Confined Space Entry and Rescue

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:

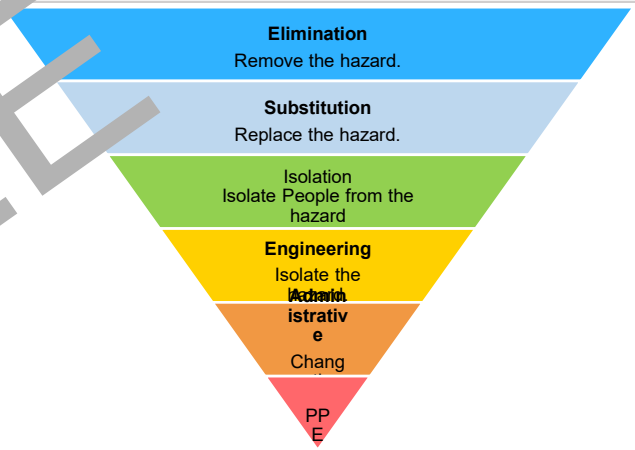
CLIENT OR PRINCIPAL CONTRACTOR DETAILS

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, Legal Compliance and Consultation	• Confined space management system not aligned with WHS Act 2011, WHS Regulations and relevant Codes of Practice • Lack of clear organisational policy for confined space entry and rescue across all sites (tanks, basements, maintenance tunnels, manholes, cargo holds, floor voids, excavations, fuel storage tanks, sewer pits, gullies and risers) • Inadequate consultation with workers and Health and Safety Representatives (HSRs) on confined space risks and procedures • Inconsistent application of confined space definition, leading to some areas (e.g. basements, cellars, floor voids, service ducts, cargo compartments, gullies, burrows and dens) being excluded from the confined space register when they should be included • No formal process to review changes in work activities (e.g. new tank cleaning operations, sewer pump station pit lid repair, drilling into walls, working in low-ventilation excavations) against confined space requirements • Failure to review and update systems following incidents, near misses or regulatory changes	4A	• Develop, implement and endorse a corporate Confined Space Entry and Rescue Policy that explicitly references WHS Act 2011, WHS Regulations and Safe Work Australia's Confined Spaces Code of Practice • Establish and maintain a formal consultation framework with workers and HSRs for all confined space related procedures, risk assessments and equipment changes • Implement a documented confined space classification and decision-making procedure to consistently determine whether tight or low-ventilation spaces (e.g. maintenance tunnels, fuel storage tanks, sewer pits, cargo compartments, floor voids, dens and burrows) meet the legislative definition • Maintain a legal register of applicable legislation, Codes of Practice and Standards (e.g. AS 2865) and assign responsibility for monitoring updates and incorporating changes into procedures • Introduce a management of change (MOC) procedure that requires WHS review for any new or modified work (e.g. new tank cleaning methods, pit cover raising systems, basement works, sewer gas exposure tasks, hot work) prior to commencement • Schedule formal annual reviews of the confined space management system, including consultation outcomes, incident trends and compliance audit results, with actions tracked to completion • Ensure contracts and service agreements with contractors explicitly reference compliance with the organisation's confined space policy and Australian WHS legislation	3H
2. Confined Space Identification, Register and Labelling	• Failure to identify all confined spaces across operations, including non-obvious spaces such as basements, cellars, floor voids, service ducts, cargo compartments, excavations, gullies, burrows and dens • Outdated or incomplete confined space register not reflecting current plant, tanks and vessels, sewer pump station pits, fuel storage tanks, risers and maintenance tunnels • Inconsistent or missing signage and labelling of confined spaces at access	4A	• Conduct systematic site-wide surveys using a standardised checklist to identify all potential confined spaces, including tanks, risers, sewer pits, maintenance tunnels, floor voids, service ducts, cellars, gullies, manholes, cargo compartments and excavations with poor ventilation • Establish and maintain a controlled Confined Space Register that documents location, description, access points, known hazards (including sewer gases, fuel vapours, low oxygen, engulfing materials) and permit requirements • Implement a change management trigger requiring re-assessment of spaces when plant modifications, ventilation changes, or structural alterations occur (e.g. additional pipework in tanks, new pit covers, altered drainage or gully systems) • Standardise and install durable, legible signage at all entry points, clearly indicating 'Danger – Confined Space – Authorised Entry by Permit Only' and listing key restricted activities	2M

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	points (e.g. manholes, pit lids, tank hatches) • No formal process to re-assess spaces where ventilation, access methods or operating conditions change (e.g. installation of new pipework, temporary covers, ventilation systems) • Workers and contractors unaware that certain work areas are classified as permit-controlled confined spaces		• Integrate the confined space register into the organisation's asset management or GIS systems to support planning of maintenance, tank cleaning, sewer pump station pit lid repair and excavation works • Include confined space identification and register awareness in job inductions for relevant trades, tank cleaners, sewer workers, tunnel maintenance crews and contractors	
3. Confined Space Risk Assessment and Permit-to-Work System	• Absence of a formal, documented risk assessment process specific to confined space tasks (e.g. tank cleaning operations, welding in tanks, working in maintenance tunnels, drilling into pits, work in risers, sewer pump station repairs) • Permit-to-work system not implemented, poorly designed or inconsistently applied across sites • Superficial or tick-box style risk assessments that fail to identify atmospheric hazards (e.g. sewer gases, fuel vapours, oxygen deficiency), engulfment, entrapment or access issues in tight spaces • Permits issued by unqualified or unauthorised personnel without authority or competency • Inadequate linkage between risk assessment outcomes and specific control requirements (ventilation rates, isolation points, standby personnel, rescue capability) • Permits not specifying clear time limits, scope of work or conditions under which work must stop • Poor retention, review and auditing of permits, limiting organisational learning	4A	• Implement a formal confined space risk assessment procedure that requires hazard identification and evaluation for each distinct task (e.g. confined space entry during drilling, welding, sewer work, fuel tank cleaning, maintenance in cellars or service ducts, work in cargo compartments) • Deploy a standardised confined space permit-to-work template capturing atmospheric test results, isolation verifications, ventilation requirements, rescue arrangements and sign-on/off of all participants • Assign permit issuing authority only to trained and formally appointed authorised persons with competency in confined space legislation, organisational procedures and risk assessment • Require task-specific risk assessments to be completed by a competent person in consultation with workers, and linked to applicable SWMS or procedures before permit issue • Mandate that permits are time-bound, clearly define the task scope and specify trigger events for suspension or cancellation (e.g. unexpected gas readings, equipment malfunction, change of work method) • Introduce an electronic permit management system where practicable, enabling tracking, verification, and audit of confined space permits across all sites • Conduct regular audits of permits and associated risk assessments to verify completeness, quality of controls and compliance with procedures, with findings fed back into training and system improvement	2M
4. Isolation, Lockout and Energy Control Systems	• Inadequate isolation procedures for mechanical, electrical, hydraulic, pneumatic, process and stored energy	4A	[redacted]	2M

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	sources connected to tanks, pits, manholes, tunnels and risers • Reliance on informal isolation (e.g. 'switch off only') rather than verified lockout and tagout systems • Failure to isolate inflows/outflows to fuel storage tanks, sewers, cargo compartments or tunnels resulting in engulfment, flooding, or introduction of toxic gases during entry • Poorly maintained or undocumented isolation points on legacy plant and equipment linked to confined spaces • No systematic verification or testing that isolations are effective before issuing permits • Unauthorised removal of locks or tags due to weak administrative controls		[redacted]	
5. Atmospheric Hazard Management and Ventilation Systems	• Inadequate systems to identify, monit and control sewer gases vapours, welding fumes, dusts d oxygen-deficient/enriched mospheres in confined spaces • Improper or insuffici ventilation basements, cellars, floor voids, serv ducts, cargo compartments, excavations, tanks and ri • Lack of standardised atmospheric testing procedures or reliance on uncalibrated gas detectors • Failure to recognise that some tight or compressed spaces with poor air flow (e.g. gullies, manholes, burrows and dens) can accumulate hazardous gases • No requirement for continuous or periodic atmospheric monitoring during high-risk activities such as confined space welding, tank cleaning with solvents, or entry into sewers	4A	[redacted]	2M

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	• Inadequate maintenance and calibration regime for ventilation equipment and gas monitoring devices		[redacted]	
6. Design, Access, Egress and Entrapment Prevention	• Confined spaces, including tanks, pits, risers, maintenance tunnels, basements, floor voids, cargo compartments and service ducts, designed or modified without consideration for safe access and egress • Restricted access openings that impede rescue or cause entrapment when manoeuvring through tight or compressed spaces • Poorly designed or unguarded pit covers, hatches or lids leading to crush, shear or entrapment injuries during pit cover raising and pit operations • Lack of fixed ladders, platforms, guardrails or anchor points, increasing fall and entrapment risks during entry and exit • No systematic process to review new projects or modifications for confined space entry and rescue requirements	3H	[redacted]	2M
7. Competency, Training and Authorisation	• Workers, supervisors and standby personnel participating in confined space entry without formal competency or refresher training • Inadequate training for specialised tasks such as confined space welding, sewer gas management, tank cleaning, pit operations and work in fuel storage tanks • Contractors assuming prior experience equates to competency under the organisation's systems and Australian legislation • Insufficient training for permit issuers, atmospheric testers and rescue team members	4A	[redacted]	2M

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	• No competency matrix or authorisation process covering all roles involved in confined space entry and rescue		[redacted]	
8. Confined Space Entry Planning and Integration with SWMS	• Fragmented planning where confined space risks are considered separately from other high-risk activities (e.g. drilling, hot work, lifting, excavation, work at height) • SWMS and job plans developed without reference to the confined space risk assessment and permit requirements • Inadequate coordination between multiple contractors working on interconnected confined spaces, pits, tanks and tunnels • Lack of pre-job planning for complex tasks such as sewer pump station pit l repair, tank cleaning operations, or en into multiple pits in one shift • Failure to consider inte between adjacent confined sp es or nearby plant operations (e fuel transfer, sewer pumping, v ilation di s)	3H	[redacted]	2M
9. Supervision, Monitoring and Standby Arrangements	• Inadequate supervision of confined space work, leading to deviation fro permits and procedures • Standby/attendant roles not clearly defined or treated as secondary duties, reducing capacity to monitor entrants effectively • No system for real-time monitoring of workers navigating tight or complex confined spaces such as maintenance tunnels, risers, cargo compartments or extensive ducting • Supervisors lacking authority or confidence to stop unsafe confined space work • Failure to ensure continuous communication between entrants and	3H	[redacted]	2M

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	standby personnel, particularly in noisy environments or extensive underground networks		[redacted]	
10. Emergency Preparedness, Rescue and Interface with External Services	• Reliance on public emergency services alone for confined space rescue without considering response time, capability or access constraints • No documented, site-specific confined space rescue plans for different scenarios (vertical entries into pits and tanks, horizontal tunnel entries, complex basements or cargo compartments) • Rescue equipment (tripods, winches, breathing apparatus, stretchers) not maintained, standardised or readily accessible • Rescue team members inadequately trained or not regularly drilled, leading delays and unsafe self-rescue attempt by co-workers • Failure to consider res[illegible]plications when modifying pits[illegible]nels, risers, tanks or floor voids[illegible].g. reduced access diameter, awkwar[illegible]ends) • Lack of coordinatio[illegible]otocols with[illegible]e services or specialist rescue provide[illegible], including site familiarisation for hi[illegible]risk facilities	4A	[redacted]	2M
11. Plant, Equipment and PPE Management for Confined Spaces	• Inadequate selection, maintenance and inspection systems for plant and equipment used in confined spaces (e.g. intrinsically safe tools, ventilation blowers, gas detectors, communication devices, retrieval systems) • Use of unsuitable or non-intrinsically safe equipment in flammable atmospheres such as fuel storage tanks or sewer gas environments • Poor management of respiratory protective equipment (RPE), harnesses	3H	[redacted]	2M

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	and PPE, leading to failure or misuse in confined spaces with poor ventilation • No systematic process to pre-approve equipment for confined space use, including electrical equipment in wet pits or tunnels • Inadequate decontamination and storage arrangements for equipment used in sewer work, tank cleaning and other contaminated environments		[redacted]	
12. Health Monitoring, Fitness for Work and Exposure Management	• Lack of systematic assessment of workers' medical fitness for confined space work, including work in compressed or tight spaces and low-ventilation environments • No health monitoring program for exposure to sewer gases, welding fumes, fuel vapours or cleaning chemicals used in tank operations • Inadequate management of fatigue f workers undertaking extended or nigh time confined space work (e.g. tunnel maintenance, sewer pump station repairs, tank shutdown • Failure to consid psychological impacts of workin confine underground locati claustrophobia, anxiety) when alloca g tasks • No process to manage who report symptoms related to confined space work, such as dizziness, headaches or respiratory irritation	3H	[redacted]	2M
13. Hygiene, Sanitation and Biological Hazard Management	• Inadequate management of sanitation in confined spaces such as sewers, pump stations, gullies, burrows and dens, leading to exposure to biological hazards and infectious agents • No procedures for decontamination of workers and equipment following sewer work, tank cleaning or work in contaminated pits and manholes	3H	[redacted]	2M

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	• Poor housekeeping in basements, cellars and service ducts, increasing slip, trip and contact with contaminated materials • Insufficient provision of washing facilities, change rooms and waste disposal systems for confined space crews working with sewage or hazardous residues • Lack of vaccination and health advice for workers routinely exposed to sewage and biological contaminants		[redacted]	
14. Contractor Management and Procurement Controls	• Engagement of contractors for confined space entry and rescue tasks without adequate verification of their systems, training and equipment • Inconsistent expectations between principal contractor and subcontractors regarding permit systems, isolation processes, rescue arrangements and sanitation standards • Procurement of tanks, pits, risers, cargo compartments or cleaning services without specifi[redacted] of confined space safety requir[redacted]ents • Limited oversight [redacted] contract compliance with org[redacted]al confi[redacted]d space procedures, particularly on remote or short-duration projects • Subcontractors adopting [redacted]al practices from previous workplaces that conflict with Australian WHS legislation and site procedures	3H	[redacted]	2M
15. Monitoring, Audit, Incident Management and Continuous Improvement	• Lack of systematic monitoring and auditing of confined space entry and rescue systems, leading to unnoticed procedural drift and non-compliance • Under-reporting or poor investigation of near misses and incidents within confined spaces, including minor gas alarms, equipment failures or difficulties evacuating tight spaces	3H	[redacted]	1L

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	• No structured process to review lessons learned from incidents, audits or industry alerts and update confined space procedures accordingly • Inadequate performance indicators for confined space safety, leaving management unable to assess control effectiveness • Failure to capture worker feedback about practical challenges in navigating confined spaces, accessing pits or implementing rescue plans		[redacted]	

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 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