

## Robot Sprayer | SAFE WORK METHOD STATEMENT (SWMS)

### TASK OR ACTIVITY: Robot Sprayer

Business Name:	ABN:	SWMS#
Business Address:		
Contact Person:	Phone:	Email:

### THIS SAFE WORK METHOD STATEMENT IS APPROVED BY THE PCBU OF THE PROJECT

Under the Work Health and Safety Regulation (WHS Regulation), a person conducting a business or undertaking (PCBU) is required to ensure that a safe work method statement (SWMS) is prepared before the proposed work starts.

Full Name:		
Signature:	Title:	Date:
Details of the person(s) responsible for ensuring implementation, monitoring compliance of the SWMS as well as reviews and modifications of the SWMS.		
Full Name:	Title:	Phone:

### ALL PERSONNEL PARTICIPATING IN ANY ACTIVITY ON THIS SWMS MUST HAVE THE FOLLOWING COMMUNICATED

Safety meetings or toolbox talks will be scheduled in accordance with legislative requirements to first identify any site hazards, then to communicate those hazards and then to further take steps to either eliminate or control each hazard.

If an incident or a near miss occurs, all work must stop immediately. Depending on the severity of the incident, a meeting will be called with all workers to amend the SWMS if required. The meeting may also be an educational opportunity.

Any changes made to the SWMS after an incident or a near miss must be approved by the Person Conducting Business or Undertaking and communicated to all relevant personnel.

The SWMS must be kept and be available for inspection at least until the work is completed. Where a SWMS is revised, all versions should be kept. If a notifiable incident occurs in relation to which the SWMS relates, then the SWMS must be kept for at least two years from the occurrence of the notifiable incident.

### NAME OF ALL RELEVANT PERSONNEL WHO HAVE BEEN CONSULTED AND COMMUNICATED TO IN THE DEVELOPMENT AND APPROVAL OF THIS SWMS

### CLIENT OR PRINCIPAL CONTRACTOR DETAILS

Client:	SCOPE OF WORKS
Project Name:	
Project Address:	
Project Manager:	
Contact Phone:	
Date SWMS supplied to Project Manager:	

### ANY HIGH-RISK CONSTRUCTION WORK BEING CARRIED OUT

- |  |  |
|--|--|
| <input type="checkbox"/> involves a risk of a person falling more than 2 meters  | <input type="checkbox"/> is carried out on or near pressurised gas mains or piping                                     |
| <input type="checkbox"/> is carried out on a telecommunication tower   | <input type="checkbox"/> is carried out on or near chemical, fuel or refrigerant lines                                 |
| <input type="checkbox"/> involves demolition of an element of a structure that is load-bearing                         | <input type="checkbox"/> is carried out on or near energised electrical installations or services                      |
| <input type="checkbox"/> involves demolition of an element related to the physical integrity of a structure            | <input type="checkbox"/> is carried out in an area that may have a contaminated or flammable atmosphere                |
| <input type="checkbox"/> involves, or is likely to involve, disturbing asbestos  | <input type="checkbox"/> involves tilt-up or precast concrete  |
| <input type="checkbox"/> involves structural alteration or repair that requires temporary support to prevent collapse  | <input type="checkbox"/> is carried out on, in or adjacent to a road, railway, shipping lane or other traffic corridor |
| <input type="checkbox"/> is carried out in or near a confined space  | <input type="checkbox"/> is carried out in an area of a workplace where there is any movement of powered mobile plant  |
| <input type="checkbox"/> is carried out in/near a shaft or trench deeper than 2m or tunnel involving use of explosives | <input type="checkbox"/> is carried out in areas with artificial extremes of temperature.                              |
| <input type="checkbox"/> is carried out in or near water or other liquid that involves a risk of drowning.             | <input type="checkbox"/> involves diving work.   |

### ANY HIGH-RISK MACHINERY OR EQUIPMENT NEARBY

RISK MATRIX									
LIKELIHOOD	INSIGNIFICANT	MINOR	MODERATE	MAJOR	CATASTROPHIC	SCORE	ACTION	HEIRARCHY OF CONTROLS	
ALMOST CERTAIN	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4 ACUTE			 <p><b>Elimination</b> Remove the hazard.</p> <p><b>Substitution</b> Replace the hazard.</p> <p><b>Isolation</b> Isolate People from the hazard</p> <p><b>Engineering</b> Isolate the hazard.</p> <p><b>Administrative</b> Change the work.</p> <p><b>PPE</b></p>	
LIKELY	2 MODERATE	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4A ACUTE	DO NOT PROCEED		
POSSIBLE	1 LOW	2 MODERATE	3 HIGH	4 ACUTE	4 ACUTE	3H HIGH	Review before work starts.		
UNLIKELY	1 LOW	1 LOW	2 MODERATE	3 HIGH	4 ACUTE	2M MODERATE	Ensure control measures in place.		
RARE	1 LOW	1 LOW	2 MODERATE	3 HIGH	3 HIGH	1L LOW	Monitor and keep records		

**Notes on Hierarchy of Controls:** Elimination methods are the most effective and preferred when controlling a hazard. Substitution is the second most effective method of controlling a hazard. Engineering by isolation is the third most effective, while Administrative Controls by changing the work is the fourth most effective method. PPE (Personal Protective Equipment) is the least effective method.

PERSONAL PROTECTIVE EQUIPMENT (PPE)											
Select the appropriate PPE above suitable for the equipment used or the job task being performed (if applicable).											
FOOT PROTECTION	HAND PROTECTION	HEAD PROTECTION	HEARING PROTECTION	EYE PROTECTION	RESPIRATORY PROTECTION	FACE PROTECTION	HIGH-VIS CLOTHING	PROTECTIVE CLOTHING	FALL PROTECTION	SUN PROTECTION	HAIR/JEWELLERY SECURED
											
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other PPE Required:											
Permit or Licenses Requirements						Mandatory Qualifications and Training					

JOB STEP	POTENTIAL HAZARDS	IR	CONTROL MEASURES	RR
SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
1. Preparation	Electric shock, Chemical exposure	2M	<ul style="list-style-type: none"> <li>- Ensure that all team members are familiar with the equipment being used, such as robot sprayers and power connections, to minimise the risk of electric shock.</li> <li>- Always wear appropriate personal protective equipment (PPE) such as gloves, safety goggles, and face masks to protect against chemical exposure.</li> <li>- Conduct a thorough inspection of all electrical equipment and cables before use to identify any signs of damage or wear that could lead to an electric shock.</li> <li>- Store chemicals in clearly labelled containers with accurate hazard information for easy identification and handling.</li> <li>- Ensure that a Material Safety Data Sheet (MSDS) is available for each chemical to provide appropriate information regarding the safe handling and storage.</li> <li>- Establish designated areas for mixing and storing chemicals to ensure they are contained within a controlled environment and away from other work steps that may result in electric shock risks.</li> <li>- Create and enforce a strict maintenance schedule for robot sprayers and related equipment, including regular inspection and repairs as needed.</li> <li>- Train workers to handle emergencies properly, such as immediate first aid response for electric shock or dealing with accidental chemical spills or splashes.</li> <li>- Set up proper ventilation systems within the workspace to help disperse and exhaust any harmful chemical fumes.</li> <li>- Utilise non-conductive tools and equipment when working near live electricity to reduce the potential for an electric shock.</li> <li>- Implement a lockout/tagout procedure for situations where robots must be powered down during maintenance or troubleshooting.</li> <li>- Develop clear communication protocols between team members responsible for the different aspects of the project, such as those managing electrical connections and those handling chemicals.</li> <li>- Keep all extension cords and power outlets clear of chemicals and other potential hazards to minimise the chance of electrical short-circuiting and electric shock incidents.</li> <li>- Continually review and update the Safe Work Method Statement (SWMS) based on new hazards identified or changes in the workplace, and ensure that everyone involved in the job is aware of the control measures in place.</li> </ul>	1L
2. Testing equipment	Equipment malfunction, Fire	3H	<ul style="list-style-type: none"> <li>- Regular maintenance checks: Ensure that the Robot Sprayer is subjected to routine maintenance checks following the manufacturer's guidelines, including software and hardware components, to minimise equipment malfunction risks.</li> <li>- Emergency protocols: Establish clear emergency protocols for staff members to follow in case of an equipment malfunction or fire, including appropriate shutdown procedures and evacuation routes.</li> </ul>	1L

JOB STEP	POTENTIAL HAZARDS	IR	CONTROL MEASURES	RR
SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
			<ul style="list-style-type: none"> <li>- Fire extinguishers: Equip the workspace with appropriate firefighting tools, like fire extinguishers and fire blankets, strategically placed within easy reach to control small fires effectively during a fire incident.</li> <li>- Personal Protective Equipment (PPE): Require all personnel involved in the testing process to wear appropriate PPE such as safety glasses, gloves and protective footwear, reducing the risk of injury due to malfunctioning equipment.</li> <li>- Clear workspace: Ensure that the testing area is clear of any flammable materials or debris, reducing the likelihood of fire damage or hazards.</li> <li>- Proper training: Provide thorough training to all employees working with the Robot Sprayer on safe handling, operation, and troubleshooting procedures to minimise human error, leading to equipment malfunction or accident.</li> <li>- Ventilation: Ensure proper ventilation in the testing area to maintain air quality and reduce the accumulation of combustible gases or dust, decreasing the chances of fire incidents.</li> <li>- Electrical safety precautions: Perform thorough inspections of power outlets, cords, and electrical connections used during the testing process to ensure they are reliable and secure, reducing the possibility of electrical fires.</li> <li>- Restrict access: Limit access to only authorised personnel during the testing phase to minimise distractions and ensure that everyone present understands the associated risks and safety measures in place.</li> <li>- Incident reporting and continuous improvement: Encourage employees to report any issues or concerns related to the Robot Sprayer's functioning promptly. Use this information to identify potential problems and review processes regularly, implementing improvements to ensure optimal safety and performance over time.</li> </ul>	
3. Setup workspace	Trip and fall hazards, Electrical hazard	2M	<ul style="list-style-type: none"> <li>- Clearly mark designated walking paths and areas within the workspace, keeping them clear of any equipment or materials that may cause a trip or fall hazard.</li> <li>- Install guardrails, barriers or appropriate signage to identify potential trip and fall hazards, such as uneven surfaces, pits, holes or other dangerous areas.</li> <li>- Ensure proper storage of all hoses, cables and wiring, by using cable covers, cable organizers and tie-downs in order to eliminate any potential trip hazards.</li> <li>- Provide adequate lighting in the workspace to ensure visibility of potential trip and fall hazards, as well as clearly display warning signs and hazard markings.</li> <li>- Use non-slip flooring material where possible and keep workspaces clean and free from spillages and debris to minimise slip and fall risks.</li> <li>- Conduct regular inspections and maintenance checks on electrical equipment and machinery, including checking for damaged wires, faulty insulation or exposed live components.</li> <li>- Implement an isolation procedure (using Lock Out, Tag Out methods) to ensure that equipment is made safe before carrying out electrical work, preventing accidental energization of the equipment.</li> <li>- Always use Ground Fault Circuit Interrupters (GFCIs) or Residual Current Devices (RCDs) for temporary electrical power sources in the workspace to prevent electrical shock incidents.</li> </ul>	1L

		<p>glasses and insulated gloves to safeguard against trips, slips and</p> <ul style="list-style-type: none"> <li>- Train all workers on hazard identification, risk mitigation, safety protocols in relation to trip and fall, as well as electrical hazards d</li> <li>- Establish and maintain an efficient communication system among supervisors and management, to address any potential hazards, effectively, ensuring continuous improvement in workplace safety.</li> </ul>
<p>Installation of fumes</p>	<p>3H</p>	<p>[REDACTED]</p>
		<p>[REDACTED]</p>
		<p>[REDACTED]</p>
		<p>[REDACTED]</p>
		<p>[REDACTED]</p>
		<p>[REDACTED]</p>

JOB STEP	POTENTIAL HAZARDS	IR	CONTROL MEASURES	RR
SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
5. Loading robot sprayer	Back strain, Crush injury	3H	<div>SAMPLE</div>	1L
6. Start spraying process	Chemical spray drift, Noise pollution	2M		1L





JOB STEP	POTENTIAL HAZARDS	IR	CONTROL MEASURES	RR
SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
7. Monitor robot sprayer	Collision with machinery, Moving parts entanglement	2M	<div>SAMPLE</div>	1L

JOB STEP	POTENTIAL HAZARDS	IR	CONTROL MEASURES	RR
SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
8. Refilling chemical containers	Chemical spillage, Exposure to chemicals	3H	<div>SAMPLE</div>	2M
9. Perform maintenance on the robot sprayer	Electrical hazards, Accidental activation	3H		1L

SAMPLE



JOB STEP	POTENTIAL HAZARDS	IR	CONTROL MEASURES	RR
SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
			<div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	
12. Robot shutdown and disassembly	Pinch points, Electrical hazards	3H	<div></div> <div></div> <div></div> <div></div> <div></div> <div></div>	1L



## EMERGENCY RESPONSE – CALL 000 FOR EMERGENCIES

Ensure to have an Emergency Management Plan in place as well as adequate numbers of trained first aid staff with easy access to fully stocked first aid kits, rescue equipment, material safety data sheets, adequate access to emergency communication equipment and fire-fighting equipment suitable for all classes of fire and ignition sources.

## LEGISLATIVE REFERENCES

RELEVANT LEGISLATION AND CODES OF PRACTICE. DELETE THE LEGISLATIVE REFERENCES IF ANY STATE THAT ARE NOT APPLICABLE

### Queensland & Australian Capital Territory

Work Health and Safety Act 2011

Work Health and Safety Regulations 2011

Legislation QLD: <https://www.worksafe.qld.gov.au/laws-and-compliance/work-health-and-safety-laws>

Codes of Practice QLD: <https://www.worksafe.qld.gov.au/laws-and-compliance/codes-of-practice>

Legislation ACT: <https://www.worksafe.act.gov.au/laws-and-compliance/acts-and-regulations>

Codes of Practice ACT: <https://www.worksafe.act.gov.au/laws-and-compliance/codes-of-practice>

### Victoria

Occupational Health and Safety Act 2004

Occupational Health and Safety Regulations 2017

Legislation VIC: <https://www.worksafe.vic.gov.au/occupational-health-and-safety-act-and-regulations>

Codes of Practice VIC: <https://www.worksafe.vic.gov.au/compliance-codes-and-codes-practice>

### New South Wales

Work Health and Safety Act 2011

Work Health and Safety Regulations 2017

Legislation NSW: <https://www.safework.nsw.gov.au/legal-obligations/legislation>

Codes of Practice NSW: <https://www.safework.nsw.gov.au/resource-library/list-codes-of-practice>

### Western Australia

Work Health and Safety Act 2020

Work Health and Safety Regulations 2022

Legislation Western Australia: <https://www.commerce.wa.gov.au/worksafe/legislation>

Codes of Practice WA: <https://www.commerce.wa.gov.au/worksafe/codes-practice>

### Northern Territory

Work Health and Safety (National Uniform Legislation) Act 2011

Work Health and Safety (National Uniform Legislation) Regulations 2011

Legislation NT: <https://worksafe.nt.gov.au/laws-and-compliance/workplace-safety-laws>

Codes of Practice NT: <https://worksafe.nt.gov.au/laws-and-compliance/codes-of-practice>

### Safe Work Australia Links

Law and Regulation (All States): <https://www.safeworkaustralia.gov.au/law-and-regulation>

Model Codes of Practice: <https://www.safeworkaustralia.gov.au/resources-publications/model-codes-of-practice>

### Model Codes of Practice

- Managing noise and preventing hearing loss at work
- Confined spaces
- Labelling of workplace hazardous chemicals
- Managing risks of hazardous chemicals in the workplace
- Welding processes
- First aid in the workplace
- Managing the risk of falls at workplaces
- Hazardous manual tasks
- Managing the risk of falls in housing construction
- Managing electrical risks in the workplace
- Demolition work
- Excavation work
- Work health and safety consultation, cooperation and coordination
- Managing the work environment and facilities
- How to manage work health and safety risks
- Managing risks of plant in the workplace
- Construction work

### South Australia

Work Health and Safety Act 2012 (SA)

Work Health and Safety Regulations 2012 (SA)

Legislation for SA: <https://www.safework.sa.gov.au/resources/legislation>

Codes of Practice for SA: <https://www.safework.sa.gov.au/workplaces/codes-of-practice#COPs>

### Tasmania

Work Health and Safety Act 2012

Work Health and Safety (Transitional and Consequential Provisions) Act 2012

Work Health and Safety Regulations 2012

Work Health and Safety (Transitional) Regulations 2012

Legislation for TAS: <https://worksafe.tas.gov.au/topics/laws-and-compliance/acts-and-regulations>

Codes of Practice for TAS: <https://worksafe.tas.gov.au/topics/laws-and-compliance/codes-of-practice>

Details of permits, licenses or access required by regulatory bodies (add or delete as required):

- Permits from local council
- Authorisation to commence work
- Any required documents.

## SIGNATORIES OF THE SAFE WORK METHOD STATEMENT

The signed and dated personnel listed below have cooperated in the consultation and development of this Safe Work Method Statement which has been approved by the Person/s Conducting a Business or Undertaking (PCBU). In signing this Safe Work Method Statement each individual acknowledges and confirms that they have read this SWMS in full, having raised any questions for items on this Safe Work Method Statement that require clarification, and confirms that they are competent, skilled and knowledgeable for the task assigned to them. Every person acknowledges that they have received the relevant training and qualifications where required, before carrying out any work contained in this Safe Work Method Statement. By signing this Safe Work Method Statement each individual agrees to work safely, to follow any safe work instructions which are provided, and agrees to use all Personal Protective Equipment where appropriate.

Worker Name	Signature	Date

## SAFE WORK METHOD STATEMENT MONITORING AND REVIEW

**The SWMS must be reviewed regularly** to make sure it remains effective and must be reviewed (and revised if necessary) if relevant control measures are revised. The review must be carried out in consultation with workers (including contractors and sub-contractors) who may be affected by the operation of the SWMS and their health and safety representatives who represent that work group at the workplace.

When the SWMS has been revised the PCBU must ensure that all persons involved with the work are advised that a revision has been made and how they can access the revised SWMS, including all persons who will need to change a work procedure or system as a result of the review are advised of the changes in a way that will enable them to implement their duties consistently with the revised SWMS. All workers that will be involved in the work must be provided with the relevant information and instruction that will assist them to understand and implement the revised SWMS.

**The SWMS must be monitored regularly** for the effectiveness of ensuring hazard controls are effective in reducing the risk of incidents, keeping the workplace safe for all personnel. The person responsible for monitoring the effectiveness of the Safe Work Method Statement should employ a multi-faceted approach which includes but is not limited to:

1. Spot Checks.
2. Consultation with workers, contractors and sub-contractors.
3. Internal audits on a continual basis.

An approach of continuous improvement, promptly recording inconsistencies or deficiencies, followed up by immediate corrective action and consultation with all relevant personnel ensures that the PCBU is consistently developing ever-improving systems of safe work principles.

REVIEW NUMBER	1	2	3	4	5	6	7
NAME							
INITIALS							
DATE							



### SAFE WORK METHOD STATEMENT REVIEW CHECKLIST

This Safe Work Method Statement Review Checklist is to be followed and used upon initial development of the SWMS to help ensure that all steps have been adequately taken before work commences. Think of this document as an internal audit review checklist before commencing work, and may form part of a Toolbox Talk (safety meeting) and may be used as an opportunity for education and training.

ITEMS WHICH MUST BE INCLUDED IN THE SWMS	COMPLETED	COMMENTS
The company details have been entered, including the project name and address.	<input checked="" type="checkbox"/>	
All relevant personnel consulted during the development of the SWMS.	<input checked="" type="checkbox"/>	
Name, signature, position and date signed of the person approving the SWMS.	<input type="checkbox"/>	
Specific personnel and qualifications, experience is noted in the SWMS.	<input checked="" type="checkbox"/>	
Provides a step-by-step process of tasks required to carry out the activity or task.	<input checked="" type="checkbox"/>	
Adequate risk assessment of any identified hazards has been completed.	<input checked="" type="checkbox"/>	
Foreseeable hazards are identified and documented for each step.	<input checked="" type="checkbox"/>	
Any hazards listed in any site risk assessments have been added to the SWMS.	<input checked="" type="checkbox"/>	
SWMS initial risk (IR) column as well as residual risk (RR) column completed.	<input checked="" type="checkbox"/>	
Check control measures added to the SWMS are the most effective selected.	<input checked="" type="checkbox"/>	
Responsible person is assigned and listed on the SWMS for the implementation of control measures.	<input checked="" type="checkbox"/>	
Permit or licenses requirements specified, such as Hot Work, Electrical Work, Work at Heights etc.	<input checked="" type="checkbox"/>	
SWMS identifies plant and equipment to be used.	<input checked="" type="checkbox"/>	
Details of inspection checks required for any equipment listed as noted on the SWMS.	<input checked="" type="checkbox"/>	
Describes any mandatory qualifications, experience, training or skills required to perform the work.	<input checked="" type="checkbox"/>	
Applicable personal protective equipment is selected on the SWMS.	<input checked="" type="checkbox"/>	
Reflects and documents any legislative references and/or Australian Standards.	<input checked="" type="checkbox"/>	
Identifies any hazardous substances used with specific control measures in line with any SDS.	<input checked="" type="checkbox"/>	
REVIEWED BY		
SIGNATURE		
DATE REVIEWED		
DATE COMPLETED		