

Scope of Work Activity Covered by this Work Method Statement

Site:

This Work Method Statement outlines the main hazards and risks associated with **Rooftop Solar Installation**

Instructions for Safe Work Method Statements

A Safe Work Method Statement (SWMS) is a document that sets out the work activities to be carried out at a workplace, the hazards arising from these activities and the measures to be put in place to control the risks. All work must be carried out in accordance with this SWMS. This SWMS must be kept and be available for inspection.

Applicable High Risk Construction Work Activities (highlighted). A SWMS is required for all high risk work activities.

A risk of a person falling more than 2 M	Demolition of a load-bearing structure.	Work on a tele-communications tower
Work in or near a shaft or thrench with an excavated depth over 1.5m or in a tunnel	Temporary load-bearing support structures for structural installations or repairs	Work on or near a pressurised gas distribution mains or piping
Work on or near chemical, fuel or refrigerant lines	Work on, in or adjacent to a road, railway, shipping lane or other traffic corridor in use by traffic other than pedestrians	Work on or near energised electrical installations or services
Likely to involve disturbing asbestos	Work in or near a confined space	Work in an area with movement of powered mobile plant
Work in areas with artificial extremes of temperature	Work in or near water or other liquid that involves a risk of drowning	Work in an area that may have a contaminated or flammable atmosphere
Use of explosives	Tilt-up or precast concrete elements	Diving work

Personal Protective Clothing & Equipment (PPE) Required



**LONG SLEEVE
SHIRT AND
TROUSERS
MUST BE WORN**

Safety Boots		Protective Gloves	
Safety Glasses		High Visibility Clothing / Vests	
Hearing Protection		Hard Hat	

Required Qualifications/Verifications

Qualification	Requirement	Qualification	Requirement
WHSQE Induction	All Personnel	CEC approved Installer	Instalation Personnel
Construction Industry White Card	All Personnel	Liecnsed Electrician	As Required

Required Qualifications/Verifications

Plant and equipment used on site includes, but is not limited to:

Plant and/or Equipment	Inspection and maintenance checks required	Plant and/or Equipment	Inspection and maintenance checks required
Mobile Equipment	Safety check prior to use. Maintenance & Safety Checks in accordanxce with Maniufacturers Specifications	Electrical Equipment	Tag & Test. Safety check prior to use. Maintenance & Safety Checks in accordanxce with Maniufacturers Specifications
Ladders	Safety check prior to use	Extension Leads	Tag & Test Safety check prior to use
Lifting Equipment	Safety check prior to use	Hand Tools	Safety check prior to use. Maintenance & Safety Checks in accordanxce with Maniufacturers Specifications

Inspections of plant to be carried out before commencement of work, as per listed hazard controls for pre-start checks.

SWMS Develop By: Mark Veenendaal

SWMS Approved By: Ryan Martin

SWMS Consulted With: Site Foreman

**Person Responsible for ensuring
compliance with this SWMS** Site Foreman

Formal communication of Site Safety Rules will occur primarily in three ways:

1. As part of the implementation of this Work Method Statement, all parties in the workgroup to be present for a brief meeting.
2. As new person(s) (employees, subcontractors, etc.) enter the site for the first time they will be briefed on the Site Safety Rules that they must comply with and sign induction form stating that they are aware of the site specific hazards.
3. At regular 'toolbox' meetings – employees will be reminded of the safety site rules, new and existing potential hazards and also constantly reminded of the importance of striving for a hazard free work place.

RISK RATING MATRIX

Consequence →	Low (C1) No Injury most probable outcome; Losses in <\$500; Environmental impact small localised and contained;	Minor (C2) FAI most probable outcome; Losses in excess >\$500 <\$15,000; Environmental impact, contained impact requiring minor remedial action.	Moderate (C3) MTI or LTI most probable outcome; Losses in excess >\$15,000 <\$50,000; Environmental impact, medium term contained impact requiring considerable remedial action.	Major (C4) LTI most probable outcome; Losses in excess >\$50,000 <\$100,000; Environmental contamination off-site, considerable remediation required	Critical (C5) A fatality(s) most probable outcome; Losses in excess >\$100,000; Irreversible/irreparable environmental contamination.
Likelihood ↓					
Rare (L1) A similar incident is unlikely to occur again	L2	L3	L4	M5	M6
Unlikely (L2) A similar incident could occur in the next 5 years	L3	L4	M5	M6	H7
Possible (L3) A similar incident could occur in the next 1 year	L4	M5	M6	H7	H8
Likely (L4) A similar incident could occur in the next 6 months	M5	M6	H7	H8	E9
Almost certain (L5) A similar incident could occur in the next 1 month	M6	H7	H8	E9	E10
Risk Score	Risk Rating	Required Action		Hierarchy of Controls	
2-4	Low risk	Manage and Monitor by routine internal procedures.		1. Elimination	Complete elimination of risk
5-6	Moderate risk	Specific monitoring or procedures to be implemented. Management responsibility to be specified and strategies implemented as part of day-to-day activities.		2. Substitution	Replacement of material, process, substance, etc.
7-8	High risk	Immediate action to be implemented by Operations Manager and HSEQ Manager. GM to be notified		3. Engineering	Designing risks out or isolation of risks
9-10	Extreme risk	Immediate action to be implemented; this level of risk needs detailed research and planning by Operations Manager and HSE Q manager. GM must be notified.		4. Administrative	Adjusting the time or conditions of risk exposure, including training options
				5. Personal protective equipment	Provision of PPE where other options are not practicable

Relevant Legislation, Standards & Codes of Practice relating to the work:

NSW Work Health & Safety Act November 2011

NSW Work Health & Safety Regulations November 2017

NSW Code of Practice - First Aid in the Workplace January 2020

NSW Code of Practice - Hazardous Manual Tasks August 2019

NSW Code of Practice - How to Manage Work Health and Safety Risks August 2019

NSW Code of Practice - Managing Electrical Risks August 2019

NSW Code of Practice - Managing Noise & Preventing Hearing Loss at Work December 2022

NSW Code of Practice - Managing the Risk of Falls at Workplaces August 2019

NSW Code of Practice - Managing the Risks of Hazardous Chemicals in the Workplace December 2022

NSW Code of Practice - Managing the Risks of Plant in the Workplace August 2019

NSW Code of Practice - Managing the Work Environment and Facilities August 2019

NSW Code of Practice - Work Health and Safety Consultation, Cooperation and Coordination August 2019

AS/NZS 3000:2018 Electrical Installations (Wiring Rules)

AS/NZS4777.1 Grid connection of energy systems via inverters – Installation requirements

AS/NZS4777.2 Grid connection of energy systems via inverters – Inverter requirements

AS/NZS5033 Installation and safety requirements of photovoltaic (PV) arrays

AS/NZS5139 Safety of Battery Systems for use in inverter systems

IEC61730 Photovoltaic (PV) Module Safety Qualification

All relevant DNSP connection requirements for grid-connected assets

Clean Energy Council (CEC) 'Grid Connected Solar PV Systems: Install and Supervise Guidelines for Accredited Installers'.

CEC Grid Connected Solar PV System Guidelines

National Electricity Law and Rules

Relevant State Government Electricity Regulations

Rooftop Solar Installation

Task	Hazard	Probability	Consequence	Ranking	Control	Person Responsible	Probability	Consequence	Ranking
		Inherent Risk			Residual Risk				
Implement a Falls Emergency Rescue Plan	Personal injury from fall	3	5	H8	Use of a Spotter: 1 - Trained first aid providers must be available 2 - A reliable means to contact emergency services.	Supervisor	1	5	M6
Arrival on-site & assess onsite conditions	Personal injury, property damage &/or environmental incident	3	3	M6	1 - The vehicle should be positioned in a safe location, clear of traffic/vehicles/pedestrians during equipment delivery and materials removal (deploy physical barriers, caution signs as necessary) 2 - Do not park illegally 3 - Identify and obey all safety-related signage (check site entry requirements) 4 - Report to Site Supervisor 5 - Ensure site-specific induction undertaken 6 - Assess mobile phone reception 7 - The worksite is exactly as detailed in Terms of Agreement or contract 8 - Complete a JSA specifying the control measures for unanticipated hazards.	Supervisor	1	3	L4
	Fall from height Impact injuries Fatality	4	5	E9	1 - Conduct risk assessment using 'RISK ASSESSMENT CHECKLIST' included in this SWMS Based on the Risk Assessment for the task always ensure the highest possible level of controls is adopted, i.e., Edge Protection is the Highest Level of Control More than one of these measures to reduce risk can be used.	Supervisor	1	5	M6
	Emergency	4	3	H7	1 - Where the Risk Assessment has identified high-risk tasks, the 'buddy' system may be utilised where a second person's presence is required at all times 2 - Where serious consequence is probable, do not expose both people to the hazard simultaneously. The second person should be within sight, but safely removed from the immediate area 3 - The 'buddy' must be trained in the specific activities the worker he/she is observing for is undertaking, be properly equipped with emergency equipment, and be capable of undertaking pre-planned rescue or emergency operations where needed.	Supervisor	2	3	M5
	Asbestos disturbance	3	4	H7	1 - Determine the presence of asbestos/ACM: Competent person to identify if ACM present (e.g., roof, eaves) Obtain as much information as possible on the location, type and condition of ACM If available, obtain a copy of the asbestos register for the site If the older house, try to determine if the roof had ever been asbestos in the past (roof space may still contain hazardous fibres) Do not drill or disturb asbestos unless qualified to do so.	Supervisor	1	4	M5

Rooftop Solar Installation

Task	Hazard	Probability	Consequence	Ranking	Control	Person Responsible	Probability	Consequence	Ranking
		Inherent Risk						Residual Risk	
Arrival on-site & assess onsite conditions	Contact with overhead power lines & services	3	4	H7	1 - Locate: Any electrical cabling, power lines, gas pipes, water pipes, air conditioning ducts before work commencing Power cables should be redirected or isolated for the duration of the work where necessary.	Supervisor	1	4	M5
Work area set- up	Fall from Height Impact Injuries Fatality	3	3	M6	1 - Protect all edges where a person can fall by installing where reasonably practicable, edge protection as the highest level of control. 2 - Ensure height access or fall restraint/arrest systems are in place before starting work 3 - Edge protection barriers and its gates or other mechanisms are strong enough to withstand the pressure of a person falling against it.	Supervisor	1	3	L4
	Falling Objects	3	3	M6	1 - Consult roof design engineer or plans to ensure the structural strength to support the required load 2 - Liaise with other contractors at the worksite to ensure no work undertaken underneath area during install. Provide barricades and place safety signs "Caution Roof Work Above." 3 - Isolate the area below roof work wherever people may be struck by falling material or tools 4 - Toe boards fixed to temporary edge protection 5 - Roof declared a 'No Go' area for all persons except those directly involved in the roof work 6 - Provide information to workers and other persons on-site advising them of the exclusion zones 7 - Provide supervision so that no unauthorised person enters an exclusion zone. 8 - When planning to store materials on the roof, check and ensure that the existing roof structure can support the weight of the materials 9 - Ensure mechanical lifting equipment is functioning as manufacturer's instructions avoiding equipment failure allowing falling objects (hoists, lifting aids, pulleys): Weight of materials to be lifted is known and displayed. Lifting equipment in good working condition no sign of obvious damage, rusting Instruction manuals for equipment use attached All slings, ropes or chains are rated to AS/NZS and in good condition and tested Undergone regular servicing/maintenance Ropes used to be free of cuts or signs of external wear Handlines to be minimum 12mm.	Supervisor & Workers	1	3	L4
Working Outdoors	Extreme Weather	3	4	H7	1 - Check weather conditions – do not work in extreme conditions 2 - Reschedule works to work in more moderate temperatures	Supervisor	1	4	M5
	Hyperthermia	3	4	H7	1 - Workers trained to recognise the symptoms of hyperthermia and hypothermia	Supervisor	1	4	M5

Rooftop Solar Installation

Task	Hazard	Probability	Consequence	Ranking	Control	Person Responsible	Probability	Consequence	Ranking
		Inherent Risk						Residual Risk	
Working Outdoors	Hyperthermia	4	4	H8	1 - Hot conditions. Ensure: Suitable protective clothing Sun brim on hard hats Safety glasses - UV rated Use 30+ sunscreen on exposed skin Adequate drinking water Access to shade on breaks Adequate breaks.	Supervisor	2	4	M6
	Hypothermia	3	4	H7	2 - Cold conditions. Ensure: Schedule warm-up breaks Hold breaks inside Dress warmly in layers Stay dry (wet clothing chills the body rapidly) Workers must get out of the cold as soon as they can if starting to feel symptoms Alcohol, cigarettes, caffeine and certain medications increase susceptibility to cold.	Supervisor	1	4	M5
Environment	Environmental Impacts	4	3	H7	1 - Noise & vibration - Be aware of maximum noise levels at the site 2 - The plant is maintained to minimise noise 3 - No noise produced outside council approved hours of operation 4 - Engineering controls fitted to equipment (e.g., silencers.) 5 - Waste - Place all wastes and rubbish in bins or other appropriate containers 6 - Separate recycle waste from general waste 7 - Do not mix waste with spoil. 8 - Fuels, oils & chemicals - Minimum amounts of hazardous substances are kept on site 9 - Labelled and securely stored 10 - Refuelling of vehicles/equipment will be undertaken at least 6m from drains and waterways 11 - Follow SDS directions for disposal of chemicals in approved waste containers 12 - A spill kit is available at all times & spills will be cleaned up immediately follow SDS directions 13 - Waterways & soils - Do not wash out tools or containers where residue can enter waterways or drains. 14 - Vehicle movement - Follow the TMP, only travel on established tracks and roads 15 - Use designated entry and exit points. 16 - Terrestrial fauna - No domestic animals on-site 17 - Ensure all food scraps placed in lidded bins.	Supervisor & Workers	1	3	L4

Rooftop Solar Installation

Task	Hazard	Probability	Consequence	Ranking	Control	Person Responsible	Probability	Consequence	Ranking
		Inherent Risk						Residual Risk	
Housekeeping	Slips, Trips & Falls	4	4	H8	1 - Maintain housekeeping throughout the shift & clean-up 2 - Clean up spills immediately 3 - Where possible use battery-operated hand tools to avoid trips from power cords, hoses 4 - Ensure sufficient lighting to detect changes in level (using temporary lighting as required) 5 - Do not jump from elevated edges >180mm, step carefully and use prepared access areas 6 - The work area is clean and uncluttered as possible 7 - Do not place equipment where it may become a tripping hazard 8 - Check for stored items, corners or other obstructions that could cause tripping 9 - Ensure there is room to manoeuvre and no obstacles in the way 10 - Check the end destination is prepared correctly for placement of the materials/equipment 11 - Ensure that footwear is suitable. Snug-fitting shoes/boots with flat, non-slip soles, no loose soles, long laces, oily soles, or caked with mud or other contaminants	Supervisor & Workers	1	4	M5
Manual Tasks	Musculoskeletal (MSD) Injuries	3	4	H7	1 - Materials/equipment placed as close to the work area as possible 2 - Ensure there are adequate workers to perform the task 3 - Planning access to the roof location: Wherever possible, use mechanical methods to deliver materials to the roof, e.g., crane Ensure all crane operators, riggers & doggers are licenced, competent & trained in the activity 4 - Weight of an object should be known; avoid lifting loads more than 1/4 of your body weight 5 - Do not use extreme force to move items 6 - Hold lifted items close to the body whenever possible: Keeping knees bent and back straight and lift, unload keeping knees bent 7 - Use team lifts and mechanical means for heavy items 8 - Schedule regular breaks and practice job rotation 9 - Avoid overreaching, long periods of repetitive movements, awkward and sustained positions, twisting and side-bending.	Supervisor & Workers	1	4	M5

Rooftop Solar Installation

Task	Hazard	Probability	Consequence	Ranking	Control	Person Responsible	Probability	Consequence	Ranking
		Inherent Risk						Residual Risk	
Inverter/ Isolator Installation	Contact &/or Damage to Assets Electrocution Fire Burns.	3	3	M6	1 - Wire inverter to manufacturer's specifications and instructions 2 - Ensure a Risk Assessment has been carried out (for any work within 3m of energised electrical installations or services) 3 - A minimum of two first aiders with current level 2 first aid certificate-CPR 4 - Switchboard rescue Rubber Matting to be in place conforming to AS 2978 5 - A hand-held fire extinguisher appropriate for electrical fires shall be in the vicinity of the work area 6 - Place a rescue kit nearby 7 - Ensure the area is adequately barricaded off at least 1m from the work area (signage to be prominently displayed) 8 - Notify other trades in the immediate area.	Licensed Technician	1	3	L4
Inverter/ Isolator Installation	Contact &/or Damage to Assets Electrocution Fire Burns.	2	3	M5	Ensure power is isolated to as required for installation works. Follow LOTO procedures: All electrical conductors & parts, including neutral and earthing conductors, shall be treated as energised until proven de-energised. TEST BEFORE YOU TOUCH. 1 - Turn off the relevant circuit protective devices and lockout (Circuit breakers, switches and combined fuse switch units are locked out Note: If the electrical installation is complex, the isolation procedures must be verified by another competent person 2 - Use locks or suitable temporary securing devices (that cannot be disrupted) 3 - Remove fuses 4 - Fit danger label 5 - Verify circuit is dead. 6 - Identify a location to place the controller on the wall. Avoid areas that may have electrical, gas or water lines: Use a stud finder that also includes detection for metal wiring and pipes Avoid drilling directly above power points or light switches Use the minimum of force required to drill into the material If a void is encountered, e.g., hollow blocks, plasterboard, stop forward pressure immediately Maintain a careful watch on drill swarf for changes of material, e.g., copper shaving, PVC Cease drilling if unexpected resistance met A qualified electrical contractor must be used to eliminate or control any risk of contact with mains power if a fault is identified, e.g., drilling into an electric cable.	Licensed Technician	1	3	L4

Rooftop Solar Installation

Task	Hazard	Probability	Consequence	Ranking	Control	Person Responsible	Probability	Consequence	Ranking
		Inherent Risk			Residual Risk				
Accessing the Roof using Mobile Scaffolding or Extension Ladder	Fall from Height Ladder Failure Falling Objects Impact Injuries Fatality	4	5	E9	1 - Erect and inspect mobile scaffold following manufacturers' instructions: Level, plumb Casters locked before accessing, not moved when persons on the scaffold Accessed by internal ladder only, do not climb on the scaffold Clear of penetrations or floor edges (by at least 1metre where possible) Do not use steps or ladders on top of the work platform to gain extra height Do not move the scaffold with persons or materials on it. 2 - Before moving the scaffold ensure that it is clear of obstructions, overhead and, at ground level 3 -Erect and inspect ladders as per manufacturers' instructions: The ladder extends at least 1 m above the place of landing Ladders set up on a level area on firm footing with the base located approximately a quarter of the vertical height of the ladder from the wall Secured against movement Face ladder when ascending/descending. Ensure 3 points of contact remain on the ladder at all times Load rating of at least 120kg Correct size and length for the job No damage, clean and dry Secured to work site (base & top) Ensure only 1 person working from each ladder Ensure that footwear is suitable. Snug-fitting shoes/boots with flat, non-slip soles, no loose soles, long laces, soles that are oily, or caked with mud or other contaminants. DO NOT: Attempt to move or extend ladder when on it Slide down stiles Step up or down two or more rungs at a time.	Supervisor & Workers	1	5	M6
	Electrocution	3	5	H8	Do not use metallic, wire-reinforced or conductive ladders around live electrical equipment.	Supervisor & Workers	1	5	M6
	Falling Objects	3	4	H7	1 - Workers on the ground to wear hard hats 2 - Carry tools and materials in a tool belt or have them passed to you.	Supervisor & Workers	1	4	M5

Rooftop Solar Installation

Task	Hazard	Probability	Consequence	Ranking	Control	Person Responsible	Probability	Consequence	Ranking
		Inherent Risk			Residual Risk				
Installing Mounting Rails & Panels	Fall from height Fall arrest system failure Suspension trauma Impact injuries Fatality	4	5	E9	1 - Construct or perform as much of the task as possible on the ground or on a solid structure 2 - Install rails and panels as per manufacturer's instructions 3 - Prior to commencing any work at height ensure Edge protection system is installed and if Edge Protection cannot be utilised ensure appropriate Risk Assessment is undertaken and approved for the use of fall restraint/arrest systems are in place before starting work 4 - Inspect harness components before use, use and maintain as per manufacturer's instructions and it's designed purpose 5 - If damaged or unsuitable for the task do not use. Take out of service immediately and apply LOTO procedures 6 - Ensure the correct harness size for weight and height of the operator (use manufacturer sizing chart). It is possible to slide out of a harness that is too big 7 - Follow manufacturer's instructions for fitting and use. The operator must ensure: Physically fit and able to withstand possible fall Within weight limit (including clothing and equipment) of harness No loose clothing (could become tangled in hooks/prevent hooks from closing properly) No obstructions in potential fall zones No sharp edges that could damage lines Plan fall arrest system before set-up to eliminate danger areas such as: - Crossing or tangling of connecting sub-systems - More than 1 worker - Pendulum effect - Swing down - Swing back (if there is a risk of swing back – swinging back into building/structure – do not use fall arrest system) 8 - Ensure anchor points or travel restraint system:	Supervisor & Workers	1	5	M6
		4	5	E9	Comply with relevant AS/NZS Are tested and approved by a competent person before use Are as high as possible above the work area. Never work above anchor point/travel restraint 9 - Ensure the harness is not exposed to chemicals or burn damage while conducting work 10 - Check line/lanyard regularly and ensure it does not make contact with sharp edges 11 - Never work alone. The spotter must maintain visual/verbal contact with harness operator at all times 12 - Do not make adjustments to harness while working at heights 13 - Inspect working surfaces/roof: 14 - Check for moisture, dust or any other condition that may cause loss of stable footing	Supervisor & Workers	1	5	M6

Rooftop Solar Installation

Task	Hazard	Probability	Consequence	Ranking	Control	Person Responsible	Probability	Consequence	Ranking
		Inherent Risk						Residual Risk	
Installing Mounting Rails & Panels	Fall from height Fall arrest system failure Suspension trauma Impact injuries Fatality	3	5	H8	15 - Access is available, e.g., entry through edge protection or other (do not climb on the outside of scaffold or over top rails of edge protection) 16 - Suitable weather conditions (no strong wind, rain, storms) 17 - Fragile Roofs: Conduct a visual inspection without stepping on the roof where possible. (If access is necessary, provide fall protection measures including safety harness with adequate anchorage along the route of access Provide warning signage/barrier around the identified fragile roof surfaces E.g., skylight or polycarbonate roof Holes or other openings through which a person can fall. Ensure: - All holes or openings are protected/closed from falls immediately after creating - Ensure the cover is secured to prevent movement 18 - Use signage or another clearly marked hazard alert to identify the hazard 19 - Leave roof if the weather changes & becomes hazardous, e.g., rain, thunderstorm or high winds.	Supervisor & Workers	1	5	M6
	Falling Objects	3	4	H7	1 - Carry tools and materials in a tool belt. 2 - Fix with lanyard.	Supervisor & Workers	1	4	M5
	Cuts Lacerations Abrasions	3	3	M6	1 - Always wear flexible leather gloves when handling steel/aluminium off-cuts 2 - Do not handle ends of cut rails (sharp edges)	Supervisor & Workers	1	3	L4

Rooftop Solar Installation

Task	Hazard	Probability	Consequence	Ranking	Control	Person Responsible	Probability	Consequence	Ranking
		Inherent Risk							Residual Risk
Installing Mounting Rails & Panels	Heat Stress	3	4	H7	1 - Ensure that workers can recognise heat stress symptoms: Mild heat stress: - Tired/weak - Muscle cramps - Feeling sick or vomiting - Irritability or confusion - Blurred vision Severe heat stress: - Headache - Rapid pulse - Profuse sweating - Can include loss of consciousness 2 - Light clothing that still provides adequate protection 3 - Providing extra rest breaks in a cool area 4 - Ensure adequate drinking water supplied. Relevant workers should be encouraged to drink a cup of water (about 200 mL) every 15 to 20 minutes when working in hot environments.	Supervisor & Workers	1	4	M5
Wiring Panels	Electrocution	4	4	H8	1 - Run and terminate both ends of the solar DC cable between the array junction box and the DC Isolator first before starting to connect the solar panels electrically. 2 - 'Plug in' each panel to the next in the string, as well as the PV extension leads if used 3 - All cables are secured and protected (secured under panels to avoid environmental damage) 4 - If two strings are connected in parallel, ensure that no panels plugged in until all DC terminations are complete. Tag the other array plugs out if necessary. 5 - Provide user instructions to the recipient of panels including a shut-down procedure 6 - Licensed Electrical Inspector to inspect completed install 7 - Issue Certification of Electrical Safety upon completion.	Licensed Technician	1	4	M5
	Falling Objects	3	3	M6	1 - Install the battery bank as per manufacturers instruction and in accordance with the relevant AS/NZS standard 2 - Ensure the floor can sustain the weight of the battery bank 3 - Use heavy-duty shelving to keep the batteries secure and clear of the ground.	Licensed Technician	1	3	L4
	Flooded Lead - Acid Batteries Acid Burns	3	3	M6	1 - Use distilled water when topping up electrolyte levels. Neutralise any electrolyte spilt or splashed on the top of the batteries (e.g., with sodium bicarbonate) and wash away with water at frequent intervals 2 - Always wear protective clothing and eye protection when near batteries 3 - Dilute with water and spilt acid and neutralise with sodium bicarbonate.	Licensed Technician	1	3	L4

Rooftop Solar Installation

Task	Hazard	Probability	Consequence	Ranking	Control	Person Responsible	Probability	Consequence	Ranking
		Inherent Risk						Residual Risk	
Hand & Power Tools	Working with Hand & Power Tools Electrocution Injury Tool Malfunction Fire	3	3	M6	1 - Use tools only for the purpose specified by the manufacturer 2 - Pre-inspect and operate tools following the manufacturer's instructions 3 - Ensure operations manual is available, read and understood 4 - All power tools and leads are Tested and Tagged and are current 5 - Use electrical sockets protected by RCD (safety-switches) or use portable RCD devices 6 - Ensure switchboards have appropriately rated circuit breaker 7 - Always ensure that the tool is switched off and power isolated before a pre-start check, adjusting, changing set-ups or repairing 8 - If damaged or unsuitable for the task do not use. Take out of service immediately and apply LOTO procedures 9 - If using grinder: Allow the blade to reach full speed before cutting, do not force the blade and always start the cut gently Ensure the switch is in the "off" position before plugging it in to avoid accidental starting Ensure the blade has stopped turning before placing the grinder down NOTE: Large off-cuts can be unstable, can affect the cut and result in operator injury. Ensure that large off-cuts are supported and removed safely. 10 - Stay alert – concentrate on what you are doing at all times and be aware of kickback You must keep your off hand out of the path of the grinder/saw in any case.	Supervisor & Workers	1	3	L4
Hazardous Chemical Use, e.g., Silicone, Cleaning Solutions	Contact with Hazardous Chemicals	3	3	M6	1 - Follow directions of use 2 - Consult SDS for the product 3 - Use PPE as per the SDS 4 - Use with adequate ventilation 5 - Chemical resistant gloves for prolonged exposure DO NOT: - Eat or drink when handling chemicals - Eat or drink without washing hands thoroughly first - Take food into the work area where chemicals are being used or stored - Wear contaminated PPE in areas outside the work zone, such as eating areas.	Supervisor & Workers	1	3	L4

Rooftop Solar Installation

Task	Hazard	Probability	Consequence	Ranking	Control	Person Responsible	Probability	Consequence	Ranking
		Inherent Risk			Residual Risk				
Test & Commission	Contact with Electricity	4	5	E9	1 - Conduct testing as per applicable standards and regulations 2 - Test all safety devices for correct operation 3 - Testing Equipment: Good condition and working (particularly, leads, probes, clips) Clean, no cracked or broken insulation Suitable for all potential fault voltages Multi-meters, RCD performance tester, earth loop impedance testers, voltage testers, insulation resistance tests regularly tested for accuracy Suitable for hazardous/flammable areas if required.	Licensed Technician	1	5	M6
On Completion	Unauthorised access	3	3	M6	1 - If acceptable, remove or add barricades 2 - Ensure machine is parked in a safe, level area, clear of unstable or sloping ground 3 - Store the key in a safe place (restrict unauthorised access).	Supervisor & Workers	1	3	L4
	Contact with electricity	3	3	M6	1 - Disconnect power tool/extension leads from power point before winding up so that you don't get a shock if the lead is damaged 2 - Provide user instructions to the recipient of panels including a shut-down procedure 3 - Licensed Electrical Inspector to inspect completed install	Supervisor & Workers	1	3	L4
	Security breach	3	3	M6	All personnel sign-out on Site Register.	Supervisor & Workers	1	3	L4
	Vehicle/people impact	3	3	M6	1 - Stay to designated access and egress routes 2 - Maintain awareness of surroundings at all times.	Supervisor & Workers	1	3	L4
Emergency Response	Injury Fatality Environmental Damage	3	5	H8	1 - For police, fire or ambulance call '000.' 2 - Follow site emergency and evacuation procedures 3 - A communication system is available, e.g., a mobile phone or radio 4 - Check for dangers to self before helping others 5 - Maintain control of the area and stabilise the situation	Supervisor & Workers	1	5	M6
	Suspension Trauma	3	4	H7	Document and rehearse post-fall rescue plan	Supervisor & Workers	1	4	M5

WORKING AT HEIGHTS RISK ASSESSMENT CHECKLIST

Site Address:

Risk assessor:

Date:

Job Description:

Supervisor:

	Yes	No	N/A	Control Measure	Control Options
Safe access to work areas?	☐	☐	☐		<i>(These are example risk controls, and the list is not exhaustive).</i> A. Edge Protection B. Elevating Work Platform (EWP) C. Scaffold with work platform and internal ladder D. Ladder E. Guard rails F. Scaffolding G. Catch platforms H. Industrial rope access I. Travel restraint J. Fall arrest system K. Permit to work systems L. Safe work method statement M. Warning signage N. Toolbox talks O. A safety harness with lifelines P. Non-slip shoes <i>Note: If using travel restraint or fall arrestors ensure harness and clips are compatible; qualified persons have assessed anchor points.</i> <i>Note: More than one of these measures to reduce risk can be used. For example, engineering controls like edge protection can be implemented with administrative controls like training and use of this SWMS, while wearing PPE (non-slip shoes).</i>
Surface condition:	☐	☐	☐		
Fragile	☐	☐	☐		
Skylights/Penetration	☐	☐	☐		
Asbestos	☐	☐	☐		
Other?	☐	☐	☐		
Is the work area incomplete?	☐	☐	☐		
Roof surface pitch > 25°	☐	☐	☐		
Unstable footing (e.g., wet slippery, sloping surfaces)	☐	☐	☐		
Unprotected edges (e.g., rooftops, shafts, balconies.) with edge protection less than 900mm high	☐	☐	☐		
Surfaces change level	☐	☐	☐		
Hazardous weather conditions (rain, wind, fog, dew)	☐	☐	☐		
UV radiation hazard	☐	☐	☐		
Lack of training (new starters)	☐	☐	☐		
Equipment to be used or installed	☐	☐	☐		
Risk of falling material?	☐	☐	☐		
Hot/cold temperature	☐	☐	☐		
Exposed electrical switchboards/power points	☐	☐	☐		
Power lines or electrical cables nearby	☐	☐	☐		
Does the structure supporting the roof require modification to support safeguards? (E.g., edge protection, travel restraint mounting points)	☐	☐	☐		
Other	☐	☐	☐		

Monitor & Review

Task	Hazard	Probability	Consequence	Ranking	Control	Person Responsible	Probability	Consequence	Ranking
		Inherent Risk						Residual Risk	
Implementation		4	4	H8	1 - Company policies and procedures. 2 - Construction and Rail Industry Inductions. 3 - SWMS Briefings and Sign Off by Operators. Any changes during consultation are incorporated into the SWMS and Workers briefed on changes. 4 - All relevant permits and approvals obtained prior to commencement of work.	Management Supervision Work Team	1	1	L2
Monitor		4	4	H8	1 - SWMS to be reviewed by all staff through daily pre-start and weekly toolbox talks for effectiveness & application to site. 2 - Compliance to the SWMS is monitored using a system of routine or random workplace inspections. 3 - In the event that the work is not being carried out in accordance with the SWMS, all work will cease immediately. SWMS are reviewed to identify non-compliance and ensure the method in the SWMS is the most practical and safest way of doing the task. The SWMS is revised if another method is identified as being a safer option, before work resumes. 4 - Feedback to be given by all staff and improvements to be included in revision of SWMS. 5 - In the event of changes to SWMS, workers are briefed on changes and sign off on revised SWMS.	Management Supervision Work Team	1	1	L2
Review		4	4	H8	SWMS are reviewed under the following circumstances: 1 - Following an incident. 2 - If the SWMS is deemed impractical through consultation with Workers. 3 - If new hazards have been identified. 4 - If the work method has changed including changes to the workplace, environment, a system of work, a process or a procedure. 5 - On restarting the activity after a significant break. 6 - At the request of a HSR. 7 - Annually if none of the above.	Management Supervision Work Team	1	1	L2

Sign Off

The representatives of G&A Martin listed below have been involved in the creation and implementation of this Safe Work Method Statement (SWMS) and will make sure all work is carried out in accordance with this document. All workers listed below have the appropriate licence/qualifications and/or experience required to perform each job task:

Workers Name	Role	Signature	Date