



# Construction Traffic Management Plan

**Warehouse Development, 339-349 Horsley Road,  
Milperra NSW**

## **Vaughan Constructions Pty Ltd**

9A Commercial Road  
Kingsgrove, NSW 2208

Prepared by:

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SLR Project No.: 630.030737.00001

14 August 2023

Revision: v1.0

## Revision Record

Revision	Date	Prepared By	Checked By	Authorised By
v0.1	14 July 2023	A. Moxon	B. Rheinberger	B. Rheinberger
v1.0	14 August 2023	A. Moxon	B. Rheinberger	B. Rheinberger
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## Basis of Report

This report has been prepared by SLR Consulting Australia Pty Ltd (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with Vaughan Constructions Pty Ltd (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.



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## 1.0 Introduction

### 1.1 Context

SLR Consulting Australia Pty Ltd (**SLR**) has been engaged by Vaughan Constructions Pty Ltd (**VC**) to prepare a Construction Traffic Management Plan (**CTMP**) for the construction of a multi-level warehouse estate consisting of five tenancies, located at 339-349 Horsley Road, Milperra NSW.

This CTMP is required to satisfy Conditions B1 and B2 of the Development Consent issued by NSW Government's Department of Planning and Environment (**DPE**). It is understood that DPE requires the preparation of a CTMP prior to the commencement of construction works to be in compliance with the general development controls.

This CTMP has been prepared by Brendyn Rheinberger, who is a suitably qualified and experienced person. Brendyn holds the following accreditation:

- Engineers Australia, Chartered Professional Engineer (**CPEng**).
- SafeWork NSW Traffic Control Work, Prepare A Work Zone Traffic Management Plan, Number: TCT1044529.
- Queensland Department of Transport and Main Roads, Traffic Management Design (**TMD**), Number: OP 951.

Brendyn's CV is provided at **Appendix A** for further details.

### 1.2 Conditions of Consent

The CTMP has been prepared to satisfy the requirements of the Development Consent in relation to application number SSD-45998963, and to manage the potential impacts of the traffic demands associated with the construction phase of the Development on the surrounding road network. The specific requirements of the Consolidated Consent relevant to this CTMP are produced in **Table 1** along with a response as to how each requirement has been addressed herein.

**Table 1 Consolidated Consent: CTMP Requirements**

Item No.	Condition Requirement	CTMP Section
A8	Where conditions of this consent require consultation with an identified party, the Applicant must:	-
(a)	consult with the relevant party prior to submitting the subject document to the Planning Secretary for approval; and	Section 1.3
(b)	provide details of the consultation undertaken including: the outcome of that consultation, matters resolved and unresolved; and details of any disagreement remaining between the party consulted and the Applicant and how the Applicant has addressed the matters not resolved.	Section 1.3
B1	Prior to the commencement of construction of the development, the Applicant must prepare a Construction Traffic Management Plan (CTMP) for the development to the satisfaction of the Planning Secretary. The plan must form part of the CEMP required by condition C2 and must:	-
(a)	be Prepared by a suitably qualified and experienced person(s);	Section 1.1



Item No.	Condition Requirement	CTMP Section
(b)	be prepared in consultation with Council and TfNSW;	Section 1.3
(c)	detail the measures that are to be implemented to ensure road safety and network efficiency during construction;	Section 5, Section 6.4
(d)	detail heavy vehicle routes, access and parking arrangements;	Section 3.5, Section 3.6
(e)	include a Drivers Code of Conduct to: Minimise the impacts of construction on the local and regional road network; Minimise conflicts with other road users; Minimise road traffic noise; and Ensure truck drivers use specified routes;	Section 5.1 and Appendix D
(f)	include a program to monitor the effectiveness of these measures; and	Section 6.2
(g)	if necessary, detail procedures for notifying residents and the community (including local schools), of any potential disruptions to routes.	Section 5.8
B2	The Applicant must:	
(a)	not commence construction until the CTMP required by condition B1 is approved by the Planning Secretary; and	Noted.
(b)	implement the most recent version of the CTMP approved by the Planning Secretary for the duration of construction.	Noted and reiterated within Section 6.1

### 1.3 Reference Documents and Stakeholder Consultation

Reference is made to the following documents which have previously been prepared in relation to the development as part of the State Significant Development Application:

- *Transport and Accessibility Impact Assessment for the Proposed Warehouse Development, 339-349 Horsley Road, Milperra* dated September 2022 prepared by Colston Budd Rogers & Kafes Pty Ltd.

The above traffic and construction related report is referred to herein where necessary.

Further to the above, this CTMP has been prepared to meet the requirements outlined in Appendix A and Appendix E, Section E.2 of the Transport for NSW (TfNSW) *Traffic Control at Work Sites Technical Manual* (Issue No. 6.1, Feb 2022).

In regard to authority consultation, this document, being the SLR CTMP Version 1.0, has been issued to both DPE and Canterbury Bankstown City Council (CBCC or Council), as the key stakeholders, for their review and comment as part of the referral process. Comments have now been received from DPE and are included at **Appendix G**. Where a comment requires an amendment to this CTMP, this has now been actioned and incorporated into this version. Council's approval letter is provided at **Appendix H** and contains no further requests for amending this CTMP.

**Table 2** will be updated in due course following receipt of DPE and/or TfNSW endorsement conditions as required.



**Table 2 DPE / TfNSW Endorsement Conditions**

No.	Condition
1	This table is to be filled in if/when endorsement conditions are received.
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	



## 2.0 Development Overview

### 2.1 Site Location

The work site is situated at Lot 140 DP 550194 and Lot 141 DP 550194 with direct frontage along the Horsley Road corridor in Milperra, NSW. Milperra Road (A34) runs east-west to the north of the site and South-Western Motorway (M5) runs east-west to the south of the site. The site address is 339-349 Horsley Road in Milperra, NSW.

The site is shown in the context of the surrounding area on **Figure 1**

**Figure 1 Site location**



### 2.2 Surrounding Road Network

Details of the key roads surrounding the subject site are provided in **Table 3**.

**Table 3 Key Roads**

Road Name	Classification	Authority	Existing Form	Posted Speed
Milperra Road	State Road	TfNSW	Three lane, two-way dual carriageway.	100km/h
Horsley Road	Local Road	Council	Two lane, two-way single carriageway.	60km/hr default 40km/hr (School Zone)
South-Western Motorway	State Road	TfNSW	Three lane, two way motorway. Toll Road.	100km/h
Ashford Avenue	Local Road	Council	Single lane, two-way carriageway.	60km/hr



Road Name	Classification	Authority	Existing Form	Posted Speed
Bullecourt Avenue	Local Road	Council	Single lane, two-way carriageway.	50km/hr
Armour Street	Local Road	Council	Single lane, two-way carriageway, industrial cross section.	50km/hr
Marigold Street	Local Road	Council	Single lane, two-way carriageway, industrial cross section.	60km/hr
Henry Lawson Drive	Local Road	Council	Two lane into one lane, two way dual carriageway.	60km/hr

## 2.3 Approved Development

The Project comprises an SSD Approved (SSD-45998963) new warehouse development, consisting of two warehouse buildings, internal road network layout and car parking. The overall site plan for the approval is provided at **Appendix B**. At a high level, the broader estate comprises the following:

- Total Site Area: 33,772m<sup>2</sup>;
- Two warehouse buildings, split over two storeys: 29,247m<sup>2</sup>;
- Total Office & amenities Area: 3,552m<sup>2</sup>;
- Three vehicular crossovers to Horsley Road;
- On site parking: 174 spaces;
- Landscaping and offset planting: 3,380.9m<sup>2</sup>.

The approved estate layout and external access arrangements are indicatively illustrated in **Figure 2**.



**Figure 2 Approved Estate Layout and External Access Arrangements**



## 3.0 Construction Phase Overview

### 3.1 Construction Activities and Staging

Planned construction activities consist of the following works:

- Demolition of all existing buildings and structures;
- Site preparation works, including in ground services and foundations;
- Earthworks and retaining walls;
- Three vehicular crossovers to Horsley Road;
- Construction of two warehouse buildings, consisting of two storeys;
- On-site car parking; and
- External pavements, complementary landscaping and offset planting.

**Table 4** details the proposed construction programme as it currently stands at the time of writing. This may slightly change due to approval timeframes or inclement weather conditions.

**Table 4 Planned Construction Programme**

Construction Activity	Estimated Duration	Date for Works
Stage 1: Demolition, earthworks, in ground services and foundations.	Up to 8 months	From July 2023 to February 2024
Stage 2: Building structures and fit out.	Up to 14 months	From November 2023 to January 2025
Stage 3: External pavements, landscaping, commissioning, demobilization and handover.	Up to 9 months	From July 2024 to March 2025
<b>Total Construction Period</b>	<b>Up to 20 months</b>	<b>From July 2023 to March 2025</b>

### 3.2 Construction Hours

All works for will be undertaken within the following hours:

- Monday to Friday: 7AM to 6PM;
- Saturday: 8AM to 1PM.

It is acknowledged that no work will be undertaken on Sundays and public holidays. Works outside of these hours may be undertaken in the following circumstances:

- works that are inaudible at the nearest sensitive receivers;
- works agreed to in writing by the Planning Secretary;
- for the delivery of materials required outside these hours by the NSW Police Force or other authorities for safety reasons; or
- where it is required in an emergency to avoid the loss of lives, property or to prevent environmental harm.



Construction hours are also described within Section 2.2 of the Construction Environmental Management Plan (**CEMP**).

### 3.3 Site Contact Details

The nominated contact person during the construction activities is as follows:

- Ali Mourad, Site Manager:
  - Mobile No.: 0416 317 404
  - Email: [ali.mourad@vaughhans.com.au](mailto:ali.mourad@vaughhans.com.au)

The key contacts for the site during construction are provided within Section 2.4 of the CEMP.

### 3.4 Site Access

#### 3.4.1 Approved Location

The industrial area is accessed from Milperra Road via signalised intersection at Queen Street and Ashford Avenue. It has access from the east and south via Beaconsfield Street, Barnsgrave Road and Horsley Road and from the west via Bullecourt Avenue.

#### 3.4.2 Construction Vehicle Routes

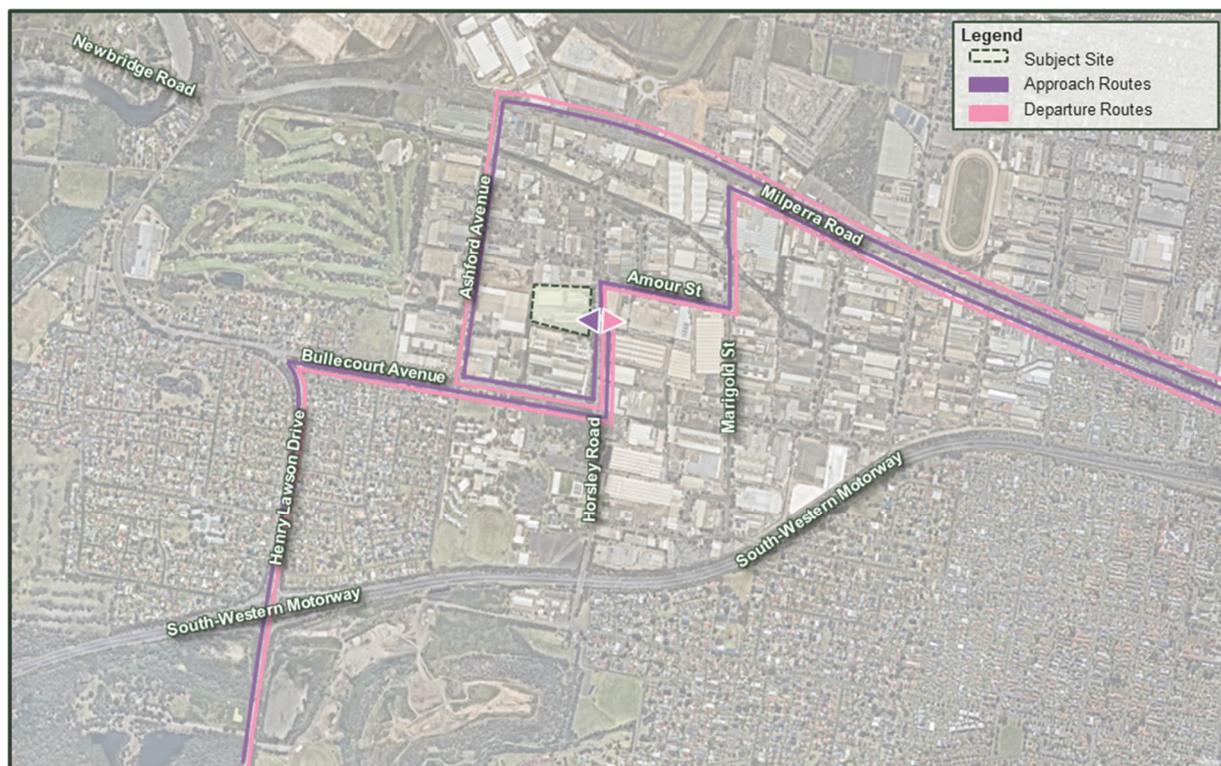
During construction vehicular access to and from the site will be provided from Horsley Road via existing access points. Truck movements on the surrounding network will be restricted to designated truck routes and will be confined to the main road network through the area. The designated routes are as follows:

- Approach routes:
  - Milperra Road, Marigold Street, Amour Street, Horsley Road;
  - Milperra Road, Ashford Avenue, Bullecourt Avenue, Horsley Road;
  - Henry Lawson Drive, Bullecourt Avenue, Horsley Road;
- Departure routes:
  - Horsley Road, Amour Street, Marigold Street, Milperra Road;
  - Horsley Road, Bullecourt Avenue, Ashford Avenue, Milperra Road; and
  - Horsley Road, Bullecourt Avenue, Henry Lawson Drive.

Refer to **Figure 3** for construction vehicle access arrangements for the site.



**Figure 3 Construction Vehicle Routes**



### 3.5 Internal Circulation Roads, Car Parking and Loading / Unloading Areas

Indictive construction staging plans are included in **Appendix C**. The plans indicate the following proposed provisions for the construction phase of the Development:

- Internal circulation roads will only occur in the south eastern corner where a turning area is provided adjacent to the site exit and entry point.
- An unsealed light vehicle car parking area will be provided for contractors. It is anticipated that up to 40 contractors will be present on-site at any one time during the construction of the warehouse, and hence car parking should be provided to accommodate up to 40 vehicles (refer to **Section 3.6**). The spatial provisions indicated on the plans provided at **Appendix C** are broadly consistent with this requirement;
- An area for laydown shall be provided to facilitate loading/unloading of heavy vehicles;
- An area for material stockpiling/storage shall be provided within the site.

Staging for the site will consist of Mobilisation 1, with the current shed set up, a single access point of entry and exit all to be maintained during demolition, earthworks, piling, footings and steel erection. Mobilisation 2 will relocate the sheds and increasing access to three points to enable trucks to navigate a one-way system through the site.

### 3.6 Construction Phase Traffic Demands

The following construction movement volumes have been provided by VC as described in **Table 5**.



**Table 5 Construction Vehicle Movement Volumes**

Description	General Construction
Worker Numbers	5 - 40
Peak Daily Heavy Vehicle Movements	30 (15 in/15 out)
Peak Daily Light Vehicle Movements	80 (40 in/40 out)
Peak Hour Heavy Vehicle Movements	6 (3 in/3 out)
Peak Hour Light Vehicle Movements	40 (40 in or 40 out)
Largest Vehicle Size	Truck & Dog

**Table 5** describes the maximum number of light vehicles to be on-site at any one time as 40 vehicles during construction. This would equate to a peak daily volume of 80 vpd or 40 vph during the peak hour period. Heavy vehicles consisting of no larger than truck & dogs would reach a maximum of 30 movements per day or 6 per hour. Therefore, the anticipated maximum construction vehicles generated is:

- Peak Daily Heavy Vehicle Movements = 30;
- Peak Daily Light Vehicle Movements = 80;
- **Maximum Daily Construction Vehicle Movements = 110 movements per day;**
- Peak Hour Heavy Vehicle Movements = 6;
- Peak Hour Light Vehicle Movements = 40;
- **Maximum Peak Hour Construction Vehicle Movements = 46 movements per peak hour.**

The AM and PM peak hour periods relating to this assessment are for time periods as follows:

- AM Peak Hour = 7am to 8am.
- PM Peak Hour = 5pm to 6pm.

## 4.0 Safety Assessment

### 4.1 Site Access

The construction activities associated with this project during mobilisation 1 do not propose to amend existing road condition arrangements on Horsley Road.

As the project progresses into mobilisation 2, there will be three crossovers to Horsley Road to allow vehicles to navigate using a one-way system through the site.

### 4.2 Emergency Vehicles

Emergency vehicle access to and from the site will be available at all times while the site is occupied by construction workers. There will be no disruption to emergency vehicles on any roads.

### 4.3 Closest Hospital / Medial Centre

The closest Medical Centre is Eldridge Road Medical Heath Centre, located at Suite G01/68 Eldridge Road, Bankstown NSW 2200. The closest Public Hospital is Bankstown-Lidcombe Hospital, located at Eldridge Road, Bankstown NSW 2200. It is approximately 1.1 km from the subject site.



## 5.0 Construction Phase Traffic Management Measures

### 5.1 Drivers Code of Conduct

A Drivers Code of Conduct was prepared as part of the SLR CTMP dated 14 July 2023. This has been reproduced at **Appendix D** and is suitable to be applied for the Proposed Site.

### 5.2 Traffic Guidance Scheme

A TGS will be required to manage construction site access located Horsley Road. Refer to **Appendix E** which contains a generic TGS for implementation associated with the management of construction site access from TCAWS 6.1. It is recommended that a site specific TGS, based on the generic TGS D.4.7, be prepared. Following the implementation of this TGS, weekly inspections of the TTM on-site shall be conducted as per **Section 6.3** herein.

### 5.3 Site Management

The following procedures are to be observed by all vehicle drivers accessing the subject site:

- The construction site has a drug and alcohol policy which includes random testing;
- Drivers are to obey all site signage and the directions of site personnel;
- Vehicles are to use designated circulation roads within the site where possible;
- All vehicles are to park and load/unload within the site using designated parking and loading areas where possible. Vehicles are not to park or load/unload within the public road reserve; and
- All drivers are required to operate vehicles in a safe and courteous manner, within and external to the subject site.

### 5.4 Heavy Vehicle Management

#### 5.4.1 General Requirements

All heavy vehicle drivers accessing the subject site must abide by the following:

- Undertake a site induction carried out by authorised site personnel or suitably qualified person under the direction of the site manager;
- All drivers must hold a valid driver's licence which is appropriate for the class of vehicle under their operation;
- All drivers are to ensure their load is legal, covered and secure before entering or exiting the site;
- All drivers must comply with Chain of Responsibility legislation;
- Vehicles entering the subject site are to be registered, roadworthy, and of sound mechanical condition. Site management may request to inspect any vehicle or request maintenance records for any vehicle and reserves the right to prohibit any vehicle from entering the subject site should there be any indication that the vehicle is not roadworthy or safe to operate;
- Any accidents, incidents, complaints, hazards, spillages or near misses must be reported immediately to the site manager. This includes incidents on the external road network.



### 5.4.2 Noise Management

To limit heavy vehicle noise associated with construction activities, drivers are to abide by the following requirements:

- Heavy vehicles using Horsley Road should limit the use of engine or compression braking systems where possible;
- Posted speed limits on the external road network are to be observed, and vehicle speeds are to be restricted 10km/h within the site;
- Vehicles are to be turned off when not in use.

### 5.4.3 Dust Management

To minimise the potential for dust production within the subject site, drivers are to abide by the following requirements:

- Vehicle speeds are to be restricted to 10km/h within the subject site;
- Vehicles are to use designated circulation roads within the site where possible;
- Drivers are to report excessive dust production from internal circulation roads to the site manager;

Water trucks will be used to wet down internal circulation roads during dry conditions and when excessive dust production is reported to the site manager.

## 5.5 Mitigation Measures

The impacts of construction traffic and the mitigating measures to be implemented are outlined in **Table 6**.

**Table 6 Mitigation Measures – Responsibility and Timing**

Mitigation Measures	Responsibility	Timing
<b>Construction Traffic in Horsley Road:</b> Construction traffic will use the existing access to enter/exit the site for the works. To ensure the impacts to motorists within the area are kept to a minimum, construction traffic will remain extremely low.	Site Manager	Weekly.
<b>Management of deliveries:</b> The site manager will manage deliveries to ensure that construction vehicle movements will remain low.	Site Manager	As required.
<b>Managing dirt on the public road network:</b> The use of rumble grids positioned at the site's access point to Horsley Road, as well as the use of water trucks and sweeper trucks for Horsley Road shall ensure the existing network is free of dirt from the site. Finally, a visual inspection by the gate operator shall be conducted to confirm that no dirt/mud is tracked onto Horsley Road when trucks exit.	Site Manager	Daily.
<b>Safety during construction:</b> Safety to motorists and the public throughout the area will be maintained during construction through the preparation and execution of a Traffic Guidance Scheme (TGS). One TGS will be implemented, to manage the access throughout construction, and identifies all reasonably foreseeable hazards, assesses the hazards, and manages the hazards as best possible by either eliminating or minimising the risks.	Project Manager	Reviewed at the inception of construction.



Mitigation Measures	Responsibility	Timing
The TGS shall be monitored and updated accordingly throughout the project.		
<b>Reporting:</b> Reporting and monitoring of movements during peak periods are to be undertaken to ensure that drivers are adhering to restricted times, and to ensure that the approved traffic generation and subsequent impacts on the road network are in line with those approved.	Site Engineer	Weekly.
<b>Induction to Drivers Code of Conduct:</b> All vehicle operators accessing the construction site must be inducted onto the Drivers Code of Conduct ( <b>Appendix D</b> ) prior to entering the site. The Contractor is to maintain a register of inducted operators with evidence of induction by way of operator signatures being captured.	Site Manager / Project Manager	As required

## 5.6 Risk Assessment

A risk assessment is intended to identify hazards and risks associated with the construction activities. The purpose is to determine the controls required for the protection of road workers and road users. A Risk Assessment associated with the construction works of this site has been completed by VC and is attached at **Appendix F**.

## 5.7 Community Consultation in Relation to External Works

Details of any notification/consultation measures to minimise disruptions to road users are contained within the respective CTMP for the signalised intersection works on Horsley Road.

## 6.0 CTMP Monitoring / Review & Improvement Process

### 6.1 Implementation

In accordance with Part B, Condition B2 of the Development Consent:

- Construction should not commence until this CTMP has been approved by the Planning Secretary; and
- The most recent version of this CTMP approved by the Planning Secretary should be implemented for the duration of construction.

### 6.2 Monitoring and Review

This CTMP shall be subject to a monthly review and will be updated accordingly. Regular reviews will be undertaken by the on-site coordinator during implementation and execution of this CTMP. Monitoring of this CTMP shall also be picked up in the Environmental checklists, with any incidents being reported within the weekly site meeting. The monitoring shall be undertaken in accordance with Condition C13.

All and any reviews undertaken should be documented, however key considerations regarding the review of the CTMP shall be:

- To ensure the implementation of the CTMP and TGS's are consistent with the intent of this report, and that the most recent version of the CTMP and TGS (as approved by the Planning Secretary) is being implemented.



- Tracking deliveries against the volumes outlined within report. Deliveries will be tracked against approved volumes and will keep a vehicle log - including Rego & time of entry - for the purpose of assessing the effectiveness of these monitoring programs.
- It is expected the Contractor will undertake a truck and car count/review to ensure volumes are within Condition Green of **Table 9** and will be undertaken once a month. In addition, the Contractor is required to retain a log of all vehicles accessing the Site on a daily basis.
- To identify any shortfalls and develop an updated action plan to address issues that may arise during construction (Parking and access issues).
- To ensure TGS's are updated (if necessary) by "Prepare a Work Zone Traffic Management Plan" card holders to ensure they remain consistent with the set-up on-site.
- Regular checks to ensure all loads are entering and leaving site covered as outlined within this CTMP.

As such, **Table 7** provides triggers to monitor and review this CTMP.

**Table 7 CTMP Monitoring and Review - Triggers**

Type of Review	Frequency	Considerations
<b>Scheduled</b>	The scheduled CTMP review must be undertaken monthly or as specified otherwise.	The scheduled CTMP review must consider the following: <ul style="list-style-type: none"> <li>• CTMP and TGS are approved;</li> <li>• Identify required variations to the TGS, and ensure that they are updated, recorded, and approved;</li> <li>• Review any departures or variations of the CTMP and/or TGS to ensure they have been documented and approved;</li> <li>• Speed control effectiveness;</li> <li>• Construction vehicle entry/egress suitability, with no queuing on the public road network at any time;</li> <li>• Construction vehicle daily / peak hour movements are compliant with approved volumes, with monthly reviews of the contractor's daily logbook of vehicles required;</li> <li>• Periodic checks to ensure that heavy vehicles are using the correct access route;</li> <li>• Periodic checks of noise generating items to ensure they are less than the prescribed 45 dBA.</li> </ul>
<b>Change Generated Review</b>	The change generated review must be undertaken when implementing new traffic stages, switches, or other construction-based activities.	The change generated CTMP review must consider the following: <ul style="list-style-type: none"> <li>• The work site is operating safely;</li> <li>• Delineation is effective with appropriate signage installed for changed conditions;</li> <li>• Safe passage is provided for all road users;</li> <li>• Road Safety Audits are arranged or confirmed as required;</li> <li>• Accountability for approval and inspection is well understood and documented.</li> </ul>



Type of Review	Frequency	Considerations
<b>Non-Compliance, Post Incident or Near Miss Review</b>	The non-compliance, post-incident or near miss review must be undertaken following an incident or near miss.	<p>Any non-compliance must be reported to immediately to the supervisor. A non-compliance is anything other than 'Condition Green' as outlined within <b>Table 9</b>.</p> <p>All workplace incidents must be reported immediately to the supervisor, who is to determine responsibility for investigating the incident. The incident and investigation must also be recorded in the incident reporting system of Transport.</p> <p>The post incident or near miss CTMP review must consider:</p> <ul style="list-style-type: none"> <li>• Causal factors;</li> <li>• Contributory factors or changes required; and</li> <li>• Identified changes to TGS are completed, approved, recorded, and communicated. For any incidents or near miss (where required) a safety alert must also be prepared and distributed by the Transport project manager to share learnings with other work sites.</li> </ul>

This monitoring process is expected to form part of the monitoring plan required to be included as part of the overarching Construction Environmental Management Plan (CEMP), of which the CTMP forms a part. The roadway (including footpath) must be kept in a serviceable condition for the duration of construction. At the direction of CBCC, undertake remedial treatments such as patching at no cost to the Council.

### 6.3 Work Site Inspections, Recording and Reporting

Recording and reporting of the monitoring programs shall be done in accordance with Section E.3 (Weekly TTM inspection checklist), E.4 (Shift/Daily TTM inspection checklist) and E.5 (Post completion inspection checklist) of the TfNSW *Traffic Control at Work Sites* Technical Manual Issue No. 6.1 (**TCAWS 6.1**). As such, the structure, schedule, and frequency of these activities have been considered and identified.

To inspect, review and audit the temporary traffic management (**TTM**) arrangements implemented on site, the actions presented in **Table 8** are to be undertaken by suitably qualified personnel in accordance with TCAWS 6.1 requirement during all phases of construction.

**Table 8 Review of Activities – Example Template**

Activity			Frequency or Details
<b>Shift Inspections</b>	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
<b>Regular Inspections</b>	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
<b>TMP Review</b>	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
<b>Road Safety Audit</b>	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
<b>Other</b>	<input type="checkbox"/> YES	<input type="checkbox"/> NO	
<b>Comments</b>			

Given that the length of construction and that no regular works have been proposed outside of the site, monthly TTM inspections are considered to be sufficient.



### 6.3.1 Incident Management

For the purposes of this CTMP, an 'incident' is an occurrence or set of circumstances that causes or threatens to cause material harm and which may or may not be or cause a non-compliance. Furthermore, a 'non-compliance' is an occurrence, set of circumstances or development that is a breach of the consent.

All incidents related to traffic, including those of the Principal Contractor, subcontractors, and/or visitors that occur during construction works will be managed in conjunction with the requirements outlined in VC's Incident and Non-compliance Response and Handling Procedure (outlined within the CEMP).

Whilst it is noted that key Contractors will be implementing their own environmental management system procedures and processes, VC will be responsible for ensuring that these systems and processes satisfy the requirements of the CEMP, including the incident management components.

VC's Project Manager must be notified immediately of any environmental incident or near miss related to traffic. Such incidents may include, but not limited to:

- Vehicle crash or injury resulting from construction traffic related to the project;
- Queuing onto Horsley Road, in breach of the requirements set out under this CTMP;
- Spill of any dangerous goods or hazardous substance to ground or water;
- Substantiated complaints received from members of the community or regulatory authorities relating to traffic management;
- Land-based off-site sediment loss to the environment, including sediment tracking onto the roadway.

VC's Project Manager will be responsible for all notifiable environmental incidents in line with the regulatory notification requirements (outlined within the CEMP).

All environmental incidents will be reported immediately to DPE in writing via the Planning Portal after VC becomes aware of the incident, as per Condition C10 of the conditions. Any notification to DPE must identify the development, including the application number, and set out the location and nature of the incident.

In the event of a notifiable non-compliance incident arising, the Principal Contractor will notify Hales Project Manager immediately, who is then required to notify DPE in writing (via the Planning Portal) within 7 days, as per Condition 11 of the conditions. Any notification to DPE must:

- identify the development, including the application number;
- set out the condition of approval that the development is non-compliant with;
- the way in which it does not comply;
- the reasons for the non-compliance (if known); and
- what actions have been taken, or will be taken, to address the non-compliance.

The CEMP also outlines procedures for incident and non-compliance response and handling within Section 3.5.



## 6.4 Contingency Plan

A contingency plan shall be established by the Contractor and is to be included in the overarching CEMP, in accordance with Condition C1(e). Notwithstanding, **Table 9** outlines an indicative plan to be undertaken by the Contractor in the event that the monitoring program identifies the management plan is not effective in managing the construction impacts.

A Compliance Report must be submitted to the Department reviewing the environmental performance of the development to:

- identify any trends in the monitoring data over the life of the development;
- identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and
- describe what measures will be implemented over the next year to improve the environmental performance of the development.

**Table 9 Contingency Plan**

Risk		Condition Green	Condition Amber	Condition Red
<b>Construction Movements</b>	Trigger	Both peak hour and daily Construction traffic volumes are in accordance with volume and time constraints as outlined within Section 3.2 and Section 3.6 (80 LV & 30 HV movements per day / 40 LV & 6 HV movements in peak hour periods).	Construction traffic volumes exceeds programmed peak hour volumes but is within permissible daily volume constraints (80 LV & 30 HV movements per day / 40 LV & 6 HV movements in peak hour periods).	Construction traffic volumes exceeds permissible volume and time constraints (80 LV & 30 HV movements per day / 40 LV & 6 HV movements in peak hour periods).
	Response	No response required.	Review and investigate construction activities, and where appropriate, implement additional remediation measures such as: <ul style="list-style-type: none"> <li>• Review CTMP and update where necessary;</li> <li>• Provide additional training.</li> </ul>	As per Condition Amber, plus: <ul style="list-style-type: none"> <li>• If it is concluded that construction activities were directly responsible for the exceedance, submit an incident report to government agencies.</li> <li>• Stop all transportation into and out of the site.</li> </ul>
<b>Queuing</b>	Trigger	No queuing identified.	Queuing identified within site, but not on to public road.	Queuing identified on the public road.



Risk		Condition Green	Condition Amber	Condition Red
	Response	No response required. Continue monitoring program.	Review the delivery schedule prepared by the builder. If drivers are not following the correct schedule, then they should be provided with additional training and an extra copy of the Driver Code of Conduct.	As per Condition, plus: <ul style="list-style-type: none"> <li>Review and investigate construction activities.</li> <li>If it is concluded that construction activities were directly responsible for the exceedance, submit an incident report to government agencies.</li> <li>Temporary halting of activities and resuming when conditions have improved.</li> <li>Stop all transportation into and out of the site.</li> <li>Review CTMP and update where necessary, provide additional training.</li> </ul>
<b>Noise</b>	Trigger	Noise levels do not exceed imposed noise constraints, as outlined within the Noise Assessment Report (<45dBA), nor has there been a traffic noise related complaint.	Noise levels in minor excess (<10dBA) of imposed noise constraints, or receipt of a single noise complaint.	Noise levels greatly in excess (>10dBA) of imposed noise constraints or consistent noise complaints.
	Response	No response required.	Undertake all feasible and reasonable mitigation and management measures to minimise noise impacts.	As with Condition Amber if noise levels cannot be kept below applicable limits, then a different construction method or equipment must be utilised.
<b>Traffic Guidance Scheme</b>	Trigger	No observable issues (TGS implemented according to plan).	Minor inconsistencies with TGS to onsite operations (such as covered signs, missing signs, fallen cones, etc.).	Near miss or incident occurring regardless of / as a result of the TGS being implemented.



Risk		Condition Green	Condition Amber	Condition Red
	Response	No response required.	Traffic Controller to amend TGS on site and to keep a log of all changes.	Stop work until an investigation has been undertaken into the incident. There are to be changes made to the TGS to ensure that the safety of all workers, students and civilians are catered for.
<b>Dust</b>	Trigger	No observable dust.	Minor quantities of dust in the air and tracking on to the road.	Large quantities of dust in the air and tracking on to the road.
	Response	No response required.	Review and investigate construction activities and respective control measures, where appropriate. Implement additional remedial measures, such as: <ul style="list-style-type: none"> <li>• Deployment of additional water sprays.</li> <li>• Relocation or modification of dust-generating sources.</li> <li>• Check condition of vibrating grids to ensure they are functioning correctly. Temporary halting of activities and resuming when conditions have improved.</li> </ul>	As per Condition Amber, plus: <ul style="list-style-type: none"> <li>• If it is concluded that construction activities were directly responsible for the exceedance, submit an incident report to government agencies.</li> <li>• Implement relevant responses and undertake immediate review to avoid such occurrences in future.</li> </ul>

## 6.5 Communications Strategy

A communications strategy shall be established by the Contractor and is included in the overarching CEMP Section 1.6 (refer to the community consultation strategy prepared separately).

A Communications and Community Liaison Representative (**CCLR**) has been nominated as Stephen Shoesmith of SLR Consulting and shall be responsible for ensuring that the appropriate management response and handling procedures are instigated and carried through in the event of an environmental complaint.



All employees who are made aware of a complaint, either verbal or written, are to immediately notify the Contractor’s Project Manager, who will then contact the CCLR. Upon becoming aware of a complaint, the protocol outlined in **Table 10** will be followed.

**Table 10 Response Strategy**

Ref	Protocol	Action
1	Record and acknowledge	Any employee who takes receipt of a complaint, either verbal or written, are to immediately notify the Contractor’s Project Manager who will then contact the Communications and Community Liaison Representative. The Contractor’s Project Manager will be available 24 hours a day, seven days a week and have the authority to stop or direct works. In the normal course of events, the first contact or complaints will usually be made in person or by telephone. The complainant’s name, address, and contact details, along with the nature of the complaint, will be requested. If the complainant refuses to supply the requested information, a note will be made on the form and complainant advised of this.
2	Assess and prioritise	The CCLR will prioritise all complaints by severity for the risk to health and safety and will attempt to provide an immediate response via phone or email.
3	Investigate	An on-site investigation will be initiated in an attempt to confirm details relevant to the complaint and the cause of the problem. Any monitoring information and/or records at and around the time of the complaint will be reviewed for any abnormality or incident that may have resulted in the complaint.
4	Action or rectify	Once the cause of the complaint has been established, every possible effort will be made to undertake appropriate action to rectify the cause of the complaint and mitigate any further impact. The CCLR will assess whether the complaint is founded or unfounded and delegate the remediation of the issue to the Contractor’s Project Manager for action, as required.
5.	Respond to Complainant	The CCLR will oversee the rectification of the issue and respond to the complainant once the issue has been resolved. The complainant will be provided with a follow up verbal response on what action is proposed within two hours during night-time works (between the hours of 6:00 pm and 10:00 pm) and 24 hours at other times. Where a complaint cannot be resolved by the initial or follow-up verbal response, a written response will be provided to the complainant within ten days.
6.	Record	It is imperative that an assessment of the situation is carried out and documented to minimise the potential for similar complaints in the future. On this basis, every complaint received is to be recorded in the Community Correspondence Register. A copy of the completed form will be maintained for at least five years
7.	Preventative Action	Once the complaint has been suitably handled, appropriate measures will be identified and implemented to negate the possibility of re-occurrence. The Community Correspondence Register is not finalised until the preventative actions are completed and recorded on the form.

In addition to the above, the CCLR is to notify the community liaison representative when traffic is expected to exceed the parameters set within “Condition Green” of **Table 9**. Notwithstanding, **Table 11** outlines an indicative communication strategy to ensure that adequate communication with key stakeholders has been met.



**Table 11 Communications Strategy**

Risk	Impact	Comms Channel
Wider Traffic Disruption	Wider community and stakeholders informed through local and wider advertising and notification	Stakeholder Meetings
Construction related traffic	Ensure construction crews use traffic routes identified in the Traffic Management Plan, and Ensure residents in area are notified in advance to any traffic changes that may affect them	Stakeholder email blast.

Furthermore, ongoing communication will be undertaken so that all stakeholders are kept up to date of works and potential impacts.



# **Appendix A Curriculum Vitae – Brendyn Rheinberger**



Brendyn is a highly dedicated and driven Traffic and Transport Engineer who thrives on working in a complex, challenging and problem-solving environment. Brendyn has extensive professional experience with over 15 years working in traffic and transport engineering, civil engineering, and project management roles in both public and private contexts throughout Queensland and NSW.

Skilled in integrated transport planning, traffic analysis, construction traffic management, traffic signal design, road network operations, road safety, car park design and project management. Brendyn has a proven ability to develop and foster strong relationships with organisations and authorities, through communication, honesty, and integrity.

## Education and Qualifications

- Master of Engineering (Engineering Management), Griffith University (2015)
- Bachelor of Engineering (Civil), Griffith University (2012)
- Chartered Professional Engineer of Australia (CPEng)
- Professional Engineer of Queensland (RPEQ)
- Professional Engineer of Victoria (RPEV)
- Traffic Management Design (TMD) accredited, Department of Transport and Main Roads
- Prepare Traffic Management Plans and Traffic Guidance Schemes (TCT1044529), NSW Government
- Road Safety Auditor (RSA), Department of Transport and Main Roads

## Project Experience

### **Springwood to Browns Plains Passenger Transport Corridor Study, TMR (2020)\*\***

Brendyn and his team were commissioned by the Department of Transport and Main Roads to investigate public transport demands and infrastructure requirements between Springwood and Browns Plains to support future growth and improved multi-modal transport outcomes.

Brendyn was involved in the review of the existing bus network, setting strategic objectives and developed the options analysis framework for assessing proposed corridors.

### **Lae Drive, Runaway Bay Corridor Master Plan, CoGC (2020)\*\***

Brendyn and his team were engaged by City of Gold Coast (CoGC) to provide a multi-modal corridor master plan for the Lae Drive corridor in Runaway Bay. The corridor includes numerous signalised and unsignalised intersections and roundabouts which were assessed, and intersection upgrades proposed as part of the project. The solutions for the corridor included individual intersection upgrades as well as corridor connections to suit the demographics and user profile of the corridor. The team prepared three briefing notes, a technical summary report and a graphically designed corridor master plan for public issue.

Brendyn oversaw the investigations into both the active and public transport networks for the corridor and provided guidance on intersection analysis using SIDRA intersection performance software.

Brendyn led workshops internally with the project team to determine individual mode-based solutions and derive the most suitable options using a SWOT analysis methodology.

### **Mackay Waterfront PDA Transport Model Analysis, MRC (2020)\*\***

Brendyn and his team were engaged by Mackay Regional Council (MRC) to undertake an options analysis on the Sydney Street/River Street intersection located near the Pioneer River in the Mackay CBD. MRC and the Department of Transport and Main Roads identified

an issue with connectivity for the Blue Water Trail, an active transport shared path that travels along the Pioneer River coastline predominantly used for recreation. The existing intersection configuration of Sydney Street/River Street forced pedestrians and cyclists travelling along the trail to cross in two stages resulting in significant delays. The project investigated various options to modify the intersection and surrounding Blue Water Trail alignment to improve connectivity for pedestrians and cyclists. The project resulted in providing MRC with three preferred options suited to three differing timeframes for implementation, as well as enabling each option to be built upon one another as a progression of sorts towards an end vision for the Waterfront PDA.

Brendyn managed the project's budgetary and time requirements and was the key contact representing his project team. He oversaw the options development, intersection analysis and provided guidance on concept designs.

**Brisbane Metro Program Management, TransLink (2019-2021)\*\***

Brendyn undertook a role in representing Queensland Government for the Brisbane Metro project. He was responsible for coordinating design reviews of all design packages under Brisbane Move's scope. He was also responsible for briefing TransLink's executive team on upcoming bus service disruptions as a result of planned construction activities. Brendyn was a liaison for TransLink within several working groups and interfaced with BCC, the Project Verifiers and Brisbane Move representatives.

**Kellyville Station Bus Interchange Concept Design, Sydney Metro (2019)\*\***

Brendyn was the project manager for the concept design of the bus interchange at Kellyville station. This involved developing several options for buses to circulate through the station precinct including providing provisions for bus stop and bus priority infrastructure. Brendyn was in constant communication with Roads and Maritime, Transport for NSW and The Hills Shire Council in regard to road operational impacts, bus route service planning, bus lane enforcement and parking and signage changes. The work Brendyn performed was pivotal to all stakeholders coming to agreement and deciding on a preferred option to be added to the Station Precinct Design Plan.

**Sydenham Temporary Bussing Optioneering, Sydney Metro (2019)\*\***

Due to the proposed changes to the surrounding road network of Sydenham station as part of Metro upgrade works, new rail replacement bus routes and stop locations were required as a result of impacts to the existing Sydney Trains bus specifications during rail possessions. Brendyn developed eight different options for bus routes and stop locations and assessed each against a common set of criteria as part of a multi-criteria analysis. Through this process Brendyn was able to determine a preferred option and presented the findings of this optioneering assessment numerous times to Roads and Maritime, Sydney Coordination Office, Transport for NSW, Sydney Trains and Inner West Council. Brendyn ascertained in-principle support and approvals from the relevant stakeholders which was instrumental in implementing the preferred option.

**Kellyville Park N Ride Demand Investigation, Sydney Metro (2019)\*\***

Brendyn provided support to the investigation of the Park n Ride facility at Kellyville. This multi-storey car park consists of 1350 spaces and it was Brendyn's responsibility to assist with providing comparative findings of the forecasted demands versus the observed demands of the facility during peak traffic periods. These findings informed the traffic analysis that Brendyn managed for the precinct streets of Kellyville station and the surrounding key intersections. By understanding the demand profile of traffic volumes entering and exiting the Park n Ride facility, Brendyn was able to accurately stress test the local road network to determine its current design life before requiring capacity upgrades.

**Sydenham To Bankstown Integrated Transport Planning, Sydney Metro (2019)\*\***

Across the ten future southwest Metro stations, Brendyn's role was to oversee the identification of potential improvement opportunities to pedestrian and cyclist facilities, bus

stops and kiss n ride spaces surrounding the station precincts. Improvements included undertaking pedestrian capacity assessments, surrounding land use investigations, identifying pedestrian desire lines, a walking and cycling strategy, traffic modelling, concept designs and bus stop operational assessments of which Brendyn facilitated. Brendyn organised workshops to further develop concept designs and presented the recommended improvements to relevant stakeholders for in-principle agreement prior to the submission of a technical report for final approval. The improvement opportunities were selected to align with Transport for NSW's Movement and Place Framework.

**Bankstown Line Temporary Transport Plan, Sydney Metro (2019)\*\***

This project involved the development of a temporary transport plan designed to be implemented during the possession of the existing Bankstown heavy rail line to facilitate conversion works. Across a three week period, rail replacement bus services are planned to be in operation to transport rail customers inconvenienced by the Bankstown line rail possession. As Traffic Manager, Brendyn was responsible for assessing the road network planned to be utilised by rail replacement buses. The main objective of Brendyn's role was to ensure reliability and to improve bus travel time through a congested road network. Through traffic modelling, Brendyn was able to effectively identify locations suitable for temporary changes to on-street parking, traffic signal phasing modifications and locations for pedestrian management, all to support the temporary bus services. Finally, the list of recommended modifications and the justification behind each was presented as part of a handover by Brendyn to members of the Sydney Coordination Office and Transport Management Centre, who were tasked with operating the TTP.

**Traffic Engineer, Sydney Light Rail Project, Acciona Infrastructure (2016-2018)\*\***

This project involved the construction of a light rail network travelling through the Sydney CBD and extending through Surry Hills, Randwick, Kensington and Kingsford suburbs. The project addressed the capacity issues on the south eastern suburbs bus network by providing a high frequency 'turn up and go' service connecting the inner west suburbs with the south eastern suburbs through 12km of light rail network. As a Traffic Engineer on this high profile project, Brendyn's primary role was to prepare site-specific traffic management plans to facilitate construction of various utility and civil components throughout the Randwick, Kensington and Kingsford sections. In designing each TMP, Brendyn had a strong focus on pedestrian and cyclist safety as these facilities were designed in a temporary configuration in the vicinity of construction vehicle movements and activities. Overseeing all aspects of TMP development and obtaining approvals from state and local authorities was Brendyn's ultimate objective and was vital for construction activities to proceed.

**Safer Roads Sooner Program, TMR (2016)\*\***

As part of the south coast region for Transport and Main Roads, Brendyn oversaw the determination of potential road improvement projects where deficiencies in safety were evident due to historical accident data and trends being identified. Brendyn was responsible for undertaking cost benefit analysis for each potential project to develop a short list for submission to the Land Transport Safety team within TMR. For each of the short listed road improvement projects, Brendyn prepared a business case which highlighted the justification and benefits the projects would provide to the state controlled road network. These business cases were submitted to the Land Transport Safety team to determine funding allocations for the south coast region under the Safer Roads Sooner program.

**M1 Motorway Exit 54 Interchange Upgrade, Traffic Signal Operational Support, TMR (2015-2016)\*\***

As part of the Network Optimisation team within Transport and Main Roads, Brendyn provided traffic signal design and operational support to the contractor during each stage of construction of the Exit 54 interchange upgrade. This involved developing traffic signal plans that dictated the cycle times and phasing for the varying traffic demands throughout each day. Brendyn monitored the live traffic utilising a combination of permanent and temporary

CCTV cameras during the critical AM and PM peak periods to ensure queuing did not exceed the capacity of the on and off-ramps to the M1 motorway. Brendyn attended meetings with the contractor regularly and provided advice on construction staging in regard to traffic signal operations.

**Metricon Stadium Venue Transport Planning, TMR (2020)\*\***

Brendyn provided support to the Gold Coast Suns AFL club in regard to the operation of traffic signals as part of the Metricon Stadium transport planning for AFL game days. Liaising with the Gold Coast Suns, Queensland Police, QLD Ambulance, QLD Fire and Emergency, City of Gold Coast and the Traffic Management Centre, Brendyn was able to develop game day specific traffic signal plans for Nerang Broadbeach Road that catered for the needs of each stakeholder. This included the coordination of the corridor to support the major direction of traffic flow, extending pedestrian crossing times at key locations which would be supported by on-site traffic controllers, and providing bus priority signal phasing to assist with transporting spectators to and from games.

## Memberships and Associations

- Member of Institution of Engineers Australia (MIEAust)
- Member of Australian Institute of Traffic Planning and Management (AITPM)

# Appendix B Site Plans



REV	DESCRIPTION	DATE
P1	PRELIMINARY ISSUE FOR BACKGROUND INFORMATION	19-05-23
P2	PRELIMINARY ISSUE FOR COLUMNS	02-06-23
P3	FOR CLIENT APPROVAL	08-06-23
P4	REVISED FOR CLIENT APPROVAL	09-06-23
P5	ISSUED FOR COORDINATION	16-06-23
P6	EXISTING SEWER SHOWN	07-07-23
P7	PRELIMINARY SET	18-07-23
P8	ISSUED FOR 50% SUBMISSION	02-08-23

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NOTE: THE LOCATION OF PROPERTY ALIGNMENTS IS DETERMINED FROM SURVEY INFORMATION PROVIDED BY SURVEYOR.

**PRELIMINARY**

CLIENT  
**Hale**

BUILDER / PROJECT MANAGER  
**VAUGHAN CONSTRUCTIONS**

ARCHITECT  
**PACE ARCHITECTS**

PROJECT  
MULTI-LEVEL WAREHOUSES

ADDRESS  
339-349 HORSLEY ROAD, MILPERRA NSW

DRAWING TITLE  
SITE PLAN

PURPOSE  
PRELIMINARY

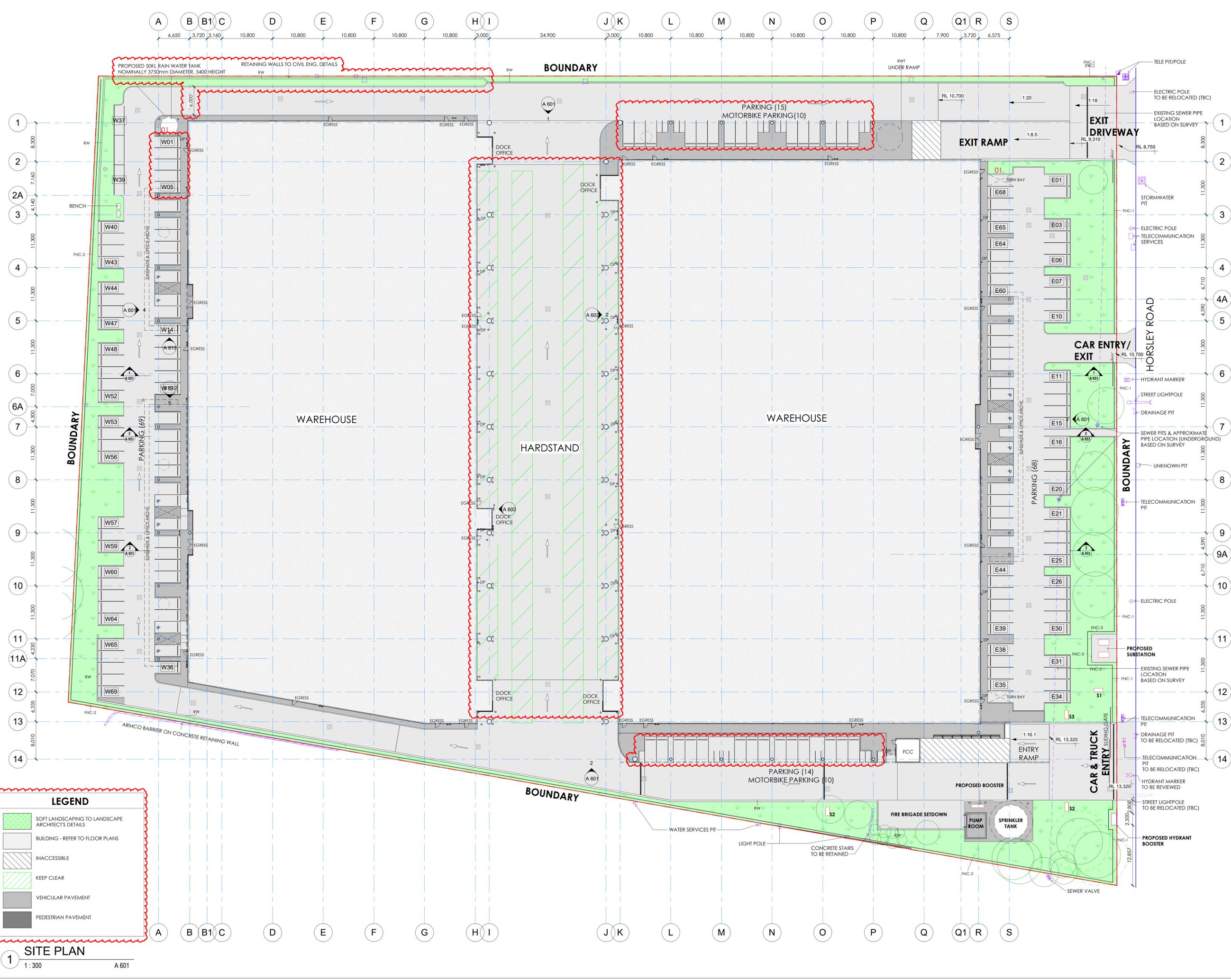
SCALE As indicated B1

PROJECT NO 230508

DATE 02-08-23

DWN DWG NO KT 230508 - A 101

ISSUE P8



LEGEND	
[Green pattern]	SOFT LANDSCAPING TO LANDSCAPE ARCHITECT'S DETAILS
[Grey pattern]	BUILDING - REFER TO FLOOR PLANS
[White pattern]	INACCESSIBLE
[Green diagonal lines]	KEEP CLEAR
[Dark grey pattern]	VEHICULAR PAVEMENT
[Light grey pattern]	PEDESTRIAN PAVEMENT

**1 SITE PLAN**  
1 : 300  
A 601

# Appendix C Mobilisation Plans



**BUILDER:**  
VAUGHAN CONSTRUCTION

**PROJECT:**  
**HALE MILPERRA**  
LOTS 140 & 141  
IN DP550194  
339-349 HORSLEY ROAD,  
MILPERRA

**SITE ESTABLISHMENT AND EMERGENCY**



**VAUGHAN CONSTRUCTIONS**

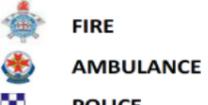
- LEGEND**
- Site Office
  - M/F Toilet
  - Change Room
  - Lunch Shed
  - Meeting Room
  - First Aid Room
  - Site Boundary
  - Truck Shaker Grid
  - Vehicle Entry & Exit
  - Pedestrian Access
  - Vehicle Zones
  - EMERGENCY ASSEMBLY POINT Emergency Muster Point at Pedestrian Gate
  - X Concrete Washout
  - Diversion Drain
  - Silt Fence

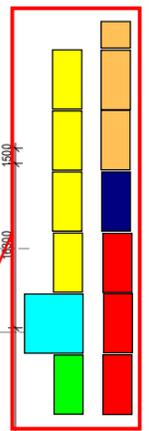
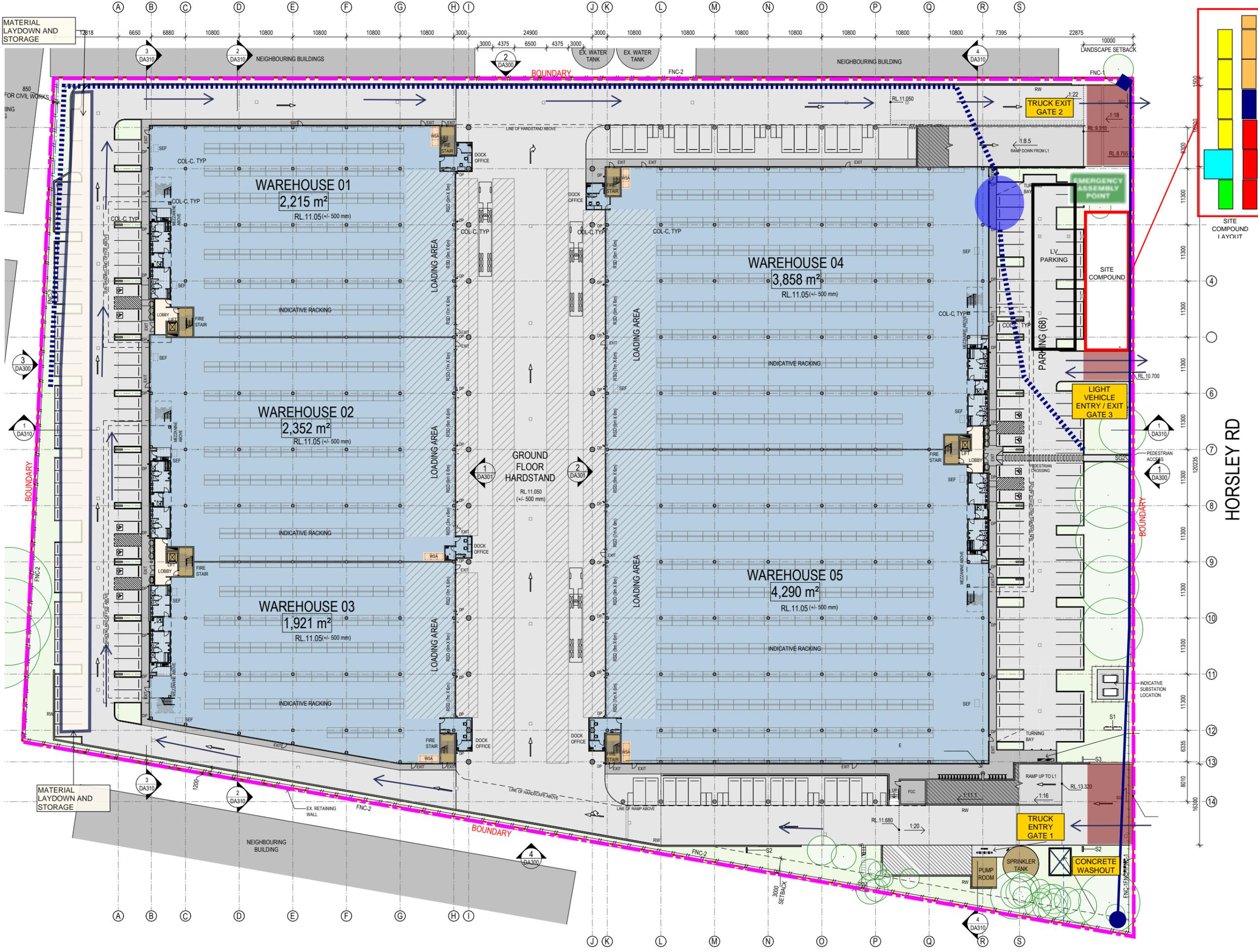
**PROJECT MANAGER:**  
Scott Fitzgerald  
0428 807 765

**SITE MANAGER:**  
Ali Mourad  
0416 317 404

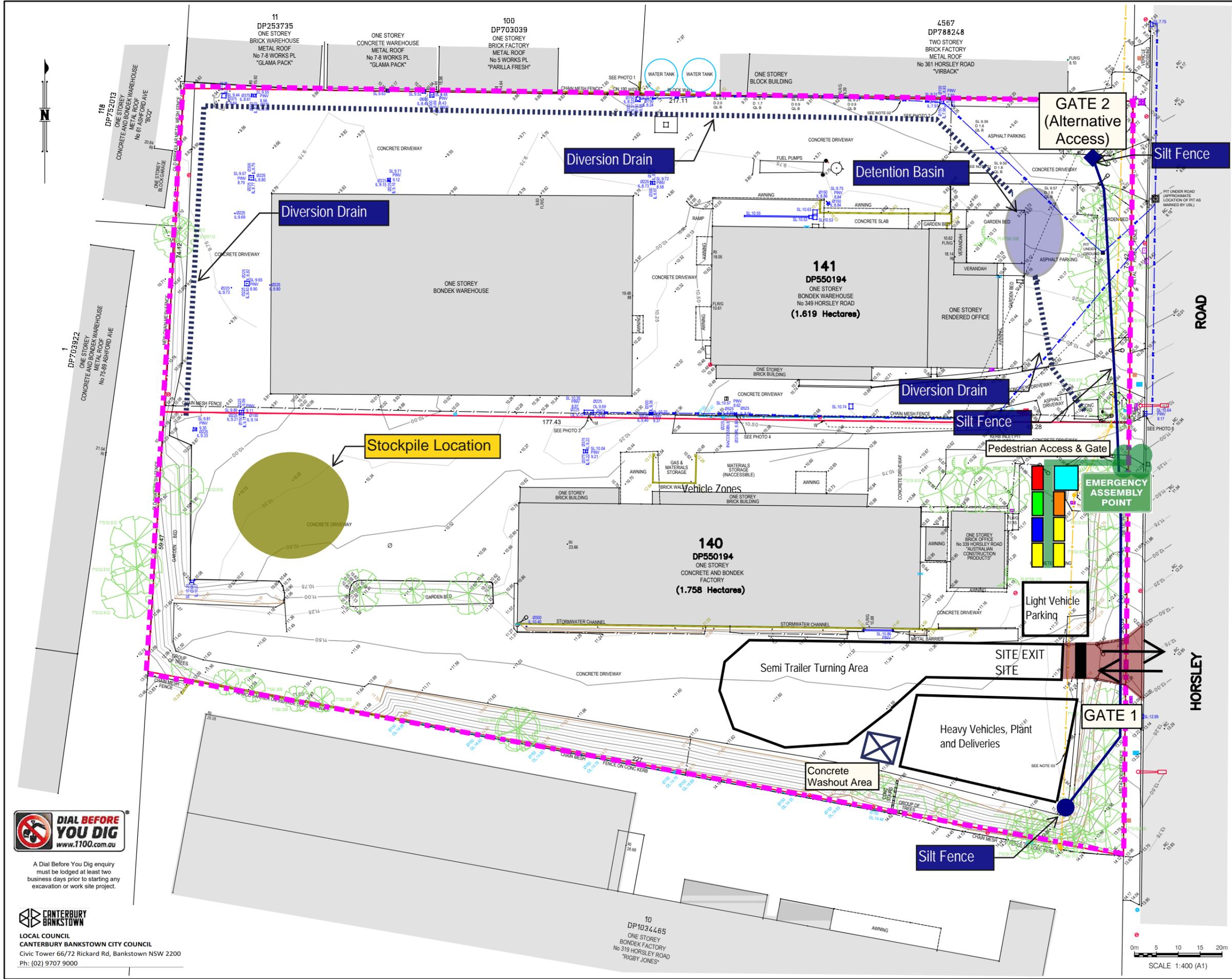
**NOTIFY SITE MANAGER OF ANY ACCIDENTS, INJURIES OR NEAR MISSES OR ENVIRONMENTAL INCIDENTS ON-SITE.**

**FOR EMERGENCY SERVICES CALL 000**

 FIRE  
AMBULANCE  
POLICE } **000**



**HORSLEY RD**



BUILDER:  
**VAUGHAN CONSTRUCTION**

PROJECT  
**HALE MILPERRA**  
LOTS 140 & 141  
IN DP550194  
339-349 HORSLEY ROAD,  
MILPERRA

**SITE ESTABLISHMENT AND EMERGENCY**

**VAUGHAN CONSTRUCTIONS**

- LEGEND**
- Site Office
  - M/F Toilet
  - Change Room
  - Lunch Shed
  - Meeting Room
  - First Aid Room
  - Site Boundary
  - Truck Shaker Grid
  - Vehicle Entry & Exit
  - Pedestrian Access
  - Vehicle Zones
  - EMERGENCY ASSEMBLY POINT Emergency Muster Point at Pedestrian Gate
  - Concrete Washout
  - Diversion Drain
  - Silt Fence

**PROJECT MANAGER:**  
Scott Fitzgerald  
0428 807 765

**SITE MANAGER:**  
Ali Mourad

**NOTIFY SITE MANAGER OF ANY ACCIDENTS, INJURIES OR NEAR MISSES OR ENVIRONMENTAL INCIDENTS ON-SITE.**

**FOR EMERGENCY**

**FIRE**  
**AMBULANCE**  
**POLICE**

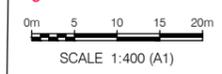
000



A Dial Before You Dig enquiry must be lodged at least two business days prior to starting any excavation or work site project.

**CANTERBURY BANKSTOWN**  
LOCAL COUNCIL  
CANTERBURY BANKSTOWN CITY COUNCIL  
Civic Tower 66/72 Rickard Rd, Bankstown NSW 2200  
Ph: (02) 9707 9000

10 DP1034465  
ONE STOREY  
BONDEK FACTORY  
No 319 HORSLEY ROAD  
"RIGBY JONES"



# Appendix D Drivers Code of Conduct



## Drivers Code of Conduct

Safe Driving Policy for the Lots 140 and 141 located at 339-349 Horsley Road, Milperra, NSW.

### **FOR ALL DRIVERS OF PLANT, TRUCKS & VEHICLES THAT ACCESS & EGRESS THIS PROJECT.**

Drivers Code of Conduct (Condition of entry):

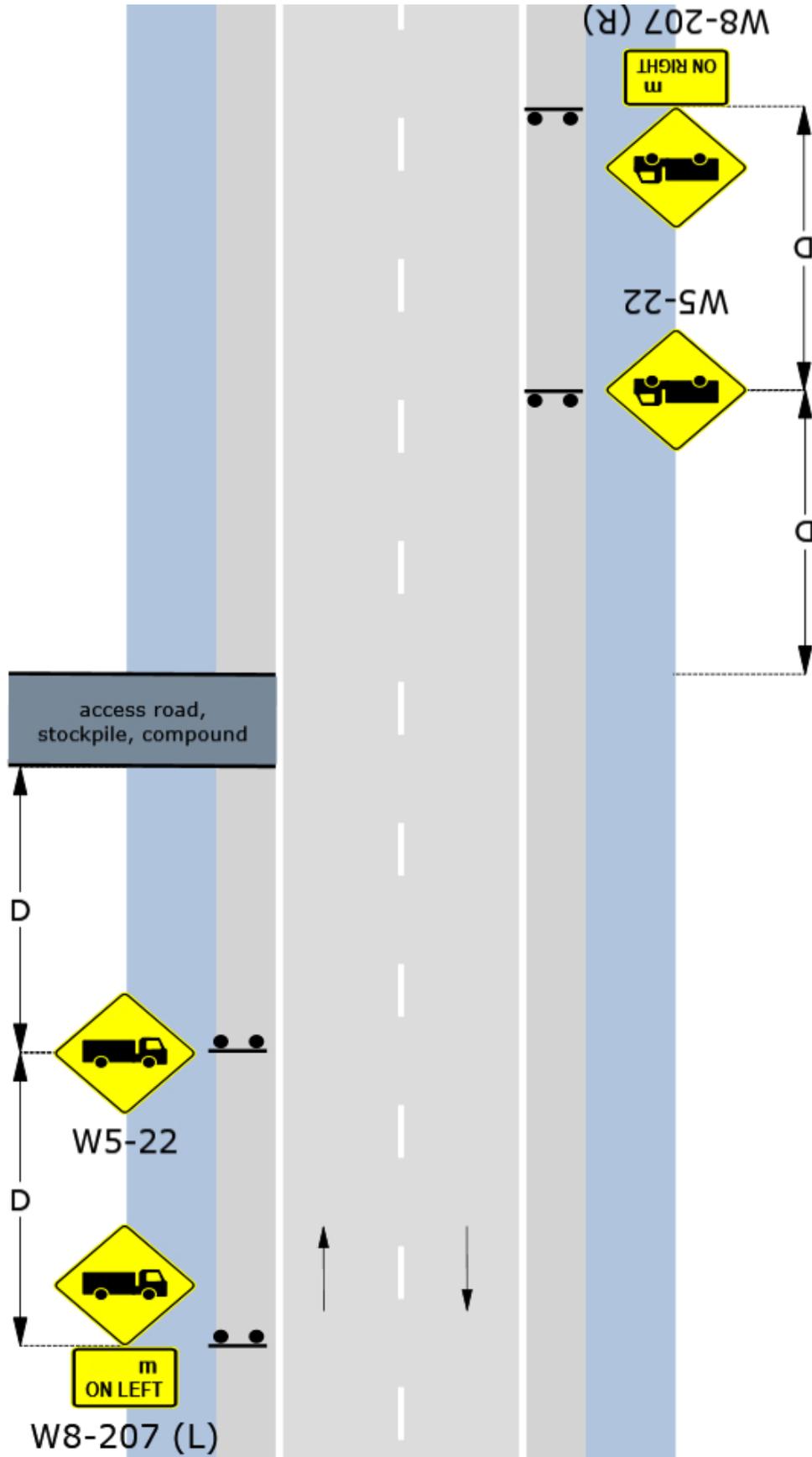
- All drivers shall follow instruction of Vaughan Constructions staff at all times;
- All drivers are to adhere to all signposted directions;
- Primary access and egress is from Horsley Rd;
- Vehicles shall not queue outside the site;
- Vehicles shall enter and exit the site in a safe and orderly manner;
- Movements within the site are restricted to 10kmp/h;
- Vehicles shall follow the main traffic routes at all times;
- Drivers must maintain a safe 'buffer' distance from any person/ or plant being operated by a person whilst moving on/ around the site;
- Drivers (of deliveries) are not to move their vehicles around site with 'unrestrained loads'. This means, any and all items must be adequately chained or tied down to the vehicle, prior to the vehicle's movement on or around the site;
- All loads being removed from site shall be secured and/ or covered appropriately;
- All parking shall be within designated areas unless approved by SM; and
- Appropriate measure will be put in place to ensure that vehicles leaving the site do not deposit dirt or mud on surrounding roadways.



# Appendix E Traffic Guidance Scheme



D.4.7 Static: Access to depot, stockpile, quarry, gravel pit etc. all roads (formerly TCP 195)



# Appendix F Risk Assessment



**Project Name:** Hale Capital Milperra

**Project No.** 23.372

**Reviewed By:** Cindy Roldan

**Revision Date:** 04<sup>th</sup> July 2023.

Risk Register							
		Pre-Control			Post Control		
Trade Works	Project Activity Hazard and Risk Assessment	Likelihood	Consequence	Score	Likelihood	Consequence	Score
Access & Egress	Inappropriate access & egress to site	Moderate	High	1	Unlikely	High	2
Access & Egress	Vehicle loads striking overhead powerlines that pass over the vehicle crossovers	Moderate	High	1	Unlikely	High	2
Access & Egress	Pedestrians being hit by vehicles entering & exiting the site	Moderate	High	1	Unlikely	High	2
Access & Egress	Inappropriate car parking (construction worker cars taking up car spaces on council road)	Moderate	High	1	Unlikely	High	2
Access & Egress	People / workers being struck by vehicles travelling through site	Moderate	High	1	Unlikely	High	2
Access & Egress	People travelling through construction zone to enter site amenity area	Moderate	High	1	Unlikely	High	2
Access & Egress	People being struck by vehicles, mobile plant and equipment	Moderate	High	1	Unlikely	High	2
Access & Egress	Unauthorised personnel entering site	Moderate	High	1	Unlikely	High	2
Access & Egress	Injuries due to personnel being unfamiliar with site specific safety rules	Moderate	High	1	Unlikely	High	2
Access & Egress	Injuries due to personnel being unfamiliar with construction safety rules	Moderate	High	1	Unlikely	High	2
Access & Egress	Injuries due to personnel being unfamiliar with task specific safety requirements	Moderate	High	1	Unlikely	High	2
Access & Egress	Collisions with members of the public and vehicles outside site boundary	Moderate	High	1	Unlikely	High	2
Access & Egress	Members of the public tripping / falling over building materials stored outside the site boundary	Moderate	High	1	Unlikely	High	2
Access & Egress	Members of the public tripping / falling over uneven ground / footpath as a result of construction works	Moderate	High	1	Unlikely	High	2
Biological / Bacteria	Workers exposed to Biological / Bacterial Hazards associated with site conditions (contaminated soils / hazardous substances)	Moderate	High	1	Unlikely	High	2
Biological / Bacteria	People infected with Coronavirus (COVID 19) coming to site	Likely	High	1	Unlikely	High	2
Biological / Bacteria	Injuries due to needle sticks	Moderate	Medium	2	Unlikely	Medium	3
Biological / Bacteria	Infectious substances	Moderate	Medium	2	Unlikely	Medium	3
Biological / Bacteria	Incorrect disposal of medical waste from first aid treatment / injuries	Moderate	Medium	2	Unlikely	Medium	3
Confined Space	Asphyxiation	Moderate	High	1	Unlikely	High	2
Confined Space	Untrained personnel entering a confined space	Moderate	High	1	Unlikely	High	2
Confined Space	Fire / Explosion	Moderate	High	1	Unlikely	High	2
Concrete Cutting & Coring	Striking services inside concrete slab	Moderate	High	1	Unlikely	High	2

Risk Register							
		Pre-Control			Post Control		
Trade Works	Project Activity Hazard and Risk Assessment	Likelihood	Consequence	Score	Likelihood	Consequence	Score
Neighbouring Properties	Damage to council infrastructure	Moderate	High	1	Unlikely	High	2
Neighbouring Properties	Dust entering neighbouring properties	Moderate	Medium	2	Unlikely	Medium	3
Neighbouring Properties	Dust contamination of neighbouring properties	Moderate	Medium	2	Unlikely	Medium	3
Neighbouring Properties	Rubbish odours from domestic waste	Moderate	Low	3	Unlikely	Low	3
Neighbouring Properties	Odours from site toilet tank	Moderate	Low	3	Unlikely	Low	3
Neighbouring Properties	Smoke odours entering neighbouring properties from burning waste on site	N/A	NA	N/A	N/A	N/A	N/A
Neighbouring Properties	Construction noise disturbing neighbouring properties	Moderate	Medium	2	Unlikely	Medium	3
Neighbouring Properties	Excessive engine noise from plant and equipment disturbing neighbouring properties	Moderate	Medium	2	Unlikely	Medium	3
Neighbouring Properties	Vibrations from rollers & rock breakers disturbing neighbouring properties	Moderate	Medium	2	Unlikely	Medium	3
Noise (Hearing)	Hearing damage	Moderate	Medium	2	Unlikely	Medium	3
Structural Alterations / Support	Unsafe work practices	Moderate	High	1	Unlikely	High	2
Structural Alterations / Support	Unstable structure	Moderate	High	1	Unlikely	High	2
Structural Alterations / Support	Structural collapse	Unlikely	High	2	Unlikely	Medium	3
Structural Alterations / Support	Concrete precast panels falling during / after installation	Moderate	High	1	Unlikely	High	2
Structural Alterations / Support	Precast panel falling	Moderate	High	1	Unlikely	High	2
Structural Alterations / Support	Utilities, services, and public infrastructure	Moderate	High	1	Unlikely	High	2
Services (underground / overhead)	Plant striking overhead power lines	N/A	N/A	N/A	N/A	N/A	N/A
Services (underground / overhead)	Contact with overhead temporary wiring on site	Moderate	High	1	Unlikely	High	2
Services (underground / overhead)	Earthmoving equipment striking in ground services	Moderate	High	1	Unlikely	High	2
Subsidence	Ground subsidence / building collapse	Moderate	High	1	Unlikely	High	2
Telecommunic	There are no telecommunication towers in the	N/A	N/A	N/A	N/A	N/A	N/A

<b>Project Name:</b>	<b><i>Hale Capital Milperra.</i></b>	<b>Project No.</b>	<b><i>23.371</i></b>
<b>Project Address:</b>	<i>339-349 Horsley Road, Milperra. NSW</i>	<b>Assessment / Revision Date:</b>	<i>03<sup>rd</sup> July 2023</i>
<b>Personnel Involved in the Risk Assessment Process:</b>	<i>Leigh Gornall (PM), Dean Grumont (HSE) &amp; Cindy Roldan (SA)</i>		

**HAZARD CATEGORY FOR TRADE / CONTRACTOR**

The following is a list of hazards to be used to identify the risk assessment requirements for the project. These identified hazards are to be addressed within the site rules for the project and in the required contractors Safe Work Method Statement(s).

**Occupational Health And Safety - Hazard Categories**

<input checked="" type="checkbox"/> Access & egress	<input checked="" type="checkbox"/> Biological/bacteria	<input checked="" type="checkbox"/> Confined Spaces
<input checked="" type="checkbox"/> Concrete Cutting & Coring	<input checked="" type="checkbox"/> Dangerous Goods / Hazardous Substances	<input checked="" type="checkbox"/> Demolition
<input checked="" type="checkbox"/> Design Risk Assessment	N/A Diving Work	<input checked="" type="checkbox"/> Electricity (power tools/other)
<input checked="" type="checkbox"/> Emergency Management / Critical Incident	<input checked="" type="checkbox"/> Explosive Equipment / Tools & Pneumatic Tools	<input checked="" type="checkbox"/> Falling Objects / Flying Debris
<input checked="" type="checkbox"/> Fatigue (shift work/hours of work)	<input checked="" type="checkbox"/> Fire / Explosion	<input checked="" type="checkbox"/> Formwork (Erection & Dismantling)
<input checked="" type="checkbox"/> Fumes / Gas	<input checked="" type="checkbox"/> Hazardous material (Asbestos / Contaminated Soil)	<input checked="" type="checkbox"/> Hazardous Manual handling
<input checked="" type="checkbox"/> Height / Falls	<input checked="" type="checkbox"/> Hot / Cold Working Environment	<input checked="" type="checkbox"/> Hot Work (Cutting / Welding / Grinding)
<input checked="" type="checkbox"/> Lasers	<input checked="" type="checkbox"/> Lighting	<input checked="" type="checkbox"/> Machine / Equipment Guarding
<input checked="" type="checkbox"/> Mobile Plant	<input checked="" type="checkbox"/> Materials Handling (crane / forklift / other)	<input checked="" type="checkbox"/> Neighbouring Properties
<input checked="" type="checkbox"/> Noise (hearing)	<input checked="" type="checkbox"/> Structural Alterations / Support	<input checked="" type="checkbox"/> Services (underground / overhead)
<input checked="" type="checkbox"/> Subsidence	N/A Telecommunications Tower	<input checked="" type="checkbox"/> Tilt-up and Precast Concrete Panels
<input checked="" type="checkbox"/> Traffic Management	<input checked="" type="checkbox"/> Trenching / Excavation	N/A Tunnels
<input checked="" type="checkbox"/> Ultra Violet Light (Sunlight & Welding)	<input checked="" type="checkbox"/> Venomous Creatures	N/A Work near/over water
<input checked="" type="checkbox"/> Young workers/unskilled labour	<input checked="" type="checkbox"/> Other – Covid 19 (Coronavirus)	<input checked="" type="checkbox"/> Other- Bankstown Airport

Item No.	Risk	Potential Hazard	Initial Risk Rating	Hierarchy of Control	Controls	Residual Risk Rating	Person / Organisation Responsible
<b>Access / Egress &amp; Site Security (Principal Contractor Requirements)</b>							
	Access & Egress	Inappropriate access & egress to site	1 MH	Engineering / Administration	A Construction Traffic Management Plan to be developed for a qualified person to the satisfaction of the Planning secretary	2 UH	CM / PM / SM / HSR / CON
			1 MH	Isolation / Engineering	Vehicles to enter & exit site using existing Horsley Road.	2 UH	CM / PM / SM / HSR / CON
		Vehicle loads striking overhead powerlines that pass over the vehicle crossovers	1 MH	Elimination	Authorize subcontractor to disconnect overhead powerlines on the construction site.	2 UH	PM / SM / HSR / CON
			1 MH	Elimination	All loads to be regulation height to clear overhead powerlines that cross the Horsley Road site entrance. Contractors to inform Vaughan Constructions of any over height loads	2 UH	PM / SM / HSR / CON
			1 MH	Administration	Display overhead powerline signage at site entrance and exit points	2 UH	PM / SM / HSR / CON
		Pedestrians being hit by vehicles entering & exiting the site	1 MH	Isolation / Engineering	Separate pedestrian access to be established for site	2 UH	CM / PM / SM / HSR
		Inappropriate car parking (construction worker cars taking up car spaces on council road)	1 MH	Isolation / Engineering	Onsite car parking area to be established, including for heavy vehicles.	2 UH	CM / PM / SM / HSR
		People / workers being struck by vehicles travelling through site	1 MH	Engineering / Administration	Maximum 10kph site speed limit to be maintained with speed limit signs displayed at site entrance	2 UH	CM / PM / SM / HSE / HSR
			1 MH	Isolation / Engineering	Pedestrian pathways to be established from car park and amenities area through to designated work areas.	2 UH	CM / PM / SM / HSR
	Site amenities	People travelling through construction zone to enter site amenity area	1 MH	Isolation / Engineering	Site amenities to be established at front of site (near site entrance)	2 UH	CM / PM / SM / HSR
	Pedestrian access from site amenity to work area	People being struck by vehicles, mobile plant and equipment	1 MH	Isolation / Engineering	Pedestrian access pathways to be established from site amenities to work areas.	2 UH	PM / SM / HSE / HSR
			1 MH	Engineering / Administration	Maximum 10kph site speed limit to be maintained with speed limit signs displayed at site entrance	2 UH	CM / PM / SM / HSE / HSR
			1 MH	PPE	Personnel to wear hi visible clothing when in construction area	2 UH	PM / SM / HSE / HSR / CON
			1 MH	Engineering	Vehicles to have operational flashing light or hazard lights on when moving through construction areas	2 UH	PM / SM / HSE / HSR / CON
			1 MH	Engineering	Mobile plant and equipment to be fitted operational flashing lights and reversing beepers	2 UH	PM / SM / HSE / HSR / CON
	Members of the public, non construction workers and pedestrians or others	Unauthorised personnel entering site	1 MH	Engineering	Existing retain boundary fencing fitted with lockable gates around site perimeter.	2 UH	CM / PM / SM / HSE / HSR
			1 MH	Administration	Construction safety signage to be displayed at site entrance(s)	2 UH	PM / SM / HSE / HSR
	Visitors to site	Injuries due to personnel being unfamiliar with site specific safety rules	1 MH	Administration	Visitors to report to Site Office signage to be displayed at site entrance	2 UH	PM / SM / HSE / HSR
			1 MH	Administration	Visitors to be escorted by personnel who have completed a site specific induction.	2 UH	PM / SM / HSE / HSR

Item No.	Risk	Potential Hazard	Initial Risk Rating	Hierarchy of Control	Controls	Residual Risk Rating	Person / Organisation Responsible
	Contractors working on site	Injuries due to personnel being unfamiliar with construction safety rules	1 MH	Administration	Personnel to show evidence they have completed the construction induction training course prior to commencing work on site.	2 UH	SM / HSR / CON
		Injuries due to personnel being unfamiliar with site specific safety rules	1 MH	Administration	All personnel to complete site specific induction.	2 UH	SM / HSR / CON
		Injuries due to personnel being unfamiliar with task specific safety requirements	1 MH	Administration	Contractors to provide site specific safe work method statements prior to commencing work on site	2 UH	PM / CA / SM / HSR / CON
	Public & Pedestrians	Collisions with members of the public and vehicles outside site boundary	1 MH	Isolation / Engineering / Administration	Traffic management plan to be prepared and implemented for works outside the site boundary	2 UH	PM / CA / SM / HSE / HSR / CON
			1 MH	Administration	All hazards and control measures associated with work outside the site boundary to be covered by a safe work method statement.	2 UH	PM / CA / SM / HSE / HSR / CON
		Members of the public tripping / falling over building materials stored outside the site boundary	1 MH	Isolation / Engineering	All building material to be stored inside the site boundary	2 UH	SM / HSR / CON
		Members of the public tripping / falling over uneven ground / footpath as a result of construction works	1 MH	Isolation / Engineering	Footpath along the site boundary to be kept open during construction works. Any works outside site boundary to be cleaned up, made safe and /or barricaded when works are not taking place / at the end of each shift	2 UH	SM / HSR / CON
<b>Biological / Bacteria</b>							
	Biological / Bacteria hazards on site	Workers exposed to Biological / Bacterial Hazards associated with site conditions (contaminated soils / hazardous substances)	1 MH	Administration / Engineering	Remediation works were implemented in contaminated soils onsite as per established in the remedial action plan 63429 / 144656 (Rev 0).	2 UH	PM / SM / HSE / HSR / CON
			1 MH	Isolation	If any unidentified / suspected contaminated soil is identified during excavation works, then all works in the area will cease, the area isolated while following the requirements of Part 17.2.1 of the HSMS	2 UH	PM / SM / HSE / HSR / CON
	Coronavirus (COVID 19)	People infected with Coronavirus (COVID 19) coming to site	1 MH	Isolation / Engineering / PPE / Administration	Refer to Coronavirus (COVID 19) section at end of risk assessment	2 UH	CM / PM / CA / SM / HSE / HSR / CON
	Needle stick injuries	Injuries due to needle sticks	2 MM	Administration	Inspect the site on a regular basis where it is suspected syringes may be present	3 UM	SM / HSR / CON
	Blood spills and exposure to bodily substances	Infectious substances	2 MM	Isolation	Spills of blood or other bodily substances will be immediately barricaded to prevent persons from walking / tracking through the spill.	3 UM	SM / HSR / CON
			2 MM	Isolation / Engineering / PPE	Spills of blood and other bodily substances will be treated as potentially infectious and cleaned up in accordance with the relevant first aid compliance code / code of practice (applicable to the state / territory). (I.e. Use of PPE, disinfection and isolation of area)	3 UM	SM / HSR / CON
	Medical waste	Incorrect disposal of medical waste from first aid treatment / injuries	2 MM	Administration	Medical waste to be disposed of as per the requirements of the Code of Practice First Aid in the Workplace.	3 UM	PM / SM / HSE / HSR

Item No.	Risk	Potential Hazard	Initial Risk Rating	Hierarchy of Control	Controls	Residual Risk Rating	Person / Organisation Responsible
<b>Confined Spaces (completed and active sewer / stormwater pits)</b>							
	Working in a confined space	Asphyxiation	1 MH	Administration	Entry permit procedures to be established	2 UH	SM / HSR / CON
			1 MH	Engineering	Continuous air monitoring to be conducted	2 UH	SM / HSR / CON
			1 MH	Administration / Engineering	Emergency procedures to be established and rescue equipment to be available on site prior to persons entering a confined space	2 UH	SM / HSR / CON
		Untrained personnel entering a confined space	1 MH	Administration	Persons entering confined spaces to have current confined space entry qualifications	2 UH	SM / HSR / CON
			1 MH	Administration	All works in a confined space to be covered in a safe work method statement	2 UH	SM / HSR / CON
		Fire / Explosion	1 MH	Engineering	Continuous air monitoring to be conducted	2 UH	SM / HSR / CON
<b>Concrete Cutting &amp; Coring (all trades)</b>							
	Concrete Cutting & Coring	Striking services inside concrete slab	1 MH	Administration	Concrete Cutting / Coring Permit to be obtained prior works commencing	2 UH	SM / HSR / CON
		Structural Failure	2 UH	Administration	Concrete Cutting / Coring Permit to be obtained prior works commencing	3 UM	SM / HSR / CON
		Slips, trips and falls on slurry water	1 LM	Elimination	Slurry water to be cleaned up as work progresses	3 UM	SM / HSR / CON
		Silica dust hazards from dry cutting	1 MH	Elimination / Engineering	Concrete to be wet cut (where practicable) using tools fitted with an integrated water delivery system that continuously feeds water to the cutting blade; and The saw is to be operated and maintained in accordance with manufacturer's instructions to minimise dust emissions.	2 UH	SM / HSR / CON
			1 MH	Engineering	<ul style="list-style-type: none"> <li>Use tools equipped with commercially available dust collection system, and</li> <li>Operate and maintain tools in accordance with manufacturers instructions to minimise dust emissions, and</li> </ul> Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and be rated to either M or H Class in accordance with AS/NZS 6033.2.69	2 UH	SM / HSR / CON
			1 MH	PPE	Tool operator to wear a <ul style="list-style-type: none"> <li>P1, P2 or P3 (see clause 4.2.3.5 of AS/NZS 1715) filter half facepiece – replaceable filter</li> <li>P1 or P2 disposable face piece</li> </ul> PAPR – P1 filter in PAPR with any head covering of facepiece	2 UH	SM / HSR / CON
		Slips, trips and falls on slurry water	1 LM	Elimination	Slurry water to be cleaned up as work progresses	3 UM	SM / HSR / CON
		People exposed to silica dust from dried out slurry water	1 LM	Elimination	Slurry water to be cleaned up while still moist and placed in site general waste bin	3 UM	SM / HSR / CON

Item No.	Risk	Potential Hazard	Initial Risk Rating	Hierarchy of Control	Controls	Residual Risk Rating	Person / Organisation Responsible
<b>Dangerous Goods / Hazardous Substances</b>							
	Use of dangerous goods / hazardous Substances	Exposure to dangerous goods (skin contact, inhalation, etc) & fire / explosion	1 MH	Administration / Substitution	The quantities of dangerous goods stored and handled at the site must be below the threshold quantities listed in the department's Hazardous and Offensive Development Application Guidelines. As per condition B30 SSD-45998963.	3 UL	PM / CA / SM / HSE / HSR / CON
			1 MH	Administration / Substitution	Chemicals, fuels and oils used on-site in appropriately banded areas in accordance with requirements of all relevant Australian Standards, and/or EPA's Storing and Handling of Liquids: Environmental protection-Participants Manual as per condition B31 SSD-45998963	3 UL	PM / CA / SM / HSE / HSR / CON
	Use of dangerous goods / hazardous Substances	Exposure to dangerous goods (skin contact, inhalation, etc) & fire / explosion	1 MH	Administration / Substitution	Pre-purchase checklist to be completed where item not in building specifications to check if a safer alternative is available.	3 UL	PM / CA / SM / HSE / HSR / CON
			1 MH	Administration	Safety data sheet (SDS) to be supplied with any dangerous good being used and its safe handling / use guidelines to be recorded in a safe work method statement (SWMS)	2 UH	SM / HSR / HSE / CON
			1 MH	Administration	Chemical Risk Assessment form to be completed for each Dangerous Good / Hazardous Substance stored or used on site.	2 UH	SM / HSR / HSE / CON
			1 MH	P.P.E.	Personal protective equipment required to be used in safety data sheet (SDS) to be worn by personnel when required and recorded in a safe work method statement (SWMS)	2 UH	SM / HSR / CON
	Storage of dangerous good / hazardous substances	Exposure to dangerous goods (skin contact, inhalation, etc)	2 MM	Administration	All containers in which hazardous substances / dangerous goods are stored will be appropriately labelled.	3 UM	SM / HSR / HSE / CON
		Fire / explosion	1 MH	Administration / Isolation	Storage requirements documented in safety data sheet (SDS) to be followed	2 UH	SM / HSR / HSE / CON
			1 MH	Administration	The quantities of dangerous goods in particular locations on site will be monitored to ensure that the "minor storage quantities" are not exceeded. Where appropriate, flammable goods cupboards will be used.	2 UH	SM / HSR / CON
		Exposure to dangerous goods (skin contact, inhalation, etc)	2 MM	Administration / Isolation	Storage requirements documented in safety data sheet (SDS) to be followed	3 UM	SM / HSR / CON
<b>Demolition</b>							
	Demolition works	Demolition works	1 MH	Administration	All demolition works will be carried out in accordance with Australian Standards AS 2601-2001 The Demolition of structures (Standards Australia, 2001)	2 UH	PM / CA
	Demolition works	Workers exposed to hazardous substances during demolition work.	1 MH	Administration	Hazardous substances audit of all proposed demolition areas to be completed prior to works commencing.	2 UH	PM / CA / SM / HSR / HSE / CON
			1 MH	Elimination	Hazardous material (i.e. asbestos, PCB, etc) to be removed prior to mechanical demolition works commencing	2 UH	PM / SM / HSR / HSE / CON
			1 MH	Elimination /	Clearance certificate to be supplied for removal of hazardous	2 UH	PM / SM / HSR /

Item No.	Risk	Potential Hazard	Initial Risk Rating	Hierarchy of Control	Controls	Residual Risk Rating	Person / Organisation Responsible
				Administration	material		HSE / CON
		Workers exposed to lead impacted dust during demolition works	2 MM	Isolation / Engineering / PPE	Demolition workers to identify lead impacted dust in their SWMS. Control measures to include <ul style="list-style-type: none"> <li>- Site workers on the ground to wear P2 half face respirator when in the vicinity of demolition works to prevent dust inhalation and wear gloves when handling materials.</li> <li>- All site workers to practice personal hygiene and wash hands, face and any other exposed skin surfaces thoroughly before eating, drinking or smoking. In addition to this, there should be no smoking within the demolition area</li> <li>- Plant operators to keep windows and doors closed and air-con systems set to recycle.</li> <li>- Dust suppression at all times to demo works and the handling/movement of demo materials to prevent dust migration to other areas of the site, or off the site.</li> </ul> Exclusion zones consistent with demolition works exclusion zones are considered sufficient to demarcate the lead hazard area.	3 UM	PM / SM / HSE / HSR / CON
		Incorrect removal of hazardous material	1 MH	Elimination / Administration	Asbestos and associated hazardous material to only be removed by appropriately licenced company and trained and personnel	2 UH	PM / CA / SM / HSR / HSE / CON
			1 MH	Administration	Asbestos removal control plan to be developed	2 UH	PM / CA / SM / HSR / HSE / CON
			1 MH	Administration	Notification of asbestos removal work form to be completed and submitted	2 UH	PM / CA / SM / HSR / HSE / CON
	Notifiable demolition work	Regulator not notified of demolition work 5 days prior to commencement	2 MM	Administration	Regulator to be notified at least 5 days before any of the following work commences: <ul style="list-style-type: none"> <li>• demolition of a structure, or a part of a structure that is load bearing or otherwise related to the physical integrity of the structure, that is at least 6 metres in height</li> <li>• demolition work involving load shifting machinery on a suspended floor</li> </ul> demolition work involving explosives.	3 UM	PM / CA / SM / HSR / HSE / CON
	Licensed demolition work	Demolition work performed by unlicensed organisation	1 MH	Administration	Demolition company to hold the required demolition licence for the demolition work taking place	2 UH	PM / CA / SM / HSR / HSE / CON
	Demolition works in general	Hazards associated with demolition work	1 MH	Elimination / Isolation / Engineering / Administration	Demolition to be completed in compliance with the requirements of the SafeWork NSW, Code of Practice - Demolition Work	2 UH	PM / CA / SM / HSR / HSE / CON
		Hazards associated with demolition works	1 MH	Administration	Hazards and control measures associated with demolition work to documented in a safe work method statement.	2 UH	SM / HSR / HSE / CON

Item No.	Risk	Potential Hazard	Initial Risk Rating	Hierarchy of Control	Controls	Residual Risk Rating	Person / Organisation Responsible
		Unstable structure	1 MH	Administration	Demolition plan to be prepared to identify and control hazards associated with demolition work	2 UH	PM / SM / HSR / HSE / CON
		Damage to essential services (electricity, gas, water, communication lines / systems)	1 MH	Isolation / Administration	Inspections, ground surveys and dial before you dig information to be conducted / obtained prior to any demolition work commencing	2 UH	PM / SM / HSR / HSE / CON
		Electrocution	1 MH	Isolation / Administration	Power to be disconnected from sub-station distribution board prior to demolition works commencing. <b>Note:</b> Documentation to be provided supporting this	2 UH	PM / SM / HSR / HSE / CON
		Injuries / incidents from water services	1 MH	Isolation / Administration	Water services to be cut and sealed prior to demolition works commencing <b>Note:</b> Documentation to be provided supporting this	2 UH	PM / SM / HSR / HSE / CON
	Dust from demolition work	Dust leaving the demolition work area	2 MM	Elimination	Water to be used to suppress dust generated during demolition works <b>Note:</b> water to not create an environmental water run off issue	3 UM	SM / HSR / CON
	Removing wall sheets	Wall sheets falling	1 MH	Substitution / Administration	Remove intermediate fixing screws. Then connect hook and rope system to wall sheet (reverse of installation) remove remaining screws and remove wall sheet using elevated work platform.	2 UH	SM / HSR / CON
	Working at height removing wall sheets	Fall from height	1 MH	Isolation / Engineering	Work at heights to be conducted using mobile elevated work platforms (MEWP)	2 UH	SM / HSR / CON
	Existing services in wall girts	Injury to workers from services being damaged during wall girt removal	1 MH	Isolation	Services to be removed, relocated or isolated during the wall girt removal process	2 UH	SM / HSR / CON
	Removing wall girts and wall columns	Working at height	1 MH	Engineering	Work at heights to be conducted using mobile elevated work platforms (MEWP)	2 UH	SM / HSR / CON
		Wall girts and columns falling while being removed	1 MH	Engineering	Wall girts and columns to be removed following reverse of the installation method Slings to be fitted to wall girts and columns with them removed using mobile plant (crane) so wall girt & column removal (suspended load) will be controlled at all times	2 UH	SM / HSR / CON
			1 MH	Engineering	Bolts to not be fully removed until wall girt / column are supported by a sling attached to a crane	2 UH	SM / HSR / CON
			1 MH	Engineering	Tag line to be fitted to wall girt to control suspended load movement	2 UH	SM / HSR / CON
		Structural failure	1 MH	Engineering	Only intermediate mullion (non structural) columns to be removed from west wall. No structural columns will be removed.	2 UH	SM / HSR / CON
<b>Design Risk Assessment</b>							
	Design Risk Management	Required safety in deign risk assessment not	1 MH	Administration	Vaughan Construction to complete a safety in design risk	2 UH	PM / CA

Item No.	Risk	Potential Hazard	Initial Risk Rating	Hierarchy of Control	Controls	Residual Risk Rating	Person / Organisation Responsible
		completed for the project			assessment if they are involved in the design of the construction project.		
<b>Diving Work</b>							
	Diving works	N/A	N/A	N/A	There are no diving works involved with this construction project	N/A	N/A
<b>Electricity (power tools / other)</b>							
	Existing permanent wiring	Electrocution	1 MH	Elimination	All permanent electrical power to be disconnected prior to construction/demolition works commencing	2 UH	PM / SM / HSR / CON
			1 MH	Substitution / Administration	Temporary construction wiring identified with appropriate signage / tape to be installed during construction / demolition works	2 UH	PM / SM / HSR / CON
	Electric hazards	Faulty wiring	1 MH	Elimination	People will not be permitted to undertake any type of electrical work, unless they hold the appropriate electrical qualifications / licence.	2 UH	PM / SM / HSR / CON
			1 MH	Administration	A certificate of electrical safety / compliance is to be provide for any electrical installations on site prior to it being used for construction work.	2 UH	SM / HSR / CON
			1 MH	Administration	All wiring (including construction switchboards) is to be inspected at six (6) month intervals.	2 UH	SM / HSR / CON
		Extension leads being run greater than the allowable safe distance	1 LM	Engineering	Temporary construction switchboards to be installed at appropriate intervals.	2 MM	PM / SM / HSR / CON
		Extension leads being run between levels	1 LM	Engineering	Temporary construction switchboards to be installed on each floor level.	2 MM	PM / SM / HSR / CON
		Electrocution	1 MH	Engineering	Temporary construction switchboards to be fitted with earth leakage / residual current device (RCD) protection.	2 UH	SM / HSR / CON
			1 MH	Engineering	Non Portable (fixed) residual current devices (RCD's) to be tested and tagged for tripping time and current at 12 monthly intervals. Test inspection results to also be recorded in an electrical register which is to be available on site. RCD push button test to be conducted at monthly intervals with the results recorded in the site electrical register.	2 UH	SM / HSR / CON
			1 MH	Engineering	Temporary construction wiring to be fitted with temporary construction wiring tape spaced at intervals not exceeding five (5) metres.	2 UH	SM / HSR / CON
			1 MH	Engineering	Temporary construction wiring is not to be grouped or bundled with permanent wiring.	2 UH	SM / HSR / CON
	Testing and tagging of portable electrical equipment & RCD's	Non-qualified personnel testing and tagging electrical equipment.	1 MH	Engineering / Administration	Portable electrical equipment & RCD's to be tested and tagged by licensed electrician or a person who can verify competence through training from a registered training organisation (RTO).	2 UH	SM / HSE / HSR / CON
	Isolation of electrical equipment	Electrocution	1 MH	Isolation / Administration	Electrical contractor to include isolation procedure (lock out / tag out – LOTO) as part of their safe work method statement (SWMS) package.	2 UH	SM / HSE / HSR / CON
	Energisation of electrical	Electrocution	1 MH	Administration	Electrical contractor to include energisation procedure as part of	2 UH	PM / SM / HSE /

Item No.	Risk	Potential Hazard	Initial Risk Rating	Hierarchy of Control	Controls	Residual Risk Rating	Person / Organisation Responsible
	sources				their safe work method statement (SWMS) package.		HSR / CON
			1 MH	Administration	Tool box talk to be held informing all workers onsite of equipment / area being energised	2 UH	SM / HSR / CON
			1 MH	Administration	Signage to be displayed on equipment / cables that are to be energised.	2 UH	SM / HSE / HSR / CON
	Use of electric powered tools	Electrocution	1 MH	Substitution	Cordless power tools to be used where practicable	2 UH	SM / HSR / CON
			1 MH	Administration	Inspect tools for damage prior to use.	2 UH	SM / HSR / CON
			1 MH	Administration	Tools have current test tag fitted. Tested and tagged at three (3) monthly intervals	2 UH	SM / HSR / CON
			1 MH	Administration	Power to be obtained from a source that has earth leakage protection fitted to it and that the residual current device has been tested and tagged with the last month.	2 UH	SM / HSR / CON
			1 MH	Engineering	All extension leads will be suspended on insulated stands or hooks to within four (4) metres of the work area.	2 UH	SM / HSR / CON
		Eye injuries	1 MH	P.P.E	Appropriate eye protection to worn where required in safe work method statement	2 UH	SM / HSR / CON
		Hearing damage	2 MM	P.P.E	Appropriate hearing protection to worn where required in safe work method statement	3 UM	SM / HSR / CON
		Cuts and lacerations	1 MH	Engineering	Inspected guards are fitted (where required), correctly adjusted and operational.	2 UH	SM / HSR / CON
		Eye injuries from welding flashes	1 LH	P.P.E	Personnel to wear approved welding shield when performing welding works	2 UH	SM / HSR / CON
		Burns from welding slag	1 LH	P.P.E	Gloves to be worn when performing welding works	2 UH	SM / HSR / CON
			1 LH	P.P.E	Appropriate welding apron / jacket to be worn where practicable when performing welding works	2 UH	SM / HSR / CON
		Eye injury to other personnel from welding flashes	1 LH	Engineering	Welding screens to be installed where practicable.	3 UM	SM / HSR / CON
			1 LH	Engineering	Barricades and warning signage to be displayed to keep non-essential personnel out of work area.	3 UM	SM / HSR / CON
<b>Emergency Management / Critical Incident</b>							
	Unable to notify that an incident has occurred on site	Workers not able to notify Vaughan Construction of a first aid / emergency incident has occurred	1 MH	Administration	Emergency phone numbers and evacuation plan to be displayed in areas as determined by site first aid & emergency equipment assessment (appendix 42) <b>Note:</b> Workers can use mobile phone to notify Vaughan Construction an incident has occurred, and assistance is required	2 UH	PM / CA / SM / HSR / CON

Item No.	Risk	Potential Hazard	Initial Risk Rating	Hierarchy of Control	Controls	Residual Risk Rating	Person / Organisation Responsible
	Site Evacuation Procedure	Emergency evacuation procedure not developed for the site	1 MH	Administration	Check that emergency management documentation is prepared by a competent person (HIRAC, first aid & / or warden trained) prior to construction work commencing	2 UH	PM / CA / SM / HSR
		People unfamiliar with evacuation procedure	1 LH	Administration	Personnel to be informed of evacuation procedures at site induction	2 UH	SM / HSR / CON
		Site evacuation procedure not suitable for site conditions.	1 MH	Administration	Evacuation drill to be conducted to check that procedures are suitable for the site conditions	2 UH	PM / SM / HSR / CON
	Medical / First Aid Incident	Insufficient first aid personnel and equipment available on site	2 MM	Administration	Site first aid assessment checklist (appendix 43) to be completed by a competent person (HIRAC, first aid & / or warden trained)	3 UM	PM / SM / HSE
	Trench Collapse	Workers engulfed in trench collapse	1 MH	Administration	Rescue procedures are recorded in the Site Emergency Management Control Measures document (Appendix 47) Trench collapse rescue procedures to be documented in safe work method statement (SWMS)	2 UH	SM / HSE / HSR / CON
	Rescue of injured person from deep excavation	Unable to retrieve injured workers from excavation	1 MH	Administration	Rescue procedures are recorded in the Site Emergency Management Control Measures document (Appendix 47) Contractors to document rescue procedures in their safe work method statement (SWMS)	2 UH	SM / HSE / HSR / CON
	Retrieval of injured person from roof / formwork area	Unable to retrieve injured workers from roof / formwork area	2 MM	Administration	Rescue procedures are recorded in the Site Emergency Management Control Measures document (Appendix 47) Contractors to document rescue procedures in their safe work method statement (SWMS)	3 UM	SM / HSR / CON
			2 MM	Administration	Documented rescue procedures to be tested by a competent person (first aid, EWP and / or height safety trained) to ensure that they are suitable for the task / project.	3 UM	SM / HSR / CON
	Rescue of person from raised elevated work platform	Unable to retrieve workers in raised elevated work platform	3 ML	Administration	Rescue procedures are recorded in the Site Emergency Management Control Measures document (Appendix 47) Rescue procedures to be documented in safe work method statement (SWMS)	3 UL	SM / HSR / CON
			3 ML	Administration	Documented rescue procedures to be tested by a competent person (EWP and / or height safety trained) to ensure that they are suitable for the task / project.	3 UL	SM / HSR / CON
	Retrieval of person suspended from a harness in a boom lift type EWP	Unable to retrieve workers suspended from a harness in a raised elevated work platform	2 MM	Administration	Rescue procedures are recorded in the Site Emergency Management Control Measures document (Appendix 47) Rescue procedures to be documented in safe work method statement (SWMS)	3 UM	SM / HSR / CON
			2 MM	Administration	Documented rescue procedures to be tested by a competent person (EWP and or height safety trained) to ensure that they are suitable for the task / project.	3 UM	SM / HSR / CON
	Mobile Plant / Traffic	Incident between mobile plant and workers	1 MH	Administration	Initiate site medical / first aid response procedure	2 UH	SM / HSR / CON

Item No.	Risk	Potential Hazard	Initial Risk Rating	Hierarchy of Control	Controls	Residual Risk Rating	Person / Organisation Responsible
	Management Incident						
	Personnel commissioning live electrical equipment	Electric shock incident	1 MH	Isolation / Administration	Electrician (subcontractor) to have isolation procedures documented and follow them.	2 UH	SM / HSE / HSR / CON
			1 MH	Isolation / Administration	Electrician (subcontractor) to have electrical rescue kit in work area. Note: this will require a spotter / standby person to be available	2 UH	SM / HSE / HSR / CON
	Contact with live overhead powerlines	Electric shock incident	1 MH	Elimination / Isolation	Work procedures to be developed to eliminate or minimise the potential risk. (Refer to Services section of this risk assessment)	2 UH	PM / SM / HSE / HSR / CON
			1 MH	Administration	Emergency procedures are recorded in the Site Emergency Management Control Measures document (Appendix 47)	2 UH	SM / HSE / HSR / CON
	Building collapse / structural failure	Personnel trapped and / or injured from building collapse / structural failure	1 MH	Isolation / Administration	Procedures are recorded in the Site Emergency Management Control Measures document (Appendix 47)	2 UH	SM / HSR / CON
<b>Explosive Equipment / Explosive Powered Tools &amp; Pneumatic Tools</b>							
	Use of explosives	N/A	N/A	N/A	There is no explosive use involved with this construction project	N/A	N/A
	Explosive powered tool	Hearing damage from the use of the explosive powered tool	1 LH	P.P.E	All personnel will wear appropriate hearing protection when using the explosive powered tool	2 UH	SM / HSR / CON
		Eye injury from flying debris	1 MH	P.P.E	All personnel will wear appropriate eye protection when using the explosive powered tool.	2 UH	SM / HSR / CON
		Cuts and lacerations and puncture wounds	2 MM	Elimination / Engineering	Inspected the explosive powered tool prior to use to ensure that safety devices are fitted and functioning correctly.	3 UM	SM / HSR / CON
			2 MM	Administration	Personnel to be trained in the safe use of the explosive powered tool they are using.	3 UM	SM / HSR / CON
		Other personnel in the work area being struck by nail from Explosive powered tool.	1 MH	Administration	Signage to be displayed at the entrance to the work area warning other personnel that explosive powered tools are in use.	2 UH	SM / HSR / CON
		Hearing damage to other personnel in the work area	1 LH	P.P.E	Personnel in the immediate work area to wear appropriate eye and hearing protection	2 UH	SM / HSR / CON
	Pneumatic nail gun	Hearing damage from the use of the nail gun	1 LH	P.P.E	All personnel will wear appropriate hearing protection when using the nail gun	2 UH	SM / HSR / CON
		Eye injury from flying debris	1 MH	P.P.E	All personnel will wear appropriate eye protection when using the nail gun.	2 UH	SM / HSR / CON
		Cuts and lacerations and puncture wounds	2 MM	Elimination / Engineering	Inspected nail gun prior to use to ensure that safety devices are fitted and functioning correctly.	3 UM	SM / HSR / CON
			2 MM	Administration	Personnel to be trained in the safe use of the nail gun they are using.	3 UM	SM / HSR / CON
		All of the above	1 LH	Administration	Hazards & Control Measures (Tasks) to be covered in a safe work method statement (SWMS).	2 UH	SM / HSR / CON
<b>Falling Objects / Flying Debris</b>							

Item No.	Risk	Potential Hazard	Initial Risk Rating	Hierarchy of Control	Controls	Residual Risk Rating	Person / Organisation Responsible
	Falling objects	Personnel being struck by falling objects	1 MH	Isolation	Toe boards to be fitted to edge protection guardrails where practicable or area below workers to be isolated by barricades and signs	2 UH	SM / HSR / CON
			1 MH	Isolation	Area below personnel working at height to be isolated and signage displayed where bottom rail fitted in lieu of a toe-board or other falling object hazard exist.	2 UH	SM / HSR / CON
			1 MH	Engineering	Toe boards to be fitted to all edge protection guardrails	2 UH	SM / HSR / CON
			1 MH	P.P.E.	Personnel working within the area to wear hard hat protection.	2 UH	SM / HSR / CON
	Objects becoming airborne in strong wind conditions	Personnel being struck by flying objects	1 MH	Engineering / Administration	Weather conditions to be monitored and loose objects secured at break times and end of shift	2 UH	SM / HSR / CON
			1 MH	Engineering / Isolation	Light weight material on formwork platform and roof area to be secured at break times and end of shift	2 UH	SM / HSR / CON
<b>Fatigue</b>							
	Fatigue	Injuries due to fatigue	1 MH	Elimination	Appropriate rest period (usually 10 hours) to be taken between work shifts.	2 UH	PM / SM / HSR / CON
			2 MM	Substitution / Administration	Rotation of job tasks	3 UM	PM / SM / HSR / CON
<b>Fire / Explosion</b>							
	Fire on site	Insufficient fire extinguishers	1 MH	Engineering	A fire extinguisher is to be available in the site office at the commencement of the construction project	2 UH	PM / SM / HSR
			1 MH	Engineering	A fire extinguisher is to be located within 2 - 20mtrs of any active electrical switchboard	2 UH	PM / SM / HSR
			1 MH	Engineering	Fire extinguishers are to be available on each floor level of the construction project.	2 UH	PM / SM / HSR
			1 MH	Engineering	Fire extinguishers to be available in the area where a hot work permit has been issued.	2 UH	PM / SM / HSR
		Personnel not trained in the use of fire extinguisher	1 MH	Administration	Personnel to be competently trained in use of fire extinguishers	2 UH	HR / PM
	Fire	Damage caused by fire	1 MH	Administration	Hot Work Permit to be obtained prior to any work that generates heat, sparks, flame, etc	2 UH	SM / HSR / CON
			1 MH	Administration	Flammable / explosive material will not be used near any naked flame or heat source.	2 UH	SM / HSR / CON
	Fire on neighbouring properties	Fire on neighbouring property	1 MH	Isolation	Site emergency evacuation procedure to be initiated.	2 UH	SM / HSR / CON
			1 MH	Engineering /	Emergency services (NSW Fire Services) to be contacted	2 UH	SM / HSR / CON

Item No.	Risk	Potential Hazard	Initial Risk Rating	Hierarchy of Control	Controls	Residual Risk Rating	Person / Organisation Responsible
				Administration			
	Neighbouring Properties	Fire / explosion	1 MH	Administration / Elimination	No cutting, grinding that generates sparks and / or use of oxy-acetylene equipment along fence line of neighbouring property (Use Hot Work Permit system)	2 UH	SM / HSR / CON
<b>Formwork (Erection &amp; Dismantling)</b>							
	Installation of conventional & modular formwork systems	Collapse of structural steel supporting formwork (Bondek / Condek)	1 MH	Engineering	Structural steel to be inspected by an engineer prior to installation of formwork material	2 UH	PM / SM / HSE / HSR / CON
		Formwork constructed incorrectly	1 MH	Administration	Formwork documentation will be provided (& be available on site) prior to elevated formwork being constructed.	2 UH	PM / SM / HSE / HSR / CON
		Falling from height	1 MH	Administration	Safe work method statement to document fall control measures to implemented during construction of elevated form work	2 UH	SM / HSE / HSR / CON
			1 MH	Engineering	Edge protection guardrails to be installed to edges where the potential exists for a person to fall two (2) metres or more	2 UH	SM / HSE / HSR / CON
	Installation of conventional & modular formwork systems <i>continued</i>	Falling from height <i>continued</i>	1 MH	Engineering	Extended height (1.8 - 2mtr) edge protection guardrails to be installed where formwork needs to be constructed on elevated concrete slabs	2 UH	PM / SM / HSE / HSR / CON
		Falling through voids and penetrations	1 MH	Engineering	All voids and penetrations to have an appropriate secured cover placed over them.	2 UH	SM / HSE / HSR / CON
			1 MH	Engineering	Voids and penetrations to be barricaded a minimum two metres back from any exposed edge.	2 UH	SM / HSE / HSR / CON
	Travelling through formwork frames	No safe designated access pathways through formwork frames	1 MH	Engineering	Green (different coloured) flags to be used to designate access pathways through formwork frames	2 UH	SM / HSR / HSE / CON
		People accessing unsafe / no go areas of formwork frames	1 MH	Isolation / Engineering	Orange flags to be used to designate no go areas of formwork frames	2 UH	SM / HSR / HSE / CON
		insufficient lighting for access through formwork frames	1 MH	Engineering	temporary lighting (with battery back up) to be installed for safe access through formwork frames	2 UH	SM / HSR / HSE / CON
	Pouring concrete at height.	In appropriate access	1 MH	Engineering	Appropriate access to be provided.	2 UH	SM / HSR / CON
		Fall from heights	1 MH	Engineering	Ensure appropriate edge protection guardrails are installed prior to accessing elevated work areas.	2 UH	SM / HSR / CON
		Falling objects	1 MH	Engineering	Toe boards to be fitted to all edge protection guardrails	2 UH	SM / HSR / CON
			1 MH	P.P.E.	Personnel working within the area to wear hard hat protection.	2 UH	SM / HSR / CON
	Pouring concrete at height <i>continued</i>	Collapse of formwork during concrete pour	1 MH	Administration	Formwork to be inspected and signed off by an engineer prior to concrete pour taking place	2 UH	PM / SM / HSR / CON
			1 MH	Engineering	Area under concrete pour to be barricaded to prevent access.	2 UH	SM / HSR / CON
	Dismantling formwork	Collapse of concrete slab due to removing	1 MH	Engineering /	Engineer approval / documentation to be obtained prior to removing	2 UH	PM / SM / HSR /

Item No.	Risk	Potential Hazard	Initial Risk Rating	Hierarchy of Control	Controls	Residual Risk Rating	Person / Organisation Responsible
		formwork supports prior to concrete reaching its required strength		Administration	formwork supports		CON
			1 MH	Engineering / Administration	Back propping (where required) to be designed and installed as per the engineer requirements	2 UH	PM / SM / HSE / HSR / CON
		Injuries due to dismantling formwork	1 MH	Engineering / Administration	Hazards associated with the removal of elevated formwork to be identified and control measures documented following the hierarchy of control in a safe work method statement	2 UH	SM / HSE / HSR / CON
	Relocation of formwork equipment and frames to additional levels	Overloading of work areas	1 MH	Engineering / Administration	Engineer approval to be obtained before loading formwork material onto new poured concrete floors	2 UH	SM / HSE / HSR / CON
		Operating plant to relocate formwork frames / equipment	1 MH	Engineering / Administration	Hazards and control measures to documented in a safe work method statement (SWMS)	2 UH	SM / HSE / HSR / CON
		Falling from height while relocating formwork frames / equipment	1 MH	Engineering / Administration	Hazards and control measures to documented in a safe work method statement (SWMS)	2 UH	SM / HSE / HSR / CON
	Installation of formwork on structural steel	Formwork not able to support required loads	1 MH	Engineering / Administration	Formwork system to be designed by a competent person	2 UH	PM / SM / HSE / HSR / CON
		Formwork constructed incorrectly	1 MH	Administration	Bondek / Condek type formwork to be installed as per requirements on site drawings / plans	2 UH	PM / SM / HSR / CON
		Falling from height	1 MH	Administration	Safe work method statement to document fall control measures to implemented during construction of elevated form work	2 UH	SM / HSR / CON
			1 MH	Engineering	Edge protection guardrails to be installed to edges where the potential exists for a person to fall two (2) metres or more	2 UH	SM / HSR / CON
			1 MH	Engineering	Extended height (1.8 - 2mtr) edge protection guardrails to be installed where formwork needs to be constructed on elevated concrete slabs	2 UH	PM / SM / HSE / HSR / CON
		Falling through voids and penetrations	1 MH	Engineering	All voids and penetrations to have an appropriate secured cover placed over them.	2 UH	SM / HSR / CON
			1 MH	Engineering	Voids and penetrations to be barricaded a minimum two metres back from any exposed edge.	2 UH	SM / HSR / CON
	Pouring concrete at height.	In appropriate access	1 MH	Engineering	Appropriate access to be provided.	2 UH	SM / HSR / CON
		Fall from heights	1 MH	Engineering	Ensure appropriate edge protection guardrails are installed prior to accessing elevated work areas.	2 UH	SM / HSR / CON
		Falling objects	1 MH	Engineering	Toe boards to be fitted to all edge protection guardrails	2 UH	SM / HSR / CON
			1 MH	P.P.E.	Personnel working within the area to wear hard hat protection.	2 UH	SM / HSR / CON
		Collapse of formwork during concrete pour	1 MH	Administration	Formwork to be inspected and signed off by an engineer prior to concrete pour taking place	2 UH	PM / SM / HSR / CON
			1 MH	Engineering	Area under concrete pour to be barricaded to prevent access.	2 UH	SM / HSR / CON

Item No.	Risk	Potential Hazard	Initial Risk Rating	Hierarchy of Control	Controls	Residual Risk Rating	Person / Organisation Responsible
	Dismantling formwork	Injuries due to dismantling formwork	N/A	N/A / Engineering	All elevated formwork is of Bondek / Condek type that does not require removal after pouring	N/A	N/A
		Collapse of concrete slab due to removing formwork supports prior to concrete reaching its required strength	N/A	N/A / Engineering	All elevated formwork is of Bondek / Condek type that does not require support as part of its design.	N/A	N/A
<b>Fumes / Gas</b>							
	Welding fumes	Welders being exposed to welding fumes	1 LH	Administration / PPE	Safe work method statement (SWMS) to explain control measures (eg: filtered or positive air flow welding shields) for welding fume	2 UH	PM / SM / HSE / HSR / CON
	Use of combustion engines in an enclosed workplace	Exposure to exhaust fumes	2 MM	Isolation	Combustion engine powered plant equipment (eg: pumps & generators) to be kept back from excavation works where fumes have the potential to build up.	3 UM	SM / HSR / CON
			2 MM	Isolation	Only use combustion engine powered plant in well ventilated areas.	3 UM	SM / HSR / CON
			2 MM	Engineering	Extraction fans to be used where required	3 UM	SM / HSR / CON
			2 MM	Substitution	Use electric powered plant where practicable	3 UM	SM / HSR / CON
<b>Hazardous Material (i.e. Asbestos / Contaminated Soil)</b>							
	Asbestos observed on ground	Workers exposed to asbestos in identified areas	1 MH	Elimination / Administration	Asbestos can be cleaned up by trained personnel following requirements of WHS Regulations, hygienist report and safe work method statements (emu bobbing / sparrow picking)	2 UH	PM / SM / HSR / HSE / CON
			1 MH	Elimination / Administration	Larger asbestos finds to be cleaned / removed following requirements of the hygienist report	2 UH	PM / SM / HSR / HSE / CON
		Unexpected find of non-identified hazardous material	1 MH	Isolation	Work area to be isolated and the unexpected finds procedure in Part 17.2.1 of the HSMS to be followed.	2 UH	PM / SM / HSE / HSR
	Potential underground storage tank	Exposure to chemicals and fumes still in potential underground storage tank	1 MH	Isolation	If located the unexpected finds procedure in Part 17.2.1 of the HSMS to be followed.	2 UH	PM / SM / HSE / HSR / CON
			1 MH	Elimination / Administration	If located the tank is to be removed following the requirements of the WHS Regulations, hygienist report and safe work method statements	2 UH	PM / SM / HSE / HSR / CON
	Transport of contaminated soil	Transport of contaminated soil from site	1 MH	Elimination / Administration	Clean fill documentation to be provided for soils to be transported from site	2 UH	PM / SM / HSR / HSE / CON
			1 MH	Elimination / Administration	Any contaminated soil to be disposed of at an approved EPA facility	2 UH	PM / SM / HSR / HSE / CON
		Transport of contaminated soil to site	2 MM	Elimination / Administration	Clean fill documents to be provided for soils transported to site	3 UM	PM / SM / CON
	Drilling, cutting, scabbling or grinding material that contains 1% or more of	Worker exposed to respirable crystalline silica dust greater than the time weighted average (TWA) of 0.05 milligrams per cubic metre	1 LH	Administration	Safety data sheet to be checked that product contains 1% or more or silica-based product	2 UH	PM / SM / CON

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	silica material	averaged over an eight-hour period.					
			1 LH	Administration	Company completing the work to prepare a respirable crystalline silica dust control plan	2 UH	PM / SM / CON
			1 LH	Administration	Safe work method statement to be prepared incorporating the requirements of the respirable crystalline silica dust control plan.	2 UH	PM / SM / CON
			1 LH	Engineering	Water to be used to suppress dust (where practicable), when drilling, cutting, scabbling or grinding material that contains 1% or more of silica material. Note: Tools should be fitted with an integrated water delivery system that continuously feeds water to the working surface	2 UH	PM / SM / CON
			1 LH	Engineering	<ul style="list-style-type: none"> <li>Use tools equipped with commercially available shroud or cowling fitted a dust collection system, and</li> <li>Operate and maintain tools in accordance with manufacturers instructions to minimise dust emissions, and</li> </ul> Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have either <ul style="list-style-type: none"> <li>a tool mounted HEPA filtered dust collector, or</li> <li>an on-tool capture hood connected to a dust extractor / vacuum rated to either M or H Class in accordance with AS/NZS 60335.2.69</li> </ul>	2 UH	PM / SM / CON
			1 LH	PPE	Tool operator to wear a <ul style="list-style-type: none"> <li>P1, P2 or P3 (see clause 4.2.3.5 of AS/NZS 1715) filter half facepiece – replaceable filter</li> <li>P1 or P2 disposable face piece</li> </ul> PAPR – P1 filter in PAPR with any head covering of facepiece	2 UH	PM / SM / CON
		Other workers in the area exposed to respirable crystalline silica dust greater than the time weighted average (TWA) of 0.05 milligrams per cubic metre averaged over an eight hour period.	1 LH	Administration	Area where work tasks involving potential exposure to respirable crystalline silica dust greater than the time weighted average (TWA) of 0.05 milligrams per cubic metre averaged over an eight hour period are to be isolated / barricaded to prevent unauthorised entry into the area	2 UH	PM / SM / CON
	Using electric powered tools with water	Electric shock	1 LH	Engineering	Tools to be IPL rated for use with water	2 UH	PM / SM / CON
	Worker wearing personal protective equipment (PPE) not correctly fitted	Worker exposed to respirable crystalline silica dust greater than the time weighted average (TWA) of 0.05 milligrams per cubic metre averaged over an eight hour period.	1 LH	Administration	Workers to be fit tested to ensure respirator (PPE) being used is suitable for the task.	2 UH	PM / SM / CON
			1 LH	Administration	Worker to be trained in the correct use and maintenance (cleaning) of the PPE	2 UH	PM / SM / CON

Item No.	Risk	Potential Hazard	Initial Risk Rating	Hierarchy of Control	Controls	Residual Risk Rating	Person / Organisation Responsible
			1 LH	Administration	Medical examinations to be completed where a worker is required to use respiratory protective equipment (RPE) for 30+ days in 12 month period	2 UH	PM / SM / CON
	Emptying vacuum equipment catchment containers	Worker(s) exposed to respirable crystalline silica dust greater than the time weighted average (TWA) of 0.05 milligrams per cubic metre averaged over an eight hour period.	1 LH	Engineering	Vacuum equipment to be fitted with bags that can be sealed (tied) when the vacuum system is opened	2 UH	PM / SM / CON
	Emptying containers containing loose silica dust	Worker(s) exposed to respirable crystalline silica dust greater than the time weighted average (TWA) of 0.05 milligrams per cubic metre averaged over an eight hour period.	1 LH	Engineering	Containers to be emptied into a bag / container that can be sealed prior to disposal	2 UH	PM / SM / CON
			1 LH	PPE	When emptying containers, vacuum systems or removing bags from a vacuum system, workers are to wear a <ul style="list-style-type: none"> <li>P1, P2 or P3 (see clause 4.2.3.5 of AS/NZS 1715) filter half facepiece – replaceable filter</li> <li>P1 or P2 disposable face piece</li> </ul> PAPR – P1 filter in PAPR with any head covering of facepiece	2 UH	PM / SM / CON
	Disposal of silica dust	People exposed to silica dust in unsealed bins	1 LH	Isolation	Silica dust (bags & containers) to be placed in general waste bins for disposal at land fill site	2 UH	PM / SM / CON
		People exposed to silica dust if (bags & containers) placed in recycling skips	1 LH	Isolation	Silica dust (bags & containers) to be placed in general waste bins for disposal at land fill site	2 UH	PM / SM / CON
	Storage of tools	People exposed to silica dust from tools contaminated with silica dust from use	1 LH	Elimination	Tools & equipment should be cleaned of any respirable crystalline silica dust or slurry at the end of each use to remove any potential exposure to people who may use the tool for non-silica dust work.	2 UH	PM / SM / CON
	Storage of open bags in use on site	Worker(s) exposed to respirable crystalline silica dust greater than the time weighted average (TWA) of 0.05 milligrams per cubic metre averaged over an eight hour period.	1 LH	Isolation / Engineering	Open bags to be placed in sealed containers when not in use	2 UH	PM / SM / CON
	Dry sweeping floors	Worker(s) exposed to respirable crystalline silica dust greater than the time weighted average (TWA) of 0.05 milligrams per cubic metre averaged over an eight hour period.	1 LH	Substitution / Engineering	Use a H or M class vacuum cleaner as a substitute to sweeping floors.	2 UH	PM / SM / CON
			1 LH	Substitution / Engineering	Use sufficient amount of water to prevent elevated levels of airborne dust (i.e. wet sweeping).	2 UH	PM / SM / CON
<b>Hazardous Manual Handling</b>							
	Hazardous Manual Handling	Manual handling sprains & strains	1 LH	Engineering / Substitution	Mechanical lifting device to be used where practicable	2 UH	SM / HSR / CON

Item No.	Risk	Potential Hazard	Initial Risk Rating	Hierarchy of Control	Controls	Residual Risk Rating	Person / Organisation Responsible	
			1 LH	Administration	Hazardous manual handling tasks and control measures to be documented in safe work method statement (SWMS).	2 UH	SM / HSR / CON	
			1 LH	Administration	Appropriate number of personnel to be used to lift / move large, heavy or awkward size items.	2 UH	SM / HSR / CON	
			1 LH	Administration	Personnel to use correct manual handling procedures / techniques.	2 UH	SM / HSR / CON	
		<b>Heights / Falls</b>						
	Use of temporary stair tower for access & egress to elevated work areas	Stair tower collapse	1 MH	Engineering	Stair tower to be secured to structure when height exceeds a minimum of three (3) times lease base width of scaffold	2 UH	PM / SM	
			1 MH	Administration	Stair tower to be inspected by a competent person and a scafftag / handover certificate issued after completion of construction, after any modifications, high wind event and at periods not exceeding 30 days	2 UH	SM / HSR	
	Working at height	Fall from height	1 MH	All	Control measures to be document in applicable trade SWMS following the hierarchy of control. 1. Elimination - Complete works at ground level if possible 2. Substitution - Not practicable for work at height 3. Isolation - Display barricades and signage a minimum of two metres back from work edge 4. Engineering - Install edge protection guardrails - Use elevated work platforms - Use of scaffolding 5. Administration - Safe work method statements - Work at heights permits 6. P.P.E Use of safety harness and lanyard	2 UH	CM / PM / SM / HSR	
			1 LH	Engineering	Edge protection guardrails to be installed around perimeter edge	2 UH	PM / SM / HSR / CON	
			1 LH	Engineering	Visual barriers to be installed a minimum of two (2) metres back from any live unprotected edge. <b>Note:</b> If roof pitch exceeds 7 degrees then visual barriers cannot be used due to potential slide down roof slope hazard	2 UH	SM / HSR / CON	
		Injuries requiring first aid	3 ML	Administration	Portable first aid kit to be available on site	3 UL	SM / HSR	
		Workers on site don't know who to notify of a	3 ML	Administration	First aid person contact details to be displayed at each work level	3 UL	SM / HSR	

Item No.	Risk	Potential Hazard	Initial Risk Rating	Hierarchy of Control	Controls	Residual Risk Rating	Person / Organisation Responsible
		first aid incident					
		No appropriate facilities to move injured person	3 ML	Administration	Stretcher to be available to move injured person (where required) <b>Note:</b> In some instances it is best to leave the injured person where they are until Paramedic assistance arrives	3 UL	PM / SM / HSR
	Excavation fall hazards over two metres	Fall from height over two metres	1 MH	Administration / Engineering	Fall control measures to be documented in the company safe work method statement (i.e. trench shields to be maintained a minimum 900mm above ground level, edge protection guardrails to be fitted trench shields)	2 UH	SM / HSR / CON
			1 MH	Engineering	Temporary access platforms to be used where fall hazard between the excavation and shield exist during access	2 UH	SM / HSR / CON
	Rescue of an injured person using a boom type elevated work platform	Structural inadequacy of landing area	2 MM	Engineering	Only completed solid work area to be used to retrieve the injured person using an elevated work platform	3 UM	SM / HSR / CON
		Fall from height while retrieving an injured person using an elevated work platform	1 LH	Engineering	Edge protection guardrails to be installed around all live edges	2 UH	SM / HSR / CON
			1 LH	Engineering	Boom lift to extend a minimum of two (2) metres past edge protection guardrails	2 UH	SM / HSR / CON
			1 LH	Engineering	Completed work area to be used to place injured person in the elevated work platform	2 UH	SM / HSR / CON
		Slips, trips and / or falls	2 MM	Administration	Boom lift platform to be lowered to within 300mm of roof surface	3 UM	SM / HSR / CON
		Unauthorised use of boom lift designated as the access / egress EWP	2 MM	Administration	Base controls to be tagged to indicate the equipment is in use and to caution against interference	3 UM	SM / HSR / CON
	Rescue of an injured person requiring stretcher assistance using a scissor lift type elevated work platform	Structural inadequacy of landing area	2 MM	Engineering	Only completed solid work area to be used to retrieve the injured person using an elevated work platform	3 UM	SM / HSR / CON
		Fall from height while retrieving an injured person using an elevated work platform	1 LH	Engineering	Edge protection guardrails to be installed around all live edges	2 UH	SM / HSR / CON
			1 LH	Engineering	Loading dock area on elevated areas to be used	2 UH	SM / HSR / CON
			1 LH	Engineering	Sliding platform on scissor lift to be pushed out onto loading dock area.	2 UH	SM / HSR / CON
			1 LH	Engineering	End guardrails on scissor lift to be lowered to transport stretcher patient onto scissor lift	2 UH	SM / HSR / CON
		Unauthorised use of boom lift designated as the access / egress EWP	2 MM	Administration	Base controls to be tagged to indicate the equipment is in use and to caution against interference	3 UM	SM / HSR / CON
<b>Hot / Cold Working Environment</b>							

Item No.	Risk	Potential Hazard	Initial Risk Rating	Hierarchy of Control	Controls	Residual Risk Rating	Person / Organisation Responsible
	Working outside in hot weather	Sunburn, Heat Stress, Dehydration	2 LL	Administration / Isolation	Work to be planned so that tasks are done in the shaded areas where practicable.	3 UL	PM / SM / HSR / CON
		Heat Stress / Dehydration	3 ML	Administration	Personnel to take frequent rest breaks and drink cool refreshing liquids (e.g. water) when performing manual tasks on high temperature days.	3 UL	SM / HSR / CON
	Working outside in cold weather	Frost bite / hypothermia	3 ML	P.P.E	Suitable warm clothing to be worn when working in cold climate conditions	3 UL	SM / HSR / CON
			3 ML	Administration	Personnel to take regular rest breaks in heated areas and drink warm refreshing liquids.	3 UL	SM / HSR / CON
<b>Hot Work (cutting / welding / grinding)</b>							
	Cutting, welding, grinding	Fire	1 MH	Administration	Hot Work Permit to be obtained prior to any work that generates heat, sparks, flame, etc	2 UH	SM / HSR / CON
			1 MH	Isolation	Flammable substances to be removed from the work area.	2 UH	SM / HSR / CON
			1 MH	Isolation / Engineering	Flammable substances to be covered with welding / fire blanket.	2 UH	SM / HSR / CON
			1 MH	Administration	Fire extinguisher to be available in the work area.	2 UH	SM / HSR / CON
			1 MH	Engineering	Flash back arresters will be fitted to all oxy-acetylene equipment.	2 UH	SM / HSR / CON
			1 MH	Isolation / Engineering / Administration	Gas cylinders onsite will: <ul style="list-style-type: none"> <li>▪ be stored vertically</li> <li>▪ be adequately restrained and secured against movement</li> <li>▪ have full cylinders are segregated from empty cylinders</li> <li>▪ have fuel gases are segregated from oxygen (e.g. acetylene and oxygen)</li> </ul> have signage, such as <b>“No Smoking or Naked Lights”</b> is displayed where fuel gases are stored	2 UH	SM / HSR / CON
		Eye injuries from welding flashes	1 LH	P.P.E	Personnel to wear approved welding shield when performing welding works	2 UH	SM / HSR / CON
		Burns from welding slag	1 LH	P.P.E	Gloves to be worn when performing welding works	2 UH	SM / HSR / CON
			1 LH	P.P.E	Appropriate welding apron / jacket to be worn where practicable when performing welding works	2 UH	SM / HSR / CON
		Eye injury to other personnel from welding flashes	1 LM	Engineering	Welding screens to be installed where practicable.	3 UM	SM / HSR / CON
			1 LM	Engineering	Barricades and warning signage to be displayed to keep non-essential personnel out of work area.	3 UM	SM / HSR / CON
	Welding	UV Radiation welding hazards	2 MM	Isolation / Engineering /	Where UV radiation is produced from welding activities screens will be used to isolate welding activities and workers who are not	3 UM	SM / HSR / CON

Item No.	Risk	Potential Hazard	Initial Risk Rating	Hierarchy of Control	Controls	Residual Risk Rating	Person / Organisation Responsible
				Administration	carrying out the welding will not be permitted in the welding area.		
			1 LM	PPE	Appropriate PPE (long sleeves & pants) to be worn when performing welding tasks	3 UM	SM / HSR / CON
<b>Lasers</b>							
	Use of laser levelling equipment.	Injuries from using inappropriate type of laser levelling equipment.	2 UH	Substitution	Class 1 & Class 2 laser levelling equipment will be used where practicable	3 UL	SM / HSR / CON
			2 UH	Administration	Appropriate signage will be displayed when Class 2 & Class 3 laser levels are in use	3 UL	SM / HSR / CON
			2 UH	Elimination	Class 3B and class 4 lasers will not be used on building construction sites.	3 UL	SM / HSR / CON
	Use of laser levelling equipment <i>continued</i>	Injuries from using inappropriate type of laser levelling equipment <i>continued</i>	2 UH	Administration	Operators of Class 2 and Class 3 laser equipment will be competently trained in their use.	3 UL	CON
			2 UH	Administration	A laser safety officer will be appointed when Class 2 & Class 3 laser equipment is in use.	3 UL	SM / HSR / CON
<b>Lighting</b>							
	Insufficient access & egress lighting	Slips trips & falls	1 LM	Elimination	Lighting will be provided on site sufficient and suitable for the illumination of all common areas including stairways, corridors, temporary construction switchboards and passageways where persons must frequent, pass or use.	3 UM	PM / SM / HSR / CON
		Emergency exit required	1 LM	Elimination	Access and egress lighting to have battery backup where required	3 UM	PM / SM / HSR / CON
	Insufficient task lighting	Slips, trips, falls, cuts and lacerations	1 LM	Elimination	Contractors are required to provide suitable and sufficient task lighting for all work areas and workplaces requiring a greater luminance to perform their specific activities in a safe manner.	3 UM	CON
			1 LM	Isolation	Relocatable lighting will not be placed in a position where it presents a trip hazard.	3 UM	SM / HSR / CON
		Mechanical damage to lights	2 LL	Engineering	Wire guards and / or polycarbonate diffusers will be required to be provided to all lighting to prevent damage.	3 UL	SM / HSR / CON
<b>Machine / Equipment (guarding)</b>							
	Use of electric powered tools	Cuts and lacerations due to guards not fitted or functioning correctly	1 MH	Engineering	Inspected guards are fitted (where required), correctly adjusted and operation.	2 UH	SM / HSR / CON
	Inspection and operation of plant & equipment	Entanglement in moving parts	1 MH	Administration	Plant risk assessments to be provided and reviewed.	2 UH	SM / HSR / CON
			1 MH	Engineering	Guards and engine covers to be inspected & fitted prior to plant / equipment operation.	2 UH	SM / HSR / CON
			1 MH	Administration	Safety signage to be displayed on plant / equipment as per risk assessment requirements.	2 UH	SM / HSR / CON

Item No.	Risk	Potential Hazard	Initial Risk Rating	Hierarchy of Control	Controls	Residual Risk Rating	Person / Organisation Responsible
<b>Mobile Plant</b>							
	Operation of mobile plant	Plant over turning	1 MH	Administration	Assessment to be made that the appropriate sized item of plant is used for the task	2 UH	PM / SM / CON
			1 MH	Engineering	Mobile plant to only be operated on firm ground (where practicable)	2 UH	PM / SM / CON
		Hazards relating to mobile plant operating on site	1 MH	Administration	Safe work method statements to be prepared / supplied for the operation of mobile plant on site	2 UH	SM / HSR / CON
		Plant failure	1 MH	Administration	Plant induction procedure to be completed	2 UH	SM / HSR / CON
			1 MH	Administration	Operator to conduct and record daily preoperational checks in a log book.	2 UH	SM / HSR / CON
	Operation of mobile plant <i>continued</i>	Unsafe operation on plant and equipment	1 MH	Administration	Checks to be made at induction that personnel hold the appropriate licence / qualification for the type / size of plant they intend to operate.	2 UH	SM / HSR / CON
			1 MH	Administration	Operators qualifications to be recorded on the site induction form.	2 UH	SM / HSR / CON
		Hazards from unqualified / untrained operator	1 MH	Administration	Operator to hold relevant high risk licence or be training card from registered training organisation (RTO).	2 UH	SM / HSR / CON
		Mobile plant striking personnel on site	1 MH	Engineering	Mobile plant to be fitted with reversing beeper and flashing light.	2 UH	SM / HSR / CON
			1 MH	P.P.E.	Site personnel to wear hi-visible clothing	2 UH	SM / HSR / CON
			1 MH	Engineering	Roadways and pedestrian pathways to be designated where practicable	2 UH	PM / SM / HSR / CON
			1 MH	Administration	Personnel to hold the appropriately high risk licence be competently trained by a registered training organisation	2 UH	SM / HSR / CON
	Operating mobile plant near elevated edges	Plant travelling over edge	1 MH	Engineering	Physical barriers to be installed at least 2mtrs back from edge in areas where mobile plant is being operated	2 UH	PM / SM / HSR / HSE / CON
			1 MH	Isolation	Spotters to be used where physical barriers cannot be properly installed	2 UH	SM / HSR / CON
			1 MH	Administration	Work at heights permit to be issued where mobile plant is operating within 2mtrs of an elevated edge.	2 UH	SM / HSR / CON
			1 MH	Administration	Hazards and control measures relating to work near a live edge to be covered in a safe work method statement.	2 UH	SM / HSR / HSE / CON
<b>Materials Handling (crane / forklift / other)</b>							
	Use of plant for materials handling	Plant overturning	1 MH	Administration	Assessment to be made that the appropriate sized item of plant is used for the task	2 UH	PM / SM / CON
			1 MH		Materials handling plant to only be operated on firm compacted ground	2 UH	

Item No.	Risk	Potential Hazard	Initial Risk Rating	Hierarchy of Control	Controls	Residual Risk Rating	Person / Organisation Responsible
			1 MH	Administration	Safe work method statements to be prepared / supplied for the operation of plant on site	2 UH	SM / HSR / CON
		Plant failure	1 MH	Administration	Plant induction procedure to be completed	2 UH	SM / HSR / CON
			1 MH	Administration	Operator to conduct and record daily preoperational checks in a log book.	2 UH	SM / HSR / CON
		Unsafe operation on plant and equipment	1 MH	Administration	Checks to be made at induction that personnel hold the appropriate licence / qualification for the type / size of plant they intend to operate.	2 UH	SM / HSR / CON
			1 MH	Administration	Operators qualifications to be recorded on the site induction form.	2 UH	SM / HSR / CON
	Use of plant for materials handling <i>continued</i>	Falling objects	1 MH	Administration	Work area to be isolated (where practicable) to keep unauthorised personnel out of the plant operating area	2 UH	SM / HSR / CON
			1 MH	Administration	Only qualified dogman / riggers to sling, direct and release loads	2 UH	SM / HSR / CON
	Lifting over public areas	Falling objects	1 MH	Elimination	Building design to allow for crane to be set up within site boundary.	2 UH	PM / SM / HSR / CON
			1 MH	Elimination	Multiple site access points to be established (when required) to avoid lifting over members of the public and other workers on site.	2 UH	SM / HSR / CON
<b>Neighbouring Properties</b>							
	Vehicles entering and exiting site	Damage to council infrastructure	1 MH	Engineering	Approved access points to be to be used for site vehicle / plant access / egress.	2 UH	PM / SM / HSR / CON
	Damage to land outside of the construction site boundary	Perceived damage to existing council / public areas that are not part of the building works	1 MH	Administration	A dilapidation inspection shall be carried out prior to taking possession of site or any works carried out under the contract and a report produced from that inspection that will form part of the contract documents	2 UH	PM / SM / HSR / CON
		Hazards from construction works outside the site boundary	1 MH	Engineering	All disturbed surfaces are to be made good at the end of each day during the project period	2 UH	PM / SM / HSR / CON
	Fire on neighbouring property	Fire	1 MH	Administration / Elimination	No cutting, grinding that generates sparks and / or use of oxy-acetylene equipment along fence line of neighbouring property (Use Hot Work Permit system)	2 UH	SM / HSR / CON
	Civil Works	Dust entering neighbouring properties	2 MM	Elimination	Control any dust generated from the works (stockpiles, exposed soil) by on-site watering as required.	3 UM	SM / HSR / CON
			2 MM	Elimination	Spray soil stockpiles to suppress dust as required. Such sprays should not create water quality management issues.	3 UM	SM / HSR / CON
			2 MM	Elimination	Stabilise (compact) soils as soon as practicable after disturbance to prevent dust generation	3 UM	SM / HSR / CON
	Loading trucks	Dust contamination of neighbouring properties	2 MM	Engineering	Load and cover trucks and ensure the tailgates of all trucks transporting spoil from site are securely fixed prior to loading and immediately after unloading.	3 UM	SM / HSR / CON
	Odour emissions from site	Rubbish odours from domestic waste	3 ML	Elimination	Domestic type waste from amenities area to be placed in plastic	3 UL	SM / HSR

Item No.	Risk	Potential Hazard	Initial Risk Rating	Hierarchy of Control	Controls	Residual Risk Rating	Person / Organisation Responsible
	installation	installation			specifies otherwise		
			1 MH	Engineering	Precast panel brace shear pins to be fitted with a device that requires a tool be used for their removal	2 UH	SM / HSR / CON
			1 MH	Administration	Precast panel installation checklist to be completed and signed off at the end of each day	2 UH	SM / HSR / CON
			1 MH	Administration	Precast panel braces to be inspected weekly until removed.	2 UH	SM / HSR
	Precast panel braces removed prematurely	Precast panel falling	1 MH	Administration	Engineer to inspect and provide documentation prior to brace removal	2 UH	SM / HSR
	Precast panel braces struck by mobile plant	Precast panel falling	1 MH	Engineering / Isolation	Barricades / visual barriers to be installed one metre out from base of braces.	2 UH	SM / HSR
	Operation of plant on suspended concrete slabs	Structural collapse	1 MH	Administration	Information from an engineer to be obtained for safe load requirements of suspended concrete slabs prior to operating plant on it	2 UH	SM / HSR / CON
<b>Services (underground / overhead)</b>							
	Electrical power to existing buildings	Utilities, services, and public infrastructure	1 MH	Isolation / Administration	As per required in condition A20 to A23 in The Development Consent SSD-45998963	2 UH	PM / SM / HSR / CON
	Operating plant & equipment near overhead power lines outside of site boundary.	Plant striking overhead power lines outside of site boundary in public areas.	1 MH	Isolation / Administration	Safe system of work to be developed and included in a safe work method statement for mobile plant to be set up so that its design envelope cannot enter the Ordinary Person distances set in Table 1 of the Code of Practice – Work Near Overhead Powerlines	2 UH	PM / SM / HSR / CON
			1 MH	Isolation / Administration	A qualified Safety Observer will be used when the design envelope of the mobile plant can enter Safety Observer Zone set in Table 2 of the Code of Practice – Work Near Overhead Powerlines (Safety Observer requirements to be included in a SWMS)	2 UH	PM / SM / HSR / CON
			1 MH	Elimination	Written Approval (Permit) to be obtained (and its requirements followed) from the asset owner / network operator where mobile plant is required to be operated closer than the distances set in Table 2 of the Code of Practice – Work Near Overhead Powerlines Note: No plant is intended to be operated within the No Go Zone (permit required area).	2 UH	PM / SM / HSR / CON
	Operation of mobile plant near overhead temporary wiring	Contact with overhead temporary wiring on site	1 MH	Elimination	Temporary wiring will be placed in ground where practicable in access and plant operational areas.	2 UH	SM / HSR / CON
			1 MH	Elimination	Overhead wiring will be positioned to avoid crossing roadways or access ways where cranes, high loads or large plant and equipment may travel.	2 UH	SM / HSR / CON
<b>Subsidence</b>							

Item No.	Risk	Potential Hazard	Initial Risk Rating	Hierarchy of Control	Controls	Residual Risk Rating	Person / Organisation Responsible
		Precast panel braces removed prematurely	1 MH	Administration	Engineer to inspect and provide documentation prior to brace removal	2 UH	SM / HSR
		Precast panel braces struck by mobile plant	1 MH	Engineering / Isolation	Barricades / visual barriers to be installed one metre out from base of braces.	2 UH	SM / HSR
		Dato height panels falling during / after installation	1 MH	Engineering	Dato height precast panel to be properly connected to structural steel before being released from crane	2 UH	CON
	Concrete pre-cast panel installation	Insufficient crane/ lifting equipment considerations	1 MH	Administration	<p>Safety documentation, safe work method statement supplied by the subcontractor undertaking pre-cast panel installation works is to address:</p> <ul style="list-style-type: none"> <li>Crane size requirements</li> <li>Erection sequence and bracing requirements</li> <li>Rigging and rotating of panels</li> <li>Provisions of shop drawings and engineer certification</li> <li>Methods of controlling vehicle access around the pre-cast work area</li> </ul> <p>Any hazards associated with ground conditions i.e. trenches and recent excavations, etc</p>	2 UH	SM / HSR / CON
<b>Traffic Management</b>							
	Work on a public roadway	Workers being struck by passing traffic	1 MH	Administration	Traffic Management Plan will be developed by a competent person in accordance with the RMS Guide Traffic Control at Workplaces and AS1742.3.	2 UH	SM / HSR / CON
		Traffic congestion as a result of traffic management	1 MH	Isolation / Engineering	Where the altered roadway/path cannot be controlled through the use of safety barriers and signage alone, traffic controllers will be provided to direct vehicles and pedestrians.	2 UH	SM / HSR / CON
	Work on a public roadway	Unidentified hazards relating to traffic management set up & removal procedures	1 MH	Administration	All tasks involving traffic & pedestrian management will be documented in a SWMS	2 UH	SM / HSR / CON
		Unqualified personnel undertaking traffic management tasks	1 MH	Administration	All traffic management personnel to be suitably trained and qualified for the tasks they are required to perform.	2 UH	SM / HSR / CON
<b>Trenching / Excavation</b>							
	Excavation / trench work over 1.0 metres deep	Excavation trench collapse	1 MH	Elimination	Drains will be designed as shallow as possible.	2 UH	Design Department
			1 MH	Administration	All details of trenching excavation work to covered in safe work method statement.	2 UH	SM / HSR / CON
			1 MH	Engineering / Administration	Trenches / excavations to be battered / benched or appropriate shields to be used	2 UH	SM / HSR / CON
			1 MH	Elimination	Services to be installed as soon as possible.	2 UH	PM / SM / CON
			1 MH	Administration	Rescue procedures to be documented in safe work method statement	2 UH	SM / HSR / CON

Item No.	Risk	Potential Hazard	Initial Risk Rating	Hierarchy of Control	Controls	Residual Risk Rating	Person / Organisation Responsible
<b>Working near / over water</b>							
	Working near water (around swimming pool)	Drowning hazard	N/A	N/A	There are no water hazards (settling ponds, dams etc) in the construction area.	N/A	N/A
<b>Young workers / unskilled labour</b>							
	New employees, apprentices and work experiences students	Injuries due to inexperience and lack of training	1 MH	Administration	Trainees and inexperienced personnel to be under supervision of qualified or experienced personnel at all times.	2 UH	SM / HSR / CON
		Injuries due to inexperience and lack of training	1 MH	Administration	Trainees and inexperienced personnel to complete comprehensive site induction procedure	2 UH	SM / HSR
		Injuries due to inexperience and lack of training	1 MH	Administration	Personnel to hold appropriate high risk licence or certificate of competence from a registered training organisation (RTO) prior to operating any plant or equipment	2 UH	SM / HSR / CON
<b>Other – COVID 19 (Coronavirus)</b>							
	Covid19 (Coronavirus)	Personnel coming to site infected with Covid19 (coronavirus)	1 MH	Isolation / Administration	Covid Safe Plan prepared for construction site.	2 UH	CM / PM / SM / HSE / HSR / CON
<b>Other- Bankstown Airport</b>							
	Cranes, booms, etc working at height in restricted air space	Plane striking elevated plant & equipment	1 MH	Elimination / Administration	The construction Zone is located a kilometres away within the take-off and landing flight path of Bankstown Airport. The construction site is waiting on final height restriction requirements for all plant and equipment.	2 UH	PM / SM HSE / HSR / CON
		Aircraft bird hazards	1 MH	Elimination / Isolation	All food bins to be kept covered so as to not attract birds which can become potential flight hazards when flying up in the air from scavenging in bins.	2 UH	SM HSE / HSR / CON
		Others Aircraft hazards	1 MH	Elimination / Isolation	Any incident that causes or poses the possibility to cause problems for the safe operation of the airport should be reported immediately to the Bankstown Airport Reporting Officer.	2 UH	SM HSE / HSR / CON
<b>Other</b>							

# Appendix G DPE Review Comments



Brendyn Rheinberger

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From: brheinberger@slrconsulting.com  
Subject: FW: CTMP and VMP review  
Attachments: RE: SSD-45998963 - Post Approval - Consultation with Council - CTMP

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From: Tom Bertwistle <[Thomas.Bertwistle@planning.nsw.gov.au](mailto:Thomas.Bertwistle@planning.nsw.gov.au)>  
Sent: Friday, August 4, 2023 3:52 PM  
To: Fei Chen <[fchen@tacticalgroup.com.au](mailto:fchen@tacticalgroup.com.au)>  
Subject: CTMP and VMP review

Hi Fei,

Apologies for the time it has gotten to get back to you on this one. I've started a review, but haven't been able to complete it of the main CEMP body. However, I have done a review of the relevant subplans, the CTMP and VMP, which are the two more technical management plans required for this one.

I'll try to get the CEMP comments early next week, however, generally we have the most comments on the subplans and CEMP is usually administrative comments.

#### CTMP

- CTMP condition requires the plan to have been prepared in consultation with Council – this is required to be completed (with evidence supplied in the CTMP) prior to resubmission.
- The drawings in the appendices are superseded plans.
- Not all appendices were submitted.

#### VMP

- The VMP appears to be based off the Arboricultural Impact Assessment (AIA) (V3), including differences in trees proposed to be removed (western boundary). The AIA was updated in March 2023 (V5) and should be the one used in preparation of the AIA. It is noted all of Section 6 refers to tree protection measures.
- Section 4 refers to the AIA and associated Tree Protection Management Plan for tree protection measures. The VMP should contain these measures or include them as an appendix.
- It is noted the Applicant supplied [further information](#) on footpath construction in assessment process, specifically the below which should be located in the VMP.  
*'To minimise the impacts of the footpath, it is preferred that it is constructed above existing grade with only removal of the grass layer to prevent root loss. If this is not possible, the entire path must be hand excavated under supervision of the project arborist and following the guidelines in the tree protection management plan. Any roots >30mm in diameter will need to be bridged'*
- Section 5.3.2 – the inclusion of the following was not considered in the original BDAR and the Department has concerns the inclusion has potential to be overused.  
*"In the event that arboreal animals do not move or they cannot be captured because the tree hollow is too large, high or its recovery would breach WH&S requirements then the tree will be felled (in the direction of other tree debris if possible) and animals recovered post-felling."*
- Condition B25(e) was identified as not applicable. Sound reasoning should be given in the VMP as to why felled trees can not be used within the site.

Thanks,

**Tom Bertwistle**  
Senior Environmental Assessment Officer  
Industry Assessments  
**Department of Planning and Environment**

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I acknowledge the traditional custodians of the land and pay respects to Elders past and present. I also acknowledge all the Aboriginal and Torres Strait Islander staff working with NSW Government at this time.

Please consider the environment before printing this email.

Brendyn Rheinberger

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From: Tom Bertwistle <Thomas.Bertwistle@planning.nsw.gov.au>  
Sent: Wednesday, 9 August 2023 10:23 AM  
To: Fei Chen  
Subject: RE: CTMP and VMP review

Hi Fei,

I've finished the initial review and have no further comments on the CEMP and nothing additional on the subplans. However, once the CTMP/VMP have been updated, the CEMP may have to be updated to reflect any new requirements (i.e. tree protection measures etc) as well as include the new versions.

Once the CEMP and associated CTMP and VMP have been updated, these can be reuploaded to the task (SSD-45998963-PA-2).

Thanks,

**Tom Bertwistle**  
Senior Environmental Assessment Officer  
Industry Assessments  
**Department of Planning and Environment**

T (02) 8275 1025 E [thomas.bertwistle@planning.nsw.gov.au](mailto:thomas.bertwistle@planning.nsw.gov.au)

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Please consider the environment before printing this email.

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From: Fei Chen <fchen@tacticalgroup.com.au>  
Sent: Monday, 7 August 2023 08:47  
To: Tom Bertwistle <Thomas.Bertwistle@planning.nsw.gov.au>  
Subject: RE: CTMP and VMP review

Thank you Tom,

We will look into the below comments and update accordingly and look forward to any comments on the CEMP. Can you please confirm if we can expect any further commentary on the subplans?

Kind Regards,

Fei Chen  
Project Manager



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From: Tom Bertwistle <[Thomas.Bertwistle@planning.nsw.gov.au](mailto:Thomas.Bertwistle@planning.nsw.gov.au)>  
Sent: Friday, August 4, 2023 3:52 PM  
To: Fei Chen <[fchen@tacticalgroup.com.au](mailto:fchen@tacticalgroup.com.au)>  
Subject: CTMP and VMP review

Hi Fei,

Apologies for the time it has gotten to get back to you on this one. I've started a review, but haven't been able to complete it of the main CEMP body. However, I have done a review of the relevant subplans, the CTMP and VMP, which are the two more technical management plans required for this one.

I'll try to get the CEMP comments early next week, however, generally we have the most comments on the subplans and CEMP is usually administrative comments.

#### CTMP

- CTMP condition requires the plan to have been prepared in consultation with Council – this is required to be completed (with evidence supplied in the CTMP) prior to resubmission.
- The drawings in the appendices are superseded plans.
- Not all appendices were submitted.

#### VMP

- The VMP appears to be based off the Arboricultural Impact Assessment (AIA) (V3), including differences in trees proposed to be removed (western boundary). The AIA was updated in March 2023 (V5) and should be the one used in preparation of the AIA. It is noted all of Section 6 refers to tree protection measures.
- Section 4 refers to the AIA and associated Tree Protection Management Plan for tree protection measures. The VMP should contain these measures or include them as an appendix.
- It is noted the Applicant supplied [further information](#) on footpath construction in assessment process, specifically the below which should be located in the VMP.  
*'To minimise the impacts of the footpath, it is preferred that it is constructed above existing grade with only removal of the grass layer to prevent root loss. If this is not possible, the entire path must be hand excavated under supervision of the project arborist and following the guidelines in the tree protection management plan. Any roots >30mm in diameter will need to be bridged'*
- Section 5.3.2 – the inclusion of the following was not considered in the original BDAR and the Department has concerns the inclusion has potential to be overused.

*“In the event that arboreal animals do not move or they cannot be captured because the tree hollow is too large, high or its recovery would breach WH&S requirements then the tree will be felled (in the direction of other tree debris if possible) and animals recovered post-felling.”*

- Condition B25(e) was identified as not applicable. Sound reasoning should be given in the VMP as to why felled trees can not be used within the site.

Thanks,

**Tom Bertwistle**

Senior Environmental Assessment Officer  
Industry Assessments

**Department of Planning and Environment**

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I acknowledge the traditional custodians of the land and pay respects to Elders past and present. I also acknowledge all the Aboriginal and Torres Strait Islander staff working with NSW Government at this time.

Please consider the environment before printing this email.

# Appendix H Council Approval Letter





**Brendyn Berger**

E [brheinberger@slrconsulting.com](mailto:brheinberger@slrconsulting.com)

11 August 2023

### Construction Traffic Management Plan

339-349 Horsley Road, Milperra – SSD-45998963 - Condition B1 and B2

### **Approved**

Dear Mr Berger,

The Construction Traffic Management Plan (CTMP) dated April 2023 including Traffic Guidance Schemes (TGS formerly Traffic Control Plan - TCP), prepared by SLR Consulting Australia Pty Ltd and submitted to Council on 21 July 2023, has been assessed to comply with Condition B1 and B2 of the Development Consent. Accordingly, Condition B1 and B2 of the Development Consent has been satisfied and approved.

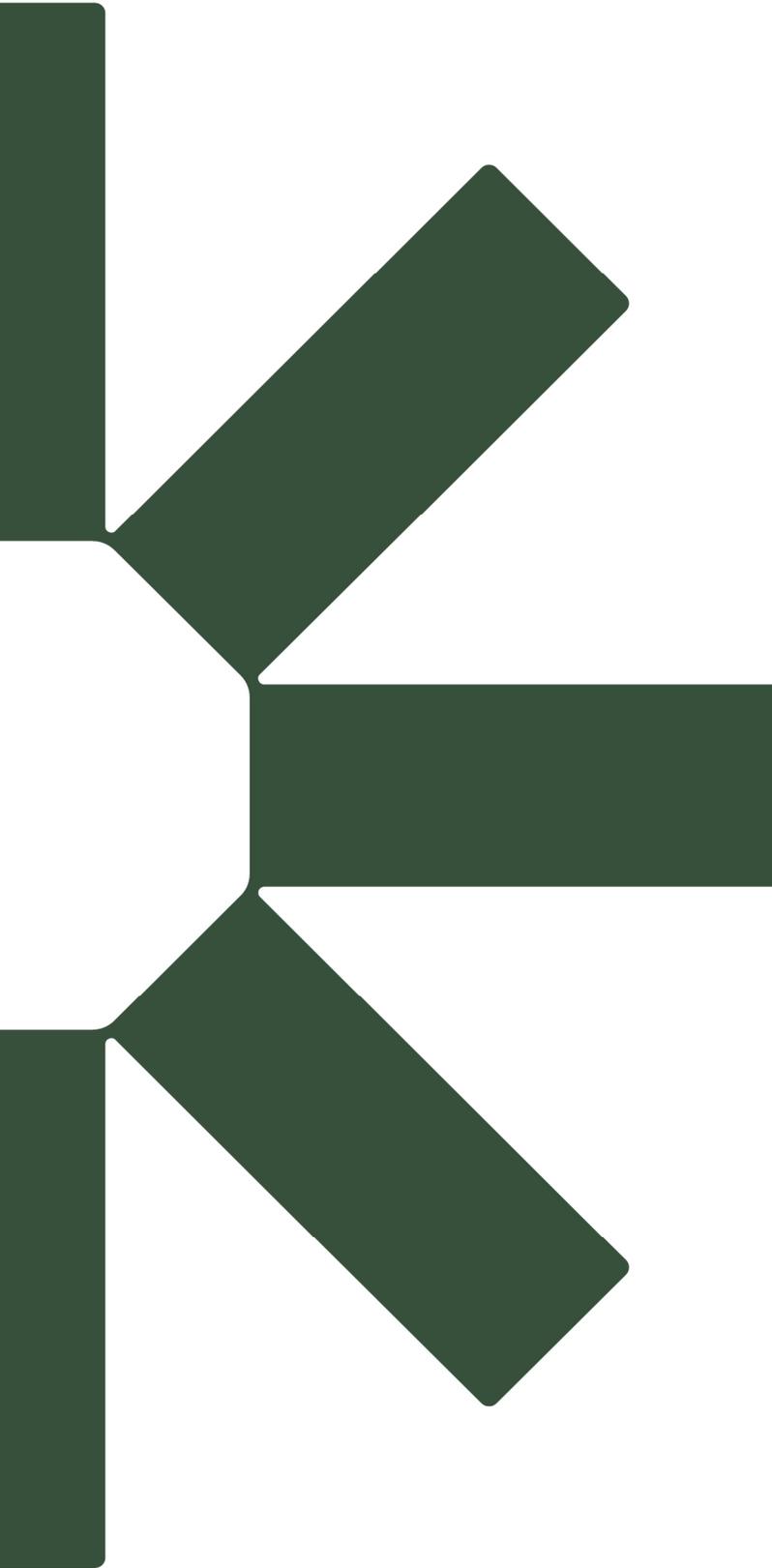
The completed Damage Agreement Transport Route for the proposed development has been received on 10 August 2023 and signed by Scott Fitzgerald as the owner's representative. You have advised that Ali Mourad, Site Manager will be the after-hours contact person and may be reached on mobile 0416 317 404 and [ali.mourad@vaughans.com.au](mailto:ali.mourad@vaughans.com.au).

Please note that Council does not approve Traffic Guidance Schemes (TGS) (formerly - TCPs), which are the responsibility of the applicant. A TGS is an occupational health and safety requirement of a work site (i.e. should be held on site) and it should comply with AS 1742.3. While a TGS is often a very important part of the TMP, Council's endorsement of a TMP does not constitute approval or concurrence of any TGS.

This approval will be passed on to Council's Compliance Officers, Senior Assets Planner – Roads and Development Engineering Services teams for monitoring.

Kind Regards

**Trevor Le**  
**Traffic Services Officer**



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