCTION ENTRY/ EXIT SEDIMENT TRAPS ARE TO BE PROVIDED AT ENTRY/ EXIT LOCATIONS.
3. PIT INLET SEDIMENT TRAPS ARE TO BE PROVIDED AT ALL EXISTING STORMWATER INLET PITS LOCATED WITHIN AREA OF WORK.

## SEDIMENT CONTROL CONDITIONS:

1. SEDIMENT FENCES WILL BE INSTALLED AS SHOWN AND ELSEWHERE AT THE DISCRETION OF THE SITE MANAGER TO CONTAIN COARSER SEDIMENT FRACTIONS INCLUDING AGGREGATED FINES AS CLOSE TO THE SOURCE AS PRACTICABLE.
2. SEDIMENT REMOVED FROM ANY TRAPPING DEVICE WILL BE RELOCATED WHERE FURTHER POLLUTION TO DOWNSTREAM LANDS AND WATERWAYS CANNOT OCCUR.
3. STOCKPILES TO BE PLACED AT THE DISCRETION OF THE SITE MANAGER, NOT WITHIN 5m OF ANY HAZARDOUS AREAS INCLUDING LIKELY AREAS OF HIGH VELOCITY FLOWS SUCH AS WATERWAYS, PAVED AREAS & DRIVEWAYS.
4. PIT INLET FILTERS (SEE DETAILS) WILL PREVENT WATER FROM DIRECTLY ENTERING THE PERMANENT DRAINAGE SYSTEM UNLESS IT IS FREE OF SEDIMENT.
5. TEMPORARY SEDIMENT TRAPS WILL BE RETAINED UNTIL AFTER THE LANDS THEY ARE PROTECTING ARE COMPLETELY REHABILITATED.

## CONSTRUCTION WORK MANAGEMENT IN WET-WEATHER EVENTS:

- ALL STOCKPILES TO BE CAPPED.
- STABLISED ACCESS ROADS TO BE INSTALLED FROM CARPARK 5 TO RELEVANT WORKFACES.
- AFTER EVERY RAIN EVENT, SAFETY INSPECTION TO BE CARRIED OUT PRIOR TO WORKS RECOMMENCING.

FOR CONSTRUCTION

DO NOT SCALE FROM DRAWINGS, CHECK & VERIFY ALL DIMENSIONS & LEVELS BEFORE COMMENCEMENT OF ANY WORK.

THIS DRAWING IS NOT TO BE COPIED IN PART OR WHOLE WITHOUT WRITTEN PERMISSION FROM WARREN SMITH CONSULTING ENGINEERS.

NORTH

DRAWING COLOUR CODED - PRINT ALL COPIES IN COLOUR

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PLAN SCALE 1:200 A1 SHEET

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150
A1

| REVISION | AMENDMENT | DATE | REVISION | AMENDMENT | DATE |
|---|---|---|---|---|---|
| A | ISSUE FOR CONSTRUCTION CERTIFICATE | 23/03/2026 | | | |

CLIENT
Sydney Catholic early childhood services
TRINITY

PROJECT
AUSTRAL - EARLY CHILDHOOD SERVICE

PREPARED BY
WSCE
Driven by excellence, built on experience.

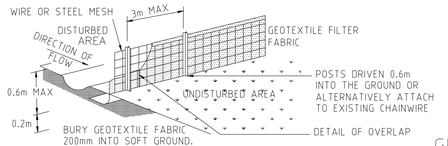
TITLE
# SOIL AND WATER MANAGEMENT PLAN

| SCALE | DRAWN | DESIGNED | CHECKED | APPROVED |
|---|---|---|---|---|
| AS SHOWN | S.C. | I.S. | J.G | J.G. |

| JOB No. | DRAWING No. | ISSUE |
|---|---|---|
| 5914009 | C2.01 | A |

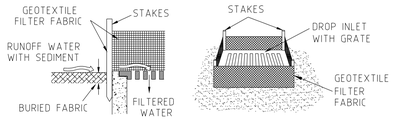
| DATE | STATUS |
|---|---|
| SEPTEMBER 2024 | ISSUE FOR CC |

Xrefs: X:\5914008.SU-Utilities_X-5914008.SU_Existing Boundary_X-5914008_TB_A1H_X-5914004-AR_Site Plan-CPS_X-5914004-SW_Layout_Carpark Extension_X-5914006-SU-Ground_X-5914006-SU-Trees_X-5914006-SW_Layout ECS_5914009-WSCE-CS-MO-03 - Bulk Earthworks Surface
Plot Date: 23/03/2026@17:55:50 Login Name: iskwan Cad File: Y:\5914009\Civil\Drawings\CAD\Civil 2D\C2.01 Soil and Water Management Plan.dwg



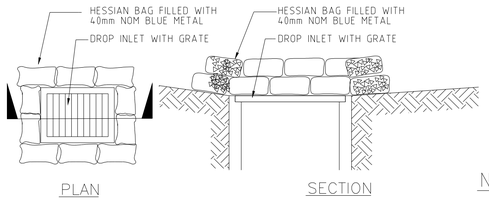

## SEDIMENT CONTROL FENCE

NTS



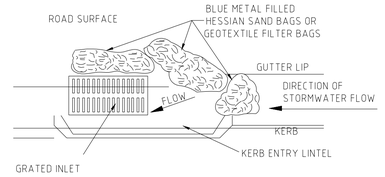

## GEOTEXTILE FILTER FABRIC DROP INLET SEDIMENT TRAP

NTS



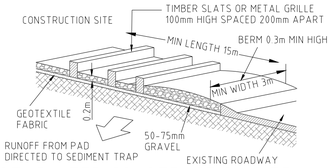

## HESSIAN BAG DROP INLET SEDIMENT TRAP

NTS




## NEW/EXISTING GRATED KERB ENTRY PIT SEDIMENT CONTROL BARRIER

NTS

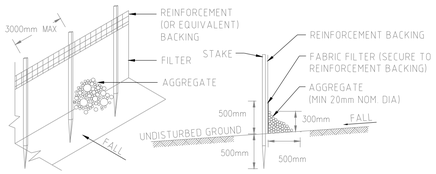



## STABILIZED CONSTRUCTION SITE VEHICLE ENTRY/EXIT

NTS

### SITE ENTRY/EXIT NOTES:-

1. ALL VEHICLE ENTRANCES & EXITS TO THE CONSTRUCTION SITE MUST BE STABILIZED TO PREVENT THEM BECOMING A SOURCE OF SEDIMENT, BY PROVIDING A VEHICLE SHAKE AREA. THIS MAY CONSIST OF A TIMBER, CONCRETE OR STEEL SHAKER GRID OR RUBBLE AREA.
2. THE VEHICLE EXIT AREA IS TO BE MAINTAINED IN A CLEAN & SERVICEABLE CONDITION DURING THE TOTAL TIME OF USAGE.
3. ANY UNSEALED ROAD BETWEEN THE DEVICE AND COUNCILS ROADWAY IS TO BE TOPPED WITH 100mm THICK, 40mm NOMINAL SIZE AGGREGATE.
4. PUBLIC ROADS MUST BE KEPT FREE OF DIRT AND MUD. SEDIMENT TRACKED ONTO THE PUBLIC ROADWAY BY VEHICLES LEAVING THE CONSTRUCTION SITE IS TO BE SWEPT UP IMMEDIATELY.
5. FENCES SHOULD BE ERECTED TO ENSURE VEHICLES CAN NOT BYPASS THE STABILIZED ACCESS POINTS, UNLESS COMING FROM A STABILIZED AREA.

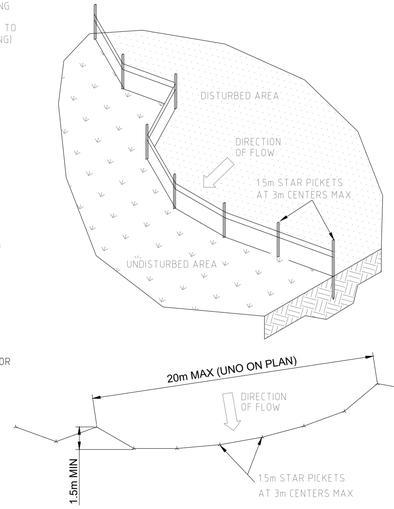



## SEDIMENT FENCE DETAIL FOR ROCKY GROUND

NTS

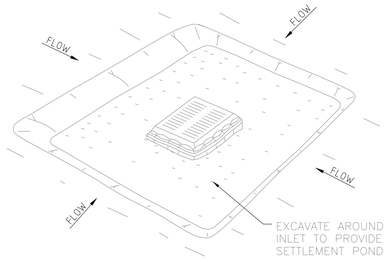
### SEDIMENT FENCE NOTES:-

1. CONSTRUCT SEDIMENT FENCE AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE OR AT THE TOE OF A SLOPE.
2. DRIVE 1.5 METRE LONG STAR PICKETS INTO GROUND SUFFICIENT TO PROVIDE RIGID SUPPORT, 3 METERS APART. WHERE THERE IS INSUFFICIENT SOIL DEPTH OVER ROCK, HOLES ARE TO BE DRILLED INTO ROCK TO ACCEPT THE STAR PICKETS.
3. ON SOFT GROUND MATERIALS, DIG A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
4. BACKFILL TRENCH OVER BASE OF FABRIC & COMPACT.
5. FIX SELF-SUPPORTING GEOTEXTILE TO UPSLOPE SIDE OF POSTS WITH WIRE TIES OR AS RECOMMENDED BY THE GEOTEXTILE MANUFACTURER. USE A REINFORCEMENT BACKING WITH NON SELF-SUPPORTING GEOTEXTILE FABRIC.
6. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.
7. ON HARD OR ROCKY GROUND, SMOOTH A 500mm WIDE STRIP UPSLOPE OF THE FENCE LINE. TURN THE BOTTOM 500mm OF THE FABRIC UPSLOPE AND ANCHOR IN PLACE WITH SUITABLE AGGREGATE.
8. WHERE A SEDIMENT FENCE IS CONSTRUCTED DOWN SLOPE FROM A DISTURBED BATTER THE FENCE SHOULD BE LOCATED 1.5 TO 2.0 METERS DOWN SLOPE FROM THE TOE OF THE BATTER.




## SEDIMENT FENCE LAYOUT PLAN

NTS

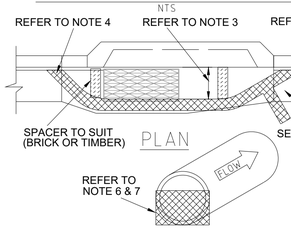



## EXCAVATED SEDIMENT TRAP

NTS

### EXCAVATED SEDIMENT TRAP NOTES:-

1. REMOVE THE SEDIMENT WHEN IT HAS ACCUMULATED TO HALF THE DESIGN DEPTH OF THE TRAP AND RESTORE THE TRAP TO ITS ORIGINAL DIMENSIONS.
2. PROVIDE 50 cu.m/Ha OF SEDIMENT STORAGE VOLUME.
3. REFER TO THE MAINTENANCE REQUIREMENTS.

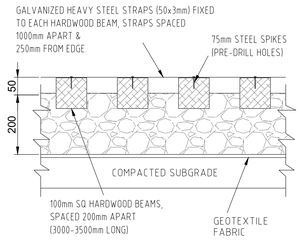



## GEOTEXTILE FILTER BAGS

NTS

### SEDIMENT BARRIER FOR PITS & PIPES, NOTES:-

1. SLEEVES ARE TO BE MADE FROM GEOTEXTILE FABRIC LONGER THEN THE LENGTH OF THE INLET PIT.
2. FILL SLEEVE WITH 5 OR 10mm CLEAN GRAVEL.
3. PLACE THE SLEEVE AT THE OPENING OF THE KERB INLET LEAVING A 100mm GAP TO ACT AS AN EMERGENCY OVERFLOW.
4. SLEEVE MUST BE PLACED AGAINST THE KERB TO PREVENT BYPASS.
5. FIT SLEEVE TO ALL INLETS DOWNSTREAM OF THE WORKS.
6. FOR DRAINAGE WORKS FIT GEOTEXTILE FABRIC OR GEO BAGS TO UPSTREAM FACE OF ALL OPEN PIPES.
7. MAINTAIN AN OPENING AT THE TOP OF THE PIPE OF 1/3 OF THE PIPE DIAMETER.
8. THE FILTERS ARE TO BE CLEANED AND MAINTAINED DAILY.
9. ALL CARE SHOULD BE TAKEN TO MINIMIZE SEDIMENT REACHING THE STORMWATER SYSTEM BY MINIMIZING EXCAVATION WORKS AND PREVENTING EXCESS WATER FLOW THROUGH WORKS.

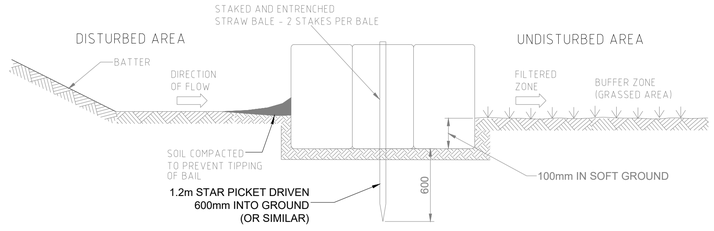



## VEHICLE SHAKER GRID

NTS

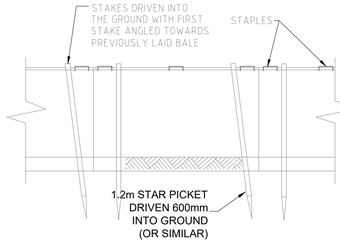
### SITE ENTRY/EXIT CONSTRUCTION NOTES:-

1. STRIP TOP SOIL & LEVEL SITE. PROVIDE CATCH DRAIN AT SIDES TO DIRECT RUNOFF WATER TO SEDIMENT TRAPS.
2. COMPACT SUBGRADE AND REMOVE ANY HIGH POINTS.
3. COVER AREA WITH GEOTEXTILE FABRIC. THIS MAY BE WOVEN OR NEEDLE PUNCHED PRODUCT WITH A MINIMUM CBR BURST STRENGTH (AS3706.4-90) OF 2500 N.
4. CONSTRUCT 200mm THICK RUBBLE PAD OVER GEOTEXTILE USING ROAD BASE OR 30-40mm AGGREGATE. MINIMUM LENGTH 15 METRES OR TO BUILDING ALIGNMENT. MINIMUM WIDTH 3 METRES. CONSTRUCT 300mm HIGH HUMP IMMEDIATELY WITHIN BOUNDARY TO DIVERT WATER TO A SEDIMENT TRAP.
5. WHERE GRIDS ARE USED FIRST CONSTRUCT A 150 THICK PAD OVER GEOTEXTILE FABRIC. LEVEL THIS IN BOTH DIRECTIONS. LOWER GRID ON TO THE PREPARED BASE AND ENSURE THAT NO PART IS SITTING ON ANY HIGH POINTS. BACKFILL THE SPACES BETWEEN THE GRIDS TO WITHIN 50mm OF THE TOP.
6. PROVIDE RAMPS AT ENDS AND SIDE OF GRIDS. IF DEPRESSIONS OCCUR IN THE RAMPS DURING USE. ADD ADDITIONAL MATERIAL.



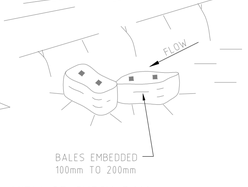

## TYPICAL STRAW BALE SECTION

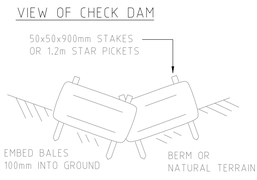
NTS

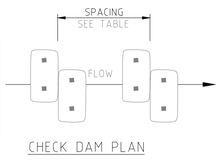



## TYPICAL STRAW BALE DETAIL

NTS




CHECK DAM SPACING TABLE

| LONGITUDINAL GRADE (%) | SPACING (METERS) |
|---|---|
| 0 - 5 | 40 |
| 5 -10 | 30 |
| 10 - 15 | 20 |
| GREATER THAN 15 | 10 |

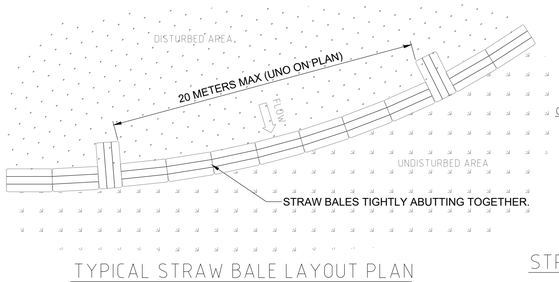
## STRAW BALE CHECK DAM DETAILS

NTS

### STRAW BALE NOTES:-

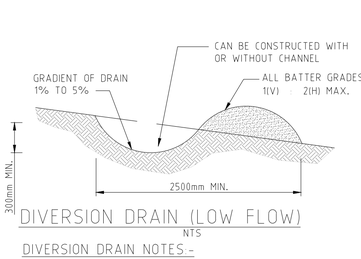
1. CONSTRUCT STRAW BALE FILTER AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE OR AT THE TOE OF A SLOPE.

   PLACE BALES LENGTHWISE IN A ROW WITH ENDS TIGHTLY ABUTTING.
2. USE STRAW TO FILL ANY GAPS BETWEEN BALES. STRAWS TO BE PLACED PARALLEL TO GROUND.
3. MAXIMUM HEIGHT OF FILTER IS ONE BALE.
4. ON SOFT MATERIALS, EMBED EACH BALE IN THE GROUND 75mm TO 100mm AND ANCHOR WITH TWO 1.2 METRE STAR PICKETS. ANGLE THE FIRST STAKE IN EACH BALE TOWARDS THE PREVIOUSLY LAID BAIL. DRIVE STAKES 600mm INTO THE GROUND AND FLUSH WITH THE TOP OF THE BALES.
5. WHERE A STRAW BALE FILTER IS CONSTRUCTED DOWN SLOPE FROM A DISTURBED BATTER THE BALES SHOULD BE LOCATED 1.5 TO 2.0 METERS DOWN SLOPE FROM THE TOE OF THE BATTER.
6. WHERE REQUIRED WRAP GEOTEXTILE FILTER FABRIC AROUND BALES AND STAPLE IN POSITION.




## TYPICAL STRAW BALE LAYOUT PLAN

NTS




## DIVERSION DRAIN (LOW FLOW)

NTS

### DIVERSION DRAIN NOTES:-

1. CONSTRUCT WITH GRADIENT OF 1 PER CENT TO 5 PER CENT.
2. AVOID REMOVING TREES AND SHRUBS IF POSSIBLE.
3. DRAINS TO BE OF CIRCULAR, PARABOLIC OR TRAPEZOIDAL CROSS SECTION NOT V-SHAPED.
4. EARTH BANKS TO BE ADEQUATELY COMPACTED IN ORDER TO PREVENT FAILURE.
5. PERMANENT OR TEMPORARY STABILIZATION OF THE EARTH BANK TO BE COMPLETED WITHIN 10 DAYS OF CONSTRUCTION.
6. ALL OUTLETS FROM DISTURBED LANDS ARE TO FEED INTO A SEDIMENT BASIN OR SIMILAR.
7. DISCHARGE RUN OFF COLLECTED FROM UNDISTURBED LANDS ONTO EITHER A STABILIZED OR AN UNDISTURBED DISPOSAL SITE WITHIN THE SAME SUBCATCHMENT AREA FROM WHICH THE WATER ORIGINATED.
8. COMPACT BANK WITH A SUITABLE IMPLEMENT IN SITUATIONS WHERE THEY ARE REQUIRED TO FUNCTION FOR MORE THAN FIVE DAYS.
9. EARTH BANKS TO BE FREE OF PROJECTIONS OR OTHER IRREGULARITIES THAT WILL IMPEDE NORMAL FLOW.

## MAINTENANCE REQUIREMENTS:-

1. ACCUMULATED SILT & SEDIMENT MUST BE REMOVED AT REGULAR INTERVALS AND AFTER EACH MAJOR STORM.
2. SILT & SEDIMENT MUST BE REMOVED FROM OFF THE SITE OR TO A COUNCIL APPROVED LOCATION WITHIN THE SITE, WHERE IT WILL NOT ERODE.
3. THE SEDIMENT FENCES, BALES & TRAPS SHALL BE REGULARLY INSPECTED, ESPECIALLY AFTER RAIN AND KEPT IN GOOD REPAIR AND FUNCTIONING CONDITION AT ALL TIMES.
4. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT SEDIMENT, EROSION & WATER POLLUTION SHALL BE MINIMIZED.
5. THE SEDIMENT TRAPS SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE CONSTRUCTION AREA HAS BEEN PROPERLY STABILIZED.

FOR CONSTRUCTION

DO NOT SCALE FROM DRAWINGS, CHECK & VERIFY ALL DIMENSIONS & LEVELS BEFORE COMMENCEMENT OF ANY WORK.

THIS DRAWING IS NOT TO BE COPIED IN PART OR WHOLE WITHOUT WRITTEN PERMISSION FROM WARREN SMITH CONSULTING ENGINEERS.

DRAWING COLOUR CODED - PRINT ALL COPIES IN COLOUR

| REVISION | AMENDMENT | DATE | REVISION | AMENDMENT | DATE |
|---|---|---|---|---|---|
| A | ISSUE FOR CONSTRUCTION CERTIFICATE | 23/03/2026 | | | |

CLIENT

Sydney Catholic early childhood SERVICES

TRINITY

PROJECT

AUSTRAL - EARLY CHILDHOOD SERVICE

PREPARED BY

WSce Driven by excellence, built on experience.

TITLE

**SOIL AND WATER MANAGEMENT DETAILS**

| SCALE | DRAWN | DESIGNED | CHECKED | APPROVED |
|---|---|---|---|---|
| AS SHOWN | S.C. | I.S. | J.G | J.G. |

| JOB No. | DRAWING No. | ISSUE |
|---|---|---|
| 5914009 | C2.02 | A |

| DATE | STATUS |
|---|---|
| SEPTEMBER 2024 | ISSUE FOR CC |

Cad File: T:\5914009\Civil\Drawings\CAD\Civil 25\C2.02 Soil and Water Management Details.dwg
Logo Name: scock
Xrefs: X-5914008_TB_A1H
Plot Date: 23.03.2026@14:41:30

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

A 1

## Luke Zammit

**From:** Luke Zammit
**Sent:** Thursday, 19 February 2026 1:19 PM
**To:** KumarJ2@liverpool.nsw.gov.au
**Cc:** lcc@liverpool.nsw.gov.au
**Subject:** 5914005 | SSDA-8865 - CSWMP
**Attachments:** 5914006-WSCE-CS-DD-C2.02_Soil_and_Water_Management_Plan_[03].pdf; 5914006-WSCE-CS-DD-C2.01_Soil_and_Water_Management_Plan_[05].pdf; Email from Jason Kumar dated 4.7.22.pdf

Hi Jason,

Hope you are well. Please find attached Soil and Water Management Plans and Details prepared by Warren Smith Consulting Engineers for the final stage of the St Anthony of Padua SSDA 8865 works in regards to condition C24 a which requires consultation with Council for the Cnstruction Soil and Water Management Plans.

Please note these are new plans to the previous stage plans approved by Liverpool Council in attached email on 4/7/22 provided by Lipman. This is a smaller scale building on the same subject site with previous stages all completed by others.

Could you please confirm if you have any comments or issues by COB 27th February.

Kind Regards,

**Luke Zammit | Senior Project Manager | 0435 001 373**
**Trinity Fitout & Construction**
**Sydney | Hunter | Illawarra | Regional NSW**

## Lachlan Ryan

**To:** Jason Kumar
**Cc:** Tim Calpito
**Subject:** RE: 5914005 | SSDA-8865 - CSWMP

---

**From:** Jason Kumar <KumarJ2@liverpool.nsw.gov.au>
**Sent:** Monday, 4 July 2022 3:48 PM
**To:** Lachlan Ryan <lachlanr@lipman.com.au>
**Cc:** Tim Calpito <timc@lipman.com.au>
**Subject:** RE: 5914005 | SSDA-8865 - CSWMP

Hi Lachlan,

Thanks for the email below.

Council has reviewed the Soil and Water Management Plans and Details prepared by Warren Smith Consulting Engineers, Job No. 5914005, drawings C2.01-03, revision 3, dated 1/07/2022 for the phase 3 works. Council has no objection to the proposed plans.

Council is satisfied with condition C24 (a) in the development consent (SSDA-8865).

Should you have any enquiries, please contact on the details below.

Thanks

**Jason Kumar**
Acting Land Development Engineer

LIVERPOOL CITY COUNCIL

02 8711 7634 | | KumarJ2@liverpool.nsw.gov.au
Customer Service: 1300 36 2170 | 33 Moore Street Liverpool, NSW 2170, Australia
www.liverpool.nsw.gov.au

# Appendix 7: Aboriginal Culture Heritage Management Plan

# Approved Development of St Anthony of Padua Catholic School at 135-165 Tenth Avenue and 170-140 Eleventh Avenue, Austral, Liverpool City Council LGA, NSW

Aboriginal Cultural Heritage Management Sub-Plan

Prepared for Lipman on behalf of The Catholic Archdiocese of Sydney

June 2022

KAYANDEL

ARCHAEOLOGICAL SERVICES

☎ 02 4627 8622
🖷 02 4605 0815
Info@kayandel.com.au

**Document Status**

| Version No. | Purpose of Document | Orig | Review | Review Date | Approval for Issue | Date Issued |
|---|---|---|---|---|---|---|
| 1.1 | Internal Review | TJ & SC | NS | 21/09/2020 | NS | 22/0/2020 |
| 1.2 | Client Review | NS | CTPG | 22/09/2020 | SS | 22/09/2020 |
| 1.3 | RAP Review | NS | RAPs | 22/09/2020 | RAPs | 30/09/2020 |
| 2.0 | Final ACHMSP | NS | LS | 30/09/2020 | LS | 30/09/2020 |
| 3.1 | Internal Review | BA | NS | 20/05/2022 | NS | 31/05/2022 |
| 3.2 | Client Review | DA | TC | 31/05/2022 | TC | 31/05/2022 |
| 3.3 | RAP Review | DA | RAPS | 31/05/2022 | | 28/06/2022 |
| 3.4 | Final Draft | NS | LS | 31/05/2022 | LS | 31/05/2022 |
| 4.0 | Final ACHMSP | NS | LS | 29/06/2022 | LS | 30/06/2022 |

# CONTENTS

## LIST OF TABLES



## LIST OF FIGURES

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# 1 INTRODUCTION

This Aboriginal Cultural Heritage Management Sub-Plan (ACHMSP) has been developed in order to manage impacts to Aboriginal heritage during the construction of the St Anthony of Padua Catholic School in Austral.

This ACHMSP has been prepared to Condition C23 and C30 of the Development Consent (SSD-8865) for the redevelopment of the St Anthony of Padua Catholic School (refer to Section 1.1).

## 1.1 Project Background

Kayandel (2018) prepared an Aboriginal Cultural Heritage Assessment Report (ACHAR) to support an Environmental Impact Statement (EIS) for the proposed redevelopment of St Anthony of Padua at 125-165 Tenth Avenue and 170-140 Eleventh Avenue, Austral.

The ACHAR was prepared to address the Secretary's Environmental Assessment Requirements (SEARs) issued by the Department of Planning and Environment (DPE).

The ACHAR was prepared in accordance with the:

- *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW, 2010a);
- The *Code of Practice for the Investigation of Aboriginal Objects in New South Wales* (DECCW, 2010b); and,
- *The Guide to Investigating, Assessing and Report on Aboriginal Cultural Heritage in NSW* (OEH, 2011).

The assessment included a field survey, and a review of background resources including soil landscapes, geology, hydrology and past reports and site records to inform predictive statements about the likelihood of Aboriginal heritage sites to occur within the Subject Area.

As part of preparing the ACHAR, a search of the Aboriginal Heritage Information Management System (AHIMS) was undertaken. No previously recorded Aboriginal sites have been documented within the Subject Area.

As part of undertaking the field survey, Kayandel (2018) did not identify any previously unrecorded Aboriginal sites or areas of Potential Archaeological Deposit (PAD) within the Subject Area.

Based on the sensitivity mapping undertaken by AMBS (2012) (refer to Figure 13 of Kayandel (2018)), and the results of the Kayandel field survey, the Subject Area was assessed as having low archaeological sensitivity.

Kayandel (2018) recommended the following:

1. No further assessment of the Aboriginal heritage within the Subject Area is required to inform the proposed State Significant Development (SSD) application (refer to Sections 1.2 and 1.3 of Kayandel (2018));
2. Should the proposed works be amended and result in potential impacts to areas previously not inspected as part of this assessment, further investigations may be required;
3. Consultation should continue with the Registered Aboriginal Parties (RAPs) at intervals not exceeding 6 months until such time as the works approved under the SSD have been completed;
4. Prior to the commencement of any ground disturbance works authorised by the SSD, an Aboriginal Cultural Heritage Management Plan (ACHMP) should be developed by a qualified and experienced practitioner in Aboriginal cultural heritage in consultation with the

Registered Aboriginal Parties (RAPs); this should include a provision for unexpected finds, and methodologies for further investigation and reporting where required;

5. The final ACHMP must be kept onsite so that it can be referred to in the event of an unexpected find being identified;
6. All relevant staff and contractors should be made aware of their statutory obligations for heritage under the *National Parks and Wildlife Act 1974*, which may be implemented as a heritage induction;
7. If, during the course of development works, suspected historic cultural heritage material is uncovered, work should cease in that area immediately. Heritage NSW (formerly the Heritage Branch, Office of Environment & Heritage) (Enviroline 131 555) should be notified and works only recommence when an approved management strategy has been developed; and,
8. A copy of the final report should be sent to the RAPs identified in Kayandel (2018, Table 3).

A draft copy of this ACHMSP was provided to the RAPs in September 2020.

## 1.2 Location of the Subject Area

The Subject Area is situated within the Liverpool City Council Local Government Areas (LGA), and is also within the Leppington North Precinct of the South West Growth Centre (see Figure 1).

The Subject Area comprises of the allotments listed below and covers approximately 10.92ha. The Subject Area extends along the southern side of Eleventh Avenue to Tenth Avenue and west from Fourth Avenue towards Edmondson Avenue in the east (see Figure 2):

- Lots 1 & 2 DP1232692; and,
- Lots 810-812, 840-842 DP2475.

## 1.3 General Scope of Development Works

The SSD application (SSD-8865) was for the concept development application for St Anthony of Padua School redevelopment including:

- A Concept Proposal for alterations and addition to the existing school to accommodate up to 2480 students and 200 staff members, in three stages comprising:
    - Retention of the existing buildings;
    - Maximum building envelopes for the school buildings, a childcare centre, a church and a trade training centre, site layout, access arrangements, car parking areas and landscaping;
    - Outline staging of the development;
- Stage 1 of the development for the detailed design, construction and use of the buildings, comprising:
    - Demolition works, tree removal and site remediation work;
    - A new two - four storey school building (central hub);
    - A bell tower at the entrance piazza;
    - A new two-storey building at the north-western corner to accommodate gymnasium / hall, indoor sport courts and indoor swimming pool / recreation centre;
    - Retention and use of existing single storey building for Kindergarten classrooms;
    - Accommodation of up to 2280 students (K – 12);
    - A canteen and café within the site;
    - Expansion of an existing building at the north-eastern corner to provide for a single storey 125-place childcare centre;

- Accommodation of up to and 200 staff members;
- Car parking areas for up to 326 car spaces, outdoor play areas, hard and soft landscaped areas;
- Associated external road works and intersection upgrades; and,
- Staged construction and use of the buildings in six construction phases.

## 1.4 Relevant Conditions of Consent for Concept Proposal

Table 1 identifies the Conditions of Consent that relate to Aboriginal heritage. The aforementioned Conditions of Consent have been addressed in this ACHMSP.

| Part | Description | Location within ACHMSP |
|---|---|---|
| **Condition C23 – Construction Environmental Management Plan** | | |
| (a) | be prepared by a suitably qualified and experienced expert in consultation with the Registered Aboriginal Parties (RAPs) | Section 1.6<br>Section 3 and Appendix II |
| (b) | include recommendations of the Aboriginal Cultural heritage Assessment Report (ACHAR) prepared by Kayandel dated August 2018. | Sections 1.1 and 6 |
| **Condition C30 – Aboriginal Heritage** | | |
| - | Prior to commencement of construction of a relevant stage, the Applicant must consult with RAPs to determine specific requirements and management measures to be used on site during construction, including protection of any objects or items in perpetuity. | Section 3 and Appendix II<br>Section 6 |

**Table 1:** Conditions of Consent – Aboriginal heritage

## 1.5 Purpose and Objectives

The purpose of this ACHMSP is to describe how Aboriginal heritage will be protected and managed by Lipman on behalf of the Catholic Archdiocese of Sydney during the construction of the project.

A provision for managing impacts to unexpected historical heritage items has also been included as part of this ACHMSP (refer to Section 6.2.2).

Specific objectives include:

- An unexpected finds procedure developed in consultation with Heritage NSW and Registered Aboriginal Parties (RAPs) for the management of any previously unidentified Aboriginal heritage finds;
- A description of the measures that would be implemented for:
  - Ensuring workers on site receive suitable heritage inductions prior to carrying out any development on site, and that records are kept of these inductions;
  - Ongoing consultation with Aboriginal stakeholders during the implementation of the plan
- A program to monitor and report on the effectiveness of these measures and any heritage impacts of the project.

This ACHMSP should be read in conjunction with the following document:

- Proposed Redevelopment of St Anthony of Padua Catholic School 125-165 Tenth Avenue (Lot 2 DP1232692 and Lots 842-839 DP2475) and, 170-140 Eleventh (Lot 1 DP1232692 and Lots 810-

812 DP2475), Austral, Liverpool City Council LGA, NSW: Aboriginal Cultural Heritage Assessment Report (Kayandel, 2018).

## 1.6 Personnel

This ACHMSP has been prepared by Kayandel (refer to Table 2).

| Person | Qualifications | Experience | Tasks |
|---|---|---|---|
| Britt Andrews | B. Arts (His. and Anc. His. and Arch.), B. Com. and Media Studies (Digital Media and Com.) | >1 year | Background research, report drafting |
| Steven Castell | B. Arts Ext (Arch/Anthro) | 4 years | Background research, report drafting |
| Natalie Stiles | B. Arts (Arch/Palaeo), Grad Cert. Arts (Arch), MGIS&RemoteSens | >10 years | Mapping, ACHMSP review |
| Lance Syme | B. Arts (Arch/Palaeo), Grad. Dip. (Heritage Cons.), M. ICOMOS | >20 years | Project supervisor, quality control |

**Table 2:** Kayandel personnel involved in the preparation of this ACHMSP


**Figure 1: Project Location**


**Figure 2: Subject Area**

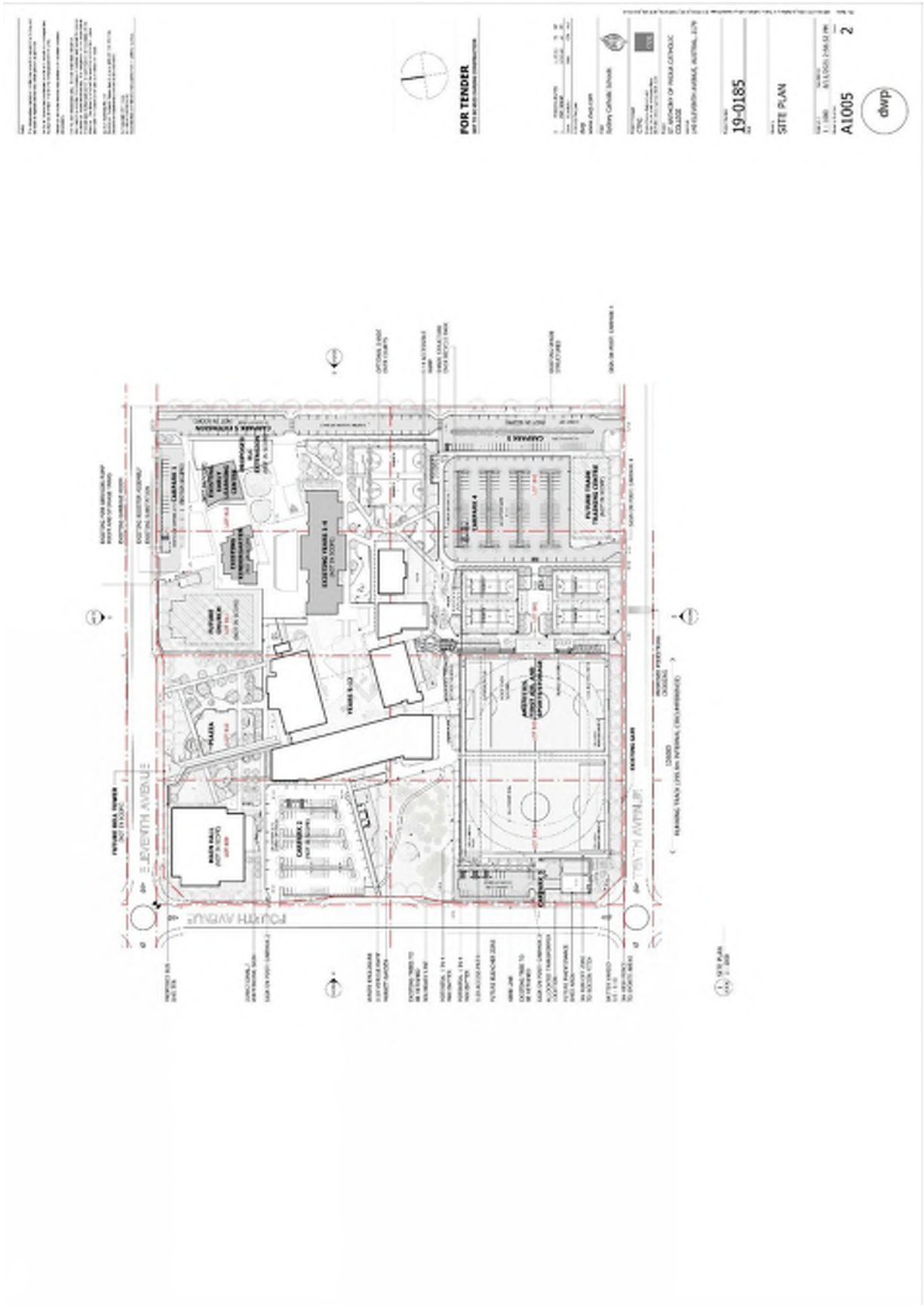


**Figure 3:** Approved Concept Design

# 2 ENVIRONMENTAL REQUIREMENTS

The following section outlines the environmental requirements of the project including relevant legislation and guidelines that have been used to aid in the formulation of this ACHMSP.

## 2.1 Relevant Legislation and Guidelines

Legislation relevant to heritage management includes:

- *Environmental Planning and Assessment Act 1979* (*EP&A Act*);
- *National Parks and Wildlife Act 1974* (*NPW Act*);

The main guidelines, specifications, and policy documents relevant to this ACHMSP include:

- *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW, 2010a);
- *The Burra Charter: The Australia ICOMOS Charter for Places of Cultural Significance* (Australia ICOMOS, 2013); and,
- The *Code of Practice for the Investigation of Aboriginal Objects in New South Wales* (DECCW, 2010b).

## 2.2 Commitment to Cultural Heritage Preservation

According to Allen and O'Connell (2003), Aboriginal people have inhabited the Australian continent for the last 50,000 years. New evidence out of the Northern Territory has pushed this date back to around 60,000 years with the Malakanunja II rock shelter dated at 61,000 +9000/-13,000 BP (Clarkson et al., 2015).

In NSW, according to Bowler et al. (2003), Aboriginal people have occupied the land for over 42,000 years. However, preliminary evidence presented by Biosis (2017) from a subsurface testing program in South-Western NSW suggests Aboriginal people may have occupied the semi-arid zone of the region for 50,000 years.

Without being part of the Aboriginal culture, and the productions of this culture, it is not possible for non-Aboriginal people to fully understand their meaning to Aboriginal people – only to move closer towards understanding this meaning with the help of the Aboriginal community. Similarly, definitions of Aboriginal culture and cultural heritage without this involvement constitute outsider interpretations.

With this preface, Aboriginal cultural heritage broadly refers to things that relate to Aboriginal culture and hold cultural meaning and significance to Aboriginal people (DECCW, 2010a, p. 3). There is an understanding in Aboriginal culture that everything is interconnected. In essence, Aboriginal cultural heritage can be viewed as potentially encompassing any part of the physical and/or mental landscape, that is, 'Country' (DECCW, 2010a, p. iii).

Aboriginal people's interpretation of cultural value is based on their "traditions, observance, lore, customs, beliefs and history" (DECCW, 2010a, p. 3). The things associated with Aboriginal cultural heritage are continually / actively being defined by Aboriginal people. These things can be associated with traditional, historical or contemporary Aboriginal culture (DEC, 2005, p. 1; DECCW, 2010a, p. 3).

### 2.2.1 Tangible Aboriginal Cultural Heritage

Three categories of tangible Aboriginal cultural heritage may be defined:

- Things that have been observably modified by Aboriginal people;

- Things that may have been modified by Aboriginal people, but no discernible traces of that activity remain; and/or,
- Things never physically modified by Aboriginal people (but associated with Dreamtime Ancestors who shaped those things).

### 2.2.2 Intangible Aboriginal Cultural Heritage

Examples of intangible Aboriginal cultural heritage would include memories of stories and 'ways of doing', which would include language and ceremonies (DECCW, 2010a, p. 3).

### 2.2.3 2.2.3 Statutory

Currently Aboriginal cultural heritage, as statutorily defined by the *NPW Act* consists of objects and places.

Aboriginal objects are defined as:

> *any deposit, object or material evidence…relating to the Aboriginal habitation of the area that comprises NSW, being habitation before or concurrent with (or both) the occupation of that area by persons of non-Aboriginal extraction, and includes Aboriginal remains.*

Aboriginal places are defined as a place that is or was of special Aboriginal cultural significance. Places are declared under section 84 of the *NPW Act*.

### 2.2.4 2.2.4 Values

Aboriginal cultural heritage is broadly valued by Aboriginal people as it is used to define their identity as both individuals and as part of a group (DEC, 2005, p. 1 & 3; DECCW, 2010b). More specifically it is used:

- To provide a:
  - "Connection and sense of belonging to Country" (DECCW, 2010a, p. 15);
  - "Link between the present and the past" (DECCW, 2010a, p. iii).
- As a learning tool to teach Aboriginal culture to younger Aboriginal generations and the general public (DECCW, 2010a, p. 3).

As further evidence of Aboriginal occupation prior to European settlement for people who do not understand the magnitude to which Aboriginal people occupied the continent (DECCW, 2010a, p. 3).

The NSW government and all of its entities are committed the protection and preservation of Aboriginal and non-Aboriginal cultural heritage in NSW.

# 3 ABORIGINAL COMMUNITY CONSULTATION

## 3.1 Aboriginal Consultation undertaken as part of the Project Approval

Consultation and collaboration with registered Aboriginal stakeholders has been integral to the assessment and management of Aboriginal cultural heritage for the project.

Consultation undertaken to date is outlined in the ACHAR (Kayandel, 2018), this was undertaken in accordance with the consultation requirements (DECCW, 2010a).

## 3.2 Ongoing Aboriginal consultation

Ongoing consultation between Lipman, the Catholic Archdiocese of Sydney, and Registered Aboriginal Parties (RAPs) regarding the management of Aboriginal cultural heritage associated with the project will continue throughout the life of this project.

Ongoing consultation will consist of the following actions:

- Outcomes for any proposed modification to the consent for the project;
- Outcomes of any unexpected Aboriginal finds;
- Outcomes for any unexpected Aboriginal archaeological features; and,
- Updates to this ACHMSP.

In the event of an unexpected Aboriginal heritage find, Lipman and/or the Catholic Archdiocese of Sydney, or a qualified Archaeologist will consult with RAPs regarding the management of Aboriginal heritage items.

Following consultation with the various stakeholders, the ACHMSP will be updated to include any comments raised and to document the consultation undertaken (refer to Appendix II).

### 3.2.1 ACHMSP RAP Review - 2020

A copy of version 1.3 of the ACHMSP was provided to RAPs for their review and comment.

Refer to Table 3 and Appendix II for a copy of the comments received from the RAPs in regard to v1.3 of the ACHMSP.

| RAP | RAP's Comment(s) | Kayandel's Response |
|---|---|---|
| Thoorga Nura (received 24/09/2020) | Has no comments at this stage | N/A |
| Goobah (received 24/09/2020) | Agrees with the mitigation measures in the management plan and that he has no comments otherwise. | N/A |
| Wailwan Aboriginal Digging Group (received 25/09/2020) | At this point I do not have any more to add to this project. Everything seems to be satisfactory. | N/A |
| Kamilaroi-Yankuntjatjara Working Group (received 28/09/2020) | We agree & support your report & looking forward to working with you on this project | N/A |
| Darug Custodian Aboriginal Corporation (received 28/09/2020) | We support the recommendations in this Draft report | N/A |
| Barraby Cultural Services (received 29/09/2020) | Following on from my phone conversation I have reviewed and | N/A |

| RAP | RAP's Comment(s) | Kayandel's Response |
|---|---|---|
| | agree with the report associated with this project | |
| Yurrandaali Cultural Services (received 29/09/2020) | Happy for us to proceed with the project as it is. | N/A |
| Kawul Cultural Services (received 29/09/2020) | Happy with the recommendations and management strategies that are contained within the ACHMSP and that she does not have any additional management strategies to add | N/A |
| Didge Ngunawal Clan (received 29/09/2020) | Happy with the recommendations and management strategies that are contained within the ACHMSP and that they don't have any additional management strategies to add. | N/A |
| Cubbitch Barta Native Title Claimants Aboriginal Corporation (received 30/09/2020) | I would like to make comment on is that the usual unexpected finds and human remains statement is made in this document, who during the construction process has the knowledge to identify unexpected finds on site? | As part of Strategy 1 "Heritage Inductions and Toolbox" (refer to Section 6.2.1) there will be a discussion regarding the process of identifying unexpected Aboriginal finds, and unexpected Aboriginal remains.<br>These processes are also detailed in Sections 6.2.2 and 6.2.3.<br>The ACHMSP also includes Appendix I which provides reference examples of Aboriginal finds and remains for people on-site to refer to as part identifying any unexpected Aboriginal finds and/or Aboriginal remains. |

**Table 3:** RAP comments on version 1.3 of the ACHMSP

### 3.2.2 ACHMSP RAP Review – 2022

A copy of version 3.3 of the ACHMSP was provided to RAPs for their review and comment.

Refer to Table 4 and Appendix III for a copy of the comments received from the RAPs in regard to v3.3 of the ACHMSP.

| RAP | RAP's Comment | Kayandel's Response |
|---|---|---|
| Kamilaroi-Yankuntjatjara Working Group (received 28/09/2020) | The whole study area and surrounding area is of high significance to us Aboriginal Peoples, for tens of thousands of years the area has been occupied by Aboriginal Peoples, in turn We have a deep connection to the sky, water ways and land. The area would have been utilied for daily activites such as camping, hunting, fishing and ceremonial practices etc. There are water ways within the area that are utilised by Aboriginal Peoples. Yes, it's the | Thanks for sending through your comments detailing the cultural significance of the Subject Area and the surrounding area.<br>We will pass your comments onto the Proponent so that they can be incorporated into any interpretative plan that may be being produced for the development. |

| RAP | RAP's Comment | Kayandel's Response |
|---|---|---|
| | tangible aspects that archaeology looks for but it's also the intangible and aesthetic aspects that must be considered when it comes to cultural heritage. There are stories of the dreaming and creations stories that should be sort when it comes to place and connecting to country. | |
| | The study area is significant due to the multiple water ways in an ecosystem rich. The main water way that is close by to the to the site are Kemps Creek. This water way runs across the land utilised by many for many reasons such as fresh water, bathing, gathering of food and for everyday life activities. Water is a giver of life without water we would not be here so we should respect, conserve and mange water ways as naturally as possible and keep them maintained. Aboriginal people have been following waterways for tens of thousands of years a sense of way finding and a deep connection we hold. | |
| | Is there a cultural interpretation plan for this project? due to the project being accessed by the wider community we believe there is an opportunity to archive connecting with country through design, art, digital displays, apps, native gardens, or landscaping. It is important to incorporate interpretation into you project as it educates the wider community and our next generations about the traditional owners of the land, a keeping place should also be sort to house artefacts on country. This is a way in which to close the gap and better our understanding of one of the oldest continuing cultures in the world. | |
| | We would like to agree to your report and look forward to furthering consultation for this project. | |

**Table 4:** RAP comments on version 3.3 of the ACHMSP

# 4 EXISTING ENVIRONMENT

The following sections summarise what is known about Aboriginal heritage within and adjacent to the Subject Area based on information provided in:

- Proposed Redevelopment of St Anthony of Padua Catholic School 125-165 Tenth Avenue (Lot 2 DP1232692 and Lots 842-839 DP2475) and, 170-140 Eleventh (Lot 1 DP1232692 and Lots 810-812 DP2475), Austral, Liverpool City Council LGA, NSW: Aboriginal Cultural Heritage Assessment Report (Kayandel, 2018).

## 4.1 Aboriginal Cultural Heritage

No previously recorded Aboriginal sites have been documented within the Subject Area.

As part of preparing the ACHAR, Kayandel (2018) did not identify any previously unrecorded Aboriginal sites or areas of Potential Archaeological Deposit (PAD) within the Subject Area.

Based on the sensitivity mapping undertaken by AMBS (2012) (refer to Figure 13 of Kayandel (2018)), and the results of the Kayandel field survey, the Subject Area was assessed as having low archaeological sensitivity.

# 5 IMPACTS TO ABORIGINAL HERITAGE

The key construction activities and the associated impacts to Aboriginal heritage values were identified and assessed during the Aboriginal cultural heritage assessment process as per the Code of *Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (DECCW, 2010b), and the *Guide to Investigating, Assessing and Report on Aboriginal Cultural Heritage in NSW* (OEH, 2011).

The consequence and likelihood of each activity's impact on Aboriginal heritage values is detailed below.

## 5.1 Aboriginal Heritage Impacts

The potential impacts on Aboriginal heritage could include:

- Direct impacts and disturbance to the entire site or the majority of a site containing Aboriginal objects due to the construction of the project. This impact can be complete or partial.
- Indirect impacts to Aboriginal objects or cultural values, such as from development related changes to the landscape or scenic context of a site or item.

As noted in Section 4.1, no Aboriginal sites, or areas of Potential Archaeological Deposit (PAD) have been identified within the Subject Area, and as such the approved works will not result in direct and/or indirect to Aboriginal sites.

# 6 MITIGATION MEASURES

## 6.1 Construction Related Measures

Specific mitigation measures to address impacts on Aboriginal heritage are outlined in Table 5. Where required, further details of the proposed mitigation measures are provided in Section 6.2.

| Strategy | Requirement | Personnel |
|---|---|---|
| 1 | Heritage inductions to be completed as part of the overall site induction | Project Manager / Archaeologist |
| 2 | Procedure to follow in case of unexpected Aboriginal finds | Construction contractor |
| 3 | Procedure to follow in case of the discovery of human remains | Construction contractor |

**Table 5:** Construction Related Measures

## 6.2 Heritage Protection Management Strategies

### 6.2.1 Strategy 1: Heritage Inductions and Toolbox Talks

All contractors and staff working on site will undergo site induction training (or be supervised by a staff member that has had the relevant training) relating to Aboriginal heritage management issues. The induction training will address elements related to heritage management including:

- Requirements of this ACHMSP and relevant legislation;
- Roles and responsibilities for heritage management;
- Location of identified heritage sites;
- Proposed heritage management and protection measures;
- Basic identification skills for Aboriginal artefacts and human remains;
- Specific training for personnel working in the vicinity of Aboriginal heritage sites identified within the Subject Area;
- Procedure to follow in case of an unexpected heritage item find during construction works;
- Procedure to follow in case of discovery of human remains during construction works; and,
- Penalties and non-compliance with this ACHMSP.

Training records for all project personnel will be kept and maintained in a register detailing names, dates, content and type of training undertaken. This ACHMSP should be kept on site at all times and be readily accessible. The requirements of the ACHMSP and the unexpected finds protocols should be incorporated into toolbox talks, where works are commencing in the vicinity of heritage items or sites, the mapping presented in this report should be reviewed and management measures assessed to ensure no impacts beyond the project approval are likely to take place.

### 6.2.2 Strategy 2: Procedure to Follow in case of Unexpected Aboriginal Finds

As noted in Section 4.1, no Aboriginal sites, or areas of Potential Archaeological Deposit (PAD) have been recorded within the Subject Area.

Based on the sensitivity mapping undertaken by AMBS (2012) (refer to Figure 13 of Kayandel (2018)), and the results of the Kayandel field survey, the Subject Area was assessed as having low archaeological sensitivity.

Should further previously unrecorded Aboriginal sites, or archaeological features such as shell middens, or hearths be identified during the course of the development works, the following process should be followed:

- Works must cease in the vicinity and the find should not be moved until assessed by a qualified Archaeologist;
- The Archaeologist will investigate and assess the find to determine the nature, extent and significance of the find. This will enable recommendations to be provided on how work can proceed and whether any further work is required. The archaeologist must supply written advice to the Project Manager stating:
    - Determination of whether the find is an Aboriginal object;
    - Advice on how the project is to proceed and whether the establishment of any no-go areas is necessary;
    - Recommendation on further works that may be required and timeframe for completion of these works;
    - Any Aboriginal finds will be registered on the Aboriginal Heritage Information Management System (AHIMS). Where sites are impacted, a site impact form will be completed and lodged with AHIMS prior to impact.
- Create a no-go area around the find based upon the advice of the Archaeologist; and,
- The archaeologist's written advice will be supplied to Heritage NSW, the Secretary and RAPs for their review. This will include a statement concerning the find, management measures implemented and notification of any further works arising. RAPs are to be involved in any further assessments or works as required. Any comments made by Heritage NSW, the Secretary and RAPs will be incorporated into the written advice prior to finalisation and work proceeding.

Should any previously unidentified Aboriginal finds as outlined above be identified, this will trigger a review of this ACHMSP in accordance with Section 9.

Please note that Appendix I contains guidelines around the identification of Aboriginal objects and site types.

### 6.2.3 Strategy 3: Procedure to follow in case of the discovery of human remains

If any suspected human remains are discovered during the proposed works, all activity in the area must cease. The following process must be undertaken:

- Immediately cease all work at that location and not further move or disturb the remains;
- Notify the NSW Police, DPIE, and Heritage NSW's Environmental Line on **131 555** as soon as practicable and provide details of the remains and their location;
- Establish an appropriate no-go area. This will need to be established in consultation with NSW Police, Heritage NSW and if necessary, a qualified Archaeologist;
- Works will not be able to recommence within the location of the find until confirmation from NSW Police and Heritage NSW is obtained. If the remains are confirmed as not being human, then works may recommence. If the remains are human then consultation with NSW Police, Heritage NSW, and the RAPs to establish a plan of management will be required;
- Works in the vicinity of the remains will only be able to recommence once the plan of management has been established and approval has been obtained from all relevant parties; and,

- Should any human remains be identified, this will trigger a review of this ACHMSP in accordance with Section 9.

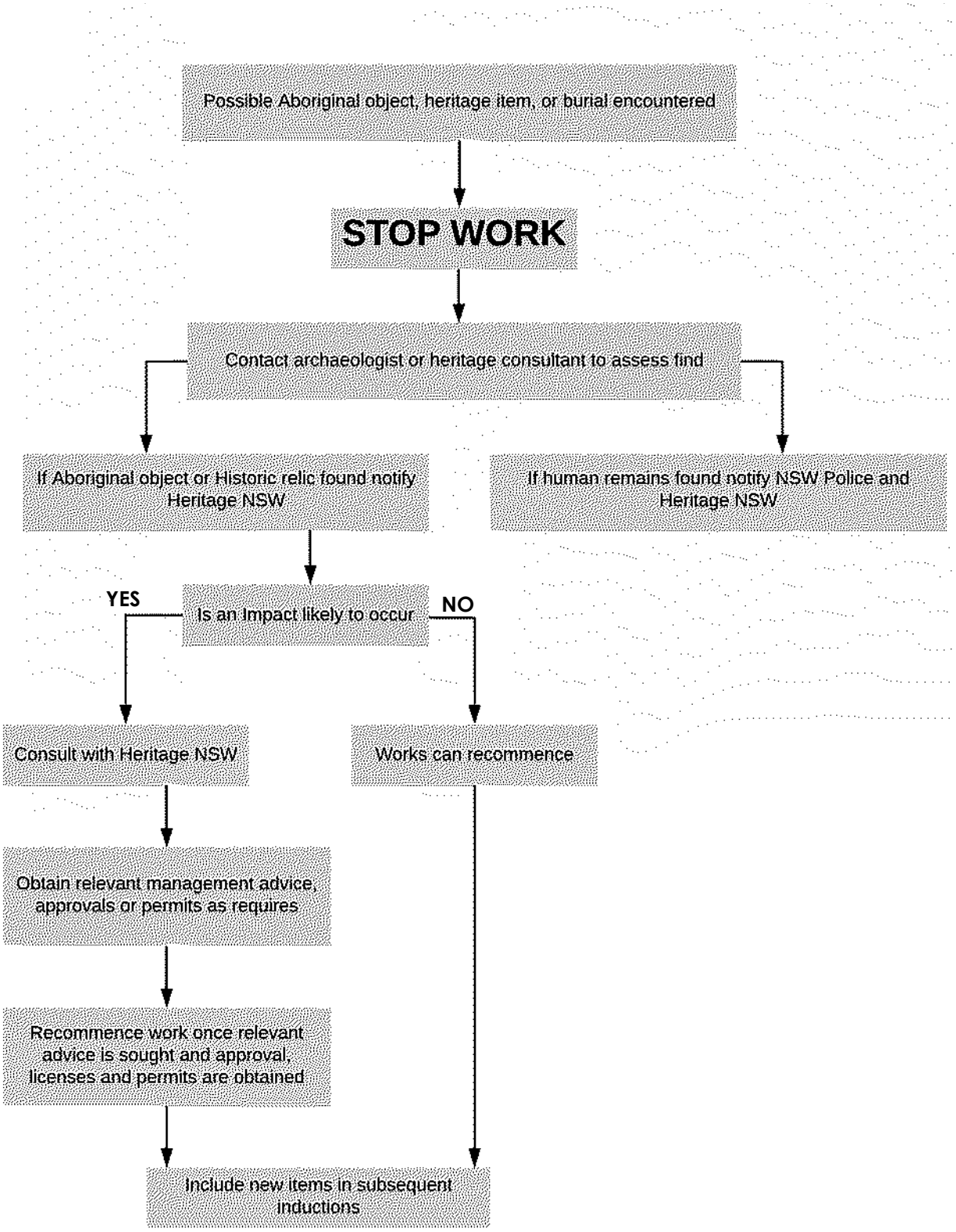


**Figure 4:** Decision Flowchart for Unexpected Aboriginal Finds

#### 6.2.4 Strategy 4: Ongoing consultation with Aboriginal stakeholders

Consultation with Aboriginal stakeholders will be continued throughout the life of this project as outlined in Section 3 above.

#### 6.2.5 Strategy 5: Monitoring and reporting

A program to monitor and report on the effectiveness of the measures and any heritage impacts will consist of reassessing the above listed strategies following the completion of works.

Upon completion of the works, a short report will be prepared, documenting:

- The effectiveness of the ACHMSP measures;
- A list of sites salvaged, harmed, and relocated;
- Confirmation the ASIRFs have been completed and submitted to AHIMS; and,
- A copy of the Aboriginal Site Impact Recording (ASIR) forms.

A copy of the report will be provided to Aboriginal stakeholders for the project, and Heritage NSW by email to heritagemailbox@environment.nsw.gov.au.

# 7 COMPLIANCE MANAGEMENT

## 7.1 Roles and Responsibilities

The Diocese Project Manager is responsible for ensuring all activities in this manual are carried out prior to and during construction, along with reporting any incidents to Heritage NSW.

The construction contractor must comply with the activities outlined in this manual and any deviation to activities outlined in this manual must be reported to the Diocese Project Manager.

| Name | Role/Responsibility | Contact Details |
|---|---|---|
| Sydney Catholic Schools | Diocese Project Manager | Simon Romalis<br>simon.romalis@lipman.com.au |
| Lipman | Construction Contractor | TBA |
| Heritage NSW | Regulator/Compliance | 131555<br>heritagemailbox@environment.nsw.gov.au |
| Lance Syme | Kayandel Principal | (02) 4627 8622<br>info@kayandel.com.au |

**Table 6:** Roles and Responsibilities and Contact Details

## 7.2 Recording Keeping

The following records must be kept by the archaeologist, construction contractor and the Diocese Project Manager:

- Any archaeological salvage of cultural material prior to and during construction; and,
- Any breaches of the approval conditions and/or this ACHMSP, and the incident report provided to Heritage NSW.

## 7.3 Incidents

If an incident occurs that results in actual or potential impacts on known heritage items and/or archaeological items that are discovered unexpectedly, Heritage NSW will be informed immediately.

The report to Heritage NSW should also be sent to the Diocese Project Manager and the archaeologist and include the following information:

- Any contravention to the strategies outlined in the ACHMSP;
- The nature of the incident;
- The actual or likely impact of the incident on Aboriginal objects and/or Aboriginal places;
- The nature and location of the Aboriginal objects and/or places, referring to and providing maps and photos where appropriate; and,
- The measures which have been taken or will be taken to prevent a recurrence of the incident.

## 7.4 Reporting

Reporting requirements and responsibilities of heritage related issues should be documented as outlined in Table 7 below:

| Action | Responsibility |
|---|---|
| A short summary of the report | Archaeologist |
| Describe any ongoing consultation with or involvement of RAPs | Project Manager/Archaeologist |
| Provide details of the Aboriginal objects which were fully or partially harmed in the course of undertaking the construction | Construction contractor/Project Manager/Archaeologist |
| Detail any community collection of Aboriginal objects undertaken by the RAPs | Archaeologist |
| Comment on the effectiveness of any mitigation measures that were implemented | Construction contractor |
| Comment on the effectiveness of any mitigation plan which was in place | Construction contractor |
| If any Aboriginal objects were moved to a temporary storage location, a description of the nature and types of Aboriginal objects which are now at that location | Archaeologist |
| Detail the results of any analysis of Aboriginal objects | Archaeologist |
| Detail the long term management arrangements for any Aboriginal objects | Archaeologist |

**Table 7:** Reporting Roles and Responsibilities

# 8 TRAINING AND AWARENESS

The construction contractor must comply with all Diocese WHS manuals and procedures. Prior to the commencement of construction, the construction contractor must undertake a cultural heritage induction which will include the following:

- A description of Aboriginal cultural heritage in Australia;
- A description of Aboriginal cultural heritage in the Cumberland Plains region;
- A description of the tangible and intangible aspects of Aboriginal heritage and why it is important;
- An overview of the *National Parks and Wildlife Act 1974* and the *Heritage Act 1977* and the implications and fines applicable for breaching the Acts;
- A general overview of cultural heritage site types (refer to Appendix I);
- The process for reporting unknown cultural heritage sites;
- The process for reporting damage to cultural sites; and,
- The process for reporting human remains.

# 9 REVIEW AND IMPROVEMENT

## 9.1 Continuous Improvement

Opportunities for the improvement of this CHMP will be found through the ongoing evaluation of environmental management performance against environmental policies, objectives and targets. The purpose of this is to:

- Identify opportunities for the improvement of environmental management and performance;
- Determine the cause or causes of non-conformances and deficiencies;
- Development and implementation of a plan of corrective and preventative actions to address any non-conformances and deficiencies in this ACHMSP;
- Corroborate the efficiency of the corrective and preventative actions;
- Document any changes in procedures resulting from process improvement; and,
- Revise the objectives and targets of this CHMP accordingly.

## 9.2 ACHMSP Update and Amendment

This will occur as needed. A copy of the updated ACHMSP and changes will be distributed to all relevant stakeholders in accordance with the approved document control procedure. The ACHMSP will also be updated and resubmitted for approval in the event a previously unidentified heritage item is found.

# 10REFERENCES

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OEH. (2011). *Guide to Investigating, Assessing and Report on Aboriginal Cultural Heritage in NSW*. South Sydney: Office of Environment and Heritage

# APPENDIX I. Identifying Aboriginal objects and site types

**Isolated stone artefact**

**Stone artefact scatter**

**Shell midden**

**Stone Quarry**

**Modified/Carved Tree**

**Burial**

**Aboriginal gathering and resource location**

**Hearth**

# Appendix II. Aboriginal Consultation Log

| Date | Time | Nature of consultation | Action taken by: |
|---|---|---|---|
| 22/09/2020 | 6:17pm | Sent draft Aboriginal Cultural Heritage Management Sub-Plan (ACHMSP) to all 20 RAPs for comment to address Conditions 23 and 30 of the SSD approval. | NS |
| 23/09/2020 | 8:30am | Received acknowledgment of receipt of ACHMSP from Wyanita Tranter of GLALC | NS |
| 24/09/2020 | 1:00pm | Phone calls attempted to 14 RAPs Gandangara Local Aboriginal Land Council, Darug Land Observations Pty Ltd, Barraby Cultural Services, Yurrandaali Cultural Services, Phil Khan Didge Ngunawal Clan, Darug Tribal Aboriginal Corporation, Wailwan Aboriginal Digging Group, Cubbitch Barta Native Title Claimants Aboriginal Corporation, Goobah, THOORGA NURA, Darug Custodian Aboriginal Corporation, Butucarbin Aboriginal Corporation and Kawul Cultural Services to ask if they had received the ACHMSP and if they had had a chance to read it, results of calls is details below | SC |
| 24/09/2020 | 1:00pm | Phone call made to Gandangara Local Aboriginal Land Council and spoke to reception, they stated they had passed the email on to the Heritage team, they took my number and said they would get someone to call me back | SC |
| 24/09/2020 | 1:00pm | Phone call made to John Carriage of THOORGA NURA who said he has no comments at this stage | SC |
| 24/09/2020 | 1:00pm | I spoke with Basil Smith of Goobah who said he had received the email and read the document. Basil said he agrees with the mitigation measures in the management plan and that he has no comments otherwise. | SC |
| 25/09/2020 | 7:53am | Received email from Glenda Chalker of Cubbitch Barta Native Title Claimants Aboriginal Corporation requesting hard copy of ACHMSP to be sent to her | NS |
| 25/09/2020 | 3:41pm | follow up emails sent to the 17 RAPs who we had not yet received comments from, to ask if they had any comments regarding the recommendations or management strategies within the ACHMSP | SC |
| 25/09/2020 | 1:00pm | Received email from Phil Boney of Wailwan Aboriginal Digging Group who said at this point I do not have any more to add to this project. Everything seems to be satisfactory. Thank you. | SC |
| 28/09/2020 | 8:34am | Received email from Vicki Slater of Kawul Cultural Services who said she will take a look at it today. | SC |
| 28/09/2020 | 12:46am | Received email from Phil Khan of Kamilaroi-Yankuntjatjara Working Group who agree & support your report & looking forward to working with you on this project'. | SC |
| 28/09/2020 | - | Hard copy of ACHMSP sent to Glenda Chalker of Cubbitch Barta Native Title Claimants Aboriginal Corporation | SC |
| 28/09/2020 | 11:16am | Received comments from Justine Coplin of Darug Custondian Aboriginal Corporation who support the recommendations in this Draft report | NS |
| 29/09/2020 | 10:23am | I spoke to Bo Field who said he is happy for us to proceed with the project as it is. | SC |
| 29/09/2020 | 10:23am | Spoke to Vicki Slater of Kawul Cultural Services who said that she is happy with the recommendations and management strategies that are contained within the ACHMSP and that she does not have any additional management strategies to add. | SC |
| 29/09/2020 | 10:23am | Received email from Lee Field who stated that 'I have reviewed and agree with the report associated with this project'. | SC |
| 29/09/2020 | 10:37am | Spoke to Paul Boyd and Lilly Carroll of Didge Ngunawal Clan who said that she is happy with the recommendations and management strategies that are contained within the ACHMSP and that he does not have any additional management strategies to add. | SC |

| | | | |
|---|---|---|---|
| 30/09/2020 | 11:15am | Received comments from Cubbitch Barta Native Title Claimants Aboriginal Corporation via email | NS |
| 1/10/2020 | 12:52pm | Issued final ACHMSP to all 20 RAPs via email (attached as pdf) | SC |
| 20/05/2022 | 5:37pm | Sent the DRAFT Aboriginal Cultural Heritage Management Sub-Plan for review and comment to RAP | DA |
| 2/06/2022 | 7:38am | Glenda Chalker (CBNTCAC) requested a hard copy of the ACHMSP be posted to her | DA |
| 9/06/2022 | 10:16am | Received email from Justine Coplin (DCAC) advising she was having trouble opening the ACHMSP OneDrive link | DA |
| 9/06/2022 | 12:32pm | Emailed Justine (DCAC) a pdf copy of the ACHMSP | DA |
| 10/06/2022 | - | Express posted a hard copy of the ACHMSP to Glenda Chalker (CBNTCAC) | NS |
| 22/06/2022 | 11:15am | Sent a follow up for the DRAFT Aboriginal Cultural Heritage Management Sub-Plan's review and comment to RAP | DA |
| 29/06/2022 | 11:38am | Received comments from Kadibulla Khan (Kamilaroi-Yankuntjatjara Working Group) | DA |

# Appendix III. 2022 RAP Comments

**From:** Phil Khan <philipkhan.acn@live.com.au>
**Sent:** Wednesday, June 29, 2022 11:38 AM
**To:** Divina Alfonso <divina.alfonso@kayandel.com.au>
**Subject:** Re: Kayandel Project - KA-175 St Anthony of Padua Catholic Schoolat 135-165 Tenth Avenue and170-140 Eleventh Avenue,Austral, Liverpool City Council LGA, NSW

Dear Divina,

Thank you for your St Anthony of Padua Catholic School at 135-165 Tenth Avenue and170-140 Eleventh Avenue,Austral, NSW.

The whole study area and surrounding area is of high significance to us Aboriginal Peoples, for tens of thousands of years the area has been occupied by Aboriginal Peoples, in turn We have a deep connection to the sky, water ways and land. The area would have been utilied for daily activites such as camping, hunting, fishing and ceremonial practices etc. There are water ways within the area that are utilised by Aboriginal Peoples. Yes, it's the tangible aspects that archaeology looks for but it's also the intangible and aesthetic aspects that must be considered when it comes to cultural heritage. There are stories of the dreaming and creations stories that should be sort when it comes to place and connecting to country.

Sky knowledge is a place to start understanding the sky is like a reflection of the land for Indigenous Peoples. An example that is relevant to the area is the dark emu in the sky (better known as the darks space within the milky way). The emu provides knowledge of what's happen on the land for instance hunting times, sessional change and travel routes can be recognised by looking into the night sky. It's this knowledge that get missed time and time again.

We can also understand the knowledge of sustainability and or agricultural practices along with aquaculture knowledge of occupation that occurred before colonisation, Australia is one big estate that was managed and cared for by Aboriginal Peoples still today. We must consider burials when excavating the land as we are unaware of the locations of such burials dure to colonisation and disposition of the land.

Fire played a big part in the Aboriginal lifestyle as the flora needs to be burnt to rejuvenate, this was known by Aboriginal people and was carried out seasonally. The Aboriginal people moved around seasonally and knew the land very well, in fact they could read the land navigating them around, like they used the sky to navigate around and to understand the weather from reading the sky and stars at night. We Aboriginal people hold a connection to the sky and many of our dreaming stories are told through the stars and consolations along with the land and wildlife.

The study area is significant due to the multiple water ways in an ecosystem rich. The main water way that is close by to the to the site are Kemps Creek. This water way runs across the land utilised by many for many reasons such as fresh water, bathing, gathering of food and for everyday life activities. Water is a giver of life without water we would not be here so we should respect, conserve and mange water ways as naturally as possible and keep them

1

maintained. Aboriginal people have been following waterways for tens of thousands of years a sense of way finding and a deep connection we hold.

Is there a cultural interpretation plan for this project? due to the project being accessed by the wider community we believe there is an opportunity to archive connecting with country through design, art, digital displays, apps, native gardens, or landscaping. It is important to incorporate interpretation into you project as it educates the wider community and our next generations about the traditional owners of the land, a keeping place should also be sort to house artefacts on country. This is a way in which to close the gap and better our understanding of one of the oldest continuing cultures in the world.

We would like to agree to your report and look forward to furthering consultation for this project.

Kind Regards
Kadibulla Khan


**From:** Divina Alfonso <divina.alfonso@kayandel.com.au>
**Sent:** Friday, 24 June 2022 4:01 PM
**To:** Phil Khan <philipkhan.acn@live.com.au>
**Subject:** RE: Kayandel Project - KA-175 St Anthony of Padua Catholic Schoolat 135-165 Tenth Avenue and170-140 Eleventh Avenue,Austral, Liverpool City Council LGA, NSW

Hi Phil,

Sorry for this. Please see attached file for your checking.

Thank you.

Regards

Divina Alfonso
Assistant

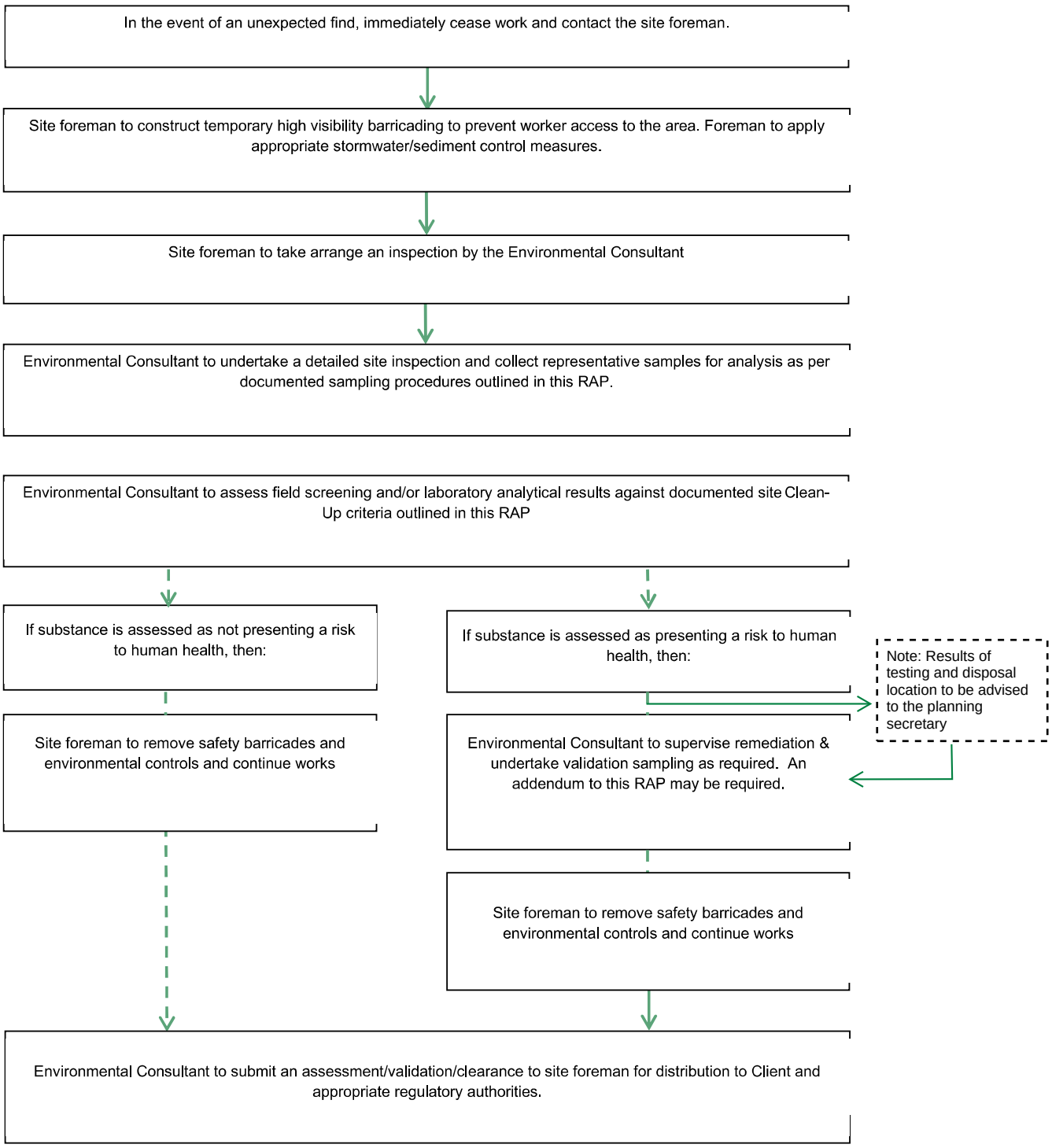
PO Box 440, Picton NSW 2571
Tel. +61 (0)2 4627 8622 Fax. +61 (0)2 4605 0815


**From:** Phil Khan <philipkhan.acn@live.com.au>
**Sent:** Friday, June 24, 2022 1:55 PM
**To:** Divina Alfonso <divina.alfonso@kayandel.com.au>

2

# Appendix 8: Unexpected Finds Protocol – Contamination

# Unexpected Finds Protocol



# Appendix 9: Unexpected Finds Protocol – Non-Aboriginal Heritage

# Unexpected Finds Protocol

## Non-Aboriginal (Historic) Heritage Items

Project: SCECS Austral – 140 Eleventh Avenue, Austral, Liverpool City Council LGA, NSW
SSD 8865 C18

## 1. Purpose

This protocol sets out the procedure to be followed if a suspected item, object, or feature of non-Aboriginal (historic) heritage significance – or suspected human skeletal remains – is unexpectedly encountered during construction works on this project. For any unexpected Aboriginal Finds, please refer to the Cultural Heritage Management Sub-Plan, which deals separately with Aboriginal objects, heritage items and burials.

## 2. Scope

This protocol applies to all Trinity personnel, subcontractors, and visitors undertaking works on the project. It covers unexpected discoveries such as:

- Building foundations, footings, wells, cisterns or other structural remains not shown on existing plans
- Historic artefacts (e.g. bottles, ceramics, tools, machinery) that appear to pre-date current site use
- Fill deposits, middens, or occupation layers of potential historic (non-Aboriginal) origin
- Items associated with a listed heritage place under the State Heritage Register or the Liverpool Local Environmental Plan
- Suspected human skeletal remains of non-Aboriginal origin (which must also be reported to NSW Police)

## 3. Legislative Context

Non-Aboriginal heritage items and relics are principally regulated under the Heritage Act 1977 (NSW). Key provisions include:

- Section 139 – it is an offence to disturb or excavate land knowing, or having reasonable cause to suspect, that the disturbance will or is likely to affect a relic, without an excavation permit
- Section 146 – a person who discovers a relic must notify Heritage NSW (Heritage Council) as soon as practicable
- Section 57 / 60 – approvals or exceptions may be required where an item is listed on the State Heritage Register
- Coroners Act 2009 (NSW) – governs the reporting and handling of suspected human remains, administered in conjunction with NSW Police

*Where an item is also listed under the Liverpool Local Environmental Plan as a local heritage item, additional approval from Liverpool City Council may be required before works can recommence in the affected area.*

## 4. Definitions

- Relic – any deposit, object or material evidence of non-Aboriginal settlement that is more than 50 years old
- Heritage item – a place, building, structure or object identified as having heritage significance under State or local planning instruments
- Unexpected find – any object, feature or remains identified during construction that was not anticipated or identified prior to works commencing

## 5. Roles and Responsibilities

| Role | Responsibility |
|---|---|
| Site Supervisor / Leading Hand | Stops work in the immediate area on discovery, secures the location, and notifies the Project Manager immediately. |

| Role | Responsibility |
|---|---|
| Project Manager | Engages a qualified archaeologist or heritage consultant, notifies the Superintendent and relevant authorities, and coordinates the assessment and approvals process. |
| Heritage Consultant / Archaeologist | Assesses the find, provides written advice on significance and impact, and prepares any Heritage Act applications required. |
| Trinity HSE / Environmental Officer | Maintains the unexpected finds register, ensures exclusion zones are signed and fenced, and updates site inductions. |
| Superintendent (Platform Projects) | Receives notification under the contract and monitors compliance with statutory approval requirements before works recommence. |
| All Site Personnel | Stop work immediately if a suspected item is uncovered, do not handle or remove the item, and report it through supervision. |

# 6. Procedure – Decision Flowchart

If a suspected non-Aboriginal heritage item, relic, or possible human remains is encountered, the following process applies:

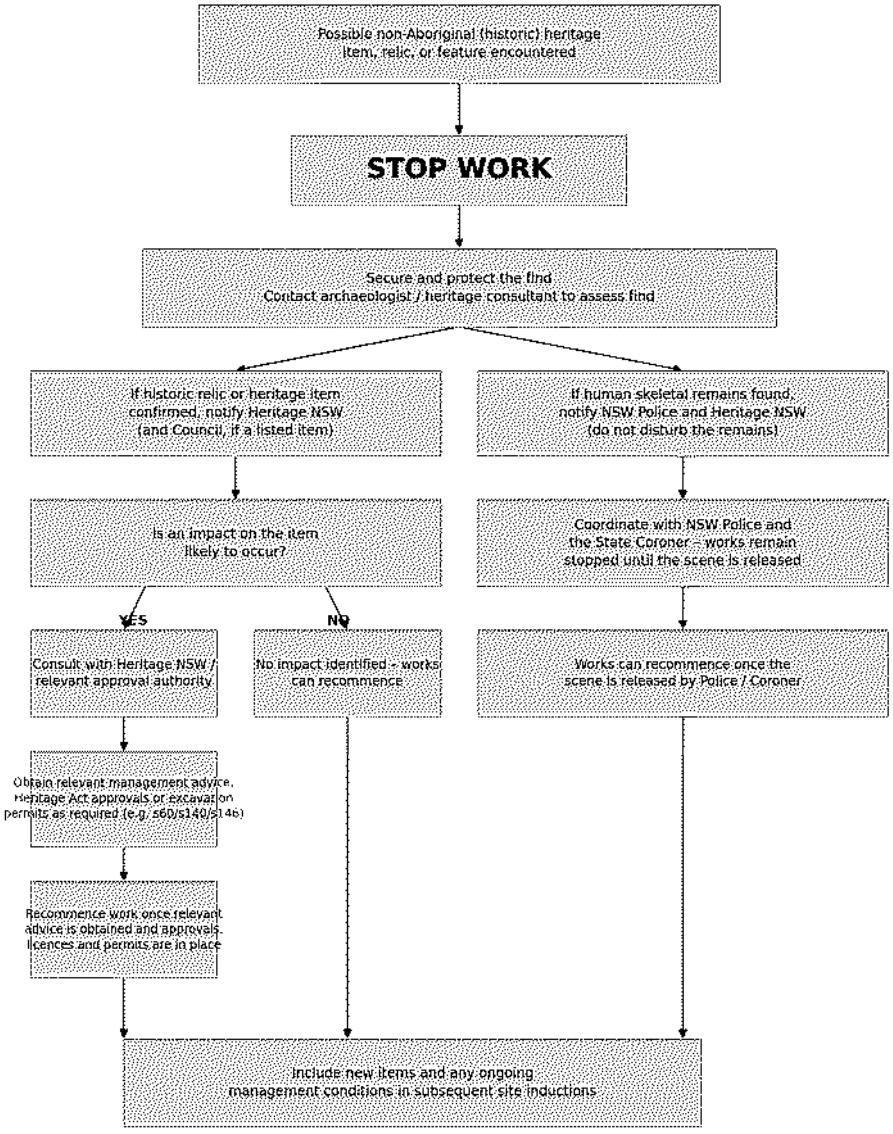



*Figure 1: Decision Flowchart for Unexpected Non-Aboriginal Heritage Finds*

# 7. Step-by-Step Procedure

1. Stop work immediately in the vicinity of the find. Do not move, remove, or further disturb the item.
2. Secure and, where practicable, cover the area to protect the find from weather, plant, and unauthorised access. Establish an exclusion zone with barrier fencing and signage.
3. Notify your supervisor and the Project Manager without delay.
4. The Project Manager engages a qualified archaeologist or heritage consultant to assess the find and provide written advice.
5. Where the consultant confirms a historic relic or heritage item, notify Heritage NSW (and Liverpool City Council if the item is separately listed).
6. Where suspected human skeletal remains are found, notify NSW Police immediately and do not disturb the remains under any circumstances. Heritage NSW is notified concurrently, as remains may also have Aboriginal cultural significance requiring assessment under separate provisions.
7. If an impact on the item is likely, consult with Heritage NSW (or Council) and obtain any required management advice, excavation permits (e.g. under s60 or s140 of the Heritage Act 1977), or approvals before works recommence in the affected area.
8. If no impact is likely (e.g. the item can be avoided or is outside the works footprint), works may recommence in the surrounding area once this is confirmed in writing by the consultant.
9. Notify the Superintendent / Client of the find and the outcome of the assessment
10. Record the find, assessment outcome, and any approvals obtained in an Unexpected Finds Register.
11. Update site inductions to include the new item, its location, and any ongoing management conditions or exclusion zones.

# 8. Notification Contacts

| Item / Circumstance | Notify | Contact |
|---|---|---|
| Suspected historic (non-Aboriginal) relic or heritage item | Heritage NSW | 1300 731 837 / heritageinfo@environment.nsw.gov.au |
| Item on or near a listed local or State heritage item | Liverpool City Council Heritage Officer | (02) 8711 7000 |
| Suspected human skeletal remains | NSW Police (000 in an emergency, or local station for non-urgent) | 000 / Liverpool Police Area Command |
| Suspected human skeletal remains (concurrent notification) | Heritage NSW | 1300 731 837 |
| Internal escalation | Trinity Project Manager / Site Manager | Project-specific contact list |

# 9. Record Keeping

The Trinity HSE / Environmental Officer maintains an Unexpected Finds Register recording, for each find: date and location, description, personnel involved, consultant advice received, authorities notified, approvals or permits obtained, and the date works recommenced. Copies of all correspondence with Heritage NSW, Liverpool City Council, and NSW Police are to be retained on the project file.

# 10. Training and Induction

All site personnel are to be briefed on this protocol as part of project induction, including how to recognise a possible historic relic or heritage item, the location of any known heritage constraints on site, and the requirement to stop work and report rather than remove or disturb a suspected find.

# Appendix 10: External Lighting Design Certificate

MARWYN ENGINEERS PTY LTD

ACN: 693 033 751
8A/Level-1,175 Keira St,
Wollongong, NSW-2525
Email: info@marwyn.com.au

1 May 2026
Ref: LTR-26006.01A

Trinity Construction & Fitout
Level-1
15 Forest Road
Hurstville, NSW-2220

**Dear Luke Zammit,**

**Re: Design Statement – Electrical Services**

| | |
|---|---|
| **Project:** | Austral ECS |
| **Address:** | 140 Eleventh Avenue<br>Austral, NSW-2179 |

## Electrical Services

Pursuant to the provisions of clause A5G3 of the Building Code of Australia, I hereby certify that the above design is in accordance with normal engineering practice and meets the requirements of the Building Code of Australia, relevant Australian standards and relevant conditions of the development consent. In particular, the design is in accordance with the following:

- Interior Lighting – AS1680.0:2009
- Emergency Escape Lighting and Exit Signs for Buildings Part 1: System Design, Installation and Operation – AS 2293.1-2018.
- Wiring Rules – AS3000-2018.
- Control of the obtrusive effects of outdoor lighting – AS 4282-2019
- BCA 2022 Amendment 2 Clause E4D2, E4D4, E4D5, NSW E4D6, E4D8.
- BCA 2022 Amendment 2 Parts J7.
- Condition C15 of the Development consent SSD-8865(Please refer to clarification letter)

I am an appropriately qualified and competent person in this area and as such state that the design and performance of the design systems comply with the above and which are detailed on the drawings listed below.

| DWG NO | DRAWING NAME | REVISION |
|---|---|---|
| E-00 | COVER SHEET & DRAWING LIST | B |
| E-01 | LEGEND OF SYMBOLS & GENERAL NOTES | B |
| E-02 | SITE PLAN | B |
| E-10 | LIGHTING LAYOUT | B |
| E-20 | POWER & COMMUNICATIONS LAYOUT | B |
| E-40 | CABLE TRAY LAYOUT | B |
| E-50 | SCHEMATIC & DETAIL | B |

Yours sincerely,

Onil Govind Suresh

*BEng, MIE Aust, CP Eng, NER, APEC Eng, Int PE(Aust), RP Eng (Vic & NSW)*

Director/Electrical Engineer