JCDecaux

Rosehill Aspires LED sign Installation

Project No. 230004

Construction & Project Management Plan SEMP & EWMP

Revision	Originator	Approved	Date	Comments
0	D. Johns	S. Scruby	10/04/2024	Issued for Review

Execution

I have read and understood this Management Plan, and ensured the persons allocated responsibility in the project have been issued with the following applicable OH&S documentation and are clear on their responsibilities in relation to them:

Control (Tick applicable)	Name & Date of Person Allocated Responsibility (These persons will sign onto that control documentation where required)		
PMP	Dean Johns		10.4.24
SWMS	Dean Johns		10.4.24
Pre-Start	Omar Saboune		10.4.24
ITPs	Dean Johns		10.4.24
Shift Handover	Omar Saboune		10.4.24

TABLE OF CONTENTS

1 INTRODUCTION

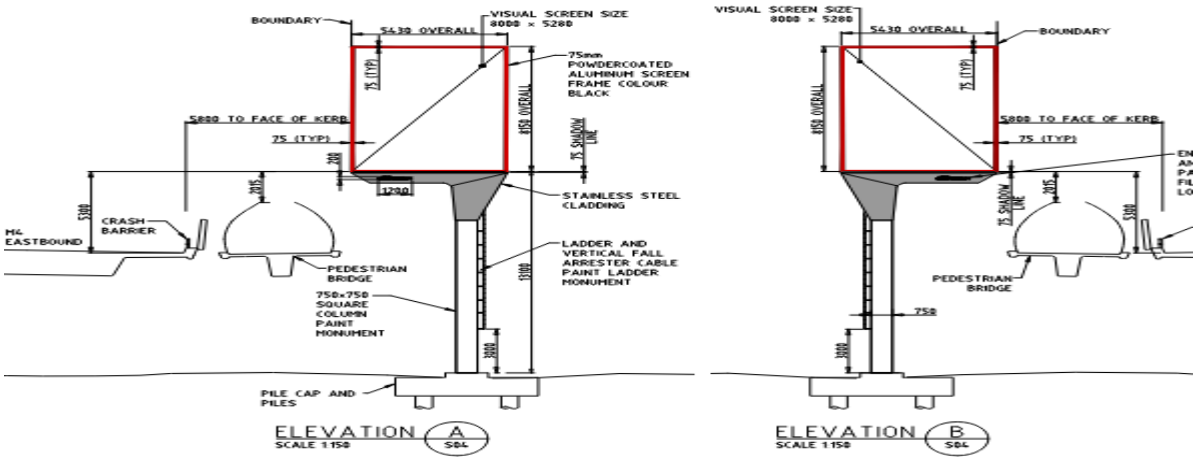
Hanlon Industries has been contracted by JCDecaux to build and install 1 x aspire digital sign. Hanlon Industries will perform the construction, supply, and install 1 x aspire digital sign for JCDecaux.

1.1 Location

1.2

1. Existing Condition

2. Arial View of Proposed Sign Location



3. ***Proposed sign location***

1.3 Design, Manufacture and Planning

Equipment to be installed will be designed to all relevant OHS&E, works will be completed as per engineering design DBCE *drawing Package.*

This document is based upon the following drawings and may be subject to change following any design revisions:

- *DBCE drawings S.01 – S.12 Drawing Package*

1.3.1 Design and Manufacture

- Design of new sign framing as per engineering design
- Obtain required certifications and approvals
- Create workshop drawings
- Issue workshop drawings for manufacture and complete manufacturing to Quality Standards

1.3.2 Planning approvals

- JCDecaux is responsible for the Planning Approvals

1.3.3 Permits/Notifications

- Hanlon will obtain the Transport permits
- Hanlon to obtain Building permits
- Hanlon to obtain Traffic permits
- Hanlon to issue all notifications

1.3.4 Site Safety

- Hanlon to create Safe Work Method Statements in advance

1.4 Key Hanlon Personnel and Contacts

- Project Manager — Dean Johns — 0417 708 599
- Site Supervisor — Omar Saboune — 0416 781 646
- OHS&E Manager — Lori Malaspina-Skrabo — 0410 584 687

1.5 Responsibility and Accountability of Personnel

Personnel	Responsibility	Name, Sign & Date
Project Manager & Project Engineer	To allocate responsibilities and resources to ensure effective site-specific implementation of this document. Ensure overall compliance with project design. Ensure project follows project plan and quality is maintained.	
Health & Safety Manager / Environment Manager	To maintain the currency and accuracy of this procedure reflective of legislative and corporate change.	
Site Managers & Supervisors	To ensure workers under their supervision are aware of their responsibilities under this procedure and comply with relevant requirements. Compliance to the Safety requirements for contractors working on Roads & Bridges. Conducting Job Start/Safety tool box meetings and minuting Coordination of Sub Contractors and site labor.	
Employees & Contractors	To always comply with the requirements of Hanlon Industries Policies & Procedures	

1.6 Key Stakeholders and Contacts

- Client — JCDecaux
- JCDecaux Senior Project Manager — Brett Hutton — 0414 315 916
- Transport NSW

1.7 Reference Documents

- Safe Work Method Statement SWMS_ 27094 Home bush bay drive_Rev00

- Engineering Drawings DBCE *drawing Package*
- Work Health & Safety Act 2011
- 230004 – M4 Rosehill Crane Plan
- 230004 – M4 Rosehill Traffic Planes

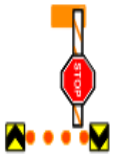
1.8 ROL's – Vehicle routes please see below ROL's ,

Number of vehicles for the project. Maximum movements in and out of site per day 10. Access has been approved by stakeholders. Traffic control to be managed by approved traffic controllers in accordance with plans below.

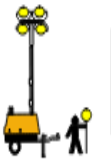
Removal machinery	Civils	Installation
150 Tonne crane	65 tonne Drill Rig	150 tonne crane
2 x semi trailers	2 x semi trailers	3 x semi trailers
1x toilet	1 x 17 tonne excavator	Work vehicles x 2
2x day makers	1 x concrete pump + lines	Day makers
Skip	Multiple concrete agitators	
Tipper	Skip	
Work vehicles	Tipper trucks (multiple)	
	Work vehicles	

Hamilton Street and Unwin st Granville

Four traffic cones are to be installed on the centre line at 4m spacing, with a T5-5(L) at both ends.
TC must remain 1.2m from live traffic and maintain a clear escape route at all times whilst operating PORTABOOM



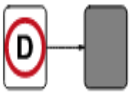
Use of Stop/Slow bats requires a 2-up Client approval to be obtained prior to commencement of works, and completion of the required Stop/Slow Bat Approval Request Form. This must also be recorded in the Field Notes section and this TGS signed off as modified/approved.



Light Towers to be used where required to illuminate TC's if lighting is insufficient.

Speed Reduction Signage to be repeated at a distance of 500m max.

Existing Speed Signs to be covered with opaque material.



Spacing of Cones/Devices

Purpose and usage	Speed zone of device location km/h	Maximum spacing m
On approach to a traffic control or position (centreline or edge line)	All zones	4
Merge tapers	55 to 75 greater than a 75	9 12
Lateral shift tapers	55 to 75 greater than a 75	12 18
Protecting freshly painted lines	55 to 75 greater than a 75	24 60*
All other purposes	less than or equal to 55 60 to 70 greater than a 75	4 12 18

Recommended Taper Lengths

	Recommended taper length (m)		
Existing permanent speed limit (km/h)	Traffic control taper	Lateral shift taper	Merge taper
40 or less	16	16	16
45 to 50	16	16	30
55 to 65	30	30	65
60 to 75	N/A	70	115
75 to 85	N/A	80	130
80 to 90	N/A	90	145
90 to 100	N/A	100	160
Greater than 100	N/A	110	180

Allowable Tolerance on amending Spacings

Tolerance	Positioning of signs, length of tapers or markings	Spacing of delineating devices
Minimum	10% less than the distances or lengths given	Nil
Maximum	25% more than the distances or lengths given	10% more than the spacing shown

Edge Clearances for Cones/Bollards

Edge of traffic lane to:	Edge clearances
Line of traffic cones or bollards	• 0.5 m for traffic speeds less than 65 km/h • 1.0 m for traffic speeds greater than 65 km/h

Adjusting or Modifying A TGS:

ITCP Holder-

- ITCP qualified person must ensure that the TGS is implemented as approved. Minor adjustments can be completed in accordance with Section 7.10.3 Tolerances on positioning of signs and devices. Modifications will be recorded on the TGS checklist and a signed copy will be available on-site.

PWZTMP Holder-

- Modifications to a Site Specific TGS must be approved by the PWZTMP or relevant qualification holder, and must be supported by a TMP or risk assessment to ensure all TGSs considers and mitigate identified site-specific conditions and risks.
- If risk is identified during the implementation of the TGS and requires modification outside of the tolerance listed below, the works must be stopped until an updated TGS is drafted and approved by a PWZTMP qualified person prior to works recommencing. (refer to TCAWS 7.10.4)
- Any anomalies or inconsistencies found in the TGSs being used must be recorded and reported back to the TGS designer who is PWZTMP qualified.

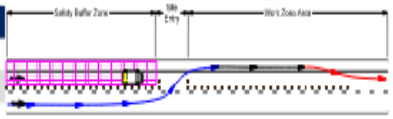
Implementing A TGS:

- A TGS must be installed, maintained and removed in a planned and safe manner.
The implementation of a TGS must only be undertaken by an ITCP qualified person.
(Refer To TCAWS 7.10.1)
- Signs and traffic control devices must be installed in a sequence via GPS, survey, landmarks, side streets or chainage in accordance with TCAWS V6 Section 6.4 and AGTTM Section 6.2
- An implementation TGS should be provided if the risk of implementation is deemed high. The sequence of implementation should be determined as part of the drafting process in TGS or SWMS, rather than being determined on-site. (Refer To TCAWS 7.10.2)

Notes:

- This Traffic Guidance Scheme is developed by competent and experienced persons in accordance with the requirements outlined in the TfNSW TCAWS Issue 6.0, AS1742.3 and the Road Management Act 2004.
- Prior to implementation of the TGS, D&D Traffic Management will carry out an inspection and risk assessment.
- A signed copy of the SWMS will be available on-site at all times.
- A PWZTMP and/or ITCP qualified person must ensure the TGS is implemented, and the work area maintained as per attached TGS. Otherwise, any adjustment and modification will be captured in the shift paperwork.
- Pedestrian management is to be overseen by onsite crew and supported by a risk assessment. If additional signage (TCAWS 6.5.2 - Table 6.5) is required it is subject to modifying TGS criteria, see below.
- Signs to be installed on high legs if sight obstruction is present (for example behind guardrails/barriers, etc.)
- Site Specific TGS is drafted for nominated works that is noted on the TGS. The TGS must be formally reviewed and signed off by a PWZTMP qualified person (a minimum of every 12 months from the drafted date) as per TCAWS 7.11.2. For details, refer to the title box below.
- Borger Traffic Management does not accept liability for the implementation of this TGS, when not directly involved in carrying out the subject works.

Site Entry and Exit Process



- Highlight entry point with double cones and leaving a small break as per above diagram.
- Prior to Entering Worksite, work vehicles shall:
  - Turn on beacons
  - Radio Traffic Management on approach to Site using nominated UHF channel
- Traffic Controllers are to ensure that no local traffic follows work vehicles in the work area
- Above diagram is depicting a Lane 1 Closure. Set-up is to be mirrored in case of median lane closures.

Posted Speed Limit of Subject Road/s

Dimension 'D'
AS 1742.3: A distance expressed in metres, determined in accordance with Clause 4.1.5, and used for the positioning of advanced warning signage.

Speed Limit (km/H)	Dimension D (m)
< 55 km/H	15 m
60 km/H	45 m
> 65 km/H	Approach Speed

BORGER traffic
Web: www.borgertraffic.com
Email: sydney@borgertraffic.com
Phone: 02 9083 2081

TGS Installation Date:

Date: _____

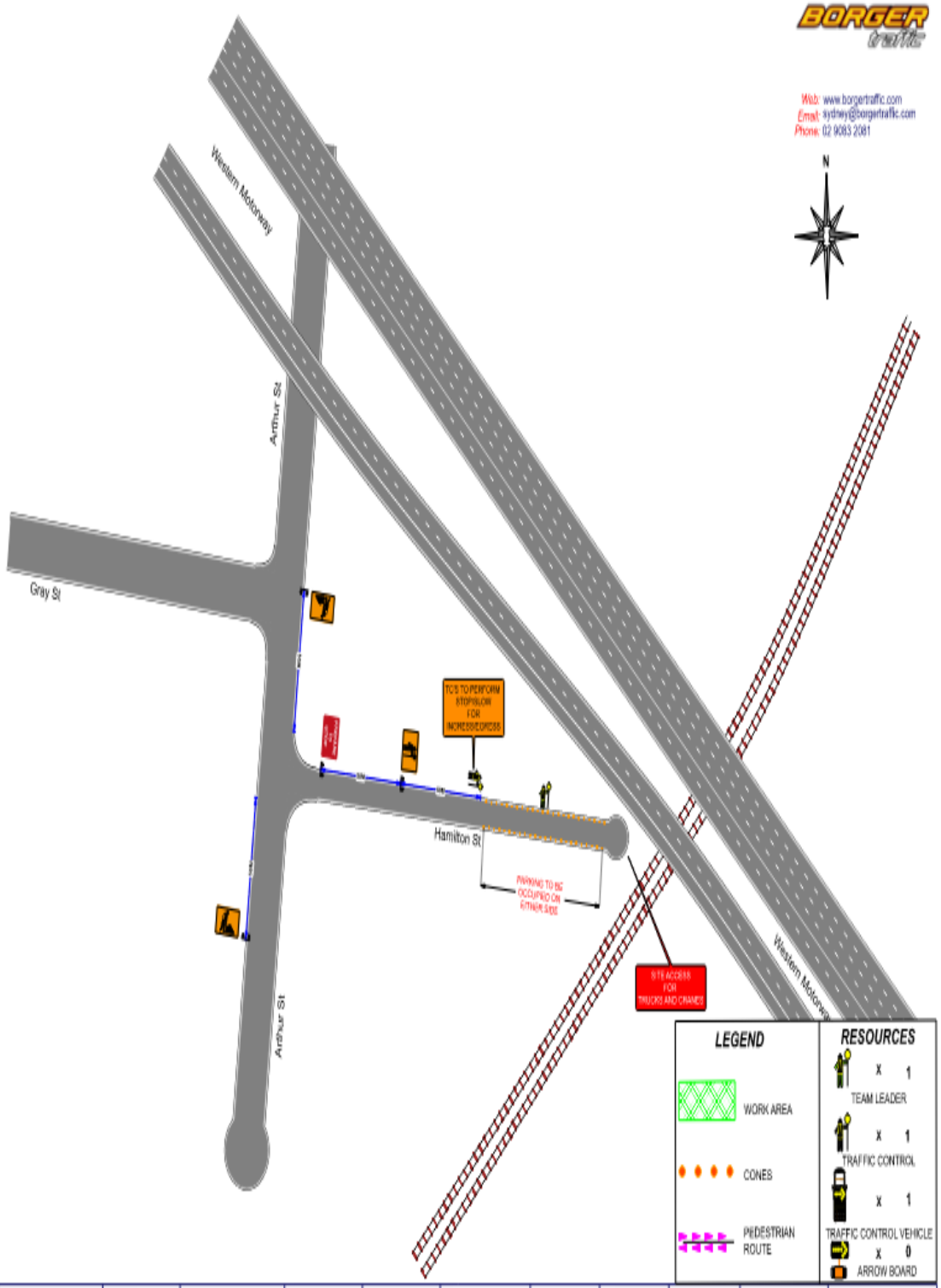
TGS Modified By:

Full Name: _____
PWZTMP or TCT Number: _____
Expiry Date or Issue Date: _____
Signature: _____
Date: _____

TGS Field Notes:

REV	REVISION DESCRIPTION	TGS PLAN #	TGS061	CLIENT:	HANLON INDUSTRIES	DESIGNED BY	S. KOLIMI	APPROVED BY	MEHMET.YESIL	IMPLEMENTED BY	
00	SUPPLIED TO CLIENT	ROAD NAME	HAMILTON ST	HANLON INDUSTRIES		SIGNATURE		SIGNATURE		SIGNATURE	
01		SUBURB	GRANVILLE	ROL REQUIRED	Y [ ] N [X]	DATE	15.04.2024	DATE	15.04.2024	DATE	
02		WORK LOCATION	GATE CONTROL	ROAD SPEED(S)	50 KM/HR	CERTIFICATE #	TCT0065537	CERTIFICATE #	TCT1003170	CERTIFICATE #	

BORGER traffic
Web: www.borgertraffic.com
Email: sydney@borgertraffic.com
Phone: 02 9083 2081



REV	REVISION DESCRIPTION	TGS PLAN #	TGS061	CLIENT:	HANLON CONSTRUCTION	DESIGNED BY	S. KOLIMI	APPROVED BY	MEHMET YESIL	IMPLEMENTED BY	
00	SUPPLIED TO CLIENT	ROAD NAME	HAMILTON ST	HANLON INDUSTRIES		SIGNATURE		SIGNATURE		SIGNATURE	
01		SUBURB	GRANVILLE	ROL REQUIRED	Y [ ] N [X]	DATE	16.04.2024	DATE	16.04.2024	DATE	
02		WORK LOCATION	GATE CONTROL	ROAD SPEED(S)	50 KM/HR	CERTIFICATE #	TCT0066537	CERTIFICATE #	TCT1003170	CERTIFICATE #	


BORGER traffic
Client: Hanlon
Project: Rose Hill Sign Removal
Location: Unwin St
Traffic Operation: Intermittent Stop
Work Activity: Site access-gate Control
TGS DEVELOPED BY: Mem Yesil
TfNSW License: TCT 1003170
Compound Entry
50m
50m
50m
50m
50m
PREPARE TO STOP
Signage place don Unwin St
Sign to be removed
James Ruse Dr
Unwin St
Western Motorway

TRAFFIC CONTROL GUIDANCE SCHEME-PRE WORKS RISK ASSESMENT CHECK LIST

Traffic Designers Name: Sandeep Kolimi

Day & date of risk assessment: Monday 15.04.2024

Client: Hanlon Industries

Work Site Location: Hamilton St-Granville

TGS Number: TGS062

Date of proposed works:
Current Road Speed:50 Km/hr

Speed Reduction Required?: Yes / No Speed Reduction to: 00Km/hr

Will works require an ROL to be lodged with RMS?: Yes / No ROL Application Number:

Will works require council permit?: Yes / No Name of the Council: Cumberland City Council

WORK SITE RISK ASSESSMENT

What is the current road configuration?	☐ One Lane-Single Direction	☐ 2 Lane-Divided	☒ Multi Lane -Divided
	☐ 2 Lane-2 Way	☐ 3 Lane - 2Way	☐ Multi Lane -Undivided
What is current road alignment?	☒ Straight	☐ Crest	☐ Pedestrian Crossing
	☐ Intersection	☐ Traffic Islands	☐ Curved
What is proposed traffic control set up?	☒ Stop/Slow	☐ Road Closure	☒ Pedestrian Management
	☐ Contra Flow	☐ Shoulder Closure	☐ Lane Closures
Which lane will the works affect	☒ Slow lane	☐ Fast Lane	☐ Fast and Middle lane
	☒ Shoulder	☐ Middle Lane	☐ Slow and Middle Lanes

Are the conflicting signs that need to be covered up: Yes

Any other site - specific items to be noted? Lane closure with pedestrian management and stop slow

SITE SPECIFIC RISK CHECK LIST: How are we to control the following hazard? Refer to SWMS for further Hazards

HAZARD	RISK	APPLICABLE	CONTROL MEASURES
Pedestrians	Struck by vehicles	Yes / No	Pedestrian management around work zone
High speed road	Struck by vehicles	Yes / No	
Long Queues	Rear end collisions	Yes / No	Gate Control
Night works	Struck by vehicles	Yes / No	
		Yes / No	
		Yes / No	
		Yes / No	

Traffic Designers sign: K Sandeep

Date: 15.04.2024

RISK ASSESSMENT

What is an ACTIVITY?
An activity is the physical task being undertaken. EG: Installation of an advanced warning sign, operating a PTCD, etc.

What is a HIGH RISK ACTIVITY?
A high risk activity requires a worker to hold a licence, competency and/or work permit/approval to perform the activity. This is due to the hazardous nature of the work.

What is a HAZARD?
A hazard is anything that could cause harm. EG: Traffic Controllers being struck by live traffic, Traffic Controllers falling into an excavation on the worksite, etc.

What is a RISK?
A risk is the assessment and determination of likelihood and consequence of the hazard occurring. E.g. crush injury to operator or nearby pedestrian from articulated dump truck tray rolling over. Using the **Risk Matrix**, allocate the **Risk Score** based on the consequence – e.g. permanent disability / fatality, and likelihood – e.g. likely to occur. The **Risk Score** is where the two points intersect – for this example it is a 3. The risk must be assessed before control measures are applied, and again after control measures are applied to verify if the risk has been eliminated or reduced.

Hierarchy of Controls
Southern Cross Traffic employs a Hierarchy of Controls which is split into 3 levels of control. Each level describes the ways in which a risk can be controlled. The higher the level of control, the greater level of protection and reliability is provided in effectively controlling the risk.

The most effective form of control is elimination, however where this is not possible, a combination of substitution, isolation or engineering controls must be applied to minimise the risk. Level 3 controls include administrative and PPE categories, the least preferred form of control to manage a risk.

Risk Matrix
The risk matrix provided below is used to distribute risks into four categories – Critical, High, Medium and Low.

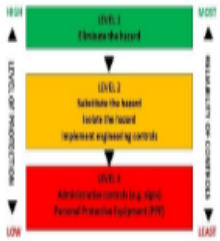
A task with an identified risk of Critical must not proceed. The Team Leader must escalate the high risk activity with the Site Supervisor and Operations, and work must stop immediately, to identify strategies to reduce risk or where Director approval is required where risk cannot be lowered to acceptable level.

How to look for hazards
A simple way to begin looking for hazards can be by dividing the Site into logical workplace groupings, such as:
- Task hazards (EG: loading and unloading vehicles, signs/devices needed for Site Treatment);
- Workplace hazards (EG: Pedestrian and Vehicular Traffic);
- Environmental hazards (EG: Road layout and configuration, topography/lay of the land, weather conditions – strong wind, rain, extreme heat);

There are many other activities that can be undertaken to help with identifying hazards. These include:
- Walking through and inspecting each task or location;
- Consulting with workers. Ask about any problems they have encountered or how the job should be carried out safely;
- Consider the following:
  - How people use equipment and materials;
  - How suitable the equipment used for the task is; and
  - How people could be injured directly and indirectly by the various workplace hazards.

LIKELIHOOD \ CONSEQUENCE	CRITICAL	HIGH	MEDIUM	LOW
Almost certainly will occur	EXTREME (E)	EXTREME (E)	EXTREME (E)	HIGH (H)
Likely to occur	EXTREME (E)	EXTREME (E)	HIGH (H)	MEDIUM (M)
Possibility to occur	EXTREME (E)	HIGH (H)	MEDIUM (M)	LOW (L)
Unlikely to occur	HIGH (H)	MEDIUM (M)	LOW (L)	LOW (L)
Could occur rarely	MEDIUM (M)	LOW (L)	LOW (L)	LOW (L)

RISK SCORE	CATEGORY
1 – 6	EXTREME (E)
7 – 10	HIGH (H)
11 – 14	MEDIUM (M)
15 – 20	LOW (L)



Likelihood	Definition	Frequency Scale
Almost certainly will occur	Would expect the event to occur **every time** the activity is undertaken (daily), >90% of the time the activity is undertaken.	Every day
Likely to occur	Would expect the event to occur **at least once a week** if the activity was done regularly, 50 – 90% of the time the activity was undertaken.	Every week
Possibility to occur	Would expect the event to occur **once per month** if the activity was done regularly, 20 – 40% of the time the activity was undertaken.	Every month
Unlikely to occur	Would expect the event to occur **once during the project** <20% of the time the activity was undertaken.	Duration of project
Could occur rarely	Would expect the event to occur **only in exceptional circumstances** <5% of the time the activity was undertaken whether performed regularly or infrequently.	Duration of project

Task	Hazard/s	Risk Rating	Mitigation Measures/Responses	Residual Risk Rating	TC/PCBU Responsible
Dynamic Works (including set up and pick up activities)	· Being struck by live traffic · TC in live traffic lane · Vehicular accidents	7 (High)	· Follow safe working methods as outlined in approved SWMS. · Positive communication between all crew members. · Cover vehicles to be used at all times, positioned at a safe distance from the lead vehicle. · Shadow/Tail vehicles to be positioned with good sight distance to oncoming traffic, as per TCAMS 6.1. · TMA's to be used as Cover Vehicles in all motorway scenarios, and/or for multi-lane roads exceeding 80km/H.	14 (Medium)	All TC's
Implementation of approved Signs and Devices	· Being struck by live traffic · TC in live traffic lane · Slips, trips and falls · Manual Handling injuries	7 (High)	· Follow safe working methods as outlined in approved SWMS. · TC to have a cover vehicle in place at all times. · TC to never stand in the live lane of traffic, only in the closed lane, with a cover vehicle in place. · Clear escape route to be available to TC at all times, this is non-negotiable. · Positive communication between all crew members.	14 (Medium)	All TC's
Stopping Traffic	· Being struck by live traffic · TC in live traffic lane · Slips, trips and falls	7 (High)	· Follow safe working methods as outlined in approved SWMS. · Traffic stoppages only to occur using PTCD's (Portable Traffic Lights, Portaboom, etc.). · TC to never stand in the live lane of traffic, only in the closed lane or off-road. · Clear escape route to be available to TC at all times, this is non-negotiable. · Positive communication between all crew members. · Hold point, must achieve minimum sight distances to oncoming traffic as per TCAMS 6.1.	12 (Medium)	All TC
Dealing with irate members of the public	· Being struck by live traffic · Receiving verbal or physical abuse	10 (High)	· Do not engage or retaliate with irate members of the public. · Report incident to Team Leader immediately. · Remain polite and de-escalate situation until Team Leader or other relevant Crew Member is able to assist. · Clear escape route to be available to TC at all times, this is non-negotiable.	15 (Low)	All TC's
Pedestrian Management	· Being struck by live traffic · Slips, trips and falls	7 (High)	· Set up clear exclusion zones around Work Area and restricted areas. · Signage and delineation to be set-up as per approved TGS, in accordance with TCAMS 6.1. · TC to monitor pedestrian movements and assist where required.	14 (Medium)	All TC's

Notations

End of Queues and Avoiding Collisions

Refer to TfNSW TCWS Manual V6 Section 4.6 End-of-queue management regarding placement of "PREPARE TO STOP" signs, assessment of expected queue lengths and procedures for reducing end-of-queue collisions.

Defining "D"

Refer to TfNSW TCWS Manual V6 section 4.3.6 Sight distances, Table 7-2. Dimension D calculation based on speed zone AND section 7.10.3 Tolerances on positioning of signs and devices.

TfNSW TCWS Manual V6.1: Section 4.3.4 Minimum clearances of workers to traffic (Page 47)

Work must be planned and designed to provide maximum clearances to workers on foot and plant. When performing static work, the minimum allowable clearance of 1.5m must be maintained at all times between workers on foot, plant, and traffic. Where workers are closer than 1.5m to moving traffic a 30km/h speed zone should be installed.

Other considerations to be undertaken in the specific Risk Assessment of working within 1.5m of passing traffic are to deploy VMS Radar Data Boards, Portable Speed Humps, Rumble Strips, Escort/Patrol Vehicle.

(TfNSW TCWS technical manual V6 section 7.6.6 Workers on foot. Also refer to Section 4.3.5 Protection of work area {Pge 47} and Table 4 Mandatory and recommended controls for protection of a work area {Pge 48}).

Other considerations to be undertaken in the specific Risk Assessment of working within 1.5m of passing traffic are to deploy VMS Radar Data Boards, Portable Speed Humps, Rumble Strips, Escort/Patrol Vehicle.

Traffic Controllers

Refer to TfNSW TCAWS V6 Section 5.4.3 Requirements for traffic controllers. Table 5-11 provides the general requirements that must be applied when a traffic controller is used, including the use of a PTCD and also refer to TfNSW TCAWS V6 Section 6.6 Portable traffic control devices Subsection 6.6.1 General

Sight distances

Refer to TfNSW TCWS Technical Manual V6.1:
>Section 5.4.5 Traffic control locations "When a traffic controller is utilized for operation of a PTCD or a STOP/SLOW bat, a sight distance of 1.5D must be allowed for." (Page 89).
>Section 5.4.3 Requirements for traffic controllers (Page 86) Table 5-11 General requirements for the use of a traffic controller. Specifically the "Visibility" and "Positioning" aspects therein.

Refer to AUSROADS Temporary Traffic Management Guidelines Part 3 Static Worksites:
>Section 2.5.4 Sight distance (Page15)
Table 2.3: Recommended sight distances to a traffic control device
Figure 2.3: Appropriate sight distance

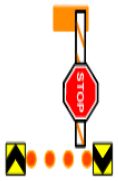
Termination Area

Traffic Control Risk Assessment undertaken prior to works commencing and as works progress to monitor the effectiveness and suitability of the END ROAD WORK sign placement and re-instatement of posted speed limits. Refer to the TfNSW TCAWS technical manual V6 Section 7.6.2.5 Termination Area and also refer to the AGTTM03-19 Part 3 Static Worksites: Section 4.9 Termination Area and "Table 4.5: Placement of termination signs" therein.

Field notes:

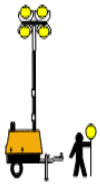
M4 Western motor way closure

Four traffic cones are to be installed on the centre line at 4m spacing, with a T5-5(L) at both ends.
TC must remain 1.2m from live traffic and maintain a clear escape route at all times whilst operating PORTABOOM



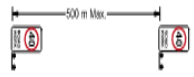
Use of Stop/Slow bats requires a 2-up Client approval to be obtained prior to commencement of works, and completion of the required Stop/Slow Bat Approval Request Form. This must also be recorded in the Field Notes section and this TGS signed off as modified/approved.

ALTERNATE SIGNAGE ARRANGEMENT

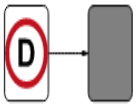


Light Towers to be used where required to illuminate TC's if lighting is insufficient.

Speed Reduction Signage to be repeated at a distance of 500m max.



Existing Speed Signs to be covered with opaque material.



Spacing of Cones/Devices

Purpose and usage	Speed zone of device location km/h	Maximum spacing m
On approach to a traffic controller position (centreline or edge line)	All cases	4
Merge tapers	55 to 75 greater than 75	9 12
Lateral shift tapers	55 to 75 greater than 75	12 18
Protecting freshly painted lines	55 to 75 greater than 75	24 60*
All other purposes	less than or equal to 55 55 to 75 greater than 75	4 12 18

Recommended Taper Lengths

Existing permanent speed limit (km/h)	Recommended taper length (m)		
	Traffic control taper	Lateral shift taper	Merge taper
45 or less	15	15	15
46 to 55	15	15	30
56 to 65	30	30	60
66 to 75	N/A	70	115
76 to 85	N/A	80	130
86 to 95	N/A	90	145
96 to 105	N/A	100	160
Greater than 105	N/A	110	180

Allowable Tolerance on amending Spacings

Tolerance	Positioning of signs, length of tapers or markings	Spacing of delineating devices
Minimum	10% less than the distances or lengths given	Nil
Maximum	25% more than the distances or lengths given	10% more than the spacing shown

Edge Clearances for Cones/Bollards

Edge of traffic lane is:	Edge clearances
Line of traffic cones or bollards	• 0.5 m for traffic speeds less than 65 km/h • 1.0 m for traffic speeds greater than 65 km/h

Posted Speed Limit of Subject Road/s

Adjusting or Modifying A TGS:

ITCP Holder-
- ITCP qualified person must ensure that the TGS is implemented as approved. Minor adjustments can be completed in accordance with Section 7.10.3 Tolerances on positioning of signs and devices. Modifications will be recorded on the TGS checklist and a signed copy will be available on-site.

PWZTMP Holder-
- Modifications to a Site Specific TGS must be approved by the PWZTMP or relevant qualification holder, and must be supported by a TMP or risk assessment to ensure all TGSs considers and mitigate identified site-specific conditions and risks.
- If risk is identified during the implementation of the TGS and requires modification outside of the tolerance listed below, the works must be stopped until an updated TGS is drafted and approved by a PWZTMP qualified person prior to works recommencing. (refer to TCAWS 7.10.4).
- Any anomalies or inconsistencies found in the TGSs being used must be recorded and reported back to the TGS designer who is PWZTMP qualified.

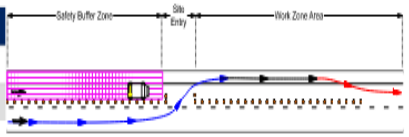
Implementing A TGS:

- A TGS must be installed, maintained and removed in a planned and safe manner.
The implementation of a TGS must only be undertaken by an ITCP qualified person.
(Refer To TCAWS 7.10.1)
- Signs and traffic control devices must be installed in a sequence via GPS, survey, landmarks, side streets or chainage in accordance with TCAWS V6 Section 6.4 and AGTTM Section 6.2
- An implementation TGS should be provided if the risk of implementation is deemed high. The sequence of implementation should be determined as part of the drafting process in TGS or SWMS, rather than being determined on-site. (Refer To TCAWS 7.10.2)

Notes:

- This Traffic Guidance Scheme is developed by competent and experienced persons in accordance with the requirements outlined in the TfNSW TCAWS Issue 6.0, AS1742.3 and the Road Management Act 2004.
- Prior to implementation of the TGS, D&D Traffic Management will carry out an inspection and risk assessment.
- A signed copy of the SWMS will be available on-site at all times.
- A PWZTMP and/or ITCP qualified person must ensure the TGS is implemented, and the work area maintained as per attached TGS. Otherwise, any adjustment and modification will be captured in the shift paperwork.
- Pedestrian management is to be overseen by onsite crew and supported by a risk assessment. If additional signage (TCAWS 6.5.2 - Table 6.5) is required it is subject to modifying TGS criteria, see below.
- Signs to be installed on high legs if sight obstruction is present (for example behind guardrails/barriers, etc.)
- Site Specific TGS is drafted for nominated works that is noted on the TGS. The TGS must be formally reviewed and signed off by a PWZTMP qualified person (a minimum of every 12 months from the drafted date) as per TCAWS 7.11.2. For details, refer to the title box below.
- Borger Traffic Management does not accept liability for the implementation of this TGS, when not directly involved in carrying out the subject works.

Site Entry and Exit Process



- Highlight entry point with double cones and leaving a small break as per above diagram.
- Prior to Entering Worksite, work vehicles shall:
  - Turn on beacons
  - Radio Traffic Management on approach to Site using nominated UHF channel
- Traffic Controllers are to ensure that no local traffic follows work vehicles in the work area
- Above diagram is depicting a Lane 1 Closure. Set-up is to be mirrored in case of median lane closures.

Dimension 'D'
AS 1742.3: A distance expressed in metres, determined in accordance with Clause 4.1.5, and used for the positioning of advanced warning signage.

Speed Limit (km/H)	Dimension D (m)
< 55 km/H	15 m
60 km/H	45 m
> 65 km/H	Approach Speed

BORGER traffic

Web: www.borgertraffic.com
Email: sydney@borgertraffic.com
Phone: 02 9083 2081

TGS Installation Date:

Date:_____

TGS Modified By:

Full Name:_____
PWZTMP or TCT Number:_____
Expiry Date or Issue Date:_____
Signature:_____
Date:_____

TGS Field Notes:

REV	REVISION DESCRIPTION	TGS PLAN #	TGS063	CLIENT:		DESIGNED BY	S. KOLIMI	APPROVED BY	MEHMET.YESIL	IMPLEMENTED BY	
00	SUPPLIED TO CLIENT	ROAD NAME	WESTERN MOTORWAY	HANLON INDUSTRIES		SIGNATURE		SIGNATURE		SIGNATURE	
01		SUBURB	GRANVILLE	ROL REQUIRED	Y [X] N [ ]	DATE	15.04.2024	DATE	15.04.2024	DATE	
02		WORK LOCATION	LANE CLOSURE	ROAD SPEED(S)	90 KM/HR	CERTIFICATE #	TCT0065537	CERTIFICATE #	TCT1003170	CERTIFICATE #	

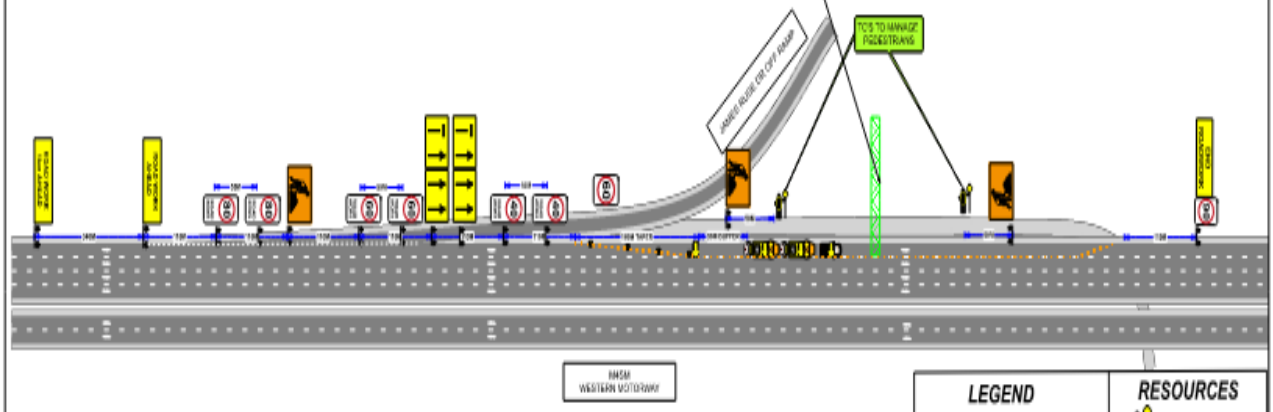

BORGER traffic
Web: www.borgertraffic.com
Email: sydney@borgertraffic.com
Phone: 02 9083 2081
N
JAME RUSE DR
JAME RUSE DR ON RAMP
JAME RUSE DR OFF RAMP
M4 WESTERN MOTOWAY
M4 WESTERN MOTOWAY
HAMILTON ST
JAME RUSE DR

NOTES:

1. THIS TGS IS GENERIC, A SITE ASSESSMENT SHOULD BE CONDUCTED TO ENSURE SUITABILITY & COMPLIANCE BEFORE IMPLEMENTATION.
2. THIS TGS MAY BE MODIFIED BY A SUITABLY QUALIFIED RMS ACCREDITED PERSON.
3. ALL DEVICES SHOULD BE INSTALLED IN ACCORDANCE WITH THE RMS TRAFFIC CONTROL AT WORKSITES MANUAL AND AUSTRALIAN STANDARDS 1742.3.
4. VMS BOARDS SHOULD BE USED AS ADVANCE WARNING WHERE POSSIBLE.
5. ANY MESSAGE DISPLAYED SHOULD BE IN ACCORDANCE WITH CURRENT RMS TECHNICAL DIRECTION.
6. CONSIDER VISIBILITY AT CREST AND CURVES WHEN PLACING ADVANCE SIGNS AND DEVICES.
7. ADVANCED WARNING VEHICLE POSITIONED 2m FROM THE EDGE LINE (PREFERABLY IN A PHONE BAY).
8. TRUCK MOUNTED ATTENUATOR TO BE USED TO SET UP/PACK UP SITE WHEREVER POSSIBLE.

SINAGE REMOVAL

BORGER traffic
Web: www.borgertraffic.com
Email: sydney@borgertraffic.com
Phone: 02 9083 2981



1

OVER HEAD VMS BOARDS USAGE TO BE CONFIRMED WHEN DISCUSSING WORK WITH MOTORWAY OPERATIONS CONTROLLER (M.O.C)

CONTACT MUST BE MADE WITH M.O.C IF BOARDS ARE NOT ACTIVE DURING THE APPROACH TO WORK SITE

ROADWORK AHEAD
REDUCE SPEED
MERGE RIGHT

2

WORKERS ON FOOT SHALL ENSURE THAT MINIMUM OF 1.5M CLEARENCE IS MAINTAINED WITH LIVE TRAFFIC LANES WHERE POSSIBLE

LEGEND

- WORK AREA
- CONES
- PEDESTRIAN ROUTE
- BARRIER BOARDS

RESOURCES

- x 1 TEAM LEADER
- x 3 TRAFFIC CONTROL
- x 2 TRAFFIC CONTROL VEHICLE
- x 1 ARROW BOARD
- x 2 TMA

REV	REVISION DESCRIPTION	TGS PLAN #	TGS083	CLIENT:	HANLON INDUSTRIES	DESIGNED BY	S. KOLIMI	APPROVED BY	MEHMET YESIL	IMPLEMENTED BY	
00	SUPPLIED TO CLIENT	ROAD NAME	WESTERN MOTORWAY			SIGNATURE		SIGNATURE		SIGNATURE	
01		SUBURB	GRANVILLE	ROL REQUIRED	Y [X] N [ ]	DATE	15.04.2024	DATE	15.04.2024	DATE	
02		WORK LOCATION	LANE CLOSURE	ROAD SPEED(S)	90 KM/HR	CERTIFICATE #	TCT0065537	CERTIFICATE #	TCT1003170	CERTIFICATE #	

TRAFFIC CONTROL GUIDANCE SCHEME-PRE WORKS RISK ASSESMENT CHECK LIST

Traffic Designers Name: Sandeep Kolimi

Day & date of risk assessment: Monday 15.04.2024

TGS Number: TGS063

Client: Hanlon Industries

Work Site Location: Western Motorway(M4)-Granville

Date of proposed works:
Current Road Speed:90 Km/hr

Speed Reduction Required?: Yes / No Speed Reduction to: 40Km/hr

Will works require an ROL to be lodged with RMS?: Yes / No ROL Application Number:

Will works require council permit?: Yes / No Name of the Council: Cumberland City Council

WORK SITE RISK ASSESSMENT

What is the current road configuration?	☐ One Lane-Single Direction	☐ 2 Lane-Divided	☒ Multi Lane -Divided
	☐ 2 Lane-2 Way	☐ 3 Lane - 2Way	☐ Multi Lane -Undivided
What is current road alignment?	☒ Straight	☐ Crest	☒ Pedestrian Crossing
	☐ Intersection	☐ Traffic Islands	☐ Curved
What is proposed traffic control set up?	☐ Stop/Slow	☐ Road Closure	☒ Pedestrian Management
	☐ Contra Flow	☐ Shoulder Closure	☒ Lane Closures
Which lane will the works affect	☒ Slow lane	☐ Fast Lane	☐ Fast and Middle lane
	☒ Shoulder	☐ Middle Lane	☐ Slow and Middle Lanes

Are the conflicting signs that need to be covered up: Yes

Any other site - specific items to be noted? Lane closure with pedestrian management and stop slow

SITE SPECIFIC RISK CHECK LIST: How are we to control the following hazard? Refer to SWMS for further Hazards

HAZARD	RISK	APPLICABLE	CONTROL MEASURES
Pedestrians	Struck by vehicles	Yes / No	Pedestrian management around work zone
High speed road	Struck by vehicles	Yes / No	Speed reduction to 40km/hr
Long Queues	Rear end collisions	Yes / No	Lane Closure with TMA
Night works	Struck by vehicles	Yes / No	PPE, arrow board, TMA, TC vehicle with flashlights
		Yes / No	
		Yes / No	
		Yes / No	

Traffic Designers sign: K Sandeep Date: 15.04.2024

RISK ASSESSMENT

What is an ACTIVITY?
An activity is the physical task being undertaken. EG: Installation of an advanced warning sign, operating a PTCD, etc.

What is a HIGH RISK ACTIVITY?
A high risk activity requires a worker to hold a licence, competency and/or work permit/approval to perform the activity. This is due to the hazardous nature of the work.

What is a HAZARD?
A hazard is anything that could cause harm. EG: Traffic Controllers being struck by live traffic, Traffic Controllers falling into an excavation on the worksite, etc.

What is a RISK?
A risk is the assessment and determination of likelihood and consequence of the hazard occurring. E.g. crush injury to operator or nearby pedestrian from articulated dump truck tray rolling over. Using the **Risk Matrix**, allocate the **Risk Score** based on the consequence – e.g. permanent disability / fatality, and likelihood – e.g. likely to occur. The **Risk Score** is where the two points intersect – for this example it is a 3. The risk must be assessed before control measures are applied, and again after control measures are applied to verify if the risk has been eliminated or reduced.

Hierarchy of Controls
Southern Cross Traffic employs a Hierarchy of Controls which is split into 3 levels of control. Each level describes the ways in which a risk can be controlled. The higher the level of control, the greater level of protection and reliability is provided in effectively controlling the risk.

The most effective form of control is elimination, however where this is not possible, a combination of substitution, isolation or engineering controls must be applied to minimise the risk. Level 3 controls include administrative and PPE categories, the least preferred form of control to manage a risk.

Risk Matrix
The risk matrix provided below is used to distribute risks into four categories – Critical, High, Medium and Low.

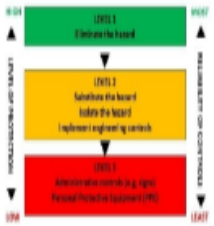
A task with an identified risk of Critical must not proceed. The Team Leader must escalate the High-risk activity with the Site Supervisor and Operations, and work must stop immediately, to identify strategies to reduce risk or where Director approval is required where risk cannot be lowered to acceptable level.

How to look for hazards:
A simple way to begin looking for hazards can be by dividing the Site into logical workplace groupings, such as:
- Task hazards (EG: loading and unloading vehicles, signs/devices needed for Site Treatment);
- Workplace hazards (EG: Pedestrian and Vehicular Traffic);
- Environmental hazards (EG: Road layout and configuration, topography/lay of the land, weather conditions – strong wind, rain, extreme heat).

There are many other activities that can be undertaken to help with identifying hazards. These include:
- Walking through and inspecting each task or location;
- Consulting with workers. Ask about any problems they have encountered or how the job should be carried out safely;
- Consider the following:
  - How people use equipment and materials;
  - How suitable the equipment used for the task is; and
  - How people could be injured directly and indirect by the various workplace hazards.

	CONSEQUENCE			
LIKELIHOOD	CRITICAL	HIGH	MEDIUM	LOW
Almost certainly will occur	EXTREME (E)	EXTREME (E)	EXTREME (E)	HIGH (H)
Likely to occur	EXTREME (E)	EXTREME (E)	HIGH (H)	MEDIUM (M)
Possibility to occur	EXTREME (E)	HIGH (H)	MEDIUM (M)	LOW (L)
Unlikely to occur	HIGH (H)	MEDIUM (M)	LOW (L)	LOW (L)
Could occur rarely	MEDIUM (M)	LOW (L)	LOW (L)	LOW (L)

RISK SCORE	CATEGORY
1 – 6	EXTREME (E)
7 – 10	HIGH (H)
11 – 14	MEDIUM (M)
15 – 20	LOW (L)



Likelihood	Definition	Frequency Scale
Almost certainly will occur	Would expect the event to occur **every time** the activity is undertaken (daily), >90% of the time the activity is undertaken.	Every day
Likely to occur	Would expect the event to occur **at least once a week** if the activity was done regularly, 50 – 90% of the time the activity was undertaken.	Every week
Possibility to occur	Would expect the event to occur **once per month** if the activity was done regularly, 30 – 60% of the time the activity was undertaken.	Every month
Unlikely to occur	Would expect the event to occur **once during the project** <30% of the time the activity was undertaken.	Duration of project
Could occur rarely	Would expect the event to occur **only in exceptional circumstances** <5% of the time the activity was undertaken, whether performed regularly or infrequently.	Duration of project

Task	Hazard/s	Risk Rating	Mitigation Measures/Responses	Residual Risk Rating	TC/PCBU Responsible
Dynamic Works (including set-up and pack-up activities)	- Being struck by live traffic - TC in live traffic lane - Vehicular accidents	7 (High)	- Follow safe working methods as outlined in approved SWMS. - Positive communication between all crew members. - Cover vehicles to be used at all times, positioned at a safe distance from the lead vehicle. - Shadow/Tail vehicles to be positioned with good sight distance to oncoming traffic, as per TCAWS 6.1. - TMA's to be used as Cover Vehicles in all motorway scenarios, and/or for multi-lane roads exceeding 80km/H.	14 (Medium)	All TC's
Implementation of approved Signs and Devices	- Being struck by live traffic - TC in live traffic lane - Slips, trips and falls - Manual Handling injuries	7 (High)	- Follow safe working methods as outlined in approved SWMS. - TC to have a cover vehicle in place at all times. - TC to never stand in the live lane of traffic, only in the closed lane, with a cover vehicle in place. - Clear escape route to be available to TC at all times, this is non-negotiable. - Positive communication between all crew members.	14 (Medium)	All TC's
Stopping Traffic	- Being struck by live traffic - TC in live traffic lane - Slips, trips and falls	7 (High)	- Follow safe working methods as outlined in approved SWMS. - Traffic stoppages only to occur using PTCD's (Portable Traffic Lights, Portaloomo, etc). - TC to never stand in the live lane of traffic, only in the closed lane or off-road. - Clear escape route to be available to TC at all times, this is non-negotiable. - Positive communication between all crew members. - Hold point: must achieve minimum sight distances to oncoming traffic as per TCAWS 6.1.	12 (Medium)	All TC
Dealing with irate members of the public	- Being struck by live traffic - Receiving verbal or physical abuse	10 (High)	- Do not engage or retaliate with irate members of the public. - Report incident to Team Leader immediately. - Remain calm and de-escalate situation until Team Leader or other relevant Crew Members is able to assist. - Clear escape route to be available to TC at all times, this is non-negotiable.	15 (Low)	All TC's
Pedestrian Management	- Being struck by live traffic - Slips, trips and falls	7 (High)	- Set up clear exclusion zones around Work Area and restricted areas. - Signage and delineation to be set up as per approved TCS, in accordance with TCAWS 6.1. - TC to monitor pedestrian movements and assist where required.	14 (Medium)	All TC's

Notations

End of Queues and Avoiding Collisions

Refer to TfNSW TCWS Manual V6 Section 4.6 End-of-queue management regarding placement of "PREPARE TO STOP" signs, assessment of expected queue lengths and procedures for reducing end-of-queue collisions.

Defining "D"

Refer to TfNSW TCWS Manual V6 section 4.3.6 Sight distances, Table 7-2. Dimension D calculation based on speed zone AND section 7.10.3 Tolerances on positioning of signs and devices.

TfNSW TCWS Manual V6.1: Section 4.3.4 Minimum clearances of workers to traffic (Page 47)

Work must be planned and designed to provide maximum clearances to workers on foot and plant. When performing static work, the minimum allowable clearance of 1.5m must be maintained at all times between workers on foot, plant, and traffic. Where workers are closer than 1.5m to moving traffic a 30km/h speed zone should be installed.

Other considerations to be undertaken in the specific Risk Assessment of working within 1.5m of passing traffic are to deploy VMS Radar Data Boards, Portable Speed Humps, Rumble Strips, Escort/Patrol Vehicle.

(TfNSW TCWS technical manual V6 section 7.6.6 Workers on foot. Also refer to Section 4.3.5 Protection of work area {Pge 47) and Table 4 Mandatory and recommended controls for protection of a work area {Pge 48}).

Other considerations to be undertaken in the specific Risk Assessment of working within 1.5m of passing traffic are to deploy VMS Radar Data Boards, Portable Speed Humps, Rumble Strips, Escort/Patrol Vehicle.

Traffic Controllers

Refer to TfNSW TCAWS V6 Section 5.4.3 Requirements for traffic controllers. Table 5-11 provides the general requirements that must be applied when a traffic controller is used, including the use of a PTCD and also refer to TfNSW TCAWS V6 Section 6.6 Portable traffic control devices Subsection 6.6.1 General

Sight distances

Refer to TfNSW TCWS Technical Manual V6.1:
>Section 5.4.5 Traffic control locations "When a traffic controller is utilized for operation of a PTCD or a STOP/SLOW bat, a sight distance of 1.5D must be allowed for." (Page 89).
>Section 5.4.3 Requirements for traffic controllers (Page 86) Table 5-11 General requirements for the use of a traffic controller. Specifically the "Visibility" and "Positioning" aspects therein.

Refer to AUSROADS Temporary Traffic Management Guidelines Part 3 Static Worksites:
>Section 2.5.4 Sight distance (Page15)
Table 2.3: Recommended sight distances to a traffic control device
Figure 2.3: Appropriate sight distance

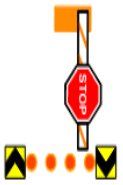
Termination Area

Traffic Control Risk Assessment undertaken prior to works commencing and as works progress to monitor the effectiveness and suitability of the END ROAD WORK sign placement and re-instatement of posted speed limits.
Refer to the TfNSW TCAWS technical manual V6 Section 7.6.2.5 Termination Area and also refer to the AGTTM03-19 Part 3 Static Worksites: Section 4.9 Termination Area and "Table 4.5: Placement of termination signs" therein.

Field notes:

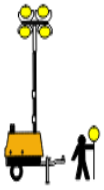
Opp 77A - Parramatta rd Granville entry

Four traffic cones are to be installed on the centre line at 4m spacing, with a T5-5(L) at both ends.
TC must remain 1.2m from live traffic and maintain a clear escape route at all times whilst operating PORTABOOM



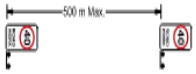
Use of Stop/Slow bats requires a 2-up Client approval to be obtained prior to commencement of works, and completion of the required Stop/Slow Bat Approval Request Form. This must also be recorded in the Field Notes section and this TGS signed off as modified/approved.

ALTERNATE SIGNAGE ARRANGEMENT

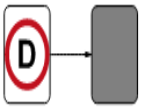


Light Towers to be used where required to illuminate TC's if lighting is insufficient.

Speed Reduction Signage to be repeated at a distance of 500m max.



Existing Speed Signs to be covered with opaque material.



Spacing of Cones/Devices

Purpose and usage	Speed zone of device location km/h	Maximum spacing m
On approach to a traffic controller position (centreline or edge line)	All cases	4
Merge tapers	55 to 75 greater than 75	9 12
Lateral shift tapers	55 to 75 greater than 75	12 18
Protecting freshly painted lines	56 to 75 greater than 75	24 60*
All other purposes	less than or equal to 55 56 to 75 greater than 76	4 12 18

Recommended Taper Lengths

Existing permanent speed limit (km/h)	Recommended taper length (m)		
	Traffic control taper	Lateral shift taper	Merge taper
45 or less	15	15	15
46 to 55	15	15	30
56 to 65	30	30	60
66 to 75	N/A	70	115
76 to 85	N/A	80	130
86 to 95	N/A	90	145
96 to 105	N/A	100	160
Greater than 105	N/A	110	180

Allowable Tolerance on amending Spacings

Tolerance	Positioning of signs, length of tapers or markings	Spacing of delineating devices
Minimum	10% less than the distances or lengths given	Nil
Maximum	20% more than the distances or lengths given	10% more than the spacing shown

Edge Clearances for Cones/Bollards

Edge of traffic lane to:	Edge clearances
Line of traffic cones or bollards	• 0.5 m for traffic speeds less than 65 km/h • 1.0 m for traffic speeds greater than 65 km/h

Posted Speed Limit of Subject Road/s

Adjusting or Modifying A TGS:

ITCP Holder-

- ITCP qualified person must ensure that the TGS is implemented as approved. Minor adjustments can be completed in accordance with Section 7.10.3 Tolerances on positioning of signs and devices. Modifications will be recorded on the TGS checklist and a signed copy will be available on-site.

PWZTMP Holder-

- Modifications to a Site Specific TGS must be approved by the PWZTMP or relevant qualification holder, and must be supported by a TMP or risk assessment to ensure all TGSs considers and mitigate identified site-specific conditions and risks.
- If risk is identified during the implementation of the TGS and requires modification outside of the tolerance listed below, the works must be stopped until an updated TGS is drafted and approved by a PWZTMP qualified person prior to works recommencing. (refer to TCAWS 7.10.4).
- Any anomalies or inconsistencies found in the TGSs being used must be recorded and reported back to the TGS designer who is PWZTMP qualified.

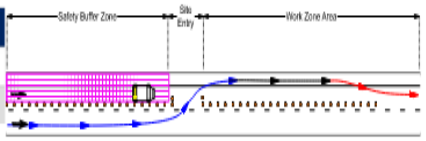
Implementing A TGS:

- A TGS must be installed, maintained and removed in a planned and safe manner.
The implementation of a TGS must only be undertaken by an ITCP qualified person.
(Refer To TCAWS 7.10.1)
- Signs and traffic control devices must be installed in a sequence via GPS, survey, landmarks, side streets or chainage in accordance with TCAWS V6 Section 6.4 and AGTTM Section 6.2
- An implementation TGS should be provided if the risk of implementation is deemed high. The sequence of implementation should be determined as part of the drafting process in TGS or SWMS, rather than being determined on-site. (Refer To TCAWS 7.10.2)

Notes:

- This Traffic Guidance Scheme is developed by competent and experienced persons in accordance with the requirements outlined in the TfNSW TCAWS Issue 6.0, AS1742.3 and the Road Management Act 2004.
- Prior to implementation of the TGS, D&D Traffic Management will carry out an inspection and risk assessment.
- A signed copy of the SWMS will be available on-site at all times.
- A PWZTMP and/or ITCP qualified person must ensure the TGS is implemented, and the work area maintained as per attached TGS. Otherwise, any adjustment and modification will be captured in the shift paperwork.
- Pedestrian management is to be overseen by onsite crew and supported by a risk assessment. If additional signage (TCAWS 6.5.2 - Table 6.5) is required it is subject to modifying TGS criteria, see below.
- Signs to be installed on high legs if sight obstruction is present (for example behind guardrails/barriers, etc.)
- Site Specific TGS is drafted for nominated works that is noted on the TGS. The TGS must be formally reviewed and signed off by a PWZTMP qualified person (a minimum of every 12 months from the drafted date) as per TCAWS 7.11.2. For details, refer to the title box below.
- Borger Traffic Management does not accept liability for the implementation of this TGS, when not directly involved in carrying out the subject works.

Site Entry and Exit Process



- Highlight entry point with double cones and leaving a small break as per above diagram.
- Prior to Entering Worksite, work vehicles shall:
  - Turn on beacons
  - Radio Traffic Management on approach to Site using nominated UHF channel
- Traffic Controllers are to ensure that no local traffic follows work vehicles in the work area
- Above diagram is depicting a Lane 1 Closure. Set-up is to be mirrored in case of median lane closures.

Dimension 'D'
AS 1742.3: A distance expressed in metres, determined in accordance with Clause 4.1.5, and used for the positioning of advanced warning signage.

Speed Limit (km/H)	Dimension D (m)
< 55 km/H	15 m
60 km/H	45 m
> 65 km/H	Approach Speed

BORGER traffic

Web: www.borgertraffic.com
Email: sydney@borgertraffic.com
Phone: 02 9083 2081

TGS Installation Date:

Date: _____

TGS Modified By:

Full Name: _____

PWZTMP or TCT Number: _____

Expiry Date or Issue Date: _____

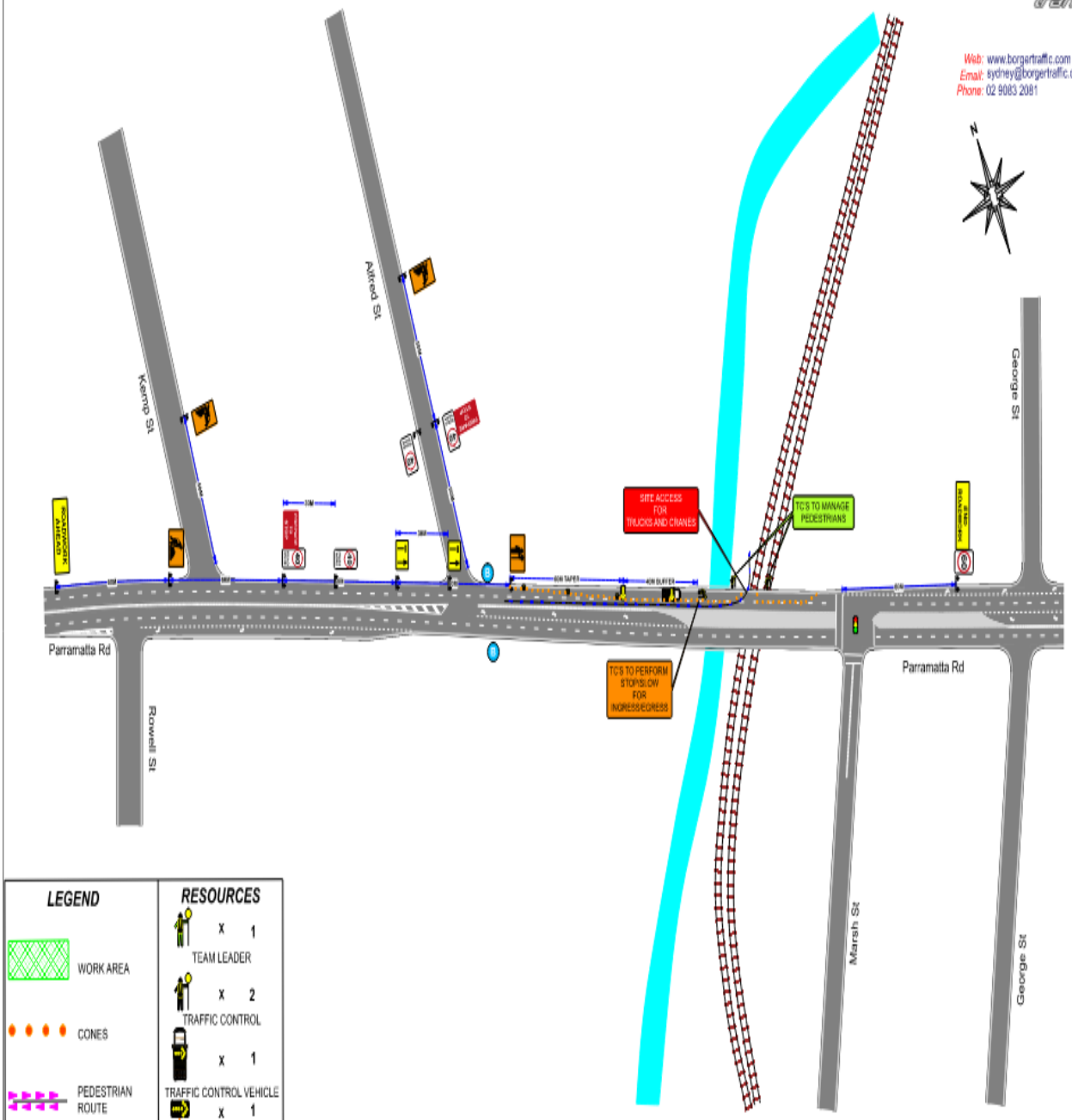
Signature: _____

Date: _____

TGS Field Notes:

REV	REVISION DESCRIPTION	TGS PLAN #	TGS061	CLIENT:		DESIGNED BY	S. KOLIMI	APPROVED BY	MEHMET.YESIL	IMPLEMENTED BY	
00	SUPPLIED TO CLIENT	ROAD NAME	PARRAMATTA RD	HANLON INDUSTIRES		SIGNATURE		SIGNATURE		SIGNATURE	
01		SUBURB	GRANVILLE	ROL REQUIRED	Y [X] N [ ]	DATE	15.04.2024	DATE	15.04.2024	DATE	
02		WORK LOCATION	LANE CLOSURE-SS	ROAD SPEED(S)	60 KM/HR	CERTIFICATE #	TCT0065537	CERTIFICATE #	TCT1003170	CERTIFICATE #	

Web: www.borgertraffic.com
Email: sydney@borgertraffic.com
Phone: 02 9083 2081



LEGEND

- WORK AREA
- CONES
- PEDESTRIAN ROUTE

RESOURCES

- x 1 TEAM LEADER
- x 2 TRAFFIC CONTROL
- x 1 TRAFFIC CONTROL VEHICLE
- x 1 ARROW BOARD

REV	REVISION DESCRIPTION	TGS PLAN #	TGS061	CLIENT:		DESIGNED BY	S. KOLIMI	APPROVED BY	MEHMET.YESIL	IMPLEMENTED BY	
00	SUPPLIED TO CLIENT	ROAD NAME	PARRAMATTA RD	HANLON INDUSTIRES		SIGNATURE		SIGNATURE		SIGNATURE	
01		SUBURB	GRANVILLE	ROL REQUIRED	Y [X] N [ ]	DATE	15.04.2024	DATE	15.04.2024	DATE	
02		WORK LOCATION	LANE CLOSURE-SS	ROAD SPEED(S)	60 KM/HR	CERTIFICATE #	TCT0065537	CERTIFICATE #	TCT1003170	CERTIFICATE #	

TRAFFIC CONTROL GUIDANCE SCHEME-PRE WORKS RISK ASSESMENT CHECK LIST

Traffic Designers Name: Sandeep Kolimi

Day & date of risk assessment: Monday 15.04.2024

TGS Number: TGS061

Client: Hanlon Industries

Work Site Location: Parramatta Rd-Granville

Date of proposed works:
Current Road Speed:60 Km/hr

Speed Reduction Required?: Yes / No Speed Reduction to: 40Km/hr

Will works require an ROL to be lodged with RMS?: Yes / No ROL Application Number:

Will works require council permit?: Yes / No Name of the Council: Cumberland City Council

WORK SITE RISK ASSESSMENT

What is the current road configuration?	☐ One Lane-Single Direction	☐ 2 Lane-Divided	☒ Multi Lane -Divided
	☐ 2 Lane-2 Way	☐ 3 Lane - 2Way	☐ Multi Lane -Undivided
What is current road alignment?	☒ Straight	☐ Crest	☒ Pedestrian Crossing
	☐ Intersection	☐ Traffic Islands	☐ Curved
What is proposed traffic control set up?	☒ Stop/Slow	☐ Road Closure	☒ Pedestrian Management
	☐ Contra Flow	☐ Shoulder Closure	☒ Lane Closures
Which lane will the works affect	☒ Slow lane	☐ Fast Lane	☐ Fast and Middle lane
	☒ Shoulder	☐ Middle Lane	☐ Slow and Middle Lanes

Are the conflicting signs that need to be covered up: Yes

Any other site - specific items to be noted? Lane closure with pedestrian management and stop slow

SITE SPECIFIC RISK CHECK LIST: How are we to control the following hazard? Refer to SWMS for further Hazards

HAZARD	RISK	APPLICABLE	CONTROL MEASURES
Pedestrians	Struck by vehicles	Yes / No	Pedestrian management around work zone
High speed road	Struck by vehicles	Yes / No	Speed reduction to 40 km/hr
Long Queues	Rear end collisions	Yes / No	Lane Closure with stop slow
Night works	Struck by vehicles	Yes / No	Traffic Control vehicle with arrow board
		Yes / No	
		Yes / No	
		Yes / No	

Traffic Designers sign: K Sandeep

Date: 15.04.2024

RISK ASSESSMENT

What is an ACTIVITY?
An activity is the physical task being undertaken. EG: Installation of an advanced warning sign, operating a PTCD, etc.

What is a HIGH RISK ACTIVITY?
A high risk activity requires a worker to hold a licence, competency and/or work permit/approval to perform the activity. This is due to the hazardous nature of the work.

What is a HAZARD?
A hazard is anything that could cause harm. EG: Traffic Controllers being struck by live traffic, Traffic Controllers falling into an excavation on the worksite, etc.

What is a RISK?
A risk is the assessment and determination of likelihood and consequence of the hazard occurring. E.g. crush injury to operator or nearby pedestrian from articulated dump truck tray rolling over. Using the **Risk Matrix**, allocate the **Risk Score** based on the consequences – e.g. permanent disability / fatality, and likelihood – e.g. likely to occur. The **Risk Score** is where the two points intersect – for this example it is a 3. The risk must be assessed before control measures are applied, and again after control measures are applied to verify if the risk has been eliminated or reduced.

Hierarchy of Controls
Southern Cross Traffic employs a Hierarchy of Controls which is split into 5 levels of control. Each level describes the ways in which a risk can be controlled. The higher the level of control, the greater level of protection and reliability is provided in effectively controlling the risk.

The most effective form of control is elimination, however where this is not possible, a combination of substitution, isolation or engineering controls must be applied to minimise the risk. Level 3 controls include administrative and PPE categories, the least preferred form of control to manage a risk.

Risk Matrix
The risk matrix provided below is used to distribute risks into four categories – Critical, High, Medium and Low.

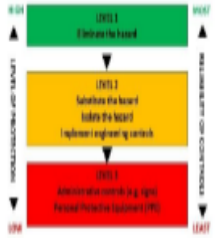
A task with an identified risk of Critical must not proceed. The Team Leader must escalate the high risk activity with the Site Supervisor and Operations, and work must stop immediately, to identify strategies to reduce risk or where Director approval is required where risk cannot be lowered to acceptable level.

How to look for hazards
A simple way to begin looking for hazards can be by dividing the Site into logical workplace groupings, such as:
- Task hazards (EG: loading and unloading vehicles, signs/devices needed for Site Treatment);
- Workplace hazards (EG: Pedestrian and Vehicular Traffic);
- Environmental hazards (EG: Road layout and configuration, topography/lay of the land, weather conditions – strong wind, rain, extreme heat).

There are many other activities that can be undertaken to help with identifying hazards. These include:
- Walking through and inspecting each task or location;
- Consulting with workers. Ask about any problems they have encountered or how the job should be carried out safely;
- Consider the following:
  - How people use equipment and materials;
  - How suitable the equipment used for the task is; and
  - How people could be injured directly and indirect by the various workplace hazards.

LIKELIHOOD	CONSEQUENCE: CRITICAL	HIGH	MEDIUM	LOW
Almost certainly will occur	EXTREME (E)	EXTREME (E)	EXTREME (E)	HIGH (H)
Likely to occur	EXTREME (E)	EXTREME (E)	HIGH (H)	MEDIUM (M)
Possibility to occur	EXTREME (E)	HIGH (H)	MEDIUM (M)	LOW (L)
Unlikely to occur	HIGH (H)	MEDIUM (M)	LOW (L)	LOW (L)
Could occur rarely	MEDIUM (M)	LOW (L)	LOW (L)	LOW (L)

RISK SCORE	CATEGORY
1 – 6	EXTREME (E)
7 – 10	HIGH (H)
11 – 14	MEDIUM (M)
15 – 20	LOW (L)



Likelihood	Definition	Frequency Score
Almost certainly will occur	Would expect the event to occur **every time** the activity is undertaken (daily), >90% of the time the activity is undertaken.	Every day
Likely to occur	Would expect the event to occur **at least once a week** if the activity was done regularly, 50 – 90% of the time the activity was undertaken.	Every week
Possibility to occur	Would expect the event to occur **once per month** if the activity was done regularly, 30 – 60% of the time the activity was undertaken.	Every month
Unlikely to occur	Would expect the event to occur **once during the project** <30% of the time the activity was undertaken.	Duration of project
Could occur rarely	Would expect the event to occur **only in exceptional circumstances** <5% of the time the activity was undertaken whether performed regularly or infrequently.	Duration of project

Task	Hazard/s	Risk Rating	Mitigation Measures/Responses	Residual Risk Rating	TC/PCBU Responsible
Dynamic Works (including set-up and pack-up activities)	- Being struck by live traffic - TC in live traffic lane - Vehicular accidents	7 (High)	- Follow safe working methods as outlined in approved SWMS. - Positive communication between all crew members. - Cover vehicles to be used at all times, positioned at a safe distance from the lead vehicle. - Shadow/Tail vehicles to be positioned with good sight distance to oncoming traffic, as per TCAWS 6.1. - TMA's to be used as Cover Vehicles in all motorway scenarios, and/or for multi lane roads exceeding 80km/H.	14 (Medium)	All TC's
Implementation of approved Signs and Devices	- Being struck by live traffic - TC in live traffic lane - Slips, trips and falls - Manual Handling injuries	7 (High)	- Follow safe working methods as outlined in approved SWMS. - TC to have a cover vehicle in place at all times. - TC to never stand in the live lane of traffic, only in the closed lane, with a cover vehicle in place. - Clear escape route to be available to TC at all times, this is non-negotiable. - Positive communication between all crew members.	14 (Medium)	All TC's
Stopping Traffic	- Being struck by live traffic - TC in live traffic lane - Slips, trips and falls	7 (High)	- Follow safe working methods as outlined in approved SWMS. - Traffic stoppages only to occur using PTCD's (Portable Traffic Lights, Portaboons, etc). - TC to never stand in the live lane of traffic, only in the closed lane or off-road. - Clear escape route to be available to TC at all times, this is non-negotiable. - Positive communication between all crew members. - Hold point, must achieve minimum sight distances to oncoming traffic as per TCAWS 6.1.	12 (Medium)	All TC
Dealing with / interviewing members of the public	- Being struck by live traffic - Receiving verbal or physical abuse	10 (High)	- Do not engage or retaliate with / interviewers of the public. - Report incident to Team Leader immediately. - Remain calm and de-escalate situation until Team Leader or other relevant Crew Member is able to assist. - Clear escape route to be available to TC at all times, this is non-negotiable.	15 (Low)	All TC's
Pedestrian Management	- Being struck by live traffic - Slips, trips and falls	7 (High)	- Set up clear exclusion zones around Work Area and restricted areas. - Signage and delineation to be set up as per approved TCS, in accordance with TCAWS 6.1. - TC to monitor pedestrian movements and assist where required.	14 (Medium)	All TC's

Notations

End of Queues and Avoiding Collisions

Refer to TfNSW TCWS Manual V6 Section 4.6 End-of-queue management regarding placement of "PREPARE TO STOP" signs, assessment of expected queue lengths and procedures for reducing end-of-queue collisions.

Defining "D"

Refer to TfNSW TCWS Manual V6 section 4.3.6 Sight distances, Table 7-2. Dimension D calculation based on speed zone AND section 7.10.3 Tolerances on positioning of signs and devices.

TfNSW TCWS Manual V6.1: Section 4.3.4 Minimum clearances of workers to traffic (Page 47)

Work must be planned and designed to provide maximum clearances to workers on foot and plant. When performing static work, the minimum allowable clearance of 1.5m must be maintained at all times between workers on foot, plant, and traffic. Where workers are closer than 1.5m to moving traffic a 30km/h speed zone should be installed.

Other considerations to be undertaken in the specific Risk Assessment of working within 1.5m of passing traffic are to deploy VMS Radar Data Boards, Portable Speed Humps, Rumble Strips, Escort/Patrol Vehicle.

(TfNSW TCWS technical manual V6 section 7.6.6 Workers on foot. Also refer to Section 4.3.5 Protection of work area (Pge 47) and Table 4 Mandatory and recommended controls for protection of a work area (Pge 48)).

Other considerations to be undertaken in the specific Risk Assessment of working within 1.5m of passing traffic are to deploy VMS Radar Data Boards, Portable Speed Humps, Rumble Strips, Escort/Patrol Vehicle.

Traffic Controllers

Refer to TfNSW TCAWS V6 Section 5.4.3 Requirements for traffic controllers. Table 5-11 provides the general requirements that must be applied when a traffic controller is used, including the use of a PTCD and also refer to TfNSW TCAWS V6 Section 6.6 Portable traffic control devices Subsection 6.6.1 General

Sight distances

Refer to TfNSW TCWS Technical Manual V6.1:
>Section 5.4.5 Traffic control locations "When a traffic controller is utilized for operation of a PTCD or a STOP/SLOW bat, a sight distance of 1.5D must be allowed for." (Page 89).
>Section 5.4.3 Requirements for traffic controllers (Page 86) Table 5-11 General requirements for the use of a traffic controller. Specifically the "Visibility" and "Positioning" aspects therein.

Refer to AUSROADS Temporary Traffic Management Guidelines Part 3 Static Worksites:
>Section 2.5.4 Sight distance (Page15)
Table 2.3: Recommended sight distances to a traffic control device
Figure 2.3: Appropriate sight distance

Termination Area

Traffic Control Risk Assessment undertaken prior to works commencing and as works progress to monitor the effectiveness and suitability of the END ROAD WORK sign placement and re-instatement of posted speed limits.
Refer to the TfNSW TCAWS technical manual V6 Section 7.6.2.5 Termination Area and also refer to the AGTTM03-19 Part 3 Static Worksites: Section 4.9 Termination Area and "Table 4.5: Placement of termination signs" therein.

Field notes:

1.9 Key Dates

Milestones:

Start date 9/5/2024
Completion Date: 29/9/24

2 SITE WORK METHODOLOGY

This work involves removal of existing sign and installation of new digital advertising screen inside the redundant rail network corridor works will be conducted from Hamilton Street with occasional access from Parramatta road and James ruse drive

Installation works will occur at both day and night and in accordance with the approved times.

1.1 Site Investigation Works.

- Undertake full dilapidation report of site and embankment and adjacent area.
- Ensure that site is survey mapped and utilities are identified and mapped.
- 'Dial Before You Dig' reports will be obtained to ensure all services are identified within the construction zone and non-destructive utility mapping will be conducted within the footing zone prior to works.
- Hanlon will ensure all rail infrastructure is protected prior to the commencement of civil works.

1.2 Site Preparation

The following steps are to be conducted prior to any construction works beginning on site

- Hanlon will acquire all permits from relevant authorities and stakeholders including any landowners' consents.
- Pre-Safety meeting & checks will be conducted on site with construction personnel prior to the commencement of works.
- Site personnel will sign into the site specific documentation.
- Site personnel will sign onto Hanlon's SWMS.
- The closure of roads as required by the traffic control plan will be undertaken as traffic management protocol.
- Site personnel will accept all work vehicles into the work zone.
- Residents letter drops to notify the residents about the works, 48hrs of notice to be given at the minimum.

1.3 Site Protection Measures

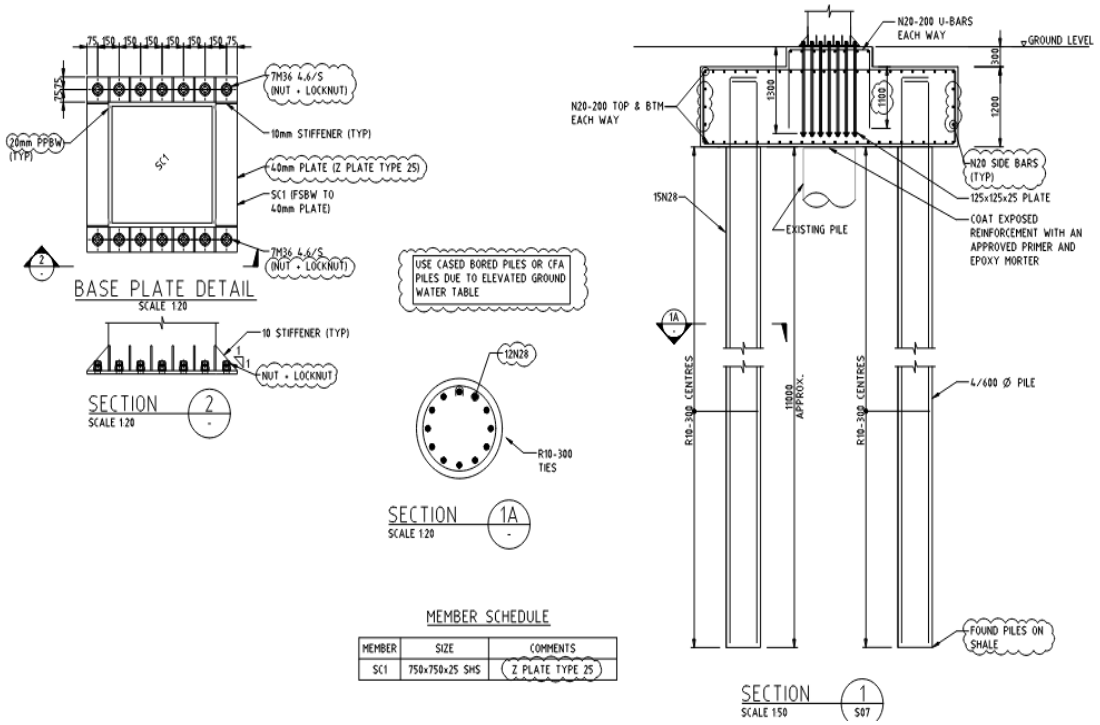
The work area will require clean up, rubbish and weed removal in the first instance to allow accurate dilapidation reports to be recorded. Once the report is completed the below site protection measures will be implemented to preserve the site in pre-construction and during construction works.

- Temporary fencing around the working area.
- Pedestrian and traffic management if required

1.4 Site Works

1.4.1 Civil Works Excavation and Concrete Pad

- Civil works to be undertaken as per the approved timeline
- Surveyor to set out location
- Sediment controls to be in place during excavation.
- Excavate planned set out location.
- Excavate existing cap down to below ground level
- Install drill pad
- Drill rig to drill and pour piles x 4
- Install Reo cage in place as per the Engineer requirement
- Form cap, install reo.
- Hold down bolts set out as per the Survey mark out & requirements
- Maintain minimum cover required for the reinforcement
- Engineer to inspect the reo cage and hold bolts prior to pouring concrete
- Pour concrete onsite, Concrete to be washed out of the site. No slurry or excessive concrete to be left onsite
- Remove formwork around the plinth after the curing period
- Back fill around the foundation if required
- Remove the temporary fencing & reinstall the fencing around the perimeter area
- Clean up site & leave

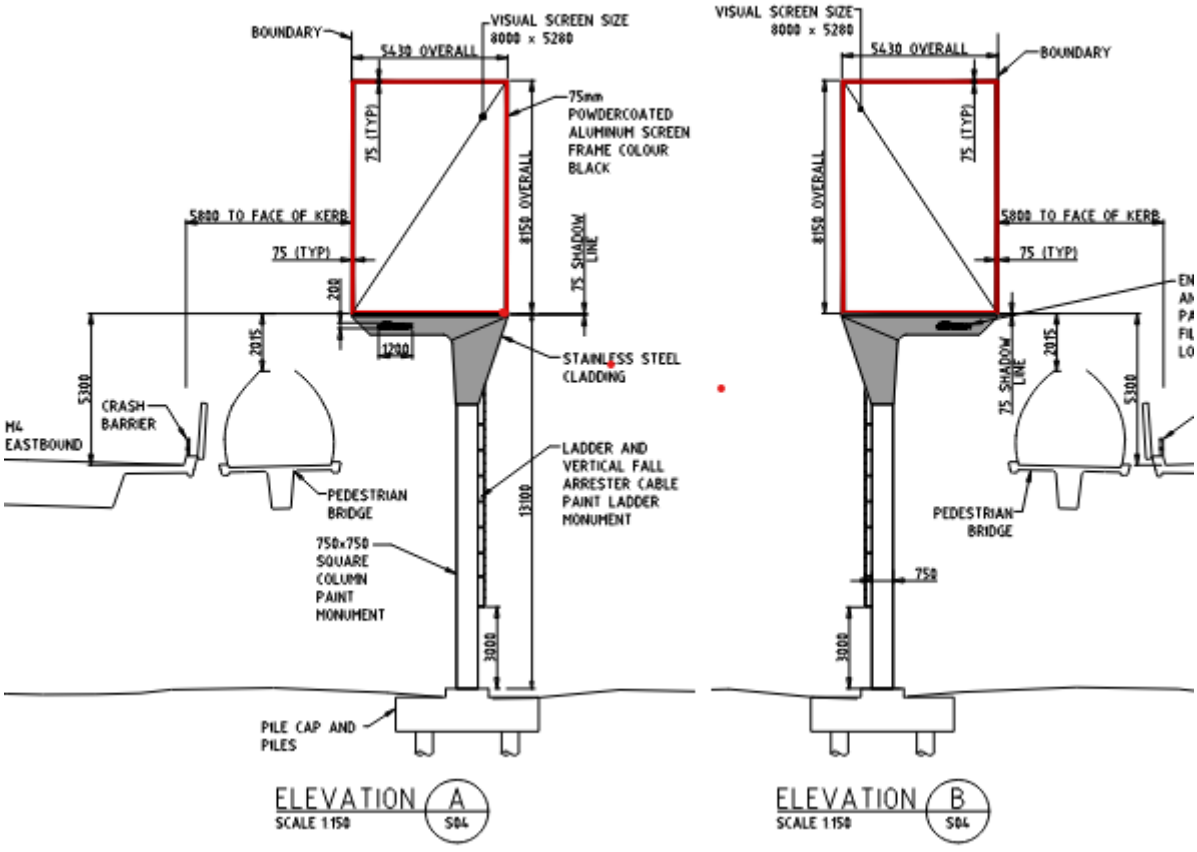


Civil workzone

1.4.2 Install structural steel.

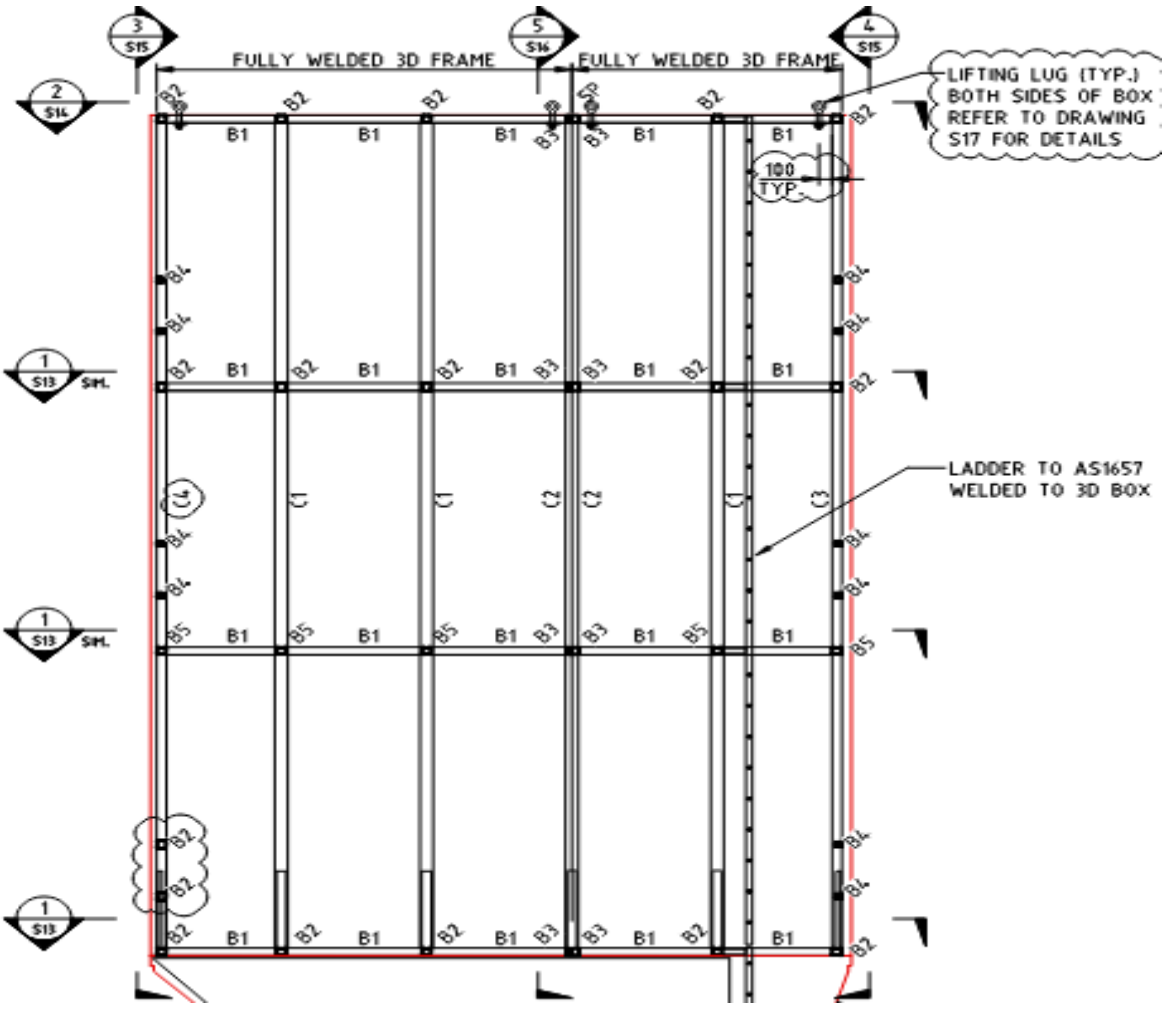
- Approved traffic management plan and correct ROL permits to be in place when entering and exiting site with large machinery
- Transdev to be notified and works only to be undertaken after hours

- Exclusion to be in place in work zone.
- Bring Semi & Crane to the workzone and setup
- A 120-tonne crane will be set up to install main structure steelworks and as built.
- Sling and install Column onto the hold-down bolts & tighten as required, Experienced dogman & operator to do the works
- Sling and install Populated frame onto the column & tighten as required, Experienced dogman & operator to do the works
- Install Missing cladding using EWP
- Pack up crane after the use
- Load up EWP and rest of the equipment after the use
- Cleanup site and leave no debris out of the fencing area



1.4.3 Install digital box

- Traffic control to be set up as per traffic management plan.
- Exclusion zone Saunders and Miller Street to be in place.
- Bring Semi & Crane to the workzone and setup
- Sling and install Populated frame onto the column & tighten as required, Experienced dogman & operator to do the works
- Install Missing cladding using EWP
- Pack up crane after the use
- Load up EWP and rest of the equipment after the use
- Cleanup site and leave no debris out of the fencing area
- Install fascia, cladding frame.
- Install camera and arm on top of the sign.
- Electrical connection to be established and commissioning to take place.



1.5 Sites clean up.

A site clean-up will be conducted after each shift.

- General tidy up of site including clearance of waste and construction materials.
- Remove vehicles.
- Ensure no equipment and rubbish is left out of the workzone
- Photograph site and issue images to client and landowner.
- Close Traffic Management.
- Close out with client and exit site.

1.6 Final sign off

- All final QA checks & certification
- Engineer to sign off work.

2 MAJOR PLANT AND EQUIPMENT

2.1 List of Equipment used on site

- 65 tonne drill rig
- 13T excavator
- 120T Mobile Crane
- Day maker lighting tower
- Semi-trailer
- Wire and Cloth Slings
- Electric power tools
- Vehicles

3 SITE WORK – SAFE WORK PROCEDURES

Hanlon has created and continually maintains an OH&S system compliant and certified to AS4801:2001, Certificate No HSM40898. Hanlon also manages an Environmental Management System in compliance with AS14001.OHS&E & Risk Management

Hanlon Industries is certified to AS4801:2001 Occupational Health & Safety Management. We are committed to all relevant Commonwealth, State and Local Safety Acts, Regulations and Standards, and to co-operation with our clients, employees, contractors, and visitors, to actively ensure that a safe and healthy workplace is provided, and that the environment is protected. Each person will be responsible to perform their duties in a manner which ensures compliance to the codes, their own safety and that of others.

Therefore, Risk Assessments are conducted at all stages of the implementation of this Project, including Planning, Design, Realisation and Close-out, and the following systems implemented to ensure that risk and harm are eliminated or minimised.

Risk Assessment is based on the Industry Standard of Hierarchy of Control and a basic Probability / Consequence Risk Matrix laid out in Australian Standard AS4801:2001 (OH&S) and planned and communicated daily.

3.1 Permits to Work

All necessary permits must be acquired from client prior to commencing site works

3.2 SWMSs & JSAs

A detailed Safe Work Method Statement (SWMS) or JSA (Job Safety Analysis) will be conducted by Hanlon Industries, reviewed & approved by the Project Manager, and sent to the client for approval prior to works commencing. It will list all hazards associated with the work, with particular emphasis on High-Risk work, and will state control measures and the manner in which the control measures are to be implemented. It is to be reviewed and updated as required daily. The SWMS is to be read and understood by all employees working to those tasks and be signed onto prior to starting work.

3.3 Inductions

All Hanlon Industries Employees and subcontractors engaged in the works will have a current HI, JCDecaux and White Card induction

3.4 Public Protection

Hanlon Industries will always ensure safety of the general public. This will be via traffic management, barricading/fencing of work areas, communication, spotters, and signage.

3.5 Traffic Management

A Traffic Management Plan (TMP) by an accredited company will be developed to manage all aspects of traffic management.

3.6 Toolbox Meetings

Toolbox meetings to be held at the beginning of each shift to discuss previous work and the day ahead. All present to sign off attendance sheet after meeting

3.7 Electrical

All electrical equipment must have a current test and tag and be visually inspected prior to use

Only licensed personnel shall work on electrical equipment

3.8 Foundation works

Civil works by JCDecaux, Hanlon's are not responsible for the civil works

3.9 Working near Overhead Power Lines

Work between 3 meters and 6.4 meters from Overhead Power Lines will require the presence of a qualified safety observer. Anything closer than 3 meters is a 'No Go' zone

Objects, Plant and Machinery or Equipment are not to be stored, stacked or kept under power lines

3.10 Elevated Work Platforms

- Conduct Pre-start Checks
- Only licensed personnel to operate Elevated Work Platforms
- Elevated Work Platforms only to be used as per manufacturer's instructions
- Logbooks to be completed daily

3.11 Site Vehicles

- All site vehicles must obey site speed limits
- All site vehicles must be maintained and kept tidy
- All vehicles must be registered and roadworthy

3.12 Working at Heights

- Working at heights must only be done after a Working at Heights risk assessment

3.13 Lifting Loads

- Conduct Pre-start Checks
- All personnel to be clear of ends of slung loads when being lifted
- Loads can only be slung by licensed personnel
- All lifting equipment to have current test tags attached and be in good order
- Riggers and Dogmen to hold current licenses

3.14 Confined Space

All personnel involved in Confined Space entry and watch must be appropriately trained. Entry to a confined space only after a risk assessment has been carried out and a permit issued.

3.15 Lift Plans / Procedures

- Conduct Pre-start Checks on all lifting equipment to ensure compliance and currency of checks / tagging
- Lift Plan must be conducted and signed by crane operator and site management prior to any lift taking place
- All fixed and mobile crane operators must be appropriately licensed
- Crane drivers must observe working near power lines rules and regulations
- Crane permits must be obtained where necessary

3.16 Welding

- When using “Caddie” welders ensure that the power outlet is the same as the machine. I.e. 10 or 15 Amp
- Diesel generator welding machines must have fuel, oil and water checked every day. Place diesel welding machines in areas where fumes can escape easily

- Welders are to be aware of others working in the area and erect suitable screens, to protect against arc flash, where necessary
- Welding, Oxy cutting and Grinding must only be carried out after a visual inspection of the work area to check for flammable goods and others working in the area
- Fire Extinguishers
- A suitable fire extinguisher to be on hand when carrying out hot work

3.17 Incidents on Site

- All incidents shall be logged in the site incident register
- In the event of a 'Notifiable Incident' the site must be preserved and secured until an investigation has been completed as confirmed by the Project Manager. Barricading and signage shall be erected around the perimeter. Where safe to do so gas bottles should be isolated and leaking taps etc turned off. Care should be taken with potentially live power lines. This instruction will form part of the Site Safety Rules document.

3.18 ENVIRONMENTAL ASPECTS / IMPACTS

Hanlon Industries will manage all environmental aspects and impacts in accordance with AS14001.

Hanlon Industries understands that there are no potential heritage or cultural aspects impacting the undertaking of this Project.

Hanlon will perform environmental risk assessments as part of its Safe Work Method Statements (SWMS), implement the containment actions that may be required and manage the aspects daily. Aspects to be assessed include:

- Noise to be in accordance with the interim construction noise guidelines (department of environment and climate change (notifications will be issued in accordance with 5-14 days, dust
- Earthmoving, cutting equipment
- Heritage, cultural aspects
- Concreting processes
- Contamination of surrounds & waste removal
- Flora & Fauna (or any protected species)
- Spills and containment (Spill kits to be on hand, nominated through the SWMS)
- Reporting of spills, damage to the environment or other environmental issues
- Cleaning up and remediation methods (Nominated through the SWMS)

If required, and in cooperation with the client, Environmental / Heritage Management Plans can be designed to ensure compliance with all Commonwealth, State and Local Council requirements pertaining to Hanlon Industries or the Project.

Hanlon will incorporate all protection requirements required to complete the works required including physical barriers ,education of staff and obtain specialist protection advice if necessary.

All notifications will be issued in accordance with recommendation noted on the enviro card.

Impact on Environmentally Sensitive Sites Hanlon will ensure that work design, planning and access is sufficient to prevent any interaction. Protection strategies such as physical barriers, education and awareness will be conveyed through toolbox and pre starts and if required will seek to obtain specialist protection advice.

Ground disturbance works will be completed in accordance with EMS-09-PR-0012 Erosion and Sediment Control requirements. Hanlon industries will continually assess and put in place Sediment controls where required.

The following would be adopted where required:

1. Minimise area to be cleared and leave as much vegetation as possible. Install temporary fences to define 'no go' areas that are not to be disturbed.
2. Install sediment fence(s) along the low side of the site before work begins. 2.
3. Divert water where possible
4. Establish a single stabilised entry/exit point. Clearly mark the access point and give an access map that has a delivery point indicated for all supplies.
5. If required Lay turf strip to slow the speed of water flows and to trap sediment.
6. Check the erosion and sediment controls every day and keep them in good working condition.
7. Stockpile topsoil within the sediment controlled zone.
8. Always be aware of the weather forecast.
9. Stabilise exposed earth banks).
10. Fill in and compact all trenches immediately after services have been laid.
11. Install site waste receptacles (mini-skip, bins, wind-proof litter receptors).
12. Sweep the road and footpath every day and put soil behind the sediment controls. Hosing down roads and footpaths is unacceptable.
13. Connect downpipes from the guttering to the stormwater drain as soon as the roof is installed.
14. Revegetate the site as soon as possible.

15. The erosion and sediment control devices must be kept in place until 70% of the site has been revegetated.

Noise impacts on the community will be assessed and managed by Hanlon in compliance with EMS-09-PR-0048 Construction and Maintenance Noise Management. Notification of affected sensitive receivers must occur at between 5 and 14 days before undertaking activities outside the standard hours

All works will be completed in accordance with EMS-09-PR-0008 Environmental Impact As Environmental Work Method Statement (EWMS) and Site Environment Management Plan (SEMP)

Involvement of environmental regulators and external authorities? Hanlon will ensure that any communication with regulators and authorities: - Is always treated as a formal interaction - Is not false or misleading in a material respect - Does not exclude materially relevant information and - Is released with the appropriate Sydney Trains authority

4 MAJOR PLANT AND EQUIPMENT

4.1 List of Equipment

- 120T Mobile Crane
- 65T drill rig
- 13 T excavator
- Semi-trailer
- HIAB Truck/Franna
- Elevated Work Platforms
- Wire and Cloth Slings
- Electric power tools
- Vehicles

4.2 Plant Risk Assessments

All major plant and equipment that is mobilised to site will have a plant risk assessment and the relevant logbook for the daily plant check

4.3 Equipment Checks & Maintenance

All equipment including mobile equipment, lifting gear and harness systems are checked, inspected and maintained to the relevant industry OHS&E standards, and records and registers are kept for each such item.

4.4 Use of diesel, petrol, and oils

Ensure contingency plans are in place for environmental spills and clean up and in case of fire. These issues are to be covered in the SWMS prior to equipment being brought onto site.

It is a Policy of Hanlon Industries that refuelling of vehicles, machinery or earthmoving equipment will be conducted off-site. Hence, no fuels such as diesel or petrol are to be brought onto site other than those required to refuel hand tools. Hand Tools may be refuelled but only in the tray of work trucks that are bunded and have spill kits available.

4.5 Site Vehicles

- All site vehicles must obey site speed limits
- All site vehicles must be maintained and kept tidy
- All vehicles must be registered and roadworthy

4.6 Lighting

External lighting will be in compliance with AS4242:1997 control of obtrusive effects of outdoor lighting;

4.7 Waste management.

All waste to be disposed of in accordance with classification and as per standards and regulations. Hanlon to provide onsite waste disposal bins/skips as required for the waste being disposed.

4.8 Flora and Fauna

Hanlon will undertake assessment on the surrounding flora and fauna and implement any bequired control measures required to protect and manage on daily basis.

4.9 Cranes

- All fixed and mobile crane operators must be appropriately licensed
- Crane drivers must observe working near power lines rules and regulations
- Crane permits and Lift Plans must be obtained where necessary
- Lifts over 85% capacity will require lift plan

5 QUALITY MANAGEMENT (HIQMS)

Hanlon Industries is certified to ISO9001:2015 Quality Management System Certificate No QMS40255 and is a Registered Building Practitioner (RBP CB-L 28519) with HIA, enabling us to deliver complete solutions in steel from design and manufacture right through to erection or installation.

We have developed our Quality Management Systems (HIQMS) for the purposes of ensuring that our services are planned in accordance with internationally recognised standards, and with the objective of consistently achieving high levels of customer satisfaction.

All aspects of the HIQMS and documentation relating to this project from Design & Development, Procurement, Manufacture and through to Handover, are available for inspection and audit by the customer with sufficient notice.

5.1 Quality Planning

The following HI Quality Procedures/Processes make up the Quality Plan for this project:

Quality Procedure	Plans/ Check sheets Required. Y/N	Process to be used
Risk Management	Y	This document
Inspection & Test Plan (ITP)	Y	
Drawing Management	N	ISO9001 JCDecaux As Built Drawings & Sketches
Welding Procedures	N	AS1554
Product & Material Traceability	N	ISO9001
Site Safety/Environment Management	Y	This document SWMS & White Card Inductions

Quality Procedure	Plans/ Check sheets Required. Y/N	Process to be used
		HI Environmental Aspects & Impacts Register HI- 24450 Traffic Management Plans
Manufacturing / Construction Management	N	JCDecaux Factory Check sheets Dispatch Check sheets
Stakeholder / Interested Parties	N	This document
Conformance	Y	Installation Check sheets Handover Documentation

Hanlon Industries conducts Responsible Design and Development to all necessary Australian Standards and Statutory Requirements.

Upon Handover, all relevant Quality Documentation and Drawings will be issued to the client, and documentation provided for required sign off.

5.2 Quality Assurance

Hanlon Industries conducts Monitoring and Measurement of Processes and Product for the purposes of Quality Assurance. Non-conformances are controlled through the HIQMS which ensures a process of Continual Improvement and Corrective / Preventative Action.

5.3 Competence

Protection of Customer Property, maintaining of insurances and ensuring the construction capabilities of Hanlon Industries, their employees and contractors is the priority of Hanlon Industries in maintaining our certification to AS/NZS ISO 9001:2015 and compliance to all relevant Statutory Authorities.

Hanlon's keeps up to date the Employee Skill Register and only those employees certified or qualified for the work are assigned to those tasks.

All equipment requiring calibration and / or regular maintenance, or inspection is managed through the HIQMS and records registers kept.

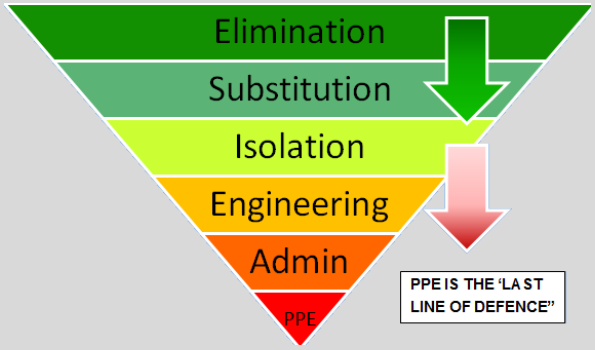
The HIQMS is subject to regular Internal / External Audit to AS/NZS ISO 9001:2015

SWMS SITE SPECIFIC – M4 Aspires screen

Organisational Details	Company Name:	The Sydney Electrical Company Pty Ltd		Approval Date:	Thursday, 11 April 2024		
	Company Address:	17 / 14 Sheridan Close Milperra NSW 2214		Next Review Date:	Thursday, 11 July 2024		
	Director / Manager Name:	Adam Stefanel		Contact Number:	0415 669 098		
	Type of SWMS:	Generic (multiple projects, jobs, or work requests)	☐	Site specific (complete section below)	☑		
Site Specific Details	Principle Contractor:	Hanlon Industries	n/a ☐	Contact Number:	0450 131 992	n/a ☐	
	Site Manager or Supervisor Name:	Sujith Reddy	n/a ☐	Other PCBU's:		n/a ☐	
	Site Address:	Help St Chatswood	n/a ☐			n/a ☐	
SWMS Details	What high risk work activities are covered by this SWMS?	Work on or near energised electrical installations or services.					
	What is the scope of the works?	Scope of work includes the physical work of installing, maintaining, repairing, altering, removing or adding to an electrical installation					
	Who else was consulted/involved in preparing this SWMS?	Workers / employees	☑	Principle Contractor	☑	NECA	☑
	Additional compliance measures:	Pre-start Hazard Risk Assessment	☑	Toolbox Talk	☑	Workplace Safety Inspection	☑
Sign off	Person responsible for ensuring compliance with SWMS:	Kurt Gledson		Responsible persons signature:			
	Contact Number:	0413 774 423					
	Date:	Thursday, 09 February 2023					

Training / Licencing Requirements	Construction industry general induction (White Card)	☑	Senior First Aid Training	☑	LVR/CPR	☑
	Working at Heights	☑	Asbestos Awareness	☑	Working with Asbestos of a Minor nature	☑
	Elevated Work Platform class SL	☑	Elevated Work Platform class VL	☐	Elevated Work Platform class TL	☐
	Elevated Work Platform class BL	☑	Elevated Work Platform Licence class WP	☐	Scaffolding	☐
	Electrical trades Licence	☑	Air Conditioning / Refrigeration Trade Licence	☐	Accredited Service Provider Authorisation / permit / rescue	☑
	(Other):	☐	(Other):	☐	(Other):	☐
Personal Protective Equipment	Arc Rated clothing HRC 1 (ATPV 4$^{cal/cm2}$ min)	☑	Arc Rated clothing HRC 2 (ATPV 8$^{cal/cm2}$ min)	☐	Arc Rated clothing HRC 3 (ATPV 25$^{cal/cm2}$ min)	☐
	Arc Rated clothing HRC 4 (ATPV 40$^{cal/cm2}$ min)	☐	Double insulated gloves	☑	Insulated gloves	☑
	Low Voltage Rescue Kit	☑	Defibrillator	☑	First Aid Kit	☑
	Insulated Mat	☑	Insulated barriers	☑	Lock Out Tag Out kit	☑
	Safety boots	☑	Eye protection	☑	Respiratory equipment	☑
	Safety Helmet	☑	Hearing protection	☑	Barricading and signage	☑
	Communication equipment	☑	Torch / lighting	☑	Harness and other fall protection equipment	☑
	(Other):	☐	(Other):	☐	(Other):	☐

Multi-Jurisdictional Reference Material					
Jurisdictions		**☑/☒**	**Safety Legislation**	**Regulator and Contact Number**	**Codes of Practice**
Harmonised Jurisdictions	**NSW**	☑	Act: Work Health and Safety Act 2011 (NSW) Regulation: Work Health and Safety Regulation 2017 (NSW)	Regulator: SafeWork NSW Number: 13 10 50	If you want to know what restrictions apply to your business, please refer to your State or Territory website.
	ACT	☒	Act: Work Health and Safety Act 2011 (ACT) Regulation: Work Health and Safety Regulation 2011 (ACT)	Regulator: WorkSafe ACT Number: 13 22 81	
	QLD	☒	Act: Work Health and Safety Act 2011 (Qld) Regulation: Work Health and Safety Regulation 2011 (Qld)	Regulator: Workplace Health and Safety Queensland Number: 1300 369 915	
	NT	☒	Act: Work Health and Safety (National Uniform Legislation) Act 2011 (NT) Regulation: Work Health and Safety (National Uniform Legislation) Regulations (NT)	Regulator: NT WorkSafe Number: 1800 019 115	
	SA	☒	Act: Work Health and Safety Act 2012 (SA) Regulation: Work Health and Safety Regulation 2012 (SA)	Regulator: SafeWork SA Number: 1300 365 255	
	TAS	☒	Act: Work Health and Safety Act 2012 (Tas) Regulation: Work Health and Safety Regulation 2012 (Tas)	Regulator: WorkSafe Tasmania Number: 1300 366 322	
	CTH	☒	Act: Work Health and Safety Act 2011 (Cth) Regulation: Work Health and Safety Regulations 2011 (Cth)	Regulator: Comcare Number: 1300 366 979	
	NZ	☒	Act: Health and Safety at Work Act 2015 (NZ)	Regulator: WorkSafe New Zealand Number: 0800 030 040	
VIC		☒	Act: Occupational Health and Safety Act 2004 (Vic) Regulation: Occupational Health and Safety Regulations 2017 (Vic)	Regulator: WorkSafe Victoria Number: 1800 136 089	
WA		☒	Act: Occupational Safety and Health Act 1984 (WA) Regulation: Occupational Safety and Health Regulations 1996 (WA)	Regulator: WorkSafe WA Number: 1300 307 877	
Standards		*Electrical (Consumer Safety) Act 2017. Electrical (Consumer Safety) Regulation 2016, AS/NZS 3000:2018 (Wiring Rules), AS/NZS 3017:2007 (Verification Guidelines), AS/NZS 4836:2011 (Safe working on Electrical Installations),* http://www.safeworkaustralia.gov.au/sites/swa/model-whs-laws/model-cop/a-z-cop/pages/a-z, NECAs "Red Book" Safety Guide for the Electrotechnology Industry DNSP Electrical Safety Rules (Ausgrid|, Endeavor Energy | Essential Energy) as relevant, ISSC14- *Guide to electrical workers' safety equipment* , ISSC34 – Guide for height Safety Within the NSW Electrical Industry, NENS-09- "*Guide to the selection, use and maintenance of PPE for electrical arc hazard",* Endeavour Energy's WSY 0037, *AS/NZS 3012:2010 (Electrical Installations – Demolition & Construction Sites, WHS Act and Regulation 2017, NSW Service & Installation Rules, Code of Practice - Managing Electrical Risks in the Workplace, Service NSW – License requirements*		
SWP		The Sydney Electrical Company Safe Working Procedures			

Hierarchy of Controls	Definitions	
	**Elimination**	This control measure involves eliminating or removing the risk in its entirety
	Substitution	This form of control involves substituting a safer process or material for the hazardous process/material found.
	Isolation	This control involves separating the hazard or hazardous work practice from employee's other work areas. This may involve sectioning off the area by erecting barriers or by moving either the hazardous work practice or the „other" employees and their work practices.
	Engineering	This method of control involves designing and/or adding physical safety features to plant or equipment.
	Admin	This type of control is most effective when used in conjunction with measures mentioned above or as an interim control whilst more effective control measures are developed and implemented.
	PPE	PPE is not a particularly effective control method and should only be used: • When all other control measures are impractical; or • In conjunction with other more effective, control measures.

Risk Level Matrix

		Consequence				
		1	**2**	**3**	**4**	**5**
Likelihood	**5**	**M**	**H**	**H**	**H**	**H**
	4	**M**	**M**	**M**	**H**	**H**
	3	**L**	**M**	**M**	**H**	**H**
	2	**L**	**L**	**M**	**M**	**H**
	1	**L**	**L**	**L**	**M**	**M**

Risk Analysis

Likelihood		Consequence	
1	Rare	1	Insignificant
2	Unlikely	2	Minor
3	Moderate	3	Moderate
4	Likely	4	Major
5	Almost Certain	5	Catastrophic

Notes / Definitions

#	Job Step / Process / Activity	Identify Hazards	Risk Level (R) and the Residual Rating (RR)				Identify Controls / Action Required	Person Responsible
			L	C	R	RR		
1	Undertake pre-start hazard identification and risk assessment (HRA) and checklist	• Unsafe work area • PPE inadequate	3	3	M	L	• Undertake HRA of the workplace • Review checklist • All PPE shall be inspected prior to use to ensure it is safe to use/operate and is fit for its purpose • Arc rated Long/Long clothing complaint to NENS-09 • Suitable Electrical First Aid kit provided with additional burns dressings and CPR mask • Defibrillator supplied and readily accessible • Appropriate Rescue Kits supplied and readily accessible	
2	Confirm local electricity distributor	• Required standards, approvals and permits	1	1	L	L	• Ensure appropriate approvals and work permits are in place Applicable standards, work practices and general requirements	
3	Undertake site inspection	• Outdoor work • Uneven ground / obstacles • Trips, slips and spills • Inadequate lighting (e.g., night work) • Traffic vehicles and pedestrians • Impact of plant at site • Underground services • Overhead services / conductors • Risk of Contamination • Needle stick injuries • Insects / vermin • Animals • Emergency and first aid facilities	1	3	L	L	• Sun protection, hot and cold protection • Remove obstacles and ensure clear access and work area • Define designated walkways and clean up liquid spills immediately. Adopt good housekeeping procedures. • Provide temporary lighting as required • Erect barricades, traffic controls. • Maintain save working distances. Wear Hi-Viz vest • Note vicinity - dial 1100 before you dig. Obtain search report • Maintain safety clearances and use observer if required. • Fit Tiger Tails to Overhead conductors as required. • Check to see if a history of previous contamination exists. • Conduct a visual inspection to see if previous contaminates are visible. • Inspect area carefully and check locks prior to entry • Use gloves and pliers to remove, use sharps container • Inspect and spray if necessary – use appropriate PPE • Avoid potential dangers (e.g., aggressive dogs) • Confirm adequacy for site and task	

4	Work site preparation	• Danger to public and other workers • Asbestos panel and dust	2	3	M	L	• Install barriers, as appropriate • Where asbestos possible wear appropriate PPE and minimise disturbance • Dispose of asbestos waste and contaminated materials at authorised depot	
5	Undertake / confirm workplace Risk Assessment HRA (document record) and secure area	• Site specific issues • Worker safety • Public access and unauthorized persons •	3	3	M	L	• Refer with SWMS C100 Accessing and Set Up of Work Site and SWMS A100 ASP Site Assessment and Set Up • Check test equipment and PPE, consult with workers involved • Clear area and use appropriate barricades and signage • Observe 'Energised Work' policy •	
6	Confirm isolation of energy sources	•	1	2	L	L	• Refer isolation section of SWMS E100 Low Voltage Isolation • Observe 'Energised Work' safety policy for energised work authority	
7	Select suitably rated test equipment	• Internal breakdown	1	1	L	L	• Instrument should be Cat3 or better for normal 240 / 415 volt work 1.	
8	Trace correct pillar streetlight column connection pit for connection	• Electric Shock	3	4	H	L	• Identify correct pillar streetlight column connection pit for connection	
9	Find planned course of underground service mains and source if any other services are in locality of planned route	• Electric shock	3	4	H	L	• Locate all services ensure DBYD Searches • Identify switchboard material	
10	Turn main switch off and REMOVE SERVICE FUSE CARRIERS from switchboard using safe work procedure	• Electric Shock	3	4	H	L	• Refer SWMS A101 Prove De Energised • Use correct safety equipment, stand on mat and maintain clearance	
11	Confirm De-energised. Check for possible alternative supply to installation.	• Electric Shock	3	4	H	L	• Test before you touch – confirm DEAD before commencing work refer SWMS E101 Low Voltage Isolation and SWMS A101 Prove De Energised • Carry out full test and verify operation of test equipment	

12	Place rubber mat at point of supply and ensure that all work at the point of supply is carried out whilst standing on the mat.	• Electric Shock • Possible touch potentials if fault in cables in vicinity of work site occurs	2	3	M	L	• Always ensure that all work is carried out whilst standing on the mat • Wear appropriate PPE as per Pre-Start HRA	
13	Locate the underground service cables for the nominated installation and disconnect.	• Electric Shock	2	4	H	L	• Maintain clearance away from exposed conductors • Wear appropriate PPE	
14	Test to ensure service mains active and neutral conductors are de-energised	• Electric Shock	3	4	H	L	• Carry out correct test • Wear appropriate PPE and stand on insulated mat	
15	Insulate ends of disconnected service mains conductors	• Electric Shock	3	4	H	L	• Use PPE as appropriate	
16	Remove main Earth from Neutral Link and prove continuity of main Earth conductor	• Electric shock • High Resistance Earth	2	4	H	L	• Service fuse is removed • Test to AS3000 Wiring Rules	
17	Remove Consumer mains neutral from Neutral Link and test insulation resistance of all Consumer mains conductors	• Electric shock	2	4	H	L	• Service fuse is removed • Test to AS3000 Wiring Rules	
18	Test to prove conductors are energised and identify active and neutral conductors with test lamp	• Electric Shock	2	4	H	L	• Maintain clearance away from exposed conductors • Wear appropriate PPE as identified in the Pre-Start HRA	
19	First connect service main neutral conductor to Consumer main neutral conductor using approved connector and connect metallic supports to neutral.	• Electric Shock • Slippage of tool on connector	2	3	M	L	• Wear appropriate PPE as identified in the Pre-Start HRA • Maintain clearance away from conductors • Use correct ratchet tool for connector	

20	Confirm neutral is connected and now connect service main active conductors to consumer main active conductors using approved connectors and connect metallic supports to active.	• Electric Shock • Slippage of tool on connector	2	3	M	L	• Wear appropriate PPE as identified in the Pre-Start HRA • Maintain clearance away from conductors • Use correct ratchet tool for connector	
21	Ensure that the metallic surround of the switchboard is not live	• Electric Shock	2	3	M	L	• Carry out correct test – SWMS E100 Low Voltage Isolation & SWMS A101 Prove De-Energised • Proximity tester maybe used before opening switchboard to confirm metallic surrounding of the switchboard is not LIVE • Wear appropriate PPE as identified in the Pre-Start HRA and stand on insulated mat	
22	Confirm de-energised at customer switchboard	• Electric Shock • Minor Injury	3	4	H	L	• Test before you touch – confirm DEAD before commencing work refer SWMS E100 Low Voltage Isolation and SWMS A101 Prove De Energised • Carry out full test and verify operation of test equipment	
23	Tidy up and complete paperwork	• Minor Injury	2	1	L	L		

SWMS Employee Sign off

Worker consultation, instruction, training, toolbox talks, review, acceptance record:

Only persons who have completed the signoff are authorised to work on the relevant tasks covered by this document.

NOTE: Work must be performed in accordance with this SWMS, any Risk Assessment prepared in relation to this work and any relevant Safe Work Procedures. This SWMS must be accessible for inspection until the energised electrical work to which this SWMS relates is completed. If the SWMS is revised, all versions should be kept. If a Notifiable incident occurs in relation to the high risk construction work in this SWMS, the SWMS must be kept for at least 2 years from the date of the Notifiable incident.

I, the undersigned, acknowledge, understand, and accept that:

1. The WHS Policy, relevant Risk Assessment, SWMS's and SWP's for this task have been reviewed, explained, and are clearly understood by me,
2. I shall only carry out work for which I am equipped and competent and advised my supervisor of any individual needs,
3. I will comply will all relevant Risk Control Measure, otherwise work must stop immediately,
4. I will be vigilant regarding hazards and the suitability of the identified Risk Control Measures, and
5. I understand that I am authorised and expected to safely stop work and immediately notify my supervisor if a task carries an unacceptable level of risk.

Print Names:	Signatures:	Dates:

Standards References

General:
AS 1319: Safety signs for the occupational environment **AS 1657:** Fixed Platforms, walkways, stairways and ladders – Design, construction and installation **AS/NZS 1892.1-5 Series**: Portable ladders **AS 2675:1983** Portable first aid kits for use by consumers **AS 2865:** Confined spaces **AS/NZS 2865:** Safe working in a confined space **AS 4142.1:** Fibre ropes - Care and safe usage **AS/NZS 4345:** Motor vehicles – Cargo restraint systems – Transport fibre rope **AS/NZS ISO 13000:** Risk management – Principles and guidelines

Welding and Gas Safety:
AS 1335: Hose and hose assemblies for welding, cutting and allied processes **AS 1674.1-2 Series:** Safety in welding and allied processes - Fire precautions **AS/NZS 2554:** Hose and hose assemblies for air **AS 4267:** Pressure regulators for use with industrial compressed gas cylinders **AS 4289:** Oxygen and acetylene gas reticulation systems **AS 4603:** Flashback arresters - Safety devices for use with fuel gases and oxygen or compressed air **AS 4706:** Pressure gauges for regulators used with compressed gas cylinders **AS 4839:** The safe use of portable and mobile oxy-fuel gas systems for welding, cutting, heating and allied processes **AS 4840:** Low pressure regulators for use in industrial compressed gas reticulation systems

Personal Protective Equipment:
AS/NZS 1067: Sunglasses and fashion spectacles **AS/NZS 1270:** Acoustics - Hearing protectors **AS/NZS 1337:** Eye protectors for industrial applications **AS/NZS 1337.4-6 Series**: Personal eye-protection **AS 1338 Series:** Filters for eye protectors **AS/NZS 1715:** Selection use and maintenance of respiratory protection devices **AS/NZS 1716:** Respiratory protective devices **AS/NZS 1891.1-4 Series:** Industrial fall-arrest systems and devices **AS/NZS 2161.1-10:** Occupational protective gloves **AS/NZS 2210.1-9 Series:** Occupational protective footwear **AS/NZS 2604:** Sunscreen products – Evaluation and classification **AS/NZS ISO 2801:** Clothing for protection against heat and flame – General recommendations for selection, care and use of protective clothing **AS/NZS 4011:** Single-use examination gloves - Specification **AS/NZS 1800:** Occupational protective helmets - Selection, care and use **AS/NZS 4179:** Single-use sterile surgical rubber gloves - Specification **AS 4381:** Single-use face masks for use in health care **AS/NZS 4399:** Sun protective clothing – Evaluation and classification **AS/NZS 4488.1-2:** Industrial rope access systems **AS/NZS 4501.1:** Occupational protective clothing – General recommendations on selection, care, use and maintenance of protective clothing **AS/NZS 4501.2:** Occupational protective clothing – General requirements **AS/NZS ISO 6529:** Protective clothing – Protection against chemicals – Determination of resistance of protective clothing materials to permeation by liquids and gases

Chemical Storage and Transport:
AS/NZS 1596: The storage and handling of LPG gas **AS 1692:** Steel tanks for flammable and combustible liquids **AS 1894:** The storage and handling of non-flammable cryogenic and refrigerated liquids **AS 1940:** The storage and handling of flammable and combustible liquids **AS/NZS 2022:** Anhydrous ammonia - Storage and handling **AS 2187.1:** Explosives - Storage, transport and use - Storage **AS 2507:** The storage and handling of agricultural and veterinary chemicals **AS 2508 Series:** Safe storage and handling information cards **AS 2714:** The storage and handling of hazardous chemical materials - Class 5.2 substances (organic peroxides) **AS/NZS 2927:** The storage and handling of liquefied chlorine gas **AS 2931:** Selection and use of emergency procedure guides for the transport of dangerous goods **AS 3780:** The storage and handling of corrosive substances **AS/NZS 3833:** The storage and handling of mixed classes of dangerous goods in packages and intermediate bulk containers **AS 3961:** Liquefied natural gas - Storage and handling **AS/NZS 4081:** The storage and handling of liquid and liquefied polyfunctional isocyanates **AS 4326:** The storage and handling of oxidizing agents **AS 4332:** The storage and handling of gases in cylinders **AS/NZS 4452:** The storage and handling of toxic substances **AS/NZS 4681:** The storage and handling of Class 9 (miscellaneous) dangerous goods and articles **AS/NZS 5026:** The storage and handling of class 4 dangerous goods **AS/NZS 60079 Series:** Explosive atmospheres

Plant, Tools and Equipment:
AS 1187: Farm milk cooling and storage systems **AS/NZS 1200:** Pressure equipment **AS 1210:** Pressure vessels **AS 1228:** Pressure equipment – Boilers **AS 1473.1-7 Series:** Wood processing machinery **AS/NZS 1576.1-6 Series**: Scaffolding **AS/NZS 1677.2:** Refrigerating systems – Safety requirements for fixed applications **AS/NZS 1873.1-4 Series:** Powder-actuated (PA) hand-held fastening tools **AS/NZS 2153:** Tractors and machinery for agriculture and forestry - Technical means for ensuring safety **AS/NZS 2211 Series**: Laser safety **AS 2550 Series:** Cranes, hoists and winches – Safe use **AS 2593:** Boilers – Safety management and supervision systems **AS 2726.1-2 Series:** Chainsaws - Safety requirements **AS/NZS 3160:** Approval and test specification – Hand-held portable electrical tools **AS 3575:** Clearing saws, brushcutters and grass trimmers - Safety requirements **AS/NZS 3576:** Clearing saws, brushcutters and grass trimmers - Guide to safe working practices **AS/NZS 3666 Series:** Air-handling and water systems of buildings – Microbial control **AS 3873:** Pressure equipment - Operation and maintenance **AS 4024 Series:** Safeguarding of machinery **AS 4509.1:** Stand-alone power systems – Safety requirements **AS/NZS 4576:** Guidelines for scaffolding **AS 4774.2:** Work in compressed air and hyperbaric facilities – Hyperbaric oxygen facilities **AS/NZS ISO 11553:** Safety of machinery – Laser processing machines – Safety requirements **AS/NZS 60745.1:** Hand-held motor-operated electric tools - Safety - General requirements
AS/NZS 60745.2.1-21 Series: Hand-held motor-operated electric tools

Office Furniture and workstations:
AFRDI Design Standards
AS 3590 Series: Screen-based workstations **AS/NZS 3813:** Plastic monobloc chairs **AS/NZS 4438:** Height adjustable swivel chairs **AS/NZS 4442:** Office desks **AS/NZS 4688:** Furniture - Fixed height chairs - Ergonomic and general requirements

Electrical Safety:
AS/NZS 3000: Electrical installations (known as the Australian/New Zealand Wiring Rules **AS/NZS 3100:** Approval and test specification – General requirements for electrical equipment
AS/NZS 3120: Approval and test specification – Cord extension sockets **AS/NZS 3200 Series:** Medical equipment safety **AS/NZS 3350.1:** Safety of household and similar electrical appliances –

General requirements
AS/NZS 3350.2.1-98 Series: Safety of household and similar electrical appliances – Particular requirements **AS/NZS 3760:** In-service safety inspection and testing of electrical equipment
AS/NZS 3820: Essential safety requirements for low voltage electrical equipment **AS/NZS 4513:** Medical electrical equipment - Fundamental aspects of safety Standards **AS/NZS 60065:** Audio, video and similar electronic apparatus - Safety requirements **AS/NZS 60335.1:** Household and similar electrical appliances - Safety - General requirements **AS/NZS 60950.1:** Information technology equipment – Safety – General requirements **AS/NZS 61558.1:** Safety of power transformers, power supply units and similar devices- General requirements and tests
AS/NZS 61558.2-23 Series: Safety of power transformers, power supply units and similar devices- Particular requirements for ignition transformers for gas and oil burners (IEC 61558-2-3:1999, IDT)

NOTE 1 Only Persons holding authorisations specifically allowing work at the reduced distance to the equipment in question may work to these distances. In other cases Authorised Persons must work only to the distances for Accredited persons.

NOTE 2 These voltages are not found on the RailCorp Electrical Network. If these voltages are encountered around another network, the Network Operator concerned must be consulted as to the SAD.

	Minimum SAD		
AC - nominal voltage	*Non accredited persons*	*Accredited persons (Refer to Sect 4.4)*	*Authorised electrical personnel (See Note 1)*
Insulated low voltage aerial lines up to 1000V, including low voltage aerial bundled cables	Refer to Table 2		0.5m
Low voltage - above 50V AC but not exceeding 1000V	3.0m	1.0m	0.5m (See also Sect 10.3.2)
Above 1000V up to and including 11,000V	3.0m	1.2m	0.7m (See also Sect 10.3.1)
Above 11,000V up to and including 33,000V	3.0m		1.0m
Above 33,000V up to and including 66,000V	3.0m	1.4m	
Above 66,000V up to and including 132,000V	3.0m	1.8m	1.5m
Above 132,000V up to and including 220,000V	6.0m	2.4m	(See Note 2)
330,000V		3.7m	
500,000V	8.0m	4.6m	
DC - Nominal Voltage			
Above 120V but not exceeding 600V	3.0m	1.0m (See also Sect 13)	0.5m
Above 600V including 1500V			0.5m (See also Sect 10.3.4)

Work activity	*Minimum SAD*	
	Non-accredited persons	*Accredited persons*
Crane or mobile plant operation	3.0m	0.5m
Handling non-conductive materials (timber, plywood, PVC, pipes and guttering etc)	1.5m	
Handling metal materials (roofing, guttering, pipes etc)	4.0m	
Driving or operating vehicle	0.6m	
Hand held tools	0.5m	
Scaffolding	Refer to SMS-06-GD-0282 Scaffolding	

SHEWMS No.:	MCS-WMS-101	**Task/Activity:**	Excavator Operations, Material Loading / Lifting, FRP Works

Risk Register Reference No:		**Commencement Date:**		**Completion Date:**	
Project No.:			**Date to be Reviewed:**	3 Months from commencement	
Project:			**To be Reviewed By:**	Safety Representative	
Site Address:			**Personnel Responsible for Monitoring this Activity:**	Superintendent, Supervisor, Safety Manager Project Manager	
Employer:	MCS (NSW) Pty Ltd		**Monitoring and Review:**	Start of job, change of activities, after an incident, 6 monthly	
ABN:	95 612 377 634				

Legislative High Risk Activity? ☒ **Yes** ☐ **No**

WMS involves: (cross ☒ any applicable below)

☒ **1.** a **High Risk Construction Activity** being a **Prescribed Activity:**

☐ Asbestos Removal ☐ Demolition ☒ Other : Excavation

☒ **2.** an **Earthmoving** or **Particular Crane Operation**

☐ **3.** a **High-Risk Construction Work**

☐ Work at 2m or more fall height	☒ Close proximity to services	☐ Work involving tilt-up or pre-cast concrete
☒ Using a hazardous substance (Part 7.1)	☐ Work on or near energised electrical installation	☐ Work on/near gas distribution main or consumer piping
☐ Work that could cause disturbance to Asbestos	☒ Work adjacent to a Road or Railway	☐ Work in artificial extreme temperatures
☐ Work in contaminated / flammable atmosphere	☐ Work in or near water or other liquids where there is a risk of drowning	☐ Structural alterations requiring support
☒ Movement of powered mobile plant	☐ Work in tunnel	☐ Demolition of a load bearing element of a structure
☐ Work in or near a confined space	☐ Work on telecommunication tower	☐ Work on / near chemical / fuel / refrigerant line
☐ Work in or near trench / shaft > 1.5m deep	☐ Using explosives	☐ Work involving Diving

References (Health, Safety and Environment) – List below			
NSW WHS Act 2011; *NSW WHS Regulations 2017*	*Work near overhead power lines: Code of practice*	NSW COP; *How to manage work health and safety risks Aug 2019* *Work health and safety consultation, coordination and cooperation*. *Excavation work* – Jan 2020 *Managing noise and preventing hearing loss at work Aug 2019* *Managing risks of plant in the workplace Aug 2019*	
Site Specific Induction *Hanlon Industries Induction*	*Rail Safety National Law (NSW) No. 82a* *Rail Safety National Law National Regulations 2012*		

Has additional sources of information to identify potential hazards been used in the development of this SWMS
☒ Yes ☐ No List-
Previous work history, Safety Alerts
(These sources may include but not limited to: legislation and safety alert, previous work history, incident trends, industry knowledge etc.)_

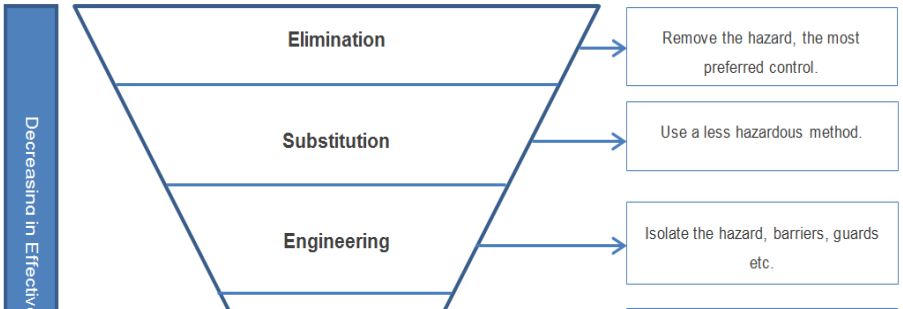
Personnel Consulted during the initial development of this SHEWMS				
Position	**Name**	**Signature**		**Date**
Site Workers Representative:	Chris Murphy		Date:	
			Date:	
			Date:	
Site Subcontractors Representative:	N/A		Date:	
MCS Project Approval				
SWMS created by:				

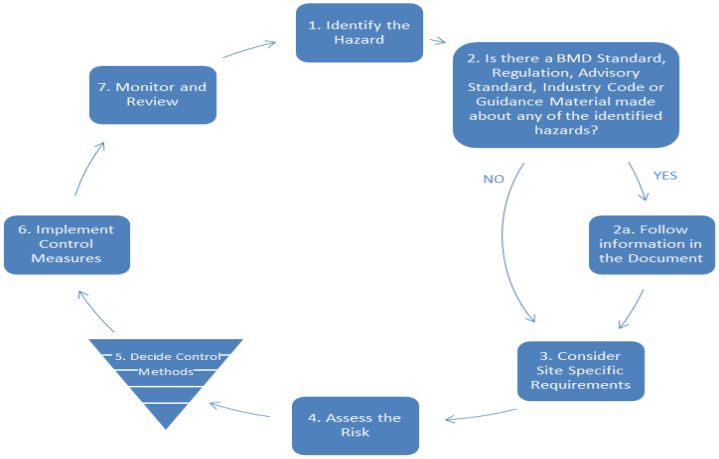
Legislation	Work Health and Safety Regulation 2017 (references)	Work Cover Codes of Practice

Work Health and Safety Act 2011 Work Health and Safety Regulation 2017 Environmental Planning & Assessment Act 1979 Environmental Planning & Assessment Regulation 2000	Ch 02 Representation and Participation Part 2.1 Representation Ch 03 General Risk and Workplace Management Part 3.1 Managing risk to health and safety Part 3.2 General workplace management. Ch 4 Hazardous Work Part 4.1 Noise Part 4.2 Hazardous manual tasks Part 4.3 Confined spaces Part 4.4 Falls Part 4.5 High risk work Part 4.7 General electrical safety in workplaces and energised electrical work. Ch 5 Plant & Structures Div 7 General duties of a person conducting a business or undertaking involving the management orcontrol of plant. Ch 6 Construction Work Part 6.3 Duties of person conducting business or undertaking. Part 6.4 Additional duties of principal contractor (applicable if PC) Part 6.5 General construction induction training Ch7 Hazardous Chemicals Div 3 Register and manifest of hazardous chemicalsDiv 4 Placards Div 5 Control of risk – obligations of persons conducting businesses or undertakings. Ch 8 Asbestos Ch 11 General	• Hazardous Manual Tasks • How to Manage Work Health & Safety Risks • Managing Noise & Preventing Hearing Loss at Work • Managing the Risk of Falls at Workplaces • Managing the Work Environment & Facilities • Work Health & Safety Consultation, Cooperation & Coordination
Australian Standards • AS 3600-2009 • HB 71-2011		**National Codes of Practice (Safe Work Aust)** • Confined Spaces • Construction Work • Excavation Work • First Aid in the Workplace • Hazardous Manual Tasks • How to Manage and Control Asbestos in the Workplace • How to Manage Work Health & Safety Risks • How to Safely Remove Asbestos • Labelling of Workplace Hazardous Chemicals • Managing Electrical Risks in the Workplace • Managing Noise & Preventing Hearing Loss at Work • Managing Risks of Hazardous Chemicals in the Workplace • Managing the Risks of Falls at Workplaces • Managing the Risks of Plant in the Workplace • Managing the Work Environment & Facilities • Welding Processes • Work Health & Safety Consultation, Cooperation & Coordination • Cutting and Drilling concrete and other masonry products

Equipment, Training and Qualifications

Plant and Equipment Required for this Activity	Personal Protective Equipment	
Plant: Excavators, Hydrema, Light Vehicles, Generator, Petrol Tools Equipment: Survey equipment, Hand Tools, laser levels, Tool vehicles	Safety Footwear (Steel Capped) AS/NZS 2210.3:2009	Appropriate Clothing as per MCS Standard
	Safety Glasses as required AS/NZS 1336:1997	Head Protection as required. AS/NZS 1800:1998
	Wide Brimmed Hat as required AS/NZS 4399	Rail Specific: 1. Orange Long Sleeved Shirt with X on the back. 2. Gloves & Safety Glasses on Person at all times.
	Sunscreen as required AS/NZS 2604:1998	Hearing Protection as required AS/NZS 1269.3:2005
	High Visibility Clothing AS/NZS 1906.4:2012	Gloves appropriate for task. AS/NZS 2161.1:2000
Specific Training Required for this Activity	**Personnel Qualifications Required for this Activity**	
Hanlon Industries Rail induction MCS Civil Company induction	General Construction Industry Induction Operator's Licence or Nationally recognised unit of competence & Verification of Competency for relevant Plant: Drivers Licence Statement of Attainment (SOA) Excavator SOA 10T Dumper SOA Operator's Licence or Nationally recognised unit of competence & Verification of Competency for relevant Plant: Excavator VOC – within 2 yrs. Dumper VOC – within 2 yrs. Rail Safety Worker Competency	





	Consequence				
Probability	**Negligible (1)**	**Minor (2)**	**Moderate (3)**	**Major (4)**	**Substantial (5)**
Rare (1)	**1**	**2**	**3**	**4**	**5**
Unlikely (2)	**2**	**4**	**6**	**8**	**10**
Possible (3)	**3**	**6**	**9**	**12**	**15**
Likely (4)	**4**	**8**	**12**	**16**	**20**
Almost Certain (5)	**5**	**10**	**15**	**20**	**25**
Extreme	Further planning and notification to the next level of management is required to analyse control measure(s) and reduce this risk score. Work associated around this risk can only proceed with written authorisation at a General Manager level. (refer sect. 10.2 Risk Standard)				
High	Work can only proceed with written approval & reviewed by the Project Manager. (refer sect. 10.4 Risk Standard)				
Moderate	Managed by specific monitoring or response procedures.				
Low	Manage by routine procedure, no formal approval required.				

#	**Hazard/Aspect** (Procedure Step)	**Impact** (what can go wrong)	**RISK SCORE** without Controls			**Management Controls** (Controls to be in place in order to manage Health, Safety and Environmental Risks)	**RISK SCORE** with Controls			**Person Responsible** (to ensure controls are applied)
			Cons	Prob	Risk		Cons	Prob	Risk	
1	Site Establishment		**4**	**3**	**17**	All personnel involved in works will attend a Hanlon Industries Project Induction. Sign on to appropriate CMS for activities. Daily pre-start by Hanlon Industries and protection officer to provide awareness to work-crew, and communicate specific information related to the work to be performed that shift. All workers must be RIW Trained. All personnel involved in the works under permit must sign in (before starting work) and sign out (when leaving work area). Assigner Check-in & Checkout. Plant must be induction and all relevant documents uploaded for Tran4M approval. Access and egress to be kept to the designated areas. All barriers to be left as they were found. Replace all barriers immediately after passing if found closed. Store Site shed on pre-approved location with level ground. Review & sign on to Hanlon Industries permits as required.	**2**	**2**	**7**	Site Engineer Superintendent / Foreman Delivery Drivers
2	Floating and offloading / loading plant	Traffic incidents	**4**	**3**	**12**	Where unloading of plant, maintain safe working distance from assets. Drivers and operators to be made aware of correct entry locations as per Vehicle Movement Plan (VMP).(TMP) Use only the access points and haul roads provided. All drivers/operators to contact site foreman prior to arriving onsite. WMS / JHA completed for activity and workers are alerted in the daily pre-start. Use Site UHF channel for warning prior to entry.	**4**	**1**	**4**	Site Engineer Superintendent / Foreman Delivery Drivers

#	Hazard/Aspect (Procedure Step)	Impact (what can go wrong)	RISK SCORE without Controls			Management Controls (Controls to be in place in order to manage Health, Safety and Environmental Risks)	RISK SCORE with Controls			Person Responsible (to ensure controls are applied)
			Cons	Prob	Risk		Cons	Prob	Risk	
		Non-Compliant Machinery				Plant to be inspected by Project Representative and Project Sticker to be issued and displayed.				
		Plant rollover	**4**	**3**	**12**	No persons to be within designated exclusion zones of mobile plant – operation to stop if anyone gets closer and is not directly involved in task. Site supervisor to determine a safe area for unloading / loading – set up on a flat level surface remote from overhead obstructions / power lines or other hazards Spotter to assist driver to indicate wheel/track position – must be positioned at a safe distance / location. Only float driver to off load plant from delivery truck. Seat belts must be worn whilst unloading or loading	**4**	**2**	**8**	Superintendent / Foreman Delivery Driver Spotter
		Releasing load restraints under tension – sudden release of energy and striking personnel	**3**	**3**	**9**	Exercise caution and setup 5m exclusion zone when releasing load binders etc. as load may have shifted during transit and put additional tension into load binders/chains.	**3**	**2**	**6**	Delivery Driver
		Striking Overhead Power lines	**5**	**3**	**15**	Permit To Work (PTW) developed for work area by client. Ensure Hanlon Industries permit is in place, signed on, activated & adhered to necessary measures in place. Ensure all personnel are aware of surrounding services and signed the PTW. All personnel to have received site specific induction Always assume overhead power lines or associated electrical apparatus to be energised until confirmation received from Project permit controller.	**5**	**1**	**5**	Site Engineer / Services Advisor Superintendent / Foreman Operators Spotters

#	**Hazard/Aspect** (Procedure Step)	**Impact** (what can go wrong)	**RISK SCORE** without Controls			**Management Controls** (Controls to be in place in order to manage Health, Safety and Environmental Risks)	**RISK SCORE** with Controls			**Person Responsible** (to ensure controls are applied)
			Cons	Prob	Risk		Cons	Prob	Risk	
						All services to be appropriately identified and marked as per PTW. Delivery driver and supervisor to avoid loading and unloading in close proximity to services. Exclusion zones are maintained- Ensure delivery/travel route does not encroach to overhead services 275Kv = 6 metres Maintain min. 3m clearance to overhead wiring as per project requirements.				
3	Plant / people movements within site.	Collision with other plant / workers	**4**	**3**	**12**	All site vehicles to be equipped with UHF radios, flashing light and reversing camera, VMP/TMP developed and presented to all personnel involved in the activities. Workers involved in activities to complete a site Risk Assessment and identify the site vehicle movements and controls. Setup exclusion from mobile plant. Do not enter unless directly involved. Operator to have positive contact via radio / sight / verbal with all workers / plant within work area. Operators to stop movement if unsure of where any person is and put the bucket down. Ensure adequate space available to carry out task. All loading / unloading activities should be undertaken at designated area(s). Delineation to be deployed where persons are walking on foot and in close proximity to moving plant. Vehicles / plant to move in a forward direction where possible. Spotter to be used at all times. TMP In place and followed.	**4**	**1**	**4**	Site Engineer Superintendent / Foreman

#	Hazard/Aspect (Procedure Step)	Impact (what can go wrong)	RISK SCORE without Controls			Management Controls (Controls to be in place in order to manage Health, Safety and Environmental Risks)	RISK SCORE with Controls			Person Responsible (to ensure controls are applied)
			Cons	Prob	Risk		Cons	Prob	Risk	
4	Prestart machine/plant	Worker falling from height when accessing plant for prestart checks Faulty Equipment	**5**	**3**	**15**	Always remain behind the hand railing Ensure 3 points of contact is maintained whilst accessing the ladders. Plant Pre-Start to be conducted per shift by operator prior to starting to operate. If plant deemed unsafe when inspected, do not operate and report to supervisor.	**5**	**1**	**5**	Supervisor & Work Crew Members
5	General excavation activities while operating mobile plant	Work in/near trench/shaft deeper than 1.5 m Workers being struck by material/spoil during loading/unloading operation Excavation collapse Inadequate Access/Egress	**4**	**4**	**16**	Hanlon Industries permit to be activated (as required). Sign on to GDP & complete GDP checklist prior to works. Excavations over 1.5mtrs are to be benched, battered or shored. Spoil to be kept at a minimum 1 metre from the excavation No person is permitted to be in the trench > 1.5m deep unless adequate support has been installed All heavy materials required for the excavation are to be kept a minimum of 2.0 m from excavation edge. In circumstances where shoring design has not allowed for surcharged loads, 1.0 m or more from edge of zone of influence. Inconsequential loads such as hand tools may be kept closer to the excavation but at a minimum of 1.0 metre away from the works, in circumstances where their placement does not introduce a hazard for persons in the trench, excavation or others in the general work area. •	**4**	**1**	**4**	Supervisor & Work Crew Members

#	Hazard/Aspect (Procedure Step)	Impact (what can go wrong)	RISK SCORE without Controls			Management Controls (Controls to be in place in order to manage Health, Safety and Environmental Risks)	RISK SCORE with Controls			Person Responsible (to ensure controls are applied)
			Cons	Prob	Risk		Cons	Prob	Risk	
		Adjoining traffic imposing load and vibration onto excavation perimeter and zone of influence				Safe and sufficient means of access and egress are to be provided at all times whenever and wherever persons are working in a trench or excavation. Ramp(s) or steps would be preferred method of access/egress however ladders may be used for access as long as step ladders: Manufactured for industrial use. Have a load rating of 120 kg. Must follow the 4 to 1 angle ratio rule: for every metre in height the base must extend out 250 mm. Extend at least 1 metre above the top edge of excavation. Spacing of ladders or means of egress is to be determined as part of the onsite risk assessment. Be firmly secure at the top and bottom. Barriers or other delineation means to keep vehicle/truck traffic from encroaching too close to the edge of excavation				
		Workers falling into excavation	**4**	**4**	**16**	Edge protection to be installed around excavation where there is a risk of personnel falling into the excavation 1.5m or deeper for less than 1.5 m depth if flagging used it should be 1 m away from the edge. Tools spoil, tools and debris must be kept back from the edge of the excavation. (min. 1.0m)	**4**	**1**	**4**	Supervisor & Work Crew Members
		Mobile Plant striking personnel Projectiles objects	**5**	**4**	**20**	Persons on foot not to enter plant operating zone. If personnel wish to speak to the operator, they must gain positive communication with spotter & operator.	**5**	**1**	**5**	Supervisor & Work Crew Members

#	Hazard/Aspect (Procedure Step)	Impact (what can go wrong)	RISK SCORE without Controls			Management Controls (Controls to be in place in order to manage Health, Safety and Environmental Risks)	RISK SCORE with Controls			Person Responsible (to ensure controls are applied)
			Cons	Prob	Risk		Cons	Prob	Risk	
	General excavation activities while operating mobile plant					Excavators implements lowered to the ground and operation ceased. Spotters to be used at all times.				
6	Mobile Plant striking live services	Mobile Plant making contact with stationary equipment or other mobile plant.	**4**	**3**	**12**	Exclusion zone to be set up if required based on site conditions. • Spotters at to be used at all times. Spotters must stand a safe distance away from the mobile plant but must still have a clear view of the operations and have contact with the operators to provide warning of possible conflicts. (Safety zones to be determined based on the works conducted on the day and must be recorded in the daily pre work brief) • UHF Communication to ensuring other plant/equipment is aware of plant/truck movement. •	**4**	**1**	**4**	Supervisor & Work Crew Members

#	**Hazard/Aspect** (Procedure Step)	**Impact** (what can go wrong)	**RISK SCORE** without Controls			**Management Controls** (Controls to be in place in order to manage Health, Safety and Environmental Risks)	**RISK SCORE** with Controls			**Person Responsible** (to ensure controls are applied)
			Cons	Prob	Risk		Cons	Prob	Risk	
						Adhere to site Vehicle Movement Plan, TMP and supervision instruction whilst travelling through site and work areas				
7	Moving material and loading into truck	Workers being struck by material/spoil during loading/unloading operation Excavation collapse Unsafe Bench/Soft edges	**5**	**5**	**25**	Do not overload tubs Load tubs evenly VMP/TMP to be established and implemented. Provide delineation for worker walkways to ensure personnel are not walking next to loaded trucks.	**5**	**1**	**5**	Supervisor & Work Crew Members
8		Mobile Plant striking personnel Excavator striking truck Excavator and truck interacting Poor positioning of truck causing rollover	**5**	**5**	**25**	Persons on foot not to enter plant operating zone If personnel wish to speak to the operator, they must gain positive communication. Excavators implements lowered to the ground and operation ceased. Surveyors not to enter area when plant is operating. When survey checks are being undertaken machine operation must cease. VMP/TMP to be available and implemented. . Horn signals to be used Loading area to be inspected prior to works commencing to ensure stable and level area for trucks	**5**	**1**	**5**	Supervisor & Work Crew Members

#	**Hazard/Aspect** (Procedure Step)	**Impact** (what can go wrong)	**RISK SCORE** without Controls			**Management Controls** (Controls to be in place in order to manage Health, Safety and Environmental Risks)	**RISK SCORE** with Controls			**Person Responsible** (to ensure controls are applied)
			Cons	Prob	Risk		Cons	Prob	Risk	
						Excavator spotter to spot truck into position Plant to move off in a forward motion Seatbelts must be worn.				
9		Truck coming in contact with surrounding structures	**4**	**4**	**16**	Task Hazard Analysis Minimise the amount of moving plant working at one time in the area. Safe approach distances must be maintained when working in close proximity to a building / structure. Spotters to control traffic movement where the operator visibility is restricted.	**4**	**1**	**4**	Supervisor & Work Crew Members
10		Dust Noise	**4**	**3**	**12**	Use water cart for dust control Use remote watercart suppression where possible. Individual personnel shall maintain 2 meters from the mobile plant & must be in view of the operator at all times when using hose. Use hearing protection if noise exceed 80 dBA for 10-hour day or 85 dBA for 8 hour work day;	**4**	**1**	**4**	Supervisor & Work Crew Members
11	Traversing material around site Loading / Unloading material	Plant/plant interaction Plant / Personnel Plant / structure interaction	**4**	**3**	**12**	Vehicle Movement Plan & TMP in place and relevant prior work commencing. Spotter to manage each vehicle movement. Minimise the amount of moving plant working at one time in the area. Always maintain an appropriate distance between plant Utilise positive radio communication. Unload material in designated area (under supervisors' instruction)	**4**	**1**	**4**	Supervisor & Work Crew Members

#	Hazard/Aspect (Procedure Step)	Impact (what can go wrong)	RISK SCORE without Controls			Management Controls (Controls to be in place in order to manage Health, Safety and Environmental Risks)	RISK SCORE with Controls			Person Responsible (to ensure controls are applied)
			Cons	Prob	Risk		Cons	Prob	Risk	
		Rollover causing injury to person or damage to plant	**4**	**4**	**16**	Use compactor and roller to level uneven ground. Ensure all road edges/bunds or windrows are an appropriate height Drive to conditions and in compliance with site VMP/TMP Seatbelts to be worn at all times whilst operating plant.	**4**	**1**	**4**	Supervisor & Work Crew Members
12	Unloading trucks / dumpers	Trucks coming in contact with overhead services	**5**	**5**	**25**	Safe approach distances must be maintained for overhead services. 3m clearance as per project requirements. Spotters / Safety Observers to control traffic movement at all times. Where there is a risk that a safe distance may not be maintained a risk assessment need to be developed and approved by site management	**5**	**1**	**5**	Supervisor / Operators
		Truck coming in contact with surrounding structures	**4**	**4**	**16**	Task Hazard Analysis Minimise the amount of moving plant working at one time in the area. Safe approach distances must be maintained when working in close proximity to a building / structure. Spotters/Safety Observers to control traffic movement at all times	**4**	**1**	**4**	Supervisor / Operators
		Person struck by failing spoil	**5**	**4**	**20**	Do not overload tub of dump truck. Provide delineation between VMP & personnel. Operator to drive to conditions in compliance with site TMP.	**5**	**1**	**5**	Supervisor / Operators
13	Using mobile plant to lift loads	Mobile Plant tipping/losing load	**5**	**5**	**25**	For mobile plant used in a crane mode: The SWL marked on the lifting attachment/point. A load chart displayed in the cabin. Controlled descent (anti burst) valves fitted.	**5**	**1**	**5**	

#	Hazard/Aspect (Procedure Step)	Impact (what can go wrong)	RISK SCORE without Controls			Management Controls (Controls to be in place in order to manage Health, Safety and Environmental Risks)	RISK SCORE with Controls			Person Responsible (to ensure controls are applied)
			Cons	Prob	Risk		Cons	Prob	Risk	
						Plan works in advance to ensure safe working load of excavator/loader is not exceeded. Position the excavator/loader as close to the load as possible Lift load with tracks facing forwards towards the load Where possible only move load over flat ground Ensure sufficient delineation is in place creating buffer between swing path & movement. Spotter to be used at all times				Supervisor Work-Crew
		Lifting gear failure Loads falling on personnel	**5**	**5**	**25**	All lifting and rigging equipment is to be: Visually inspected by a competent person prior to use To be inspected and tagged by a competent person in accordance with the RGBY system Jan-Mar – **RED**, Apr-Jun – **Green**, Jul-Sep – **Blue**, Oct Dec - **Yellow** Lifting chains are to be: load tested and tagged every 12 months All records/certificates of inspection are to be retained and the lifting gear register updated. Any defective equipment is to be tagged out of service and quarantined. Loads to be slung by tickets dogman. Ensure no one stands under a suspended load or in fall zone at any time. Ensure delineation in place to prevent encroachment of persons. Operator to maintain visual contact with all involved in the lift. Spotters in place.	**5**	**1**	**5**	Supervisor Work-Crew
15	Travelling with load	Swinging load causing excavator to tip over	**5**	**4**	**20**	Use tag lines to prevent load swinging where possible	**5**	**1**	**5**	Supervisor Work-Crew

#	Hazard/Aspect (Procedure Step)	Impact (what can go wrong)	RISK SCORE without Controls			Management Controls (Controls to be in place in order to manage Health, Safety and Environmental Risks)	RISK SCORE with Controls			Person Responsible (to ensure controls are applied)
			Cons	Prob	Risk		Cons	Prob	Risk	
						Only travel over relatively flat, even ground when load is hoisted Walk excavator at a steady slow pace Spotter to be used at all times.				
16	Placing/Lowering loads	Loads falling on person	**5**	**5**	**25**	Ensure exclusion zone is maintained in lifting zone. Ensure personnel do not stand under suspended load or within drop zone Operator to maintain visual contact with all involved in lift Use tag lines to prevent load swinging where possible	**5**	**1**	**5**	Supervisor Work-Crew
17	Enter/work in an excavated area	Slips, trips and falls. Collapsing excavation Fall into excavation	**4**	**3**	**12**	Assess ground conditions prior to entry. Tidyup your work area before you start and as work progresses. Stay behind barricade. Don't stand on edgesof excavation. Look out for cracks developing in the surface around excavation. Batter side of excavation. Ensure correct access/egress to work- Access to area via batter/ramp	**4**	**1**	**4**	Supervisor Concretors
		Vehicles driving into excavations	**4**	**3**	**12**	Barricading around all excavations Vehicles are to adhere to VMP. Vehicles not to drive within the 'zone of influence'. Only approved drivers and vehicles permitted on site	**4**	**2**	**8**	Supervisor Workers Drivers
17	Generator & Power Tool use	Personal injury caused by misuse	**3**	**4**	**17**	Wear Correct PPE (including safety gloves, hard hats, eye protection, sunscreen, safety footwear, hi vis clothing) as per page 3, Rail Compliant PPE. Follow instructions of use as indicated in the user's manual Ensure correct blades are used to suit the RPM of the grinder	**3**	**1**	**11**	Supervisor Work-Crew

#	**Hazard/Aspect** (Procedure Step)	**Impact** (what can go wrong)	**RISK SCORE** without Controls			**Management Controls** (Controls to be in place in order to manage Health, Safety and Environmental Risks)	**RISK SCORE** with Controls			**Person Responsible** (to ensure controls are applied)
			Cons	Prob	Risk		Cons	Prob	Risk	
		Eye injury				Cutting Blades not to be used for grinding. Ensure no loose clothing near moving parts of hand tools Guards, dead non switches to be in place & operational Ensure all tools are maintained in good working order. Electrical tools to be tested & tagged every 3 months.				
		Person struck by plant whilst operating tools in close proximity to plant operation.	**4**	**4**	**16**	Establish barricaded exclusion zone as required; if not feasible postpone works until plant operation is ceased in the area. Use spotter if simultaneous operation cannot be postponed; (But only as a last resort):	**4**	**1**	**4**	Supervisor Work-Crew
		Cuts and lacerations from use of powered tools	**5**	**4**	**20**	Ensure all shield and guards are in place and in working order as per manufacturers recommendations Always cut away from the body Never place your hands/arms or body in line of fire or near moving parts and equipment Gloves appropriate for the task to be worn	**5**	**1**	**5**	Supervisor Work-Crew
		Injury due to entanglement in moving parts of tools and equipment	**5**	**5**	20	Do not wear loose clothing or jewellery that could get caught in moving parts of tools and/or equipment OEM (Original Equipment Manufacturer) shields and guarding in place and in working order. Inspect and Tag out of service any equipment/tools found to be damaged;	**5**	**1**	**5**	Supervisor Work-Crew
		Noise induced hearing loss	**4**	**4**	**16**	Ear Plugs / Earmuff to be used for any tools with noise over 80-85 dbA exposure; Keep portable electrical generators away from immediate works to minimise exposure to equipment noise.	**4**	**1**	**4**	Supervisor Work-Crew

#	Hazard/Aspect (Procedure Step)	Impact (what can go wrong)	RISK SCORE without Controls			Management Controls (Controls to be in place in order to manage Health, Safety and Environmental Risks)	RISK SCORE with Controls			Person Responsible (to ensure controls are applied)
			Cons	Prob	Risk		Cons	Prob	Risk	
		Dust	**3**	**3**	**9**	Use tools in well-ventilated area Wear suitable P2 dust masks or respirator if cutting/grinding or drilling operation is too dusty Use water for dust suppression as required Use tools fitted with vacuum connection and dust suction attachments;	**3**	**1**	**3**	
		Injuries to hand/fingers and body due to sharp or hot offcuts	**4**	**4**	**16**	Wear appropriate gloves for the task (i.e., rigger or gauntlet gloves for OXY cutting/Welding)	**4**	**1**	**4**	Supervisor Work-Crew
		Injury due to electric shock electrocution	**5**	**5**	20	Inspect all tools and leads for current quarterly test and tag (RGBY) by qualified person; All electrical equipment/ Generators to be protected by Residual Current Devices (RCDs). Generator to be placed on stable surface. Where main power is unavailable the generator must be to be factory fitted with RCD; All equipment to be inspected before use and any faulty gear to be placed out of service and reported to your supervisor. Electrical leads to be elevated on stands above ground or on insulated hooks. No leads are to be joined together (maximum lead length is 30m) Do not tape leads together. Where formwork is required to be cut to size, suitable work benches shall be used to remove the potential for laceration injuries from power tools.	**5**	**1**	**5**	Supervisor Work-Crew
		Flying particles causing eye injury Exposure to UV rays from welding causing eye injury	**5**	**5**	**25**	Always work so that sparks and debris are directed away from the body Wear appropriate PPE (i.e., double eye protection for grinding and cutting activities) Keep guards in place and in proper adjustment/alignment If possible, conduct cutting/grinding activity on properly set up work bench; and ensure work	**5**	**1**	**5**	Supervisor Work Crew

#	Hazard/Aspect (Procedure Step)	Impact (what can go wrong)	RISK SCORE without Controls			Management Controls (Controls to be in place in order to manage Health, Safety and Environmental Risks)	RISK SCORE with Controls			Person Responsible (to ensure controls are applied)
			Cons	Prob	Risk		Cons	Prob	Risk	
						benches are clear of loose debris prior to operating power tools If welding you must be certified competent for welding and wear welding mask; welding gloves; apron if required and utilise welding screen to protect other personnel in the area.				
		Injury due to accidental start up	**5**	**4**	**20**	Turn off power before removing plug and never place your fingers/hands/arms or body parts in line of fire whilst carrying plugged in tool and holding finger on the power tool switch button	**5**	**1**	**5**	Supervisor Work-Crew
18	Use of non-powered hand tools i.e. claw hammer, sledge hammer, chisel, shovel, mattocks/picks, pinch bar, crow bar, broom etc.	Strains, sprains, cuts, lacerations	**5**	**5**	**25**	Warm up before starting work Adopt a comfortable stance, with a clear view of the job Maintain correct posture and hold tool firmly Bend with your knees and keep back straight when using a tool Avoid overreaching while keeping proper footing and balance at all times. When using cold chisel wear gloves, also preferably use one fitted with rubber protector handle and keep your hands out of the line of fire when using hammer ensure you keep hands and fingers out of the line of fire, keep your eyes on the point to be struck and eyes on task, maintain proper wide-open stance/stable footing and use lever force avoiding overreaching and back twisting motion	**5**	**1**	**5**	Supervisor Work-Crew
19	Cut Re-bar with Grinder	Hot works Work causing fire risks				Project approved PPE required at all times. When grinding safety glasses and full-face shield must be worn at all times. A Hot Works Permit must be in place before commencing grinding work;				Supervisor

#	**Hazard/Aspect** (Procedure Step)	**Impact** (what can go wrong)	**RISK SCORE** without Controls			**Management Controls** (Controls to be in place in order to manage Health, Safety and Environmental Risks)	**RISK SCORE** with Controls			**Person Responsible** (to ensure controls are applied)
			Cons	Prob	Risk		Cons	Prob	Risk	
		Work in contact with powered tools Burns/cuts and abrasions caused using grinder	**4**	**3**	**12**	All controls listed in permit must be adhered to e.g., fire watcher & extinguishers; Remove all flammable material from area. Ensure correct disk is selected for grinder. Prohibited Item: 9" grinders not to be used onsite. All power tools are to be operated as per manufacturers requirements and not modified in any way. Ensure all guards & handles are in place. Only use cutting discs for cutting and grinding disks for grinding.	**5**	**1**	**5**	Work-Crew
21	Cutting ply - using power saw	Serious cuts & abrasions from contact with saw blades,	**5**	**5**	**25**	Where Form work is required to be cut to size, suitable work benches shall be used to remove the potential for laceration injuries from power tools. Ensure correct PPE in use. Large off cuts will be supported so that off cuts do not fall and jam the saw. Smaller off cuts will be positioned so that they fall away from the blade. Guards to be fitted in accordance with manufactures instructions on all power saws. Ensure that Power saw guards are properly attached and that it retracts and springs back following the release of pressure. Inspect the blade of the saw and ensure it is in shape and free of defect.	5	**1**	**5**	Supervisor Work-Crew
22	Tying Rebar	Manual Handling / Strains and Sprains Cuts and Abrasions Impalement.	**4**	**4**	**16**	Use stands where possible to reduce the need to bend body. Ensure correct PPE in use. Use mechanical means where possible to move reo Use 2 person lifts to move long lengths of reo Rotate Tasks Correct tool to be used when bending bar Ensure stable working position at all times. Keep hands out of pinch points.	**4**	**1**	**4**	Supervisor Work-Crew

#	Hazard/Aspect (Procedure Step)	Impact (what can go wrong)	RISK SCORE without Controls			Management Controls (Controls to be in place in order to manage Health, Safety and Environmental Risks)	RISK SCORE with Controls			Person Responsible (to ensure controls are applied)
			Cons	Prob	Risk		Cons	Prob	Risk	
		Trip Hazards (Ankle Injuries)				Beware of sharp ends of cut rebar(s). Tie wire to be turned down into reinforcement cages Wear suitable gloves for the task.				
23	Working with concrete	Formwork Splinters/injuriesSteel scratches/cuts Concrete burns Chronic skin disorders Eye injury from concrete Respiratory disease	**3**	**4**	**12**	Avoid skin contact. Long sleeves rolled down. Long pants Gloves – pvc If walking in concrete, then gumboots worn Wash off concrete if contact with skin occurs. DO NOT kneel in concrete, remove clothes if concrete contacts skin through clothing. Safety Glasses worn If there is a risk of inhaling concrete dust when using dry concrete, a P1 or P2 mask isto be worn SDS Available	**3**	**2**	**6**	Concretors Foreman
23	Shovelling, Screeding, Vibrating & Finishing of Concrete	Noise and concrete splashing & vibration Falling Objects Manual Handling	**4**	**3**	**12**	Job rotation and relief spells to be utilized to avoid muscular sprain and strain injuries while shovelling concrete. Hearing protection and splash safety glasses to be worn. Spill kit to be on site for concrete works. Project Rail compliant PPE, Long Pants, Long Shirt, Glasses, Gloves to be worn. Adopt manual handling techniques when shovelling concrete, • Follow SDS controls when handling or working around concrete.	**4**	**1**	**4**	Site Engineer Superintendent / Foreman Workers

#	**Hazard/Aspect** (Procedure Step)	**Impact** (what can go wrong)	**RISK SCORE** without Controls			**Management Controls** (Controls to be in place in order to manage Health, Safety and Environmental Risks)	**RISK SCORE** with Controls			**Person Responsible** (to ensure controls are applied)
			Cons	Prob	Risk		Cons	Prob	Risk	
24	Handling/using Hazardous Materials	Burns to skin. Ingestion Loss of sight Breathing Difficulty	**4**	**4**	**16**	Provide SDS sheet personnel who may become in contact with substance. Wear and maintain PPE outlined in SDS sheets, i.e., gloves, glasses, long pants, long sleeve shirts. Record SDS's on site in SDS register and keep hard copies of sheets on site. Keep in a bunded area or double wall storage tank when on site. Use and apply as per manufactures recommendations. If you become in contact with hazardous material, attend the site off and follow treatment as outlined in SDS. All incidents/injuries to be reported immediately to Hanlon Industries Supervisor before end of shift.	**4**	**1**	**4**	Site Engineer Superintendent / Foreman Workers
11	Using a concrete vibrator	Extended periods of vibrations to one's hands can cause White Finger and damage the nerves of the hands – resulting in a personal injury	**3**	**4**	**12**	Take regular breaks by sharing the task with other employees. Where possible insulate yourself from the vibrations by mechanical or other means. Excessive vibration may indicate defective equipment / tool / machinery / plant – if in doubt report concerns to supervisor. Avoid prolonged use of tools / equipment / plant that vibrate. Stop if numbness / loss of control / tingling occurs	**3**	**3**	**9**	Concretors Foreman

#	**Hazard/Aspect** (Procedure Step)	**Impact** (what can go wrong)	**RISK SCORE** without Controls			**Management Controls** (Controls to be in place in order to manage Health, Safety and Environmental Risks)	**RISK SCORE** with Controls			**Person Responsible** (to ensure controls are applied)
			Cons	Prob	Risk		Cons	Prob	Risk	
	Interaction with Concrete Agitator truck and concretepump	Crush injuries from being struck by reversing truck/pump. Arm injuries from workers sticking arms in grate at rear of pump. Truck chute striking worker Hand injury when attaching chutes to agitator truck	**4**	**3**	**12**	Ensure workers are tool boxed and aware of correct hand signals when reversing/spotting for trucks. Spotters to remain within eyesight of truck driver when reversing. Truck/pump to have audible reversing warning. High vis clothing worn, reflective clothing for nightworks. Workers not to work with concrete pump unless they are signed onto pump swms. Concrete pump to have shut off valve on grate. Agitator truck to have a chute that locks into position and locked when truck is moving. Gloves worn when attaching chutes.	**4**	**2**	**8**	Concretors Truck driver /operator Foreman

#	**Hazard/Aspect** (Procedure Step)	**Impact** (what can go wrong)	**RISK SCORE** without Controls			**Management Controls** (Controls to be in place in order to manage Health, Safety and Environmental Risks)	**RISK SCORE** with Controls			**Person Responsible** (to ensure controls are applied)
			Cons	Prob	Risk		Cons	Prob	Risk	

Review and Monitoring

Review No.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**

Name									
Date									

Review Comments	

WORKERS REVIEW SECTION: Please add in any new work activities that you may require or any new control measures you may wish to add and contact site Safety / Environmental Representative before commencing this new work activity.
• A Record of nil needs to be recorded if no feedback is provided.

Employee's Acceptance

We, the undersigned, confirm that we have been consulted on the development and given opportunity to provide inclusions of the SHEWMS nominated above and the details have been explained and clearly understood. We also confirm that our required qualifications to undertake this activity are current. We also clearly understand that the controls in this SHEWMS must be applied as documented, otherwise work is to cease immediately.

Date	Name	Employer	Signature

Date	Name	Employer	Signature

Date	Name	Employer	Signature

Victoria (Head Office)
85 Heales Rd, Corio VIC 3214
PO Box 405, North Geelong VIC 3215
New South Wales
71A Burrows Rd, Alexandria, NSW 2015
Queensland
24 Armada Pl, Banyo, QLD 4014
Western Australia
Unit 5 345 Victoria Rd, Malaga, WA 6090
hanlonindustries.com.au p: 1300 20 22 80 e: admin@hanlonindustries.com.au

Prepared by: *(Name, Position, Company & address)*	Dean Johns , Hanlon Industries Pty Ltd	Date:	16/04/2024
Reviewed by: *(Name, Position, Company & address)*	Simon Scruby, Hanlon Industries Pty Ltd	Date:	16/04/2024

JOB DETAILS

Overall Risk Score:	**6**	**SWMS No:**	**27094**	**Rev No**	**01**	**Issue Date**	**16/04/2024**

Basic description of Job:	**Client:**

Installation of new monopole double supersite digital	JCDecaux

LOCATIONS

Panel or location:	Physical Address:	Expected Start Date	Expected End Date	Project Managers Name	Mobile Number
15.900 km –down relief to 17.2 km and down main as well	**Homebush bay drive bridge**	**22/05/2023**	**30/01/2024**	**Dean Johns**	**0417708599**

CONTROL MEASURES

High Risk Work	• ✓	•	✓	•	• ✓
Working at heights (above 2m)	✓	Work Involving Demolition	✓	Working with Asbestos	
Confined Space		Excavation Deeper than 1.5m		Working near Pressurised Gas	
Work near chemicals, Fuel or Refrigerant Lines		Work near Energised Electrical Lines		Working near underground Services	

Permit Requirements	• ✓		✓		• ✓
Work Permit	✓	Break-in / Road opening	✓	Hazardous Materials (See Hazardous Materials Section)	
Confined Space		Working at Heights	✓	Excavation	
Hot Works	✓	Isolation – Energy Source		Electrical – Vicinity permit	
Electrical - Testing		Working with Cranes	✓	Building / Airport Permit (AWP) / NSW Roads	✓

PPE Requirements	• ✓		✓		• ✓
High Visibility Orange Vest AS4602 & AS1906.4	✓	Steel Cap Work Boots – AS2210.1	✓	Hard hat – AS/NZS 1801	✓
Safety Eyewear – AS1067	✓	Mask – AS1716	✓	First Aid Kit	✓
Gloves	✓	Hearing Protection	✓	Leather Protective Sheets	✓
				Sunscreen	✓

PRESTART TOOLBOX MEETINGS ARE TO TAKE PLACE PRIOR TO THE START OF WORKS

ONCE WORK ON THIS JOB HAS BEGUN.....

IF THERE ARE ANY CHANGES FROM THE WORK METHODOLOGY, ACTIVITIES OR PROCEDURES DETAILED IN THIS DOCUMENT

WORK MUST STOP...REASSESS THE JOB

MARK-UP THE SWMS AND RE-SIGN PRIOR TO WORK RESTARTING

ASSESSMENT / METHODOLOGY

Legend

SS – Site Supervisor	CO – Crane Operator	PM – Project Manager
ALL – Everyone on site	EO – Equipment Operator	TO – Truck Driver

Activity / Procedure *Break the job down into steps*	Identified Hazards *Identify the hazards associated with each step. Examine each to find possibilities that could lead to an incident.*	Raw Risk Score C x P	Preventative Control Measures: *Use the two previous columns as a guide. Decide what actions are necessary to eliminate or minimise the hazards. Indicate who is responsible.*	Residual Risk Score C x P	Person Responsible
Temporary / Pre-works / Preparation					
1. Site Specific Induction	• Risk of injury while on the worksite • Risk of liability	**25**	• All visitors to site must be signed on to Hanlon Industries SWMS & JSEA's • All contractors must be inducted to JCD. • All visitors to site must be signed on to Hanlon Industries SWMS & JSEA's • Work Area to be clearly barricaded to prevent access into work zone	**9**	**ALL** **SS**

2. Drugs and Alcohol	• Contractor or Employee affected by Drugs or Alcohol – Injury – risk of injury
	  • Hit others or property with machinery
	  • Cuts / abrasions with tools
	  • Correct procedures not followed causing injury
		25	• Hanlon Industries has a ZERO Tolerance Policy for all workers.
			• Workplaces established at SYD must have a drug and alcohol monitoring program for workers involved in high-risk work. Where work involves Safety Sensitive Aviation Activities, Part 99 of the Civil Aviation safety Regulations requires compliance with the SYD Drug and Alcohol Management Plan
			• Participate in testing for drugs and alcohol when required. This may include following high-risk incidents
			• Do not consume during work hours, or present to work under the influence of and/or with the presence of any illicit drugs and/or alcohol
				2	**PM**
					ALL
					SS

3. Fitness for work	• Incidents because of fatigue symptoms • Injury or damage caused by less reaction time and awareness • Hit others or property due to lack of concentration • Unplanned overtime or irregular work hours	**20**	• 10-hour shifts and 11 hours breaks between work shifts • Fatigue questions to be asked by Leading Hand to ask all employees / contractors at commencement of work.	**4**	**PM** **ALL** **SS**

	• Physically or psychologically demanding tasks • Working in safety critical and high-risk situations • Medical conditions, injury or illness • Poor quality or lack of sleep • Lifestyle or personal factors		• All workers must attend ft for work and able to perform work tasks and not cause harm to themselves or adversely affect the health and safety of others • Report fitness for work concerns that may affect work ability to a supervisor, including consumption of over the counter or prescribed medication • Consult a medical practitioner if fitness for work is adversely affected, or before returning to work from a period of being unfit for work		
4. Working outdoors	• Adverse weather conditions • Worker dehydration / exposure	**16** **16**	• Preferable to conduct no work in adverse weather conditions. If not possible then. • Daily Toolbox to assess new conditions • Review SWMS and JSEA Risk Assessment to see if changes to work methods required • Use PPE appropriate for weather conditions, i.e. Raincoats, boots, head coverings • Heat- Drink plenty of water • Working Mobile phone / emergency contact numbers	**4** **4**	**SS** **PM** **ALL**
5. PPE Gear	• Incorrect PPE gear worn on site – Injury by not being visible on site • Cuts, abrasions or objects in eyes due to incorrect PPE • Hit by machinery because you were not seen • Injury caused by incorrect fitting clothing e.g. rolled ankle **←-PPE GEAR SHOULD BE FIT FOR PURPOSE →** • Not wearing hard hat within worksite – injury by flying material • Injuring worker from fallen objects	**25** **25**	• Correct PPE gear must always be worn on the worksite site • PPE requirements: ▪ Hi vis shirt ▪ Hi vis pants reflective tape on legs ▪ Hard hat • Safety glasses worn • Lace up ankle work boots	**6** **6**	**SS** **ALL**
6. Continued risk assessment	• Risk Assessment not carried out and SWMS not used – risk of accident to contractor while carrying out the Posting • Work Area hazards – hazards that may daily arise such as pedestrian access and vehicle encroachment	**20**	• Risk Assessment must be completed prior to work, and at daily toolbox meetings until the project is complete • Carry out RISK ASSESSMENT of the site • Hazards registers are available at the site office, if required (Risk Assessment are filed by the contractor and made available on request) • Assess and comply with all relevant legal requirements • Maintain evidence of consultation with relevant workers, cooperation and coordination of activities with other relevant duty holders • Provide information, instruction, training or supervision to workers that is suitable and adequate having regard to the nature of the work,	**4**	**SS** **ALL**

			the nature of the risks associated with the work, and the control measures implemented • Hold all required high-risk work licences for the relevant work and keep readily available on site • All relevant workers must review, understand, sign onto and apply the safe work method statements		

7. Transporting equipment and unloading	• Danger to Road users
	  • Equipment stuck to moving traffic
	• Danger from vehicles
	  • Workers being struck by moving traffic
	• Danger to Pedestrians – injury to pedestrians, ground users & other workers
	  • Hit pedestrian or worker with moving machinery
	• Manual Handling – injury while lifting
	  • Muscle or back strains
	• Hit by falling object
	• Danger to Car park users – injury to users
	  • Car park users being stuck by vehicles
		30
		
		30
		
		30
		
		20
			• Use of witches' hats to direct pedestrians
			• Barricade the area with temporary fencing
			• Use of Traffic Management Plan
			• No equipment to be left on footpath / roadways/outside enclosed area
			• Move vehicle after unloading to a safe location
			• Team lifting as required transporting equipment to minimise manual handling strain.
			• All the site vehicles to watch the car and car park users
			• Spotter to direct the traffic if needed
			• Ensure sufficient clearances under bridges and car park for cranes & EWP's
			• Report any infrastructure damage to site office/management
				8
				
				8
				
				8
				
				4
					All
					SS

8. Accessing the Worksite	• Heavy traffic • Motor vehicle users • Pedestrians hazards – risk of injury • Damage to infrastructure/surfaces • Not being accounted for in the event of an emergency – risk of injury • Unfamiliar work environment – risk of injury • Pedestrians hazard – risk of injury • Damage to parked cars • Public liability • Parking of work vehicles and machines	**30**	• Pedestrian management to block off the footpath. • Give way to all pedestrians / cyclists • Contractor to carry Valid copy of SWMS for the site and any inductions and permits required • Complete any other required site-specific induction • Wear approved PPE Gear upon entering the work site • Site layout plan for location of vehicles & crane to be coordinated with Traffic Management personnel • Park vehicles off through-ways and in safe place only • Give way to all pedestrians. • Give way to traffic in the car park • SIGN IN at site required • Spotter to watch the movements of vehicles and access equipment	**6**	**SS** **ALL**
9. Lookout person	• Incorrect use of lookout person – risk of injury • Hit person or object	**20**	• Lookout person sole responsibility is to look out for the safety of the Hanlon employees and contractors. • Use of professionally trained Traffic Management personnel	**4**	**SS** **ALL**

10. Site Protection **Fencing of entire worksite Set up the correct protection and signage around fencing**	• Workers struck by bicycle, pedestrian or motor vehicles • Traffic accidents occur, persons injured • Lookouts maybe required – Possible Injury	**30** **30**	• Determine the required protection or traffic control required • The site to be enclosed by temporary fencing	**6** **6**	**SS** **ALL**
11. Covid-19	• Infection from another worker or member of the public	**NA**	• Maintain social distancing as required – 1.5m or 1 person per 2m2 where practicable • Staggered break times • Avoid any unnecessary contact with other workers including delivery drivers to site • Wash hands with soap and water regularly • Use own tools and clean when finished using • One operator per machine / tool • Wear gloves, eye protection and masks where possible • No spitting on site • Only essential workers on site for tasks • Hand sanitizer to be available on site and in vehicles • Workers to inform Directors if feeling unwell and self-isolate until tested and cleared by doctor • Workers who interact with anyone who has returned from overseas or have come into close contact with someone with the virus– self isolate for 14 days • Manage worker breaks to avoid large groups • Regular updates to workers through toolbox talks	**NA**	**ALL**
Equipment					
12. EWP Operations	• Property Damage • Falling from heights • Crush risk from being trapped between EWP and stationary object • Falling objects – injury, property damage • Fire and explosion • Uncontrolled vehicle movements • Rollover due to unstable or unsuitable ground conditions	**30**	• Licensed and competent operators • Harnessed and attached to anchor point in basket • Operator to familiarise themselves with controls prior to undertaking task. Make sure all your steering movements are smooth and controlled. Use low speed range (turtle) mode. • Be constantly alert for potholes, obstructions, people other machinery and any other hazard. Controller in place. • Ensure all Stabilisation Arms are deployed correctly	**12**	**SS** **ALL** **EO**

			• Stop operations if persons or plant come within working range of EWP. • If moving an EWP up or down the hill, always travel with the platform pointing up the hill. • Do not carry loads on the handrails unless this is specified by the manufacturer • Do not stand on handrails. You must stand with both feet firmly on the platform floor. • Do not exit the boom lift • Operator and assistant to have lanyards and safety harness always attached to approved anchor points inside boom lift. • EWP will not be used to lift any material other than the tools required to perform work. Each of which must not exceed the SWL of the EWP listed in the Operators Manual. • Ensure work area is clear from obstructions which will hinder the movement of the platform. • Keep all hands and feet within the confines of the EWP when EWP is moving. • Spotter all time to assist the movement • Do not exit an elevated work platform when elevated unless a risk assessment has been completed and verified by a competent person • Where practicable, separate plant and people • Assess ground conditions with approval of a geotechnical engineer, or other competent person • Defne exclusion zones and control entry to work areas • Verify seating is available for all persons on powered mobile plant and that seat belts are provided and used • Fit warning or safety devices to moving plant and equipment (e.g. amber beacons, audible alarms) • Secure unoccupied mobile plant from unauthorized access and uncontrolled vehicle movements		
13. 60-90T Crane	• Crane tipping due to weight • Damage to crane overpass • Injury to crane operator • Dropped object causing injury to operator, dogman and rigger, damage to road, overpass and crane • Affected relationship with client and management • Loss of revenue • Faulty design or manufacturing errors • Adverse weather conditions • Faulty lifting anchors or connectors	**30**	• Crane to be operated by qualified person only – C6 • Crane Operator • Communications established between operator and Rigger/Dogman ▪ Weight readings cross checked ▪ Inspections maintenance completed and submitted to Seymour Whyte ▪ Weight of structure known before lifting ▪ Inspect visibility of lift ▪ Lift plan to be made ▪ 360 degree inspection of set up before lifting	**12**	**CO** **SS** **ALL**

	• Incorrect lifting and erection practices, including unsafe rigging and inadequate or unsafe lifting equipment • Incorrect loading or unloading methods • Inappropriate or unstable work areas for cranes • Inadequate structural capacity of foundations		▪ Crane configuration matches lift plan ▪ Ground is suitable to hold crane, load and outrigger weight ▪ Ground is level and suitable for lifting ▪ Outriggers to be fully extended ▪ Carrier tyres to be off ground ▪ Timbers under outriggers ▪ Cylinder and pad to be at right angles ▪ Load shall not exceed 75% of crane lifting capacity Check for overhead power lines ▪ Wind to be monitored during course of operation Check for excavations, trenches or any other hazards • Rigger/Dogman ▪ Objects to be attached by qualified rigger only ▪ Equipment fit for purpose No part of load is loose ▪ Travel route is clear and ready to receive load will not foul with object when hoisted High Risk licence and certificate ▪ Lifting equipment to be inspected and tagged • Exclusion zone to be maintained for lifting area/path • Damage to be reported immediately • Dogman to supervise crane operation • Spotter to direct crane • Crane to travel through pre-determined path only • Timbers used to spread the load on out riggers • Crane to not be operated during a storm or during lightning events • No persons to stand under suspended load at any time • Only use plant to lift or suspend a load that has been specifically designed for that purpose • Never lift or suspend loads over people. Tag lines must be used when lifting loads over existing assets • Develop, implement and maintain a safe work method statement in line with SYD review checklist. • Develop, implement, maintain, communicate and practice an emergency plan • Maintain, inspect, certify and register cranes and lifting equipment in accordance with regulatory requirements, manufacturer advice, competent person recommendations and risk assessment outcomes • Make readily available evidence of crane registrations • Develop, implement and maintain a lifting plan using a competent person • Confirm the lifting equipment is appropriate to the task and type of lift, is never overloaded and is certified by competent persons		

			• Inspect lifting gear and tag as per legal requirements, by a competent person. Tags must always be in place and a lifting/rigging equipment register must be kept on site • Lifting equipment must not be left on the hook overnight • Visually inspect lifting equipment before every use • Establish exclusion and drop zones and delineate, communicating to these relevant persons • Comply with all prescribed airspace surfaces, including the Obstacle Limitation Surface (OLS), and obtain appropriate approvals for use of cranes or lift equipment prior to a crane lifting operation		
14. Electrical Equipment & Leads	• Faulty equipment & leads • Carpark in & out traffic • Inappropriate PPE worn	**25**	• All the equipment to have current tags • Experienced operator to use the equipment • Keep electrical leads and cables off ground to prevent contact with water and damage, or from creating a hazard to personnel or other operations • Disconnect or isolate any unsafe electrical equipment from the electrical supply and do not reconnect unless tested, found safe and tagged • Regularly inspect and test all required electrical equipment. Inspect all portable power tools before use. Tag out any faulty equipment and report it to a supervisor	**6**	**SS** **PM**
15. Hot Works **Cutting / Grinding / Welding**	• Faulty equipment causing Electrocution • Dirty equipment causing Electrocution/Fire • Loose connections causing fires or electrocution/Fire • Faulty PPE causing burns (Radiation/hot metal) • Arc flash leading to damaged eyes • Flying debris can cause eye injury • Sparks from grinder can cause fire • Laceration of fingers due to contact with moving parts • Incorrectly fitted guards can cause injury • Noise induced hearing loss • Electric shock or electrocution	**25**	• Do not undertake hot works on a total fire ban day • Hot works permit to be filled before commencement • Implement fre system isolations prior to hot work commencing • Remove any flammable or combustible material or provide non-flammable covers or screens to control sparks • Keep flammable or combustible substances at their lowest practicable quantity • Inspect tools and equipment prior to works and confirm they are ft for purpose and in suitable working condition • Designate restricted work areas via physical barrier or screening to minimise risk to others and signpost • Communicate with workers or other persons in the vicinity of hot works, advising of hazards and relevant controls • Maintain a fire watch post hot work as defined in hot works permit • Ensure the welding machine is in good condition before use • Check leads for damage • Tag defective equipment so it cannot be used before it is repaired	**9**	**SS** **ALL**

			• Use tools in compliance with manufacturer's instructions • Check for defective electrode holders and guns, insulation damage, overheating or suspected defects • Clean all contact surfaces and equipment • Check and tighten all external connections • Ensure earth leads are secure • Clothing and welding gloves need to be dry and gloves free from holes • Safety boots should have rubber soles • Discard stubs carefully, preferably in a storage bin for this purpose • Ensure hot particles or sparks cannot lodge in fissures crevices or any combustible material • Do not Tangle leads as they can overheat • Keep connection point clear of flammable materials • Ensure work area is well ventilated • Keep welding leads as short as possible • DO NOT drag live welding leads to the work • Remove electrodes from holder and switch off the power source when not in use to elevate danger from electrical contact with persons or conductive objects • Avoid working in rain or close to water • Keep welder and work area dry • Have fire extinguisher on hand • Maintain a Fire Watch for at least 30 minutes after last hot work • Wear appropriate personal protection equipment. • Ensure prestart checks are carried out before each operation which will include guarding, electrical leads and general condition of grinder • Use right grinding wheel dimension. • Visual check should be carried out to ensure all guards and covers are fitted, in good order and there are no visible faults		
Site works – Civil Works for New Sign					

16. Unloading equipment and machinery	• Damage to live traffic
	  • Injury to others
	  • Damage to machinery
	• Damage to Car park
	  • Affected relationship
	  • Loss of revenue
		30
		
		30
			• Licensed and qualified person to operate machinery
			• Traffic management to control live traffic
			• Pedestrian management and barricades to direct pedestrians and foot traffic away from the area.
			• Spotter to direct
			• Unload machinery in secure/barricaded/designated area
				8
				
				8
					SS
					ALL
					CO
					EO

17. Park and set up site vehicles	• Hitting live traffic
	  • Injury to others
	  • Damage to machinery
	• Damage to Car park
	  • Affected relationship
	  • Loss of revenue
		30
		
		30
			• Licensed and qualified person to operate machinery
			• Traffic management to control live traffic
			• Pedestrian management and barricades to direct pedestrians and foot traffic away from the area.
			• Spotter to direct
			• Unload machinery in secure/barricaded/designated area
			• Wear all PPE required for works
				8
				
				8
					SS
					ALL

18. Working near live traffic	• Workers hit by passing vehicles • Objects falling on the street causing accident •	**30**	• Traffic Management plans to be developed and be approved by the council • Authorised Traffic Controllers to direct the traffic • All appropriate signage to be in place to alert road users • Traffic Controller to alert road users and workers of changing road conditions and assist with vehicle movement • Works to be conducted outside of peak hours • No vehicles to stop or reverse on main road • All workers to follow road rules, incl speed and directional signage	**12**	**ALL**
19. Cutting Concrete & asphalt surface	• Hazard to workers - cuts and abrasions • Noise pollution • Flying debris – eye injuries • Airborne dust created	**20**	• Water being used to control the dust • Use appropriate PPE equipment	**4**	**ALL** **SS**
20. Safety check of Excavator	• Safety check not completed - Faulty equipment machine failure • Injury to people, damage to product or equipment from running into or over	**20**	• Check for dents, cracks and faulty welds • Check all hydraulic rams and lines, controls for leaks • Check all safety devices • Check for leaking fluids • Check tracks for tightness and rollers, idlers, and sprockets for damage	**4**	**EO**

21. Excavation works – mechanical digging using excavator	• Hitting any underground services • Workers struck by plant or equipment • Tripping/falling hazard • The instability of any adjoining structure • Contamination of water • Inappropriate placement of excavated materials • Airborne dust created • Hazard to pedestrians • Noise pollution • Inappropriate disposal of soil based on the waste classification • Exposure to buried hazardous materials	**25** **20** **16**	• DBYD and Services scanning to be performed before excavating • Geotechnical investigation to be completed prior to works • Perimeter fencing around each worksite and laydown areas • Ensure perimeter fencing has sufficient wind bracing • Excavated soil to be tested for contamination and stored/disposed properly • Water being used to control the dust • Use appropriate PPE equipment • Provide alternate access path for pedestrians • Soil to be tested and waste classification assessed before the works • Soil to be disposed off in appropriate facility, based on the waste classification report • Refer to the asbestos and hazardous materials register/s during planning stages and test environmental media where contamination may exist. Where results indicate the presence of hazardous materials, develop, implement and maintain appropriate worker exposure controls • Provide a safe means of access and egress at all times • Undertake post rainfall or inclement weather inspections • Provide spotters for all plant or machinery when in use • Restrict access to the work area via physical barricading and signage • Excavations much be benched, shored and battered to a safe angle of repose as determined by a competent person • Develop, implement and maintain sediment control plans to prevent run off and stockpile dust management controls applied	**6** **4** **2**	**ALL** **SS** **PM** **EO**
22. Manual Digging	• Excessive heat – Heat Stress, fatigue heat stroke • Manual Handling – Muscular injuries • Fatigue, strains and sprains, dehydration • Environmental - Disturbance to plants or animals - removal of vegetation • Environmental - spreading of Weeds and pests	**20**	• Wear appropriate PPE on site at all time • Access to drinking water - maintain water intake • Rest out of direct sun (if required) • Rotate workers (if required) • Manual handling training • Breaks as required • Ensure fragile vegetation is removed carefully for reinstatement	**6**	**SS** **ALL**
23. Concrete pour	• Contact with skin • Inhalation • Ingestion • Contact with eyes	**25**	• Use appropriate PPE equipment including gloves and safety glasses • Maintain at least forearms length away from applicator • Use recommended amount of product • Use applicator recommended by manufacturer • Wash skin area after contact • Concrete truck to be washed off the site	**4**	**ALL** **SS**

Site works – Installation of New Sign					
24. Working at heights	• Falling from height – risk of injury/death • Incorrect tools or equipment (e.g. working off a ladder) • Unsuitable or inappropriately used personal protective equipment (e.g. not wearing a harness) • Poor ground conditions (e.g. uneven ground for elevated work platform use, trip hazards) • Limited access and egress to the work area • Barrier protection and exclusion zones not defined	**25**	• Where it is reasonably practicable, undertake work on the ground or on a solid construction • Assess ground conditions prior to works • Ensure adequate fall restraint or fall arrest protection is used • Ensure fall restraint anchor • Only personnel trained in Working at heights • Ensure all fall restraint has been checked and signed off by qualified personnel • Ensure fall restraint equipment is in date • Watch for the disruptions on the ground while moving around • Rachet Straps used as handrails on each level of the exposed box to prevent falling hazard • All the people on the exposed structure should have lanyards on and hooked to the steel members • Hold all required high-risk work licences for the relevant work • Inspect working at heights equipment and infrastructure at periodic intervals to confirm it remains ft for purpose and is maintained in accordance with statutory and manufacturer's requirement • Maintain 100% hook up of a harness lanyard when working at heights • Check harnesses are tagged and visually inspected before use	**6**	**SS** **ALL**

25. Installation of sign	• Working at heights
	• Crane operations
	  • Falling object
	  • Damage to crane and lifting equipment
	  • Operator, dogman, rigger or other worker being struck by moving objects
	  • Damage to property
	  • Loss of revenue
	• Objects falling from heights
	  • Injury to workers and pedestrians caused by falling objects
	  • Damage to property and infrastructure
	  • Damage to lifting equipment
	• EWP operations
	• Works near live traffic
		25
		30
		
		30
			• Traffic management to control live traffic.
			• Pedestrian management and temporary fencing to direct pedestrians and foot traffic away from the area.
			• Make sure driver is aware of the hazards. Spotter to ensure people are out of the way.
			• Wear all required PPE
			• Additional PPE of gloves and eye-protection required when doing hot works
			• Subcontractors must have SWMS signed off
			• All tools to b tethered to workers
			• Refer to point 13 for EWP operations
			• Refer to point 15 for crane operations
			• Refer to point 27 for Working at heights
			• Crane permits in place
				6
				8
				
				8
					SS
					ALL
					EO
					CO

	• Affected relationship between clients and the public • Loss of revenue • Welding – Hot works • Noise	**20**		**4**	

26. Make good	• Make good works
	  • Cuts and abrasions
	  • Slips and trips
		16	• Wear all standard PPE
			  ▪ Hard hat
			  ▪ Hi-vis clothing
			  ▪ Reflective tape to be on working trousers
			• Site to be barricaded
				4	**SS**
					ALL

Site Clean-up					
27. Tidy work site	• Hazards to live traffic • Vehicles struck by objects left on site	**25**	• Remove any rubbish, tools and equipment used on site • Remove temporary fencing from site • Clean all equipment and machinery used	**4**	**SS** **ALL**

28. Exiting the work site	• Hazards to live traffic
	  • Live traffic struck when leaving work site
	  • Live traffic damaged by moving machinery and objects
	• Heavy lifting
	  • Muscle and back strain
	  • Loss of revenue
	• Damage to car park
	  • Loss of revenue
	  • Affected relationship with client
		25
		
		20
		
		25
			• Use traffic management when to control traffic when exiting work site
			• Pedestrian management and barricades to direct pedestrians and foot traffic away from the area.
			• No equipment or machinery to be left on site/area
			• Make sure all rubbish is removed from the site/area
			• Team lifting, lifting technique, awareness
			• Contractors to sign out before leaving the site
			• Ensure project sign off by JCDecaux and Hanlon Industries
				4
				
				6
				
				4
					SS
					ALL

EMERGENCY PROCEDURE					

29. Incident	• Accident • Personal injury • Collision • Damage to existing infrastructure or services	–	• Call 000 on emergency. • Report it in the accident/ near miss report.	

Adjustments & Changes	

CONTINGENCY PLANS (as applicable)

Description of Plan (attach documentation if required)

HAZARDOUS SUBSTANCES | Materials used for this SWMS

Name of product etc.	Permit Req'd? Yes/No	MSDS Attached: Yes/No	Appropriate Controls Measures in Place? Yes/No

SWMS CONSULTATION:

The following companies / contractors participated in the development of this SWMS and agreed on the control measures to reduce the risk

Date of Consultation: 16/04/2024

Company	Printed Name:	Company	Printed Name:
Hanlon Industries	Sujith Reddy		
Hanlon Industries	Dean Johns		

MANAGEMENT & OHS&E REPRESENTATIVES:

Company	Printed Name:	Responsibility	Location	Contact Details (Mobile)
Hanlon Industries	Simon Scruby	Senior Operations Manager		0431 384 800
Hanlon Industries	Sujith Reddy	Project Manager		0450 131 992
Hanlon Industries	Omar Saboune	OHS&E Representative		0416 781 646

EQUIPMENT CHECKS

✓	**Plant and Equipment:** (as applicable)	**Safety and Maintenance Checks:**
	HIAB	Inspected on arrival and at three monthly intervals. Serviced in accordance with manufacturer's maintenance schedule.
	Concrete Trucks (by others)	Inspected on arrival and at three monthly intervals. Serviced in accordance with manufacturer's maintenance schedule.
	Bobcat / Skid Steer	Inspected on arrival and at three monthly intervals. Serviced in accordance with manufacturer's maintenance schedule.
✓	**All Terrain Cranes**	Inspected on arrival and at three monthly intervals. Serviced in accordance with manufacturer's maintenance schedule.
✓	**Excavator**	Inspected on arrival and at three monthly intervals. Serviced in accordance with manufacturer's maintenance schedule.
✓	**Motor vehicles**	Inspected on arrival and at three monthly intervals. Serviced in accordance with manufacturer's maintenance schedule.
	Hi Rail work platform	Inspected on arrival and at monthly intervals. Serviced in accordance with manufacturer's maintenance schedule
✓	**Cherry picker / EWP**	Inspected on arrival and at monthly intervals. Serviced in accordance with manufacturer's maintenance schedule
	Front end loader	Inspected on arrival and at three monthly intervals. Serviced in accordance with manufacturer's maintenance schedule
✓	**Oxy Cutting equipment**	Inspected on arrival and inspected in accordance with safety procedures
✓	**Concrete Cutting equipment**	Inspected on arrival and inspected in accordance with safety procedures
✓	**Electrical tools and leads**	Inspected, tested and tagged each month.
✓	**Hand tools**	Inspected prior to use.
	Rail Trolleys	Inspected prior to use.
✓	**Earth leakage devices**	Trip tested and tagged monthly and calibrated every three months.
•	**Concrete pumps (By others)**	Tested at start of each shift.
✓	**Generators**	Inspected, tested and tagged each month. Check of RCD
✓	**Harnesses**	Inspected and certified in accordance with WorkCover and Work Health & Safety legislation
✓	**Lifting Devices (By others)**	Inspected and certified in accordance with WorkCover and Work Health & Safety legislation
	Wheelbarrow	Ensure unit is good condition, inspected prior to use.
	Plywood Barrier Boards	Ensure not cracked or broken.

✓	**Leather Hot Work Protective Sheets**	Inspected prior to use

Notes: The Hanlon Site Supervisor must ensure that all plant and equipment is checked, and records maintained

✓	**Hand Tools:** (as applicable)	**Safety and Maintenance Checks:**
✓	**Grinder**	Ensure lead is tagged. Disc is in good condition, free of cracks or large nicks. If grinding wheel over 9 inches in diameter a full face shield must be worn. Ensure all handles are in place and in good condition.
✓	**Concrete Saw**	Ensure lead is tagged. Blade is in good condition, free of cracks or large nicks. Ensure retractable guards operate correctly.
✓	**Drills**	Ensure lead is tagged. Bits are sharp and in good condition. Ensure all handles are in place and in good condition.
✓	**Blower**	Ensure proper eye wear is worn by operator and those in area. NEVER use high pressure air as a blower.
	Kanga Hammer	Ensure lead is tagged. Ensure all handles are in place and in good condition.
•	**Water Pump**	Ensure drive unit is in good condition. Ensure pump housing is in good condition, and not damaged. Never place fingers or anything into pump to clear blockages while drive unit is engaged.
✓	**Hammer**	Ensure head is in good condition free of chips and handle is clean and in good condition.
✓	**Chisel**	Ensure blade is sharp, and head is in good condition free of “mushroom”, chips or splinters.
✓	**Brooms**	Ensure handle is in good condition, proper length and free of splinters.
✓	**Shovel**	Ensure handle is in good condition, proper length and free of splinters.
	Mobile Scaffold	Ensure unit is level, wheels are chocked, and kick boards, ladders, rails and planks are secure.
✓	**Wrenches/Sockets**	Ensure the proper size is used on bolts.
✓	**Screw Drivers**	Ensure ends are in good condition, and the proper size is used.
✓	**Pry Bar**	Always keep both feet on the ground while using a pry bar.
	Sledgehammer	Always ensure handle is secure and in good condition.
✓	**Welding Machine**	Ensure leads are tagged. Ensure all handles are in place and in good condition.
	Knife	Always ensure blade is sharp and handle in good condition. Retractable blades must be FULLY retracted while not in use, others to be stored in proper sheave. Dispose of old blades properly.
	Rivet Gun	Ensure hose is in good condition, and properly secured. Rivets ends to be cleaned up immediately.

	Nail Gun	Ensure hose is in good condition, and properly secured. Ensure "to be nailed" medium is competent to arrest nail.
	Crowbar	Always use with gloves
✓	**Ladders**	Ensure ladders are placed on level ground and secured at the top. Always maintain the 3 Points of contact.
Notes: The Hanlon Site Supervisor must ensure that all electrical tags are checked, and records maintained. Non-compliant tools to be taken out of service until repaired.		

CERTIFICATION CHECKS

Qualifications & Experience Required:	Engineers details, Certificates, WorkCover Approvals
▪ Valid Construction Industry Safety Induction Card ▪ Working at Heights ▪ High-risk license ▪ Rigging license	▪ Vandameer and DBCE
Training Requirement to complete works:	**Plant / Equipment:**

▪ Induction Training
  ○ Hanlon online induction
  ○ JCDecaux online induction
▪ Internal – Installation requirements – policies and procedures
▪ Compiling, reviewing and recording of SWMS, WPP's and Risk Assessments
▪ C6 - Crane operation
▪ Rigging
▪ Dogging
	▪ 120T All Terrain Crane
	▪ EWP –Knuckle boom
	▪ Work vehicles
	▪ Semi-Truck
	▪ Excavator
	▪ Hot works

Codes of Practice / Legislation/ Standards	**Maintenance Checks / Site Inspections**
▪ NSW Work Health and Safety Act, 2011 ▪ NSW Work Health and Safety Regulations 2011 ▪ AS/NZS 4602:1999 High visibility safety garments ▪ AS/NZS 4360:1999 Risk Management ▪ NSW WorkCover Insurance ▪ AS1418 - Cranes (Including hoists and winches) ▪ AS2550 - Cranes - Safe use ▪ AS1892 Portable Ladders – Safe use and care ▪ As/NZS 1891 – Industrial fall arrest system and devices	▪ Maintenance checks carried out by contractors regularly ▪ Repairs need to be reported on the Site Assessment Form at maintenance. The form records the current condition of the worksite and any foreseeable problems that may arise and cause a safety issue. ▪ Forms are to be handed back to your Manager who will notify Site Management ▪ Worksite Protection Plans (WPP) continually updated based on the Contractors feedback / observations as hazards change on the site. ▪ All Ladders and hand tools are subjected to a three-monthly logbook check. ▪ All safety equipment is checked before commencement of work and is subject to a three-monthly logbook safety check.

▪ Code of practice – Construction works ▪ Code of practice – Demolition ▪ Code of practice – Working at height ▪ SYD SWMS Review Checklist ▪ SYD Critical Risk Standards	

RISK ASSESSMENT MATRIX

Risk Matrix		Consequence				
		Catastrophic (6)	Critical (5)	Significant (4)	Marginal (3)	Negligible (2)
Probability	Frequent (5)	30	25	20	15	10
	Probable (4)	24	20	16	12	8
	Occasional (3)	18	15	12	9	6
	Remote (2)	12	10	8	6	4
	Improbable (1)	6	5	4	3	2
Risk Score:		High 20-30	Moderate High 15-19	Moderate 10-14	Moderate Low 5-9	Low 0-4

CONSEQUENCE	
Catastrophic	Death, loss of system or plant, release to environment, such that significant public interest or regulatory intervention occurs or reasonably could occur
Critical	Severe injury, major system damage or other event which causes some loss of production, unplanned localised damage to environment, could have resulted in catastrophic consequences under different circumstances
Significant	Some injuries, moderate system damage, disruption to production, some environmental damage, able to be restored
Marginal	Minor injury, minor system damage, minor confined and non-damaging environmental exposure, or other event generally confined
Negligible	Less than above

PROBABILITY	
Frequent	Likely to occur often during life of an individual item or system or very often in operation of a large number of similar items
Probable	Likely to occur several times in the life of an individual item or system of often in operation of a large number of similar items
Occasional	Likely to occur sometime in the life of an individual item or system, or will occur several times in the life of a large number of similar components
Remote	Unlikely to occur in the life of an individual item or system, or can reasonably be expected to occur in the life of a large number of similar components
Improbable	So unlikely to occur in the life of an individual item or system that it may be assumed not to be experienced, or it may be possible, but unlikely, to occur in the life of a large number of similar components

HIERARCHY OF CONTROL MEASURES	
Elimination	***First Option*** – can the hazard be removed altogether by elimination of process or substance?
Substitution	Involves replacing hazard with one that presents a lower risk
Isolation	Separates the hazard from the person
Engineering Controls	Involves structural change to the work environment or work process to place a barrier to, or interrupt a transmission path between the worker and the hazard
Administrative controls	Reduces or eliminates the exposure to a hazard by adherence to procedures, instructions or training. Administrative controls are dependent on human behaviour for success
Personal Protective Equipment	***Last Option*** - Provides a barrier between a person and the hazard. This is dependent on PPE being chosen correctly as well as fitted and worn at all times where required

Note: There is a requirement to evaluate the worksite & conditions prior to starting any work on site. Any changes must be recorded on the site risk assessment and advised at the pre-work briefing. Please refer to the Risk Assessment / Pre-Work Checklist/ tool box talk for additional information: ie, Name of designated first aider etc

SWMS Sign Off:

Every member of the work crew / team must sign off on the SWMS to acknowledge awareness and participation
In signing this form, you are acknowledging that the **Safe Work Method Statement (SWMS)** has been presented to you, that you understand the content and have had the opportunity to ask questions. You agree to work in accordance with the control measures within this SWMS. If changes occur during any activities, **PLEASE** inform your supervisor to amend this SWMS.

DATE	FULL NAME (printed clearly)	SIGNATURE	POSITION (Contractor, Leading Hand, Supervisor)

DATE	FULL NAME (printed clearly)	SIGNATURE	POSITION (Contractor, Leading Hand, Supervisor)

DATE	FULL NAME (printed clearly)	SIGNATURE	POSITION (Contractor, Leading Hand, Supervisor)

DATE	FULL NAME (printed clearly)	SIGNATURE	POSITION (Contractor, Leading Hand, Supervisor)

Working/Traversing on track

	Potential Hazards	Risk	Possible Controls	Controlled?	Hierarchy Of Controls						Residual Risk	Responsible
					ELI	SUB	ISO	ENG	ADM	PPE		
4.	Contact with overheads/HV cables	**20 (High) 80.00%**	Power out permit must be in place and workers and operators to be briefed and signed on Height restrictors to be set to maintain minimum clearance as per Network requirements	Yes				✓	✓		**13 (Medium) 52.00%**	Operator Site Supervisor
	Infrastructure damage including service strikes/contact with platforms	**18 (High) 72.00%**	If possible conduct visual checks to confirm location of know services/request drawings/permits as identified by the client Sign on to permit and/or request additional information from client for underground/concealed services. Ensure hi rail platforms/other attachments have sufficient clearance/stowed prior to moving on track/approaching station platforms. Reduce speed to walking pace and appoint a spotter where possible	No					✓		**9 (Medium) 36.00%**	Operator Site Supervisor
	Personal injury due moving plant while extended platform is in use	**17 (High) 68.00%**	Maintain walking speed when traveling Workers to wear harness/fall protection and must be hooked onto anchor point Movements must be supported by verbal commands ie stop, forward, reverse No Movement of truck in the reverse direction with platform away from its stowed position. (safety switch installed causing engine switch off) Maintain walking speed when travelling (5km per hour) Personnel on platform must maintain 4 points of contact when vehicle is moved	Yes					✓		**13 (Medium) 52.00%**	Operator Site Supervisor
	Infrastructure damage including service strikes/ contact with platforms	**20 (High) 80.00%**	If possible conduct visual inspection to confirm location of known services request drawings / permits as required by client Ensure hirail platform have sufficient clearance stowed prior to movement/ approaching platforms Reduce speed to walking pace and appoint a spotter where possible	Yes				✓	✓		**9 (Medium) 36.00%**	Operator Site Supervisor

HANLON INDUSTRIES

Geelong (Head Office)
85 Heales Rd
Corio, VIC 3214
P: 03 5278 6622
F: 03 5278 6655
Po Box 405, North Geelong Victoria 3215

Sydney
22 Clevedon St
Botany, NSW 2019
P: 02 9316 5509
F: 02 9695 7437

www.hanlonindustries.com.au E: admin@hanlonindustries.com.au ABN: 86 847 145 947