Maintenance of Plant and Equipment at Height

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

THIS RISK ASSESSMENT 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 RISK ASSESSMENT is prepared before the proposed work starts.

Full Name:		
Signature:	Title:	Date:

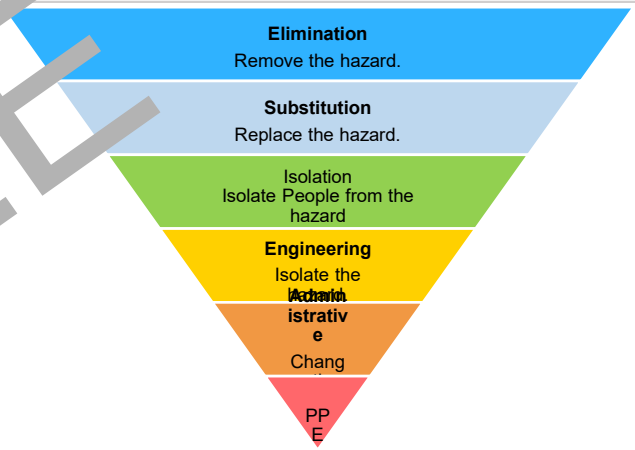
CLIENT OR PRINCIPAL CONTRACTOR DETAILS

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

RISK MATRIX

LIKELIHOOD	INSIGNIFICANT	MINOR	MODERATE	MAJOR	CATASTROPHIC	SCORE	ACTION
ALMOST CERTAIN	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4 ACUTE		
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	Rev before work
UNLIKELY	1 LOW	1 LOW	2 MODERATE	3 HIGH	4 ACU	2M MO RATE	Ensure control measures in place.
RARE	1 LOW	1 LOW	2 MODERATE	3 HIGH	3 H	1L LOW	Monitor and keep records.

HIERARCHY OF CONTROLS



Risk Rating & Required Action:

4A	Stop work. The risk is intolerable. E inate the hazar redesign the activity before proceeding. A Safe Work Method Statement (SWMS) or hi er-level authorisati is required.
3H	Review and approve additional c rols b ask arts. Senior supervisor sign-off needed.
2M	Ensure all nominated controls are in ace and effe ive. Proceed with caution; monitor conditions.
1L	Proceed, following standard operating procedures Monitor and keep records.

Consequence Scale:

Consequence	People (injury/illness)	Project / Assets	Compliance / Reputation
Catastrophic	Fatality or permanent total disability	project shutdown	Significant regulator intervention; criminal prosecution
Major	Serious injury/illness (hospital > 5 days)	critical delay	Improvement notice; major media coverage
Moderate	Medical-treatment injury; lost-time > 1 day	moderate delay	Minor breach; adverse client comment
Minor	First-aid only, no lost time	negligible delay	Isolated non-conformance
Insignificant	No injury	no schedule impact	Deviation caught and corrected on site

Notes on Hierarchy of Controls:
Remember to apply controls in the preferred order shown by the coloured pyramid:

1. **Eliminate**
2. Substitute
3. Isolate
4. Engineering
5. Administrative
6. PPE

Always document **why** a lower-order control is accepted if elimination or substitution is not reasonably practicable.

aligned with Safe Work Australia's Managing the risk of fatigue at work *(2023) and ISO 45001:2018 clauses 6–8.*

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. WHS Governance, Roles and Consultation	• Lack of clear WHS policy for maintenance of plant and equipment at height • Unclear WHS roles, responsibilities and delegations between PCBU, principal contractor and subcontractors • Inadequate consultation with workers, Health and Safety Representatives (HSRs) and contractors about height-related risks • Failure to consider WHS Act 2011 due diligence duties at senior management level • Insufficient resourcing for safe systems of work (budget, time, competent people) • No formal process to review and approve work at height methodologies for specialised tasks (e.g. bridge maintenance near trees, cold room/freezer tops)	4A	• Establish and implement a WHS governance framework that specifically addresses work at height and plant maintenance, aligned to the WHS Act 2011 and relevant WHS Regulations and Codes of Practice • Define and document WHS roles and responsibilities (officers, managers, supervisors, workers, contractors) in position descriptions and project documentation, including clear authority to stop unsafe work • Implement a formal consultation procedure requiring engagement with workers, HSRs and contractors when planning or changing systems for maintenance at height (including bridge and cold room/freezer work) • Require officers to demonstrate due diligence via regular WHS reporting on work at height performance, inspections, training completion and incident trends • Include specific work-at-height governance arrangements in contracts, project WHS management plans and service agreements • Schedule periodic management reviews of height-related WHS risks, findings from audits and incident investigations, with documented actions, accountabilities and timeframes	3H
2. Planning, Design and Engineering of Access Systems	• Plant, structures and cold rooms/freezers designed without safe permanent access for maintenance at height • Reliance on ad-hoc or temporary access solutions (e.g. ladders, makeshift platforms) instead of engineered systems • Inadequate consideration of bridge geometry and nearby trees when designing access methods for bridge maintenance • Lack of edge protection, anchor points or walkways on top of cold rooms and freezers over 2 metres and over 6 metres • Incompatible access systems for installed plant (e.g. equipment positioned beyond safe reach from platforms)	4A	• Apply the hierarchy of control at the design stage by eliminating work at height where practicable (e.g. designing plant to be serviceable from ground or low level platforms) • Engage competent engineers and designers to specify permanent access systems (fixed platforms, walkways, stairs, guardrails, compliant ladders and anchor points) for plant located at height and on top of cold rooms/freezers • For bridge maintenance adjacent to trees, commission engineering assessment of access options (under-bridge units, gantries, mobile elevating work platforms) that minimise exposure to fall and struck-by-tree risks • Ensure cold room and freezer roof designs include certified anchor points, static lines and edge protection for work over 2 metres, with enhanced controls (e.g. double guardrails, fall arrest systems, engineered walkways) where work exceeds 6 metres • Incorporate safe access, egress and rescue routes into design documentation and as-built drawings, including load ratings for roofs, platforms and connection points • Implement a formal management of change (MOC) process requiring engineering review when plant location or structure modifications affect access or fall protection systems	2M

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
	• Failure to consider safe rescue access in design (limited space, obstructions, fragile or insulated panels)			
3. Structural Integrity and Roof / Bridge Surface Management	• Unknown load capacity of cold room and freezer roofs or bridge elements used for access • Deteriorated or damaged structural components (e.g. corroded steel, rotten timber, delaminated insulated roof panels) • Fragile surfaces (e.g. skylights, aged sheet roofing, thin insulated panels) not identified or controlled • Uncontrolled build-up of ice, condensation or water on cold room/freezer roofs creating slip risks • Vegetation and tree growth impacting bridge structures, scuppers or walkways and contributing to decay or instability • Inadequate inspection and maintenance regime for structural elements used as work platforms	4A	• Establish a formal structural inspection prog bridges and old room/freezer roofs used for maintenance access, conduct d by competent e neers or s ably qualified persons • Maintain a register of structure nd roof areas ap for access, including load limits, restricted zones and any kno e area with clear signag on site • Implement a stem to ide ify and ark no zones (e.g. around skylights, weak sheet roofing, non-load-bearing ulated pan) suppo drawings and induction materials • Dev proce es f ce, water and condensation management on cold room/freezer tops, including sched e de-icing ainage maintenance and use of slip-resistant surfaces where practicable • Integ e v etatio anagement near bridges into the maintenance plan to prevent root damage, moistur eten on and ysical contact risks from nearby trees quire engine ing verification and sign-off before using any new or modified structural surface as a wor tf m or anchor point	2M
4. Fall Prevention, Fall Arrest and Edge Protection Systems	• Absence or inade cy of guardrails, barriers and edge otection on elevated work areas • Poorly designed or incorrectly insta d fall arrest systems (anchors, static l s, harnesses) on roofs and bridges • Failure to differentiate control requirements between work above 2 metres and above 6 metres on cold room/freezer roofs • Inadequate system for inspection, testing and recertification of fall protection equipment and anchor points • Reliance on administrative controls (signs, supervision) where engineering controls are reasonably practicable • Lack of documented rescue and retrieval procedures in case of fall arrest activation	4A	[redacted]	2M

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. Access Equipment Selection, Procurement and Maintenance	• Use of unsuitable access equipment (ladders, MEWPs, scaffolds, bridging units) for the specific maintenance task • Ageing or poorly maintained access equipment increasing risk of structural failure or malfunction • Inconsistent procurement standards leading to mixed quality and non-compliant equipment across sites • Failure to account for environmental conditions (wind, uneven ground, proximity to trees and powerlines) when selecting equipment for bridge work • Inadequate inspection and tagging systems for mobile scaffolds, EWP's and temporary platforms used on and around cold rooms • Limited availability of appropriate plant leading to workarounds and unsafe substitutions	4A	[redacted]	2M
6. Competency, Training and Authorisation for Work at Height	• Workers and supervisors carrying out maintenance at height without appropriate formal traini[redacted]xperienc • Lack of verificatio[redacted]r competency for specialised tasks ([redacted]idge access, [redacted]rae interface, cold roo[redacted] systems, EWP operation) • Insufficient training on specific fa[redacted] protection systems and r[redacted] procedures • Inadequate instruction on cold room/freezer-specific hazards such as thermal stress, condensation and fragile panels • Contractors engaged without adequate competency assessment or licence validation • Failure of supervisors to recognise unsafe behaviours or non-compliance due to limited height safety knowledge	3H	[redacted]	2M

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. Work Planning, Permits and Authorisation to Work at Height	• Unplanned or reactive maintenance activities at height occurring without adequate risk assessment • Absence of a formal permit-to-work system for high-risk tasks (e.g. work over 2 metres on cold stores, work over 6 metres, bridge works near traffic or trees) • Inadequate consideration of interaction with other activities (traffic, crane operations, refrigeration plant operation) • No requirement for pre-start coordination meetings or toolbox talks for complex multi-contractor works at height • Poor documentation and control of changes to method, equipment or environmental conditions during the task • Work occurring outside normal hours without appropriate supervision and support	4A	[redacted]	2M
8. Environmental and Site Conditions (Weather, Trees, Traffic, Temperature)	• Adverse weather (wind, rain, lightning, heat, cold) affecting stability of access equipment and work safety at height • Bridge locations exposed to live traffic, river systems or steep embankments compounding fall consequences • Proximity of trees to bridge maintenance areas causing struck-by, entanglement or unplanned contact with EWPs and access structures • Extreme temperatures and thermal gradients around cold rooms and freezers contributing to ice formation, condensation and thermal stress for workers • Poor visibility (night work, fog, shadows) increasing likelihood of slips, trips and missteps at height • Insufficient monitoring and escalation procedures when environmental conditions deteriorate	4A	[redacted]	2M

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
9. Isolation, Lockout and Services Management (Energy, Refrigerants, Utilities)	• Uncontrolled movement or energisation of plant during maintenance at height (e.g. conveyor start-up, fan operation, bridge components) • Exposure to live electrical systems, overhead powerlines or concealed wiring while working near or on structures at height • Release of refrigerants, cold air, steam or other hazardous substances from systems associated with cold rooms and freezers • Contact with overhead or underground services when positioning EWPs, cranes or scaffolds for bridge and roof access • Inadequate lockout/tagout procedures and poor coordination between maintenance, operations and contractors	3H	[redacted]	1L
10. Contractor and Supplier Management	• Engagement of contractors for specialised height work without adequate pre-qualification or WHS capability assessment • Inconsistent safet[redacted]standards between principal contracto[redacted]nd speci[redacted] contractors leading [redacted]on or lowest-common-denominator practic • Reliance on contractors' generic[redacted] SWMS that do not adequ[redacted]over bridge-specific or cold room/freezer roof risks • Poor communication of site-specific hazards (trees adjacent to bridges, traffic patterns, fragile roof areas, refrigeration plant layout) • Lack of monitoring and enforcement of contractor compliance with agreed systems of work and permits	3H	[redacted]	2M
11. Emergency Response, Rescue and First Aid for Work at Height	• Delayed or ineffective rescue of a worker suspended in a fall arrest system, leading to suspension intolerance or further injury	4A	[redacted]	2M

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
	• Inability to access injured workers on bridge structures or on top of cold rooms/freezers in a timely and safe manner • Lack of coordination with emergency services regarding complex access environments (bridges over water, confined spaces around plant, height above 6 metres) • Inadequate first aid capability for injuries associated with falls, hypothermia, heat stress or contact with structures • Absence of drills and practical testing leading to unrealistic or unworkable emergency plans		[redacted]	
12. Health, Fatigue and Fitness for Work	• Workers undertaking maintenance at height while fatigued, distracted or under the influence of alcohol or drugs • Medical conditions (e.g. vertigo, cardiovascular disease, musculoskele issues) not identified or considered when allocating tasks at height • Heat stress or cold ess for workers on bridge structure or cold room/freezer roofs, impacting c centratio physical capability • Psychological stress or fear of hei s leading to poor decision-making on-compliance with safe sys work • Insufficient breaks, hydration and rotation for prolonged maintenance tasks at height	3H	[redacted]	2M
13. Housekeeping, Materials Handling and Dropped Objects Control	• Poor housekeeping on bridge decks and roofs leading to slips, trips and falls at height • Uncontrolled tools, equipment or materials falling from height and striking people below or damaging plant • Inadequate systems for securing temporary components (guardrails, panels, covers) during maintenance	3H	[redacted]	2M

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
	• Improvised manual handling of equipment to and from elevated areas, including cold room/freezer roofs and bridge structures • Limited exclusion zones or barricades to separate overhead work from workers, traffic and public		[redacted]	
14. Documentation, Record Keeping and Continuous Improvement	• Inadequate documentation of risk assessments, inspections, certifications and permits for work at height • Failure to capture and analyse incidents, near misses and non-conformances related to maintenance at height • Outdated or inconsistent procedures and SWMS not reflecting current plant configuration, bridge conditions or cold room/freezer layouts • Lack of traceability of training, competency and equipment certificati records for audit and legal defence • Missed opportunities to learn from internal and industry-wi ht incidents	3H	[redacted]	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 FOR 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

New South Wales
Work Health and Safety Act 2011
Work Health and Safety Regulations 2025
Legislation NSW: https://www.safework.nsw.gov.au/legal-obligations/legislation
Codes of Practice NSW: https://www.safework.nsw.gov.au/resource-library/list-of-codes-of-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/forms-and-resources/codes-of-practice

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.

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

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

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