

Gas Fitting

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

THIS RISK ASSESSMENT IS APPROVED BY THE PCBU ON THIS 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	HIERARCHY OF CONTROLS	
ALMOST CERTAIN	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4 ACUTE			Elimination Remove the hazard.	
LIKELY	2 MODERATE	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4A ACUTE	DO NOT PROCEED	Substitution Replace the hazard.	
POSSIBLE	1 LOW	2 MODERATE	3 HIGH	4 ACUTE	4 ACUTE	3H HIGH	Review before work starts.	Isolation Isolate People from the hazard	
UNLIKELY	1 LOW	1 LOW	2 MODERATE	3 HIGH	4 ACUTE	2M MODERATE	Ensure control measures in place.	Engineering Isolate the hazard	
RARE	1 LOW	1 LOW	2 MODERATE	3 HIGH	3 HIGH	1L LOW	Monitor and keep records.	Administrative Change	
								PPE	

Risk Rating & Required Action:	
4A	Stop work. The risk is intolerable. Eliminate the hazard or redesign the activity before proceeding. A Safe Work Method Statement (SWMS) or higher-level authorisation is required.
3H	Review and approve additional controls before task starts. Senior supervisor sign-off needed.
2M	Ensure all nominated controls are in place and effective. 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 Management, Governance & Legal Compliance	<ul style="list-style-type: none"> WHS responsibilities for gas fitting not clearly defined within the PCBU and contracting chain Lack of documented WHS management plan specific to plumbing, water, sewer and gas works Failure to comply with WHS Act 2011, WHS Regulation and relevant Australian Standards (e.g. AS/NZS 5601, AS/NZS 3500) Inadequate monitoring of licences, registrations and insurances for gasfitters and plumbing contractors Poor consultation, communication and issue-resolution processes with workers, subcontractors and clients No systematic legal compliance register for gas, water and sewer regulatory requirements Inadequate change management when new technologies, fittings or work methods are introduced 	4A	<ul style="list-style-type: none"> Establish and maintain a documented WHS Management System aligned with WHS Act 2011, WHS Regulation and relevant Australian Standards for plumbing, water, sewer and gas Define and document WHS roles, responsibilities and due-diligence duties for officers, managers, supervisors and workers involved in gas fitting activities Develop a legislative and standards register for gas fitting, external plumbing, water and sewer works and review at least annually or when regulations change Implement formal processes for consultation, Health and Safety Representative (HSR) engagement and toolbox talks covering gas-related risks and controls Ensure all gasfitters hold current licence, registration and maintain a system to verify, record and periodically audit consistency and trade qualifications Adopt and implement documented policies for high-risk construction work, hot work, confined spaces and excavations where gas infrastructure may be present Introduce a formal management of change procedure for new equipment, gas systems, materials, or work processes, requiring WHS review and risk assessment Establish internal audit and management review schedules to verify the effectiveness of the WHS Management System and compliance with gas fitting duties 	3H
2. Design, Planning & Engineering Coordination	<ul style="list-style-type: none"> Poor integration between architectural, civil, hydraulic and gas design leading to clashes and re-work Gas pipe routes designed without adequate clearance from electrical, water and sewer services Inadequate design consideration for ventilation, pressure regulation and emergency isolation Design documentation not reflecting existing underground services or as-constructed conditions Late design changes not being risk assessed or communicated to installation teams Insufficient engineering sign-off for commercial or complex gas installations 	4A	<ul style="list-style-type: none"> Require formal design reviews that include WHS, constructability and service-clash assessments for external water, sewer and gas layouts Ensure gas system design and specifications are prepared or reviewed by appropriately qualified and competent designers/engineers in accordance with AS/NZS 5601 and relevant plumbing standards Implement a process for coordination of services (gas, water, sewer, electrical, communications) using up-to-date drawings and Building Information Modelling where available Mandate risk assessments for significant design changes, with documented consultation between designers, principal contractor and gasfitting contractor Include in design documentation clearly nominated gas isolation points, emergency shut-off valves, ventilation provisions and access for maintenance Establish a design approval and sign-off process, including engineering certification where required by regulation or network operator requirements 	2M

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3. Competency, Licensing, Training & Supervision	<ul style="list-style-type: none"> Unlicensed or under-qualified personnel carrying out gas installation, alteration or repair work Insufficient training on gas hazards, ignition sources, leak detection and emergency response Inadequate supervision of apprentices, labourers and subcontractors on external plumbing and gas activities Workers unfamiliar with specific gas supplier or network operator requirements Lack of refresher training on changes in legislation, standards or company procedures Language, literacy or cultural barriers impacting understanding of safe systems of work 	4A	<ul style="list-style-type: none"> Implement a competency management system that verifies licences, registrations and trade qualifications for all gasfitters and relevant plumbing workers before engagement Maintain training matrices for gas related tasks, including induction, site-specific training, emergency response and specialised equipment use Ensure structured supervision arrangements, with defined ratios for apprentices and clear responsibilities for supervising tradespersons Provide targeted training on WHS Act 2011 duties, gas hazards, atmospheric testing, live service work controls and relevant Australian Standards Deliver refresher training at planned intervals and when procedures, equipment or legislation change Use clear, plain English procedures, visual aids and translated materials where required to overcome language or literacy barriers Audit subcontractor training and competency records as part of prequalification and ongoing performance reviews 	2M
4. Procurement of Materials, Appliances & Equipment	<ul style="list-style-type: none"> Purchase of non-compliant gas appliances, fittings or regulators that do not meet Australian standards Use of incompatible materials for external water, sewer and gas services leading to corrosion or failure Inadequate verification of pressure ratings and temperature suitability for selected gas components Lack of traceability for critical components (valves, meters, regulators, flexible connections) Procurement focused on lowest price rather than compliance and quality Receiving counterfeit or incorrectly certified products through online or overseas suppliers 	3H	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	2M
5. Management of Underground & Existing Services	<ul style="list-style-type: none"> Unidentified underground gas, water, sewer or electrical services being struck during excavation Out-of-date or inaccurate service plans leading to false assumptions about pipe locations 	4A	<p>[REDACTED]</p> <p>[REDACTED]</p>	2M

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	<ul style="list-style-type: none"> Inadequate process for Dial Before You Dig (DBYD) and service detection prior to external works Lack of coordination with gas network operators when working near live mains or services Uncontrolled isolation or interference with existing gas services creating leaks or loss of supply Inadequate documentation of as-constructed services for future maintenance and works 		[REDACTED]	
6. Work Environment, Site Access & Public Interface	<ul style="list-style-type: none"> Uncontrolled public access near external gas fitting or plumbing works in streets, easements and public areas Traffic interactions with workers and plant during trenching or meter installation Restricted access or egress for emergency response around gas meter sets or external plant Inadequate site delineation where gas works interface with other trades and contractors Noise, dust or odour complaints from nearby residents or businesses during gas and sewer works Work in culturally or environmentally sensitive areas without appropriate controls 	3H	[REDACTED]	2M
7. Plant, Tools & Equipment Management	<ul style="list-style-type: none"> Defective or uncalibrated gas testing, detection and pressure-testing equipment Improperly maintained trenching, lifting or drilling plant used for external services Lack of standardised equipment for gas isolation, purging and leak testing 	3H	[REDACTED]	2M

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	<ul style="list-style-type: none"> Inadequate control over issue, inspection and maintenance of specialised gas tools Use of non-intrinsically safe equipment in potentially explosive atmospheres No system for tagging out unsafe plant or reporting defects 		[REDACTED]	
8. Safe Systems for Isolation, Purging & Commissioning	<ul style="list-style-type: none"> Inadequate isolation leading to unintended gas release during modifications or repairs Incorrect purging procedures causing accumulation of gas or introduction of air into gas lines Lack of standardised commissioning tests before placing systems into service Poor communication around live gas status between crews, supervisors and clients Failure to document and verify leak testing, pressure testing and hold time Ad-hoc deviations from approved procedures under time pressure 	4A	[REDACTED]	2M
9. Interaction with Water, Sewer & Cross-Connection Risks	<ul style="list-style-type: none"> Potential cross-connection between gas piping and water or sewer systems due to poor system identification Corrosion of gas lines from proximity to aggressive soils, sewer infrastructure or wet environments Backflow risks where water or other fluids may enter gas systems through faulty components Inadequate segregation between gas and other services in common trenches or risers Incorrect earthing/bonding arrangements between metallic water, sewer and gas lines Lack of coordinated inspection regimes for co-located services 	3H	[REDACTED]	2M

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10. Emergency Preparedness, Incident Management & Gas Leaks	<ul style="list-style-type: none"> Lack of clear procedures for responding to gas leaks, fires or explosions near external services Workers and supervisors unsure how to notify gas network operators and emergency services Inadequate provision or maintenance of fire protection and gas isolation points Poor communication to the public and neighbouring properties during gas emergencies Failure to investigate and learn from near misses and minor leaks Business continuity impacts from extended gas or water service interruptions 	4A	[REDACTED]	2M
11. Health Risks, Fatigue, Manual Handling & Psychosocial Factors	<ul style="list-style-type: none"> Chronic musculoskeletal strain from repetitive external trenching, pipe handling and valve operation Fatigue due to extended work hours, after-hours emergency callouts or remote work on networks Exposure to sewer gas, stagnant water, mould and biological contaminants during sewer internal work Working under time pressure or commercial stress leading to shortcuts on gas safety checks Psychosocial risks from remote or isolated work, conflict with the public, or aggressive clients Inadequate systems to manage occupational hygiene risks such as noise, vibration, dust and cold/heat stress 	3H	[REDACTED]	2M
12. Contractor, Subcontractor & Supplier Management	<ul style="list-style-type: none"> Inconsistent WHS standards between principal contractor, plumbing contractor and gasfitting subcontractors Subcontractors undertaking high-risk gas work without adequate prequalification or oversight 	3H	[REDACTED]	2M

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	<ul style="list-style-type: none"> Poor information flow regarding design changes, hazards and incidents across multiple parties Suppliers not meeting delivery specifications, leading to last-minute product substitutions Confusion over who controls the worksite and supervises safety in shared work areas Lack of verification that subcontractors' SWMS and risk assessments address system-level gas risks 		[REDACTED]	
13. Documentation, Records, Inspection & Assurance	<ul style="list-style-type: none"> Incomplete or inaccurate records of gas installations, inspections, pressure tests and certifications Lack of systematic periodic inspection of external gas, water and sewer assets Inability to retrieve historical information during incidents, audits or regulator enquiries Informal practices not reflected in procedures leading to inconsistent work methods Non-conformance identified but not tracked through to closure Data not used to identify trends and systemic issues in gas safety management 		[REDACTED]	1L
14. Continuous Improvement & Safety Culture	<ul style="list-style-type: none"> Complacency about gas hazards due to routine, repetitive external plumbing activities Workers not reporting near misses, minor leaks or unsafe conditions Lack of structured review of lessons learned from incidents and industry alerts Safety performance driven only by lag indicators (injuries) rather than proactive measures 	3H	[REDACTED]	1L

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	<ul style="list-style-type: none"> • Insufficient involvement of workers in developing and reviewing procedures • Leadership focus on productivity over safety in planning and resourcing gas works 			

SAMPLE

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>

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 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-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) Regulation 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>

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>

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

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.