Site SWMS & Risk Assessments

QR Code	APN-934668
Principal Contractor	McDonald Constructions
Date Provided to PC	06/03/2024
Revision Due	06/03/2025
Project	VPG - New Construction
Construction Site Location / Address	54 Penelope Road Stuart QLD 4811
Person Responsible for implementing SWMS onsite	Barry Davies 0409 753 229
After Hours Contact	Barry Davies 0409 753 229

Purpose

The purpose of this document is to clearly identify the Hazards and Risks associated in both the high-risk work activities as well as the general construction site tasks. This SWMS must be kept and be available for inspection until the high-risk construction work to which the 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.

Evaluation

Evaluation of process effectiveness is carried out using internal audits and site safety inspections. This document in its entirety is relevant between the stated review dates, unless it has been identified that controls are potentially not effective, changes to the workplace has introduced new task(s), hazard(s)/risk(s) or in the event of a notifiable incident then SWMS will be reviewed and, if necessary, revised. Ultimately everyone is responsible for ensuring their duties are upheld with regards to safety in the workplace.

At the end of the SWMS there is a provision to add to or amend the SWMS, if these are used workers must notify Barry Davies as soon as practical to ensure the changes are implemented. Once the SWMS are amended and controls are acceptable for the specified hazards all workers must re-sign onto the SWMS to ensure they are made aware of the changes.

Doc Control Details

PCBU Name:	**All Plumbing NQ**		**ABN:**	**11169623125**	
PCBU Address:	**35 Fleming Street, Aitkenvale QLD, Australia**			**Contact Number:**	**0409 753 229**
Document Name	**VPG Penelope Rd Project SWMS APN05 V1 Mar 24**				
Document Code	**APN05**				
Document Owner	**All Plumbing NQ**			**Maintained By**	**Erker Safety Pty Ltd**
Consulted By	**Barry Davies & Erker Safety Pty Ltd**			**Approved By**	**Barry Davies**
Created By	**Erker Safety Pty Ltd**			**Date Created**	**06/03/2024**
Version Number	**Modified By**	**Modifications Made**		**Date Modified**	**Review Date**
V1	SH	Document Creation		06/03/2024	06/03/2025

Table of Contents

1 Definitions:

High Risk Work (As defined by WH&S Qld):

Work carried out at a workplace deemed as high risk by WH&S Regulation 2011 (s291):

1. involves a risk of a person falling more than 2m; or
2. is carried out on a telecommunication tower; or
3. involves demolition of an element of a structure that is load bearing or otherwise related to the physical integrity of the structure; or
4. involves, or is likely to involve, the disturbance of asbestos; or
5. involves structural alterations or repairs that require temporary support to prevent collapse; or
6. is carried out in or near a confined space; or
7. is carried out in or nearby—
   (i) a shaft or trench with an excavated depth greater than 1.5m; or
   (ii) a tunnel; or
8. involves the use of explosives; or
9. is carried out on or near pressurised gas distribution mains or piping; or
10. is carried out on or near chemical, fuel, or refrigerant lines; or
11. is carried out on or near energised electrical installations or services; or
12. is carried out in an area that may have a contaminated or flammable atmosphere; or
13. involves tilt-up or precast concrete; or
14. is carried out on, in or adjacent to a road, railway, shipping lane or other traffic corridor that is in use by traffic other than pedestrians; or
15. is carried out in an area at a workplace in which there is any movement of powered mobile plant; or
16. is carried out in an area in which there are artificial extremes of temperature; or
17. is carried out in or near water or other liquid that involves a risk of drowning; or
18. involves diving work.

2 Legislation that relates to this Safe Work Method Statement

Legislation

- Work Health and Safety Act 2011
- Work Health and Safety Regulation 2011
- Electrical safety Act 2002
- Electrical Safety Regulation 2013

Current Codes of Practice – relevant to the task undertaken

https://www.worksafe.qld.gov.au/laws-and-compliance/codes-of-practice

- How to Manage Work Health and Safety Risks Code of Practice 2021
- Excavation Work Code of Practice 2021
- Managing Risks of Plant in the Workplace Code of Practice 2021
- Managing the Risk of Falls at Workplaces Code of Practice 2021
- Work Health and Safety Consultation, Co-operation and Co-ordination Code of Practice 2021

3 PPE Requirements

PPE Requirements will be listed at the beginning of each activity with the recommended requirements using the below Pictograms:

Safety Glasses Medium Impact (Clear indoor use and tinted outdoor use.)

Safety footwear with a steel cap toe or composite toe.

Safety Gloves suitable for the task.

Ear Protection either Plugs or Muffs suitable to the task.

Hard Hat for all work where there is work overhead.

Hi Visibility Clothing, Reflective Tape is only recommended at nighttime.

Respiratory Protection (RPE), specific to the task & as shown on fit test certificate

Protective Clothing, long sleeves and long pants

Clear High impact visor

Wide brim hat or ring worn over Hard Hats.

Height Safety PPE specific to the task

4 Qualifications, Training Requirements

QBCC Licence – Plumbing and Drainage
EWP (Scissor Lift) – Competently Trained
EWP (Scissor Lift to Access Roof) - Competently Trained
HRWL – WP (Knuckle Boom)
Track Excavator/Slew Excavator or Skid-Steer – Competently Trained
Apprentice Training, if applicable
Industry White Card(s)
Supervision from Barry Davies
Spotter for mobile plant, as required. Competently trained for the type of machinery with a full understanding of the tasks being conducted.

5 Hierarchy of Control Measures

Level 1	Level 2	Level 3
• Eliminate the Hazard	• Substitute the Hazard • Isolate the Hazard • Engineer the Hazard out	• Administration Controls • PPE

6 Parties responsible for implementation of Controls

Supervisor

Worker

Operator

Engineer

Management

Spotter

7 Risk Calculator

HOW TO USE THIS RISK TABLE
Step 1: Identify potential hazards.
Step 2: Decide what a possible **Consequence** could be.
Step 3: Decide **How Likely?** it is to happen
Step 4: Line up your choices in the table to get a number
Step 5: Use the Priority table to the right.

Appendix B - Risk Calculator

RISK RATING CALCULATOR			Likelihood		
Consequence What injury/damage could it cause?	**Rare - 3** Could only happen once in 25 years	**Unlikely - 2** Could happen, once in 5 years	**Possible - 1** Could happen each year	**Likely - 0** Could Happen more than once a year	**Almost Certain - 0** Could happen anytime
Catastrophic - 0 Multiple Fatalities	3	2	1	0	0
Major - 0 Death or serious disability	3	2	1	0	0
Moderate - 1 Long term illness or serious injury	4	3	2	1	1
Minor - 2 Medical attention & several days off work	5	4	3	2	2
Insignificant - 3 First aid needed	6	5	4	3	3

Risk Rating	Prioritisation
0, 1 or 2	**Action to rectify must be done immediately before work may commence**
3	**Consider control measure as necessary and implement further controls to reduce risk**
4, 5, 6	**Continue to use correct controls selected and maintain communication**

8 Workers Sign on and Consultation of SWMS

By signing the below I:

- **Acknowledge that I have had input into the development of the SWMS or have had opportunity to comment on the content**
- **Understand and agree to abide by all of the requirements stated within the SWMS**
- **Have appropriate certification, licences and/or training to competently undertake the task or, where permitted, will be directly supervised by persons with appropriate level of certification, licensing, training and competence**
- **Understand that where task changes or the controls stated are ineffective, that I will immediately notify my supervisor and cease work till the controls are modified and I re-sign an updated SWMS**

First & Last Name:	Signature:	Date:

High Risk Work Activity: 1. Working at Height 2m+				
Activity	Hazards & Risks	PRE-Risk	Work Method Used	POST Risk
1B. Working at Height – Working Around Edge Protection				
PPE Recommended			**Persons responsible for maintaining controls** 	
Working on a platform or structure with edge protection installed.	Hazard: Non-compliant edge protection **Risk: Personal injury**	1	• Edge protection must be erected according to the instructions of manufacturer, supplier, engineer, or competent person • All edge protection must be signed off by a competent person as complete and safe prior to any work occurring • The edge protection must be designed to withstand the impact of a fall against it	5
	Hazard: Fall from height **Risk: Personal injury**	1	• Edge protection will be erected on all sides of the working area. The base of the edge protection must be at least 1,200mm wide—900mm higher than that surface, it must have a mid-rail no greater than 450mm and a kickboard/toe board no greater than 250mm • All edge protection must have adequate secured access available	5
	Hazard: Falling objects **Risk: Personal injury**	1	• Tools and materials may not be leaned against edge protection	5
1DC. Work at Height - Use of an EWP (Knuckle Boom)				
PPE Recommended			**Persons responsible for maintaining controls** 	
Preparing to use knuckle boom, Assign a Spotter	Hazard: Pre-start not completed with potential to use faulty machine **Risk: Personal injury**	2	• Workers to be trained/instructed/competent in the safe operating procedures for the brand and type of knuckle boom, as well as safe work procedures to avoid crushing and electrical hazards • Flashing Lights are always on when machine is in use • Logbooks are in date and easily accessible • Operators to be licenced/competent for that plant • Ensure correct operation of movement alarms, emergency stop controls and emergency lowering controls • Remove obstructions or reposition equipment • Do not continue if you cannot confirm the stability of the machinery • Assign a Spotter to remain on the ground in visual contact at all times of the project. To assist when the knuckle boom makes any movements and keep area clean	4

High Risk Work Activity: 1. Working at Height 2m+				
Activity	Hazards & Risks	PRE-Risk	Work Method Used	POST Risk
			• Never use the knuckle boom lift as a crane for lifting materials • Never try to climb on, sit or stand on platform guard rails **Spotter is responsible for:** • Monitoring activity from around the base of knuckle boom • Activating emergency lowering mechanism if required • Maintaining exclusion zones (Depending on the height 45 degree from the top point down to the ground or 3m from edge of machine, whichever is greater) • Drop Zones • Signage to keep unauthorized person out	
Preparing job site	Hazard: Unauthorised access **Risk:** **Collision with other workers/ plant**	2	• Only those authorised may access site • Ensure relevant site personnel have been consulted and are familiar with plan of work for knuckle boom • Ensure work area is barricaded and signed to allow adequate exclusion zone**s**. Depending on the height 45 degree from the top point down to the ground or 3m from edge of machine, whichever is greater. • When using a knuckle boom for installing edge protection ensure: ○ Poles/rails are secured individually to the boom ○ Poles/rails are centrally located and evenly balanced ○ Poles/rails are untied one item at a time ○ Edge protection equipment must not exceed the SWL of the boom ○ Any item that is stood up in the boom meets the above requirements.	**4**
Working from a knuckle boom basket with under 11 metres reach	Hazard: Inexperienced operator with potential consequence of rollover/crushing/ falling objects **Risk:** **Injury, death**	1	• Although there is no high-risk work license to operate a knuckle boom under 11m, workers to be trained/instructed in the safe operation of that brand and type of machine and be supervised by an experienced person • Workers to wear approved EWP safety harness and harness to be attached to the correct harness attachment point, as per manufacturer's specifications • High visibility clothing to be worn • Never get between lift and an immovable object • Make sure there are no overhead obstructions or powerlines • If there is an emergency in any situation release the dead man switch	**4**
Working from a knuckle boom basket with 11	Hazard: Fall from height **Risk:** **Injury, death**	1	• High-risk work license to operate a knuckle boom 11m or greater is required, other workers inside the basket must be competent in working at heights • Provided safety rails and self-closing gates must be in good working condition • Workers to be trained/instructed in the safe operation of the plant, fall arrest equipment and emergency rescue	**4**

High Risk Work Activity: 1. Working at Height 2m+				
Activity	Hazards & Risks	PRE-Risk	Work Method Used	POST Risk
metres or greater reach			procedures • Workers to wear approved EWP safety harness and harness to be attached to the correct harness attachment point, as per manufacturer's specifications • High visibility clothing to be worn • Never get between lift and an immoveable object. • Make sure there are no overhead obstructions or powerlines • If there is an emergency in any situation release the dead man switch • All operations shall be at a slow speed. • Remove excess personnel from the work area while inspection is being undertaken.	
Rescue of collapsed/ injured/fallen operator	Hazard: Stuck at height while suspended in height safety harness **Risk:** **Suspension trauma/injury**	**1**	• Workers to be trained in emergency rescue procedures • Clear area of all unnecessary persons • Establish communication with operator if still conscious • Check for hazards in or around the work area, i.e., power lines • Competent person to lower knuckle boom using ground controls if disabled use hydraulic release valves • In the case of operator suspended from harness, instruct operator to place legs into leg straps of harness and take weight off body • If available, use 2nd EWP to retrieve the injured/fallen operator (in the basket) • Once retrieved from harness, do not lay the conscious/unconscious person down. Support in sitting knees raised position to prevent suspension trauma for 30 to 40 minutes. Administer first aid if required • Do no attempt to retrieve personnel if it is unsafe or other hazards exist. Contact rescue services immediately	**4**
Contact With Powerlines	Hazard: Contacting powerlines **Risk:** **Electrocution**	**1**	• Stay calm • Do not climb out of the machine, as it may be 'live' • Warn others to keep clear • Try to move the machine away from the powerlines, if possible • If there is a danger of fire, jump clear from the machine onto dry ground and move away from the machine. Do not step down. • Stay near the machine until help arrives	**4**
Machine shut down	Hazard: Incorrectly secured machine **Risk:**	**2**	• Shut down machine as per manufacturer's specifications. • Park equipment in designated area. • Plant to be locked and demobilized at end of day with basket elevated and ground controls disabled	**4**

High Risk Work Activity: 1. Working at Height 2m+				
Activity	Hazards & Risks	PRE-Risk	Work Method Used	POST Risk
	Plant obstructing other plant			
1DD. Working at Height - Use of an EWP (Scissor Lift)				
PPE Recommended			**Persons responsible for maintaining controls**	
Preparing to use scissor lift Assign a Spotter	Hazard: Pre-start not completed resulting in use of faulty machine **Risk:** **Personal injury**	2	• Operator to be trained/instructed/competent in the safe operating procedures for that type of scissor lift, inexperienced operators are to be always supervised by an experienced person. • Flashing Lights are always on when machine is in use • Logbooks are in date and easily accessible • Exclusion zone established, depending on the height 45 degree from the top point down to the ground or 3m from edge of machine, whichever is greater • Ensure correct operation of movement alarms, emergency stop controls and emergency lowering controls • Remove obstructions or reposition equipment • Do not continue if you cannot confirm the stability of the machine • Assign a Spotter to remain on the ground in visual contact with the operator. • Spotter to ensure any sensor type door openings (i.e. truck bay curtain door) are isolated prior to EWP moving towards/through the sensor **Spotter is responsible for:** • Monitoring activity from around the base of scissor lift • Aiding when the scissor lift makes any movements and keep area clean of obstructions • Activating emergency lowering mechanism if required • Maintaining exclusion zone (Depending on the height 45 degree from the top point down to the ground or 3m from edge of machine, whichever is greater) • Drop Zones • Signage to keep unauthorized person out • Isolating sensors on door openings	**4**
Working from a scissor lift	Hazard: Fall from height **Risk:** **Personal injury**	2	• Operator must ensure operation is authorised and in accordance with SWMS • Carry out a prestart inspection, and include how to lower machine in an emergency • When unit is travelling: ○ Always use safe speed	**4**

High Risk Work Activity: 1. Working at Height 2m+				
Activity	Hazards & Risks	PRE-Risk	Work Method Used	POST Risk
			○ Platform is at a safe level and for clear vision in direction EWP is travelling ○ Body is kept fully within the confines of the platform (If a worker leans outside of the handrail, a Harness attached to the labelled anchor point must be used to prevent the fall risk.) ○ Ensure gates of the cage remain closed. • Never jump or swing down from unit while it is elevated, except in an emergency • Always maintain 3 points of contact when exiting EWP • Do not carry loads on the handrails unless specified by manufacturer • Do not climb, sit, or stand on platform guard rails	
Preparing job site	Hazard: Unauthorised access **Risk: Collision with other workers or persons**	2	• Only those authorised may access site • Ensure the work area is barricaded and signed to allow adequate exclusion zone. Depending on the height 45 degree from the top point down to the ground or 3m from edge of machine, whichever is greater • Ensure relevant site personnel have been consulted and are familiar with the plan of work for scissor lift • Secure all loose objects. Use a lanyard where appropriate such as carrying hand tools. Maintain control of materials on the work platform. • When using a scissor lift for installing edge protection ensure: ○ Poles/rails are secured individually to scissor lift ○ Poles/rails are centrally located and evenly balanced ○ Poles/rails are untied one item at a time ○ Edge protection equipment must not exceed the SWL of the scissor lift ○ Any item that is stood up in the scissor lift meets the above requirements.	**4**
Working from basket	Hazard: Fall from height **Risk: Personal injury**	1	• Ensure safety rails and self-closing gates are in place • Operators to be trained in the safe operation of that brand and type of machine • Workers to attach harness, if required, to certified anchor points, as per manufacturer's specifications • High visibility clothing to be worn • Never get between lift and an immoveable object. • Make sure there are no overhead obstructions or powerlines • If there is an emergency in any situation release the dead man switch	**4**
Rescue of Injured / distressed operator	Hazard: Stuck at height **Risk:**	1	• Clear area of all unnecessary persons. • Establish communication with operator if still conscious. • Where the normal upper control functions fail, the operator will use the upper auxiliary controls to lower the platform	**4**

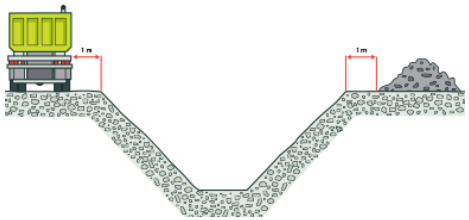
High Risk Work Activity: 1. Working at Height 2m+				
Activity	Hazards & Risks	PRE-Risk	Work Method Used	POST Risk
	Distress injury i.e., health issue		• If the operator is incapable of lowering the raised platform using the upper controls, an appointed person familiarised in the use of the 'ground' controls will lower the platform safely using the normal ground controls. • Where the normal ground controls fail, an appointed person familiarised in the use of the 'ground' controls will use the ground auxiliary controls to safely lower the platform. • If available, use 2nd EWP to retrieve the injured/distressed operator (in the basket). • Administer first aid if required. • Do no attempt to retrieve personnel if it is unsafe or other hazards exist.	
Contact With Powerlines	Hazard: Contacting powerlines **Risk: Electrocution**	1	• Stay calm • Do not climb out of the machine, as it may be 'live' • Warn others to keep clear • Try to move the machine away from the powerlines, if possible • If there is a danger of fire, jump clear from the machine onto dry ground and move away from the machine. Do not step down. • Stay near the machine until help arrives	**4**
Machine shut down	Hazard: Incorrectly secured machine **Risk: Obstruction, Mechanical damage, Theft**	2	• Park equipment in designated area • Shut down machine as per manufacturer's specifications • Make sure work area if left neat and tidy - remove tools and equipment from the basket • Make sure EWP is secure against unauthorised entry. Plant to be locked and demobilized at end of day/when not in use with basket elevated and ground controls disabled.	**4**
1DE. Working at Height - Use of an EWP (Scissor Lift to access Roof)				
PPE Recommended			**Persons responsible for maintaining controls**	
Roof Access via Scissor Lift	Hazard: Contact with electricity, Fall from height, Falling Objects	**1**	• Roof Access via scissor lift will only be considered if access via ladder or scaffolding stairs is impractical due to cost restraints or access restraints. • Any operators in control of the scissor lift shall have been deemed competent via yellow card or other means of training, e.g., high risk work licence to operate boom.	**4**

High Risk Work Activity: 1. Working at Height 2m+				
Activity	Hazards & Risks	PRE-Risk	Work Method Used	POST Risk
	Risk: Electrocution/ personal injury		**Scissor lift may be used for access in 2 scenarios:** **Scenario #1:** • No Edge Protection Installed: ○ All workers who will be accessing the roof will be additionally trained in working at heights. ○ Once the scissor lift has been situated so the gate can be aligned to the edge of the roof a gap of 150mm or less will be maintained. If practical the platform will be extended over the roof to essentially remove the "Gap". ○ If practical to do so the scissor lift will be either "strapped or clamped to the structure as well and the machine being turned off. ○ Workers will then access the roof via the gate and immediately attach their temporary anchor point as part of their height safety system. ○ Once anchor point is established the worker will attach the height safety system to the anchor point, as per manufacturer's specifications. (Adjustable rope system.) ○ Only when the height safety system "Fall Restraint" is properly set up can the worker grab tools and equipment to begin set tasks ○ Note: Care should always be taken to install a height safety system in a manner that it does not impede the work being undertaken, causing trips or slips. Systems should also be installed to prevent the worker from working in a "fall arrest" situation **Scenario #2:** • Edge Protection in Place: ○ If edge protection has been installed prior to work, by a competent installer, workers will not be required to use height safety harnesses ○ Scissor lift gate must be aligned to the gate of the edge protection ○ Once scissor lift is level to the platform a "Gap" of no more than 150mm or less will be controlled by strapping the scissor lift to the edge protection and turning off the scissor lift ○ Once the scissor lift is secured and turned off the gates may be opened to access the roof and work may commence ○ Care should always be taken when lowering the scissor lift: ▪ The straps should be removed to prevent damage to structure ▪ The opening or gate isn't left exposed to put workers remaining on the roof at risk of a fall.	

High Risk Work Activity: 1. Working at Height 2m+				
Activity	Hazards & Risks	PRE-Risk	Work Method Used	POST Risk
1F. Working at Height - Installation of Edge Protection				
PPE Recommended			**Persons responsible for maintaining controls**	

Installing edge protection in an area where a worker may fall from one level to another and sustain an injury	Hazard:
	Fall from height
	Risk:
	Injury, death
		1	• Inspect edge protection system components:
			  ○ Prefabricated components are in good as new condition and meet manufactures quality specifications.
			  ○ Able to be identified (parts number, make, model etc.).
			  ○ Tubes have square cut ends.
			  ○ Free of oil, grease, or paint.
			  ○ Nuts and hinges run and turn freely.
			  ○ No missing / damaged end fixings.
			  ○ No bowed, knotted, or damaged timbers.
			  ○ No corrosion, flattened components, or cracked welds etc.
			• **Do not install edge protection from the roof**
			• Follow supplier's recommended procedures for installing the roof edge protection
			• Ensure that persons accessing the roof can pass through the roof edge protection without having to climb over the top or mid-rail
			• Ensure gates open inwards and are self-latching
			• If ladders are to be used for access after the edge protection is in place, ensure it is securely fixed to prevent movement
			• Ensure workers are trained and instructed in the safe use of fall-arrest equipment and emergency rescue procedures
			• Fall arrest system: Fall arrest system must comply with relevant Australian Standard
			• Surrounding persons are made aware that dismantling operations are about to commence
			• Immediate area should be cordoned off
			• The number of workers needed for the breakdown process is determined
			• The method and process of dismantling components is pre-planned and understood by all workers
			• Dismantling is carried out in a systematic and progressive manner. Components are not to be dropped or thrown. Lower all components in a controlled manner
			• Wear a hard hat when dismantling
				5

High Risk Work Activity: 1. Working at Height 2m+				
Activity	Hazards & Risks	PRE-Risk	Work Method Used	POST Risk
1J. Working at Height - Installing Safety Mesh				
PPE Recommended			**Persons responsible for maintaining controls**	
Installing safety mesh	Hazard: Working at heights **Risk: Falling from height, dropping materials**	1	• Working at height competency / SWMS / Overhead work signs • Safety mesh installation from Scissor Lifts/ Mobile Scaffolds or Ladders before using Harnesses. • Ensure correct overlap & twitches as per COP. • Use barricades & signs under roof area • Use approved harness points - single anchor points. • Harness work to be reviewed by Site foreman prior to commencement. • Harness Inspections & Buddy checks before starting • Always plan for emergencies • Use harnesses in restraints • Lift only comfortable loads / correct lifting techniques • Use ropes to pull mesh into position	5
1K. Working at Height - Installing Roof Sheeting				
PPE Recommended			**Persons responsible for maintaining controls**	
Lifting roof sheets	Hazard: Fall through a framed structure **Risk: Falls from height**	1	• Edge protection to be in place before commencement • Ensure suitable fall restraints in place before commencing work • Only workers trained in working at heights to complete task • Safety footwear designed for use on a roof to be worn.	5
Roof penetrations	Hazard: Fall through a framed structure **Risk: Falls from height**	1	• All roofs should be treated as fragile until a competent person has confirmed they are not • Edge protection to be in place before commencement • Ensure suitable fall restraints in place before commencing work • Only workers trained in working at heights to complete task • Safety footwear designed for use on a roof to be worn	5

High Risk Work Activity: 7. Working in a Trench 1.5m+				
Activity	Hazards & Risks	PRE-Risk	Work Method Used	POST Risk
7A. Working in or Near a Trench Deeper Than 1.5m				
PPE Recommended			**Persons responsible for maintaining controls** 	
Pre-Start	Hazard: Inexperienced personnel, Plant/equipment used for tsk not suitable, contact with essential services **Risk: Injury, property damage, fire/explosion**	**1**	• Workers performing trenching and excavation work shall be adequately trained and competent in trenching and excavation work • Powered mobile plant operators must hold the relevant licence and verification of competency (VOC) • Plant and equipment to be used in accordance with manufacturers recommendations/specifications • Verify location of all underground services (dial before you dig and other relevant drawings). The relevant person must consider the information supplied, follow any reasonable restrictions and implement the necessary control measures. The information shall be always kept on site • All onsite workers must be advised of the location of the services, particularly the operator(s) of any plant working on the worksite • All exposed services should be marked with flags or devices that can be readily seen • Trenching and Excavation Permit to be completed • Exclusion zones to be barricaded, as required, prior to any excavation starting • Traffic control devices e.g., signage, protective barriers, traffic management plan etc. to be in place where applicable	**5**
Working in a trench deeper than 1.5 metres	Hazard: Installation of piping and foundations, uncontrolled collapse **Risk: Crush, death**	**1**	• To prevent collapse of the trench, the use of shoring, benching, or battering will be used and the most appropriate for the task will be selected. • **Battering:** To prevent collapse of the trench, no more than 45° (degrees) battering to all sides of the trench will be used. 	**4**

High Risk Work Activity: 7. Working in a Trench 1.5m+				
Activity	Hazards & Risks	PRE-Risk	Work Method Used	POST Risk
			• **Shoring:** Will be used against all sides of the trench that protects by shielding. The shoring system will comply with applicable standards and manufacturers requirements. The shoring will be checked daily to ensure its continued effectiveness.  • **Benching:** To prevent collapse of the trench, apply benching to all sides of the trench. When I/we bench a trench, the vertical trench side, below the benched portion, will not exceed 1.5m in height. The benching will be checked at least daily to ensure its continued effectiveness.  • A geo-technical engineer will: o Approve in writing that all the sides of the trench are safe from collapse o State in writing how long the approval lasts if there is no stated natural occurrence that could affect the stability of the trench o State in writing the natural occurrence that could affect the stability of the trench • Compliance with the requirements of the geo-technical engineer will be adhered to	

High Risk Work Activity: 7. Working in a Trench 1.5m+				
Activity	Hazards & Risks	PRE-Risk	Work Method Used	POST Risk
			• Safe means of access/egress provided into all excavations	
Managing fill stockpile	Hazard: Uneven surfaces unstable stockpile, uncontrolled collapse **Risk:** **Crush, death**	**1**	• Plan to stockpile materials in allotted positions • Ensure all stockpiles / spoil is kept a safe distance away from the excavation • Maintain in such a way as to prevent creation of unnecessary uneven surfaces in areas of work.	**5**

Workers inside a trench working greater than 1.5m	Hazard:
	Worker collapse or injury preventing normal exiting via ladder
	Risk:
	Unable to obtain First Aid quickly, unable to exit excavation
		2	• Workers will never work alone in trenches where risk dictates the access to be hindered for one person to exit quickly
			• Steps will be constructed where practical in the earth
			• Where it is not practical constructing earth steps multiple workers will be required, with a minimum of 2 personal always in the area
			• Send someone immediately to telephone or radio for emergency services. Ensure that the person knows the location of, and how to use the communication equipment
			• Clear all unwanted workers away from the area
			• Appoint a worker to monitor the work area (i.e. an observer who is not involved in any rescue activities)
			• Do not remove the victim unless there is a danger from flooding or dangerous gases are present or there is an imminent danger of collapse
			• Do not remove the victim by tying a rope around him/her and pulling on the rope
			• Where possible (and safe), leave the victim in the trench until the ambulance or a qualified medical person arrives
			• If risk assessment indicates:
			  ○ A stretcher will be made available with a 4-man lift required to remove a person from the excavation
			  ○ Additional lifting straps may be required and attached to a lifting device rated for man use
			  ○ There are several configurations, however, the crane is a suitable source to lift casualty as long as a dedicated spotter is always appointed in direct eye contact with casualty being lifted and direct contact with crane operator.
			• Once the Worker has been removed normal First Aid treatment will apply.
				4

High Risk Work Activity: 15. Mobile Plant				
Activity	Hazards & Risks	PRE-Risk	Work Method Used	POST Risk
15BA. Mobile Plant - Driving Work Vehicles Onsite				
PPE Recommended			**Persons responsible for maintaining controls**	
Driving work vehicles onto site	Hazard: Traffic **Risk: Uncontrolled contact between vehicles and people**	**1**	• Driver is responsible for conducting prestart vehicle checks • Only licensed drivers are permitted to drive vehicles • Always drive according to road and weather conditions • Driver to be aware of site instructions and any specific hazards/risks that may be relevant • Flashing lights are always used on mobile plant and vehicles • Adherence to site safety plan, exclusion zones, communication, consultation. • Follow the site safety plan relating to traffic control safety • Increase awareness of pedestrians if works are adjacent to the existing footpath • All pedestrians to be diverted around work area	**5**
Mobilising on site	Hazard: Obstruction Unauthorised access **Risk: Crush death Inadequate PPE Crushing**	**2**	• Do not work within 3m of live traffic unless: ○ A Traffic Management Plan is in place ○ A Traffic Control system is in place – under the direction of ticketed traffic controllers ○ There is a safety barrier in place (such as concrete new jersey curbs), water filled Triton barriers and or a shadow vehicle • Remove obstructions or reposition equipment • Ground condition and slope must be assessed prior to loading/unloading • Do not continue if you cannot confirm the stability of the machinery • Only those authorised may access site • Ensure work area is barricaded and signed to allow adequate exclusion zones. Depending on the height 45 degree from the top point down to the ground or 3m from edge of machine, whichever is greater • High visibility clothing to be always worn • Transport driver shall be responsible for tie down of load and removing tie downs, straps etc • Maintain visual contact between plant operators and other personnel at all times. Spotters to be used where required for reversing operations, tight areas etc. • Avoid unloading/loading plant under power lines	**4**

High Risk Work Activity: 15. Mobile Plant				
Activity	Hazards & Risks	PRE-Risk	Work Method Used	POST Risk
Unloading of plant	Hazard: Plant and equipment falling off deck uneven ground **Risk:** **Damaged equipment, crush death**	**1**	• Qualified and competent operator to always unload vehicle • Align machinery with ramps prior to unloading • Using a spotter when reversing • Adjust ramps to suit wheel width • Use winch cable and remote where possible • Remove excess personnel from the work area • Always choose suitable surface to unload on level ground	**4**
Moving machinery around site	Hazard: Obstruction (Overhead, at ground level or underground), faulty equipment, plant tipping or rolling over **Risk:** **Crush death**	**1**	• Remove obstructions or reposition equipment • Do not continue if you cannot confirm the stability of the machinery • Check all electrical systems are operational • Check all warning systems and devices are operational • Only authorised personnel shall carry out maintenance checks • Only qualified person shall carry out repairs and maintenance • Check tyre tread and pressure are satisfactory (where applicable) • Provide tilt alarm system to advise operator of machine operating beyond safe working angles • Ensure the machine is an “outdoor rated” machine if operating where there is a risk of external wind • Operator is responsible to not exceed the safe working load and wind rating of the plant • Operator to be trained and competent in the safe operation of the plant	**5**
Stationary equipment	Hazard: Accidental movement of plant **Risk:** **Crush death**	**1**	• Ensure tools and equipment are stored appropriately • Ensure emergency stop switch is pushed in when equipment function completed and work to commence • Ensure shutdown procedures are followed as per the manufacture’s manual	**5**

High Risk Work Activity: 15. Mobile Plant				
Activity	Hazards & Risks	PRE-Risk	Work Method Used	POST Risk
15BB. Working Near Onsite Mobile Plant				
PPE Recommended			**Persons responsible for maintaining controls**	
Working near onsite mobile plant. (Under or beside)	Hazard: Road traffic **Risk: Contact between persons and vehicles**	**2**	• When establishing work areas consider mobile plant onsite has right of way • All personnel to have undergone site specific familiarisation • Erect any barriers & signage necessary to keep others safe and aware of the work being undertaken • Designated pedestrian routes to be established where required • Personnel not to enter the swing zone of equipment without positive communications with operator • Restrict access to work area. Ensure: ○ Exclusion zones surrounding work area using barricades and signage is in place ○ Any other workers within the exclusion zones are wearing PPE as required ○ Communicate with onsite mobile plant operators to get an understanding of their tasks and areas they need to access as well as times they operate. Work in with onsite operators and ensure tools, equipment and work doesn't unnecessarily block their work areas or travel paths • When new workers come to site ensure they understand the movements of onsite mobile plant as it may not be consistent and start up without notice • Mobile phones or personal entertainment devices (PEDS) are not to be used while working around mobile plant. If necessary to use such a device, move to a safe area. • **Never work under a load being lifted by any type of crane.**	**5**
15C. Mobile Plant - Track Excavator/Slew Excavator or Skid-Steer				
PPE Recommended			**Persons responsible for maintaining controls**	
Use of track excavator, slew excavator or	Hazard: Untrained or incompetent	**1**	• Flashing Lights are always on when machine is in use • Logbooks are in date and easily accessible • Exclusion zones established. Depending on the height 45 degree from the top point down to the ground or 3m from edge of machine, whichever is greater	4

High Risk Work Activity: 15. Mobile Plant				
Activity	Hazards & Risks	PRE-Risk	Work Method Used	POST Risk
skid-steer on site	operators used **Risk:** **Personnel struck/crushed by excavator or attachments**		• Operators to be certificate holders for that plant • Ensure correct operation of movement alarms on excavator • Where possible exclude personnel from the swing area of the machine • Arrange for a worker to act as a spotter • Spotter to maintain a safe distance from the machine, making sure the operator can see spotter • The operator is always to be aware of spotter's location and maintain a safe distance • Workers to wear PPE as outlined • Workers to be aware of plant movements • Workers to have eye contact with operator when working close by • All reasonable steps will be taken to obtain current underground essential services information about any of the areas requiring excavation before directing or allowing the excavation work to commence. • If required, contact Dial Before You Dig to request information about the infrastructure networks at the planned project site ○ Online via the Dial Before You Dig website www.1100.com.au ○ Mobile website or iPhone app ○ By phone call 1100 (toll free, during business hours)	
Use of attachments	Hazard: Attachments wear or damage	1	• Inspect attachments for wear, damage, or loose or missing parts • Ensure that attachments are securely fitted, and safety pins or clips fitted • Check arms and connections for excessive wear • Inspect hoses and connections for splits, bulges, leaks or fractures • Test all hydraulic operations before applying load • Check rams, hoses and connections for splits, leaks or fractures • Test operation by raising and lowering attachment	4
Operation of machine	Hazard: Overturning / Stability **Risk:** **Personal injury**		• Do not travel at speeds which may cause control to be lost over bumps, etc. • Avoid driving over obstacles, ditches, drains, etc which could affect control • Do not attempt to lift load in excess of working load limit of loader • Reduce speed when travelling with load on front attachment • Carry load close to ground and racked back for stability and visibility • Do not raise load until ready to deposit	

Site Risk Assessments – Listed Alphabetically by Non-High-Risk Activities				
Activity	Hazards & Risks	PRE-Risk	Work Method Used	POST Risk
Manual Handling				
PPE Recommended			**Persons responsible for maintaining controls**	
Manual Handling	Hazard: Locations of the loads and distances to be moved **Risk: Musculoskeletal strain, Fatigue**	**3**	• Use mechanical handling equipment where possible • Correct lifting technics learnt in their construction induction will be used whenever a lift is required • **Preparation**: The first step in any lifting operation is preparation. Plan how you will carry out the lift and clear away any obstacles. By visualising the lift, you will automatically make your stomach muscles contract. These muscles brace your back and will significantly contribute to injury prevention • **Size up to load**: By moving the load sideways and forwards you will be able to ascertain whether it is within your capacity. Always imagine that the object you are about to lift is much heavier than it is • **Proper foot position**: As a general rule the front foot should be beside the object. The back foot should be slightly behind and be hip width from the front foot. This achieves a stable base and allows for even distribution of weight • **Proper hold**: Ideally with the proper hold the hands should be diagonally opposite for security and comfort. Use the full length of the fingers and where possible the palms to avoid fatigue • **Bend at the knees**: Bend your knees to get down to the load and use the legs to lift it. This way thigh and leg muscles are used, and these are the strongest part of your body (your back muscles are only for bracing) • **Straight back**: Keep your back as near to straight as possible, raise your head, keeping your chin in. This will keep your spine straight and enable you to see where you are going • **Keep the load close to you**: During the lift, keep the arms as straight as possible, and the elbows into the side. Don't change your grip while carrying and directly face the spot on which the load will rest. Never combine lifting with the twisting of your body. If you must turn, do it by moving your feet. Twisting causes the worst type of back injuries • **When a team lift is required, good communication will be used to co-ordinate the lift**: Whenever team lifting is used, it is essential to co-ordinate and carefully plan the lift. When organising a lift, ensure: ○ An adequate number of employees are chosen to help in the lift. ○ Team members are of similar height. ○ One person is appointed "leader" of the team to perform the lift. ○ There is enough area for the team members to maneuver as a group. ○ Team members know their roles and responsibilities. ○ Training in team lifting has been provided and the lift is rehearsed.	**5**

Site Risk Assessments – Listed Alphabetically by Non-High-Risk Activities				
Activity	Hazards & Risks	PRE-Risk	Work Method Used	POST Risk
Plumbing				
PPE Recommended			**Persons responsible for maintaining controls**	
Fitting pipes	Hazard: Personnel being struck or cut by sharp edges **Risk:** **Loud Noises, Electrocution. Cuts/abrasions**	**2**	• Ensure pipes are not LIVE before ever cutting or connecting (Earth Pipes if required.) • If not sure earth both sides of pipe before cutting • Ensure that no people, other than those workers directly involved in the plumbing operation, are in the area • All workers to be familiar with the tools • All guards used for grinders	4
Dismantle Removal of old Pipes	Hazard: Incorrect procedure followed **Risk:** **Personal injury Cut/abrasions**	**2**	• Visual inspection • Plumbing should be inspected prior to dismantling • Check for unacceptable: ○ Warping ○ Cracks ○ Live Power ○ Snakes or other animals	**4**
Use of Hand and Power Tools				
PPE Recommended			**Persons responsible for maintaining controls**	
Prestart check at site	Hazard: Site hazards may impair works **Risk:** **Personal injury**	**3**	• Undertake pre-site inspection verify conditions on site will enable works to be carried out in accordance with the SWMS. • Discuss site specific works with the Site Supervisor reviewing site signage, Safety Management Plan, for site specific hazards • Ensure all employees are made aware of any site specific hazards to works and these SWMS • Construction Inducted employees are only allowed to undertake construction works • Ensure all leads tagging & testing are up to date, if applicable	**5**

Site Risk Assessments – Listed Alphabetically by Non-High-Risk Activities				
Activity	Hazards & Risks	PRE-Risk	Work Method Used	POST Risk
Use of drills, saws, planner, sander, hand tools	Hazard: Untrained workers **Risk: Personal injury**	**3**	• Workers are to use the right type and right size of tool for the job • Workers to follow the correct procedure for using every tool • Worker to check the condition of tool prior to use • Always carry pointed tools by your side with the points and heavy ends down • Never carry tools in your pockets • Keep cutting tools sharp and in good condition • Cut away from yourself when using chisels and other edged tools • Handle sharp-edged and pointed tools with care • Handles must have no sharp edges or areas that dig into the fingers or palm of the hand • Do not use tools which are loose or cracked • When power tools are used follow the manufacturer's instructions for the correct PPE to be worn and the safe use instructions • Workers to be competent in the use of the PPE and risk assessments must be undertaken prior to using PPE to show that the hierarchy of control was used in determining if to use PPE • If an item of plant or equipment creates excessive noise, that is where you need to raise your voice to talk, wear appropriate hearing protection • If there is a risk of injury to the head by falling objects then wear hard hats	**5**
	Hazard: Contaminated atmosphere **Risk: Respiratory illness**	**3**	• If worker doesn't know or suspects area being worked on may contain crystalline silica, then follow the steps listed in the crystalline silica component of this SWMS for specific controls of respirable crystalline silica • Assess whether to wet down areas to reduce dust emission from works conducted • Where the risk of dust production, worker will wear appropriate PPE	**5**
	Hazard: Flying debris **Risk: Personal injury**	**3**	• Guards on tools and equipment will be maintained and working effectively before being used on site • Guarding on tools will not be removed to perform any work activity • All tools and equipment will be inspected prior to work activity for any faults or defects • If a fault or defect is found the item will be removed from services and reported to the supervisor as soon as practicable • All persons performing work where there is a risk of a foreign object striking the eye, eye protection must be worn	**5**

Site Risk Assessments – Listed Alphabetically by Non-High-Risk Activities				
Activity	Hazards & Risks	PRE-Risk	Work Method Used	POST Risk
	Hazard: Poorly maintained electrical tools **Risk:** **Electrocution**	**3**	• All corded tools will be tested and tagged in accordance with current legislation and conducted every **three months** on construction sites • All corded tools will be connected directly to an RCD switch box which is also inspected and tagged in accordance with current legislation	**5**
Powered tools with discs: grinders	Hazard: Incorrect disc or fragmented disc resulting in flying parts striking people **Risk:** **Personal injury**	**3**	• If worker doesn't know or suspects area being worked on may contain silica then follow the steps listed in the crystalline silica component of this SWMS for specific controls of respirable crystalline silica • Grinders will always be inspected before use • If a cutting or grinding disk has been left on, carefully inspect disc prior to use • If damage to disc is noted, swap out for a new one • Never change any type of disk on a grinder without unplugging or removing battery • Checking for dead is also essential to prevent accidental operation during disk change • Never over tighten disk as this may also damage them • Guards are always manditory on a grinder. If the guard is in the way, the grinder is the wrong tool for the job • Do not remove guards for any reason while grinder is in use	**4**
Working in Hot/ Humid Environments (Excess 30°or +60% Humidity)				
PPE Recommended			**Persons responsible for maintaining controls**	
Working in excessively hot environments or during a heat wave (i.e., working on open fields, concrete structures, etc.	Hazard: Heat and high humidity on the body, Radiant heat, High humidity, Hot objects, or Strenuous physical activity **Risk:** **Heat stress,** **Dehydration,**	**2**	• Extended working hours, excessive heat and more strenuous activities will be carefully monitored • Have in place emergency procedures for heat stress • Supervisors to consider: ○ Length of shifts - depends on physical and mental load of the work ○ Previous hours and days worked ○ Type of work being performed ○ Level of physical and/or mental effort required to complete tasks ○ Time of the day when the work is being performed. ○ Rotating workers • Supervisors to implement, as far as is reasonably practicable: ○ Increased supervision/monitoring of workers and regular communication with them ○ Work to be carried out under shade/portable shade structure	**4**

Site Risk Assessments – Listed Alphabetically by Non-High-Risk Activities				
Activity	Hazards & Risks	PRE-Risk	Work Method Used	POST Risk
	Headaches, Nausea		○ Increased work to rest ratio i.e., 1 hour work to 15 minutes, minimum, rest period ○ Buddy system where workers keep an eye on each other for signs of heat effects ○ Where possible schedule work for early morning, late afternoon or at night ○ Utilize 5 min hydration breaks away from sun and work ▪ Hydration Stop: Is a controlled break facilitated by the supervisor or safety rep to bring the work crew together and re-hydrate, (water, sqwincher or hydrolytes.) will be used. This is not a normal break as the sole purpose of this is to re-hydrate • Shaded or cool area(s) for rest breaks with good ventilation - use fans if needed	
Hot/ Humid environments - Emergency Response Procedures	Hazard: Unidentified heat stress or exhausted worker **Risk: Dehydration, Collapse, Permanent disability, Death**	**1**	• Workers will: ○ Look after each other and ensure that there is drinking water, co-workers are taking breaks and not showing signs of heat stress ○ Ensure they have plenty of cool water to drink - not icy water ○ Use electrolyte icy blocks if not contra indicated ○ Take regular rest breaks in shade • If a worker shows symptoms: ○ Remove the worker from the heat or work area ○ Loosen their clothing, remove PPE including shirts and masks ○ Have them rest in a cool, well-ventilated area ○ Encourage them to drink cool (not cold) fluids ○ If symptoms do not reduce quickly, seek medical help immediately • As far as is reasonably practicable, sites to have available ice towels (i.e., esky, ice, water, and towels) as part of a first aid response. Ice towels have been shown to be an effective cooling method for heat related illness • To relieve acute symptoms, such as painful muscular cramps, hydrolytes may be used in the single serve • **DRSABCD** – Implement basic first aid • **See site First Aiders** • Each day ensure workers know who the onsite first aiders are	**4**
Working With Lasers				
PPE Recommended			**Persons responsible for maintaining controls**	
Using Class 1, 2, 3 3B	Hazard: Exposure to lasers	**4**	• Users trained in safe lases use in accordance with AS 2397 (Safe use of lasers in the building and construction industry)	**6**

Site Risk Assessments – Listed Alphabetically by Non-High-Risk Activities				
Activity	Hazards & Risks	PRE-Risk	Work Method Used	POST Risk
restricted lasers	**Risk:** **Eye injuries**		• Use Class 1 laser where possible • Erect laser warning signs if pedestrians are in proximity • Isolate persons from laser beam if possible • Ensure the laser is not set up at eye level • If using the laser above ground, use a beam stop • Do not stare directly into beam • Avoid specular reflection (laser beam shining off metal surfaces.) • If working close to beam use appropriate safety glasses rated (ANSI Z136 and CE Certified Laser Safety Glasses) • Continually monitor the work.	
End of Shift				
PPE Recommended			**Persons responsible for maintaining controls**	
Clean up and re-packing.	Hazard: Loading vehicle **Risk:** **Muscular strains**	**3**	• When cleaning up and repacking good manual handling techniques will be used, e.g., such as bending the knees and not the back, team lifts where possible and avoid carrying very heavy items	**5**
Leaving Site	Hazard: Environmental **Risk:** **Environmental damage**	**4**	• When leaving site, make sure to take away any of the left-over materials • When cleaning ensure that all environmentally sensitive products are disposed of correctly • Any leftover hazardous substances will be taken off site and disposed at the correct facility	**5**

Site Risk Assessments – Additional Tasks or Activities to be Added				
Activity	Hazards & Risks	PRE-Risk	Work Method Used	POST Risk
Additional Tasks to Add to Job				
Task 1:	Hazard: **Risk:**	**0-6**	What did you do to make it safe?	**4-6**
Task 2:	Hazard: **Risk:**	**0-6**	What did you do to make it safe?	**4-6**
Task 3:	Hazard: **Risk:**	**0-6**	What did you do to make it safe?	**4-6**