Health, Safety,
Environmental & Quality
Management System

ISO 45001:2018 | ISO 14001:2016 | ISO 9001:2016

ELECTRICAL | HVAC | SOLAR

SafetyDocs
by SafetyCulture

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Disclaimer: *This document contains material to assist in addressing OHS, Environmental and Quality obligations. Although every effort is made to ensure the accuracy of this information at the time of publication, it is provided as guidance only and does not provide legal advice.*

6.2 Electrical Operations

POLICY

The policy applies to all electrical workers who have roles and responsibilities relating to electrical works while undertaking work for {company_name}, including:

- workers who are licensed, electrical workers; and
- supervisors and managers of licensed electrical workers; and
- electrical contractors; and
- all electrical associated trades (i.e. trades with restricted electrical work licenses, or where a risk assessment refers to this requirement.

We are committed to providing a safe environment for workers (including contractors and workers of contractors), visitors, public members, and the environment when undertaking electrical work and will ensure a systematic approach to managing health and safety risks.

The company commits to eliminating risks associated with electrical installations, equipment and work wherever possible or, where that is not reasonably practicable, minimising the risks by implementing the Hierarchy of Control (fig. 1). This will be achieved by:

- ensuring all electrical installations and electrical equipment is maintained in safe working order; and
- ensuring all electrical work performed on an electrical installation or electrical equipment is carried out by a competent person.

RESPONSIBILITIES

Systems to manage electrical work to include:

- an assessment of the risk associated with electrical work; and
- the establishment of control measures using the hierarchy of controls; and
- documented systems to monitor and evaluate the effectiveness of the risk control measures; and
- SWMS for electrical work; and
- ensuring all electrical work (whether energised or de-energised) is only be carried out by a person with an appropriate electrical licence or otherwise authorised to perform the work under the applicable Act; and
- identification of hazards related to electrical work, including but not limited to:
    - electrical hazards; and
    - falls from one level to another; and
    - damage or dangerous contact with above and underground electrical and other services; and
    - exposure to hazardous substances, including lead, asbestos and polychlorinated biphenyls (PCB).

This responsibility will be met by:

- provision of an electrical management plan, based on a risk assessment of the tasks undertaken, for all electrical contracts; and
- there are effective risk management process and associated mechanisms in place; and
- ensure SWMS are developed and used for all electrical work; and
- ensure resources are applied effectively; and
- reviewing control measures to ensure they remain effective; and
- making information available to workers about any hazardous substances in the workplace; and
- providing adequate training for applicable workers; and
- maintain training records.

Managers/Supervisors are responsible for:

- implementing safe work requirements relating to electrical work; and
- carrying out the appropriate actions required to ensure the immediate health and safety of all workers and visitors, including excluding areas considered to be hazardous; and
- liaising with personnel on OHS and environmentally related issues; and
- notify the relevant authorities as required by legislation; and
- coordinates the implementation of any corrective actions necessary to prevent harm to persons or the environment; and
- maintaining incident reports and associated documentation.

Electrical Supervisors have a responsibility to:

- be a qualified and licensed electrical worker; and
- ensure the safety of workers they are supervising; and
- have at least the same level of electrical licence as the worker being supervised; and
- ensure task-specific risk assessments are carried out; and
- ensure that all mandatory tests have been carried out.

Individual workers and others in the workplace have a responsibility to co-operate with their Manager/Supervisor and company policies and procedures concerning their tasks relating to electrical, including:

- Take reasonable care for their own and others health and safety; and
- Do not clean, damage, disturb, or remove asbestos-containing materials unless trained and authorised; and
- Being involved in risk assessment processes and the development of safe work practices; and
- Immediately report to supervisor any incidents or near misses; and
- Immediately stop work if additional hazards are identified during any works, and report to the supervisor or manager; and
- Attending training, toolbox talks and Inductions; and
- Attending monitoring and health surveillance where required; and
- Follow incident response procedures; and
- Provide incident notification.

6.2.1 Electrical Safety Equipment and Instruments

Before electrical safety equipment and instruments are used, they will be examined to ensure the equipment is within the ‘in-test’ date and in an electrically safe condition. If the equipment has any defect or is out of calibration/test date, it must be withdrawn from service.

All withdrawn equipment will be tagged out and not used until it is repaired or re-calibrated/tested.

Equipment will be tested at least every six months or following the equipment manufacturer’s recommendations.

Electrical workers must ensure the equipment used has the appropriate function, range, and accuracy for the work.

All issued electrical safety equipment and tests will be recorded in the *Electrical Equipment Register*.

Sub-contractors must only bring only compliant electrical leads/equipment onto the workplace.

6.2.2 Electrical Installations

On-site electrical installations (including PV installations, switchboards and temporary electrical installations) must only be installed by qualified and licensed persons.

- All electrical installations will comply with relevant Standards. Electrical installations will be fitted with Residual Current Devices (RCD) (safety switches) relevant for the type of installation and use; and
- Where required, permits will be obtained from the electrical asset owner before electrical work commencing; and
- Prescribed forms, e.g., connections and disconnections of supply from the electrical supply authority, will be compiled and forwarded to the distributor upon the initial connection or metering change (following relevant State/Territory regulations); and
- Persons working on or near energised conductors must be appropriately qualified, authorised and take due care of their safety.

6.2.3 De-energised Electrical Work

{company_name} has adopted a general policy of **NO LIVE WORK**. *(Live work is only permitted under special circumstances and controlled conditions.)*

- Workers must ensure that electrical work is not carried out on the electrical apparatus while energised; and
- Before electrical work is carried out on electrical equipment, the apparatus must be tested to determine whether it is energised; and

INDEX OF SUPPORT DOCUMENTS

THIS IS THE END OF THE SYSTEM MANUAL SAMPLE.

THE MANUAL IS 119 PAGES LONG AND COMES WITH ALL THE SUPPORT DOCUMENTS LISTED ABOVE.

THE SWMS SAMPLE WILL START NOW.

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Company Name:
Company Address:
ABN/NZBN:

Manual Handling Safe Work Method Statement (SWMS)

Business Contact: Phone #:	Principal Contractor (PC):
Responsible person *(for monitoring SWMS and work)*: Signature: Date: Contact Phone #:	PC Address: PC Phone #: Date SWMS provided to PC: Job Site Address:

SITE MANAGEMENT PLAN	Is the work associated with a Construction Project? ☐ **Yes** ☐ **No**	*If yes* – This SWMS must align with requirements of the Site Management Plan in place for the Construction Project.

THIS WORK ACTIVITY INVOLVES THE FOLLOWING "HIGH-RISK CONSTRUCTION WORK" (HRCW - *IDENTIFIED IN THE JOB TASK COLUMN*)

☐ Confined spaces	☒ Mobile plant movement	☐ Demolition of a load-bearing structure	☐ Asbestos disturbance
☐ Using explosives	☐ Diving work	☐ Artificial extremes of temperature	☐ Tilt-up or pre-cast concrete

☐ Pressurised gas distribution mains or piping chemical, fuel or refrigerant lines energised electrical installations or services

☐ Structures or buildings involving structural alterations or repairs that require temporary support to prevent collapse

☐ Involves a risk of a person falling from 2m or more, including work on telecommunications towers ☐ Work in a ceiling space (W.A. Only)

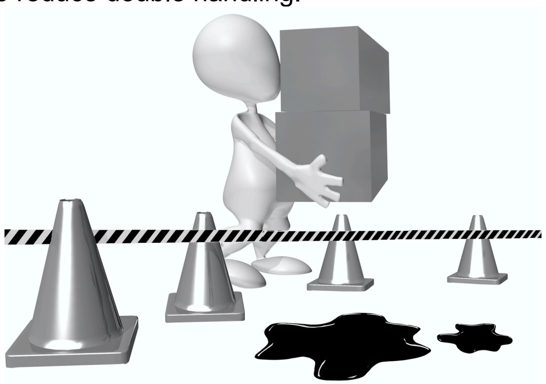
☐ Working at depths greater than 1.5 metres, including tunnels or mines	☐ Work in an area that may have a contaminated or flammable atmosphere
☐ Work carried out adjacent to a road, railway or shipping lane, traffic corridor	☐ In or near water or other liquid that involves the risk of drowning

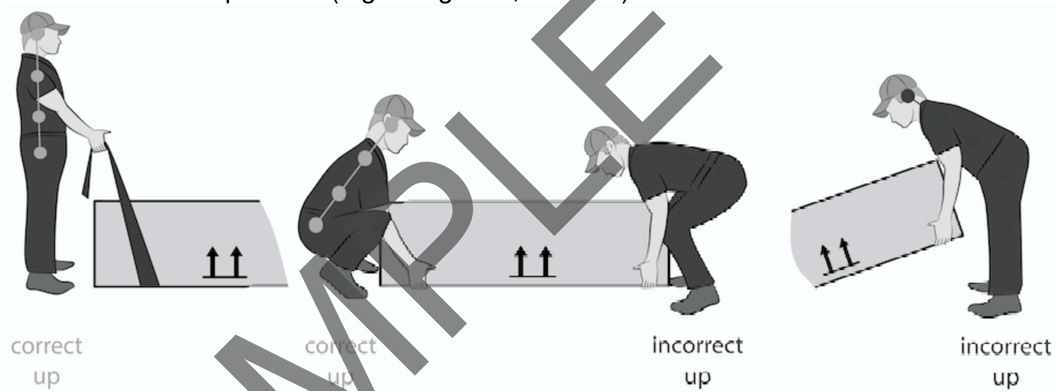
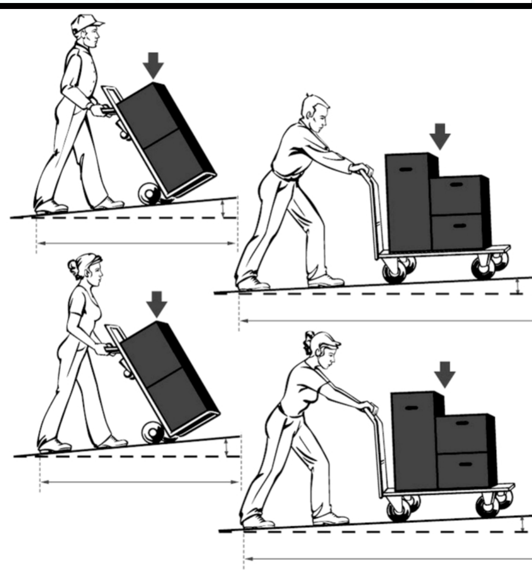
WORKING WITH A RISK OF A FALL OVER 2 METRES. Select the fall from height 'hierarchy of control level' considered when establishing controls:

☐ L 1: Work on the ground or solid construction	☐ L 4: Use a fall arrest system e.g., safety harness, catch platforms
☐ L 2: Use a passive fall restraint system e.g., guard rails, scaffolding, EWP	☐ L 5: Implement administrative controls e.g., signage, or instruction
☐ L 3: Use a work positioning system e.g., travel restraint, rope access	☐ Other?

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). Please describe why it is not reasonably practicable to use higher-order control measures. E.g. The job is less than 5 minutes on a ladder.

Personal Protective Equipment (PPE)											
Foot Protection	Hearing Protection	High Visibility	Head Protection	Eye Protection	Face Protection	Hand Protection	Protective Clothing	Breathing Protection	Sun Protection	Safety Harness	Do not wear rings, watches or jewellery that may become entangled. Long and loose hair must be tied back.
☒	☐	☐	☐	☐	☐	☒	☐	☐	☐	☐	☐

Job Task	Hazards	IR	Control Measures *Inherent Risk-rating (IR) before controls - Residual Risk-rating (RR) after controls*	RR	Responsible Person
1. Preparation	• MSD injuries • Slips • Trips • Falls	3H	• Plan travel pathway - flat, even floor surface, shortest travel distance possible with no obstructions • Weight of an object is known, avoid lifting loads more than 16 – 20kg. • Determine if a lifting aid is required • Sufficient lighting • Suitable weather conditions (for example large cement sheeting can be unsafe to lift in high winds) • Objects to be lifted are in suitable condition (dry, stable, even distribution of weight, handles where possible, allows a good grip, will not block vision, no sharp edges, containers sealed, no chemical or other waste residues on the object,) • The object can be held close to body (this excludes large/bulky items that are difficult to grasp, or hot/cold objects that cannot be held against the body) • Maintain good housekeeping. Remove waste or other items that could cause tripping hazards or awkward postures • Ensure materials/equipment is as close to the workstation as possible • Arrange work system to reduce double handling. 	2M	**Supervisor** and **workers** to follow control measures

Job Task	Hazards	IR	Control Measures *Inherent Risk-rating (IR) before controls - Residual Risk-rating (RR) after controls*	RR	Responsible Person
2. Team lifts	MSD injuries	3H	• Where team handling is required (as a last resort). Ensure: ○ All members of team-lift are matched in size, skills, capabilities ○ Number of people proportionate to the weight of load and level of difficulty ○ Lifts are planned and rehearsed ○ The person allocated to plan and oversee lift – all others to know their roles ○ Use aids where possible (e.g. lifting bars, handles) 	2M	**Supervisor** and **workers** to follow control measures
3. Non-powered lifting aid use	MSD injuries	3H	• Use mechanical aids wherever possible • Pre-inspect and use following manufacturer's instructions • When using a lifting aid, ensure: ○ Push rather than pull the aid ○ Do not pull large loads towards yourself ○ Do not jerk to get the aid moving ○ Seek assistance if the load is too heavy or break down the load to make it lighter ○ Never try to move or push a loaded aid or skid by hand ○ Use proper lifting techniques when loading and unloading ○ When going down an incline push, do not pull. ⚠ *Ensure regular maintenance and service of equipment and tools can reduce the force required to operate them.* 	2M	**Supervisor** and **workers** to follow control measures

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Company Name:
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Overall Risk Rating after Controls	☐ 1 - Low	☒ 2 - Moderate	☐ 3 - High	☐ 4 - Acute	
Permits	☐ Not applicable	☐ Hot Work	☐ Confined Space	☐ Local council	☐ Excavation	☐ Lift (crane)
	☐ Working at height	☐ Restricted access	☐ Asbestos remediation	☐ Other?	☐ Other?	☐ Other?

Plant & Equipment	
☐ Electrical tools and leads	Tested and tagged quarterly
☐ Hand tools - Meet AS/NZS	Regular visual inspection
☐ Ladders - Meet AS/NZS	Inspected and tagged out if damaged
☐ Mobile plant-*specify*	Inspected and tagged out if damaged
☐ ?	
☐ ?	
☐ ?	
☐ ?	
☐ ?	

Hazardous Substances

List hazardous substances taken on-site and have the SDS on-site.

1.
2.
3.
4.
5.

Supervisory Arrangements

☐ Audits
☐ Spot Checks
☐ Reporting systems
☐ Suitably qualified supervisors for job
☐ Direct on-site supervision
☐ Remote site: communication systems/schedule
☐ Other?

SWMS Sign-off

This SWMS developed in consultation and cooperation with workers and relevant organisation representatives. I have read the above SWMS, and I understand its contents. I confirm that I have the skills and training, including relevant certification, to conduct the task as described. I agree to comply with safety requirements within this SWMS, including risk control measures, safe work instructions, and PPE described.

Workers' Name	Job Role / Position E.g. Supervisor, Worker, Trainee	Licences, competencies & qualifications *(add as applicable)* Type / Description	Class	Number	Date	Signature
		Construction Card				
		Construction Card				
		Construction Card				
		Construction Card				
		Construction Card				

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Company Name:
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HIERARCHY OF CONTROLS

Most Effective → Elimination → Substitution → Isolation → Engineering → Administrative → PPE → Least Effective

RISK MATRIX

Step 1: Determine Likelihood: What is the possibility that the effect will occur?

	Criteria	Description
Almost certain	Expected in most circumstances.	The effect is a common result.
Likely	Will probably occur in most circumstances.	The effect is known to have occurred previously.
Possible	Could possibly occur at some time.	The effect could occur. I've heard of it happening before.
Unlikely	Unlikely but possible.	The effect could occur, but I have not heard of it happening before.
Rare	Highly unlikely to occur.	The effect is practically impossible.

Step 2: Determine Consequence: What will be the expected effect?

Level of Effect	Example of each level
Insignificant	No effect – or so minor that effect is acceptable.
Minor	Minor first aid treatment,minimal business disruption, minimal environmental effect.
Moderate	Serious injuries, medium business interruption, medium environmental impact.
Major	Extensive injuries/fatality, significant business interruption, environmental harm, prosecution.
Catastrophic	Multiple permanent disability/fatalities, business failure, substantial environmental harm, prosecution/imprisonment.

Step 3: Determine the risk score:

Effect / Likelihood	Insignificant	Minor	Moderate	Major	Catastrophic
Almost certain	2 Mod.	2 Mod.	3 High	4 Acute	4 Acute
Likely	2 Mod.	2 Mod.	3 High	4 Acute	4 Acute
Possible	1 Low	2 Mod.	2 Mod.	3 High	4 Acute
Unlikely	1 Low	1 Low	2 Mod.	3 High	4 Acute
Rare	1 Low	1 Low	2 Mod.	2 Mod.	3 High

Step 4: Record risk

Score	Action
4A: Acute	***DO NOT PROCEED until risk level is reduced;*** immediately introduce high-level controls. *Re-assess before proceeding.*
3H: High	*Review before commencing work.* Introduce new controls and/or maintain high-level controls to lower the risk level. Controls are to be monitored frequently.
2M: Mod.	*Maintain control measures.* Be cautious when working. Monitor and review regularly.
1L: Low	*Record and monitor.* Proceed with work. Regularly review risks.

THIS IS THE END OF THE SWMS SAMPLE.

THE MANUAL HANDLING SWMS IS 16 PAGES LONG.

THE SOP SAMPLE WILL START NOW.

THE SOP IS MADE UP OF A 6-PAGE PROCEDURE AND RISK ASSESSMENT FORM FOLLOWED BY A 1-PAGE QUIZ

MANUAL HANDLING SOP

USE MECHANICAL AIDS WHEREVER POSSIBLE

MANUAL TASKS

- Manual tasks can lead to “musculoskeletal disorders” (MSD)
- MSD injuries affect:
  - Muscles, ligaments, nerves, and tendons in the wrists, arms, shoulders, neck or legs, or discs in the back
  - These injuries can be sudden or occur gradually over time
- Muscular Stress – sprains, strains, temporary soft tissue injuries
- Indirect Injuries – cuts/lacerations
- Repetitive strain injuries.

HAZARDS - What can cause harm?

- ▲ Awkward, twisting, bending positions
- ▲ Lifting, carrying or putting down objects
- ▲ Prolonged sitting
- ▲ Pushing, pulling, throwing, pressing objects
- ▲ Repetitive/sustained force
- ▲ Overreaching
- ▲ Static positions
- ▲ Contact with cold/cold objects
- ▲ Contact with sharp objects
- ▲ Handling/lifting people or animals
- ▲ Vibration.

- Ensure all employees have undertaken training for manual handling.

PRECAUTIONS

- Implement controls as appropriate for the source of the risk. Options:
  - Alter workplace and layout
  - Alter environmental conditions
  - Alter system of work or how work is done
  - Modify items used in the task
- Minimise risks by providing adequate resources and controls:
  - Sufficient workers and time for the task
  - Adequate rest breaks and recovery time
  - Job rotation to ensure task variety
  - Suitable transport vehicles with hydraulic tailgate
  - Ergonomically designed mechanical aids
  - Lifting aids and equipment (cranes, vacuum lifters)
  - Specialized equipment includes spring/scissor trucks, adjustable conveyors, anti-kickback devices on power tools, height-adjustable pallet lifters with a turntable, etc.
  - Smaller-sized bags/containers of materials
  - Team-lifts
  - Seek advice from competent persons (Ergonomist) on task-specific risk controls where required.

MANUAL HANDLING RISK ASSESSMENT FORM

Location:

Location of Task:	Description of manual handling:
Date of assessment:	Workers, others (consultants, etc.):

Reason for Identification:

☐ Existing task ☐ New task ☐ Change in task, object or tool ☐ New information ☐ Report of MSD

Does the task involve repetitive or sustained movements, postures, and forces?

As a guide;

- Repetitive means the movement or force is performed more than twice a minute and
- Sustained means the posture or force is held for more than 30 seconds at a time.

Postures and Movements *(place a tick in the "yes" column each time you observe repetitive movement or sustained posture)*		**Yes**	**This action happens when...**	**Because...** *(Describe why)* This is the source of the risk	**If any boxes are ticked, what are possible controls to reduce the risk**
BACK					
Bending or twisting E.g., more than 20 degrees	Forwards	☐			
	Sideways	☐			
	Twisting	☐			
Bending E.g., more than 5 degrees	Backward	☐			
NECK OR HEAD					
Bending or twisting E.g., more than 20 degrees	Forwards	☐			
	Sideways	☐			
	Twisting	☐			
Bending E.g., more than 5 degrees	Backward	☐			