Gas Fitting Installation and Appliance Connection

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:

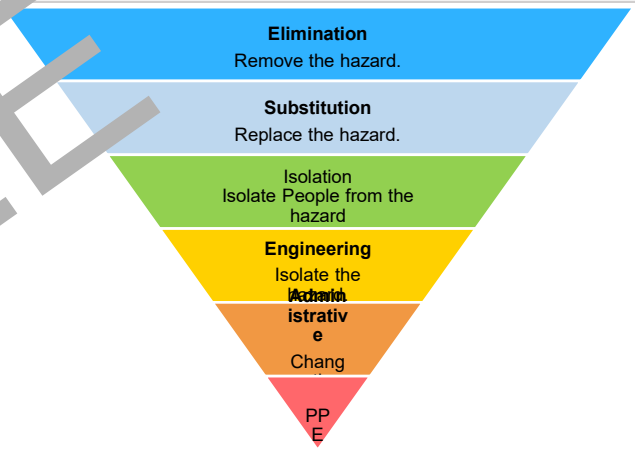
CLIENT OR PRINCIPAL CONTRACTOR DETAILS

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 Licensing	• Work activities not aligned with WHS Act 2011, WHS Regulations and applicable Gas Safety and Plumbing legislation • Gas fitters and apprentices operating without current licences, registrations or supervision as required by state/territory law • Failure to verify competency for specialised tasks such as commercial vehicle gas supply connection and complex gas system alterations • Inadequate systems to track regulatory changes (e.g. gas installation standards, carbon monoxide testing requirements, ventilation provisions) • Poor integration of gas safety obligations with broader organisational WHS management system • Inadequate procedures for notificatio of notifiable incidents related to gas explosions, fires or carbon monoxide poisoning	4A	• Establish and maintain a documented WHS nd Gas ety Governance Procedure referencing WHS Act 2011, WHS Regulations, Australian Stand ls g. AS/NZS 5601 series, AS 4575, AS 1596 where applicable) and relevant state/territory gas legisi n • Implement a licence and reg ation verification s tem (luding for gas fitters, plumbers, electricians and apprentices) with periodic a ting and automati inders for renewals • Develop a com ency m ix for s fitting, ga installation checks, leak test performance, troubleshooti gas leaks, a d gas c nectio o commercial vehicles, including evidence requirements and refresher ervals • Ass respo ble anager or WHS/Gas Safety Coordinator to monitor legislative and standards upda a l revie rocedures at least annually • Integr e g safety quirements into the organisation's WHS policy, risk management framework, and contract ma nemen procedures • I lem t a do mented notifiable incident response and reporting procedure aligned with WHS Act 2011, ling escalation pathways and regulatory contact details	3H
2. Design, Planning and Engineering of Gas Installations	• Inadequate engi ering design for new or altered gas sys ns leadin over-pressure, und tion or unsafe combustion • Incomplete consideration of bui g use, occupancy type, co al kitchen loads and commercial vehicle gas system requirements • Poor separation of gas and electrical systems, creating ignition or electrocution risk • Failure to design for safe access for adjustment of gas burner flames, inspection of gas leaks, and ongoing maintenance • Lack of design review for gas meter locations, decommissioning access and emergency isolation points	4A	• Implement a formal Gas Installation Design Procedure requiring designs to comply with AS/NZS 5601, relevant gas codes and manufacturer specifications prior to installation • Require all new and altered gas systems to undergo documented engineering review and sign-off by a competent gas design authority or licensed gas fitter with design endorsement where required • Adopt standard design templates and checklists for different installation types (domestic, commercial, industrial, commercial vehicles, LPG vs natural gas) • Mandate that designs clearly specify safe access, isolation points, ventilation provisions, flue arrangements, and locations for inspection and leak testing • Introduce a multi-disciplinary design review process involving WHS, fire safety, electrical, mechanical and operations where applicable • Ensure technical specifications clearly state acceptable components, pressure ratings, gas types and approved appliances for installation and connection • Incorporate end-of-life and decommissioning considerations into design, including safe removal of old gas meters and disconnection of obsolete gas systems	2M

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	• Inadequate specification of materials, regulators, hoses, flexible connections and gas appliances for the gas type and pressure • Insufficient consideration of future modifications, capacity upgrades and decommissioning of old gas meters and appliances			
3. Procurement and Management of Gas Appliances, Components and Materials	• Procurement of non-compliant gas appliances, regulators, hoses and fittings not certified for use in Australia • Use of components not matched to gas type (natural gas vs LPG) leading to incomplete combustion and carbon monoxide generation • Sub-standard or counterfeit parts used in gas burner assemblies, flexible connections or meters • Inadequate traceability of components used in installations and repairs, impacting recall and defect manageme • Poor storage and handling of gas components leading to c ination, damage or degradati (e.g. seals, hoses) • Inconsistent chec on c ercia vehicle gas supply co ponents and s systems for mobile plant or food tru s	4A	• Establish a Pro ement andar or gas fitting related tasks that mandates sourcing only certified and approved gas ppliances a materi (e.g. ified to appropriate Australian Standards and recognised certification s mes) • Mai an ap ve endors list for gas appliances, meters, regulators, valves, hoses and fittings, with pre-qu ation a s focusing on product compliance and quality • Requ do mente erification of gas type compatibility for all appliances and components before installat n, in ding fo commercial vehicle connections • lem t a co onent traceability system (batch numbers, serial numbers, installation locations) to enab a d response to recalls or identified defects Develop storage and handling procedures for gas components to prevent damage, contamination and U r chemical degradation Introduce incoming goods inspection procedures for critical gas safety components, including random audits and sample testing • Standardise component types and brands across operations to simplify maintenance, training and defect tracking	2M
4. Competency, Training and Supervision of Gas Workers	• Gas fitters and plumber ming complex gas installation, adjustment of burner flames and leak test performance without current competency • Inadequate training on gas and carbon monoxide leak recognition, investigation and response • Poor understanding of legal obligations for gas installation checks, safety inspections and decommissioning of old gas meters and appliances • Insufficient supervision of apprentices and new workers undertaking gas	4A	[redacted]	2M

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	fitting-related tasks and troubleshooting gas leaks • Inadequate training in commercial vehicle gas supply connection and unique risks associated with mobile installations • Lack of competency in using gas detection equipment and interpreting readings for gas leaks and CO risks		[redacted]	
5. Safe Work Procedures for Gas Fitting and Installation Activities	• Absence of standardised procedures for gas installation, installing or altering gas systems and connecting gas supplies • Inconsistent practices between teams when disconnecting old gas appliances and decommissioning old gas meters • Poorly defined methods for gas installation checks and safety inspections of gas appliances prior to handover • Reliance on informal knowledge for adjustment of gas burner flames and appliance commissioning • Lack of structured workflows for plumbing gas fitting tasks, integration with electrical work and other trades • Inadequate consideration of commercial vehicle gas supply connection steps within the broader installation system	3H	[redacted]	2M
6. Management of Gas Leak Detection, Testing and Inspection Programs	• Lack of a systematic program for inspection of gas leaks and routine gas installation checks • Reliance on ad-hoc testing rather than structured leak test performance after new installations, alterations or repairs • Inadequate calibration and maintenance systems for gas leak detectors and CO monitors	4A	[redacted]	2M

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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 identify slow or intermittent gas and carbon monoxide leaks that present cumulative exposure risks • Poorly documented outcomes of gas water leak detection and pressure testing activities • Insufficient follow-up on identified defects or recommendations from safety inspections of gas appliances		[redacted]	
7. Management of Gas and Carbon Monoxide Exposure Risks	• Uncontrolled gas leaks from installations, appliances, pipework or decommissioned systems causing explosion or fire risk • Accumulation of carbon monoxide due to poor combustion, incorrect burner flame adjustment or inadequate ventilation • Inadequate assessment of enclosed or semi-enclosed spaces where gas appliances operate (e.g. commercial kitchens, caravans, commercial vehicles) • Failure to recognise sy[redacted]s of CO exposure among wo[redacted]rs, occupants or the public • Lack of monitoring [redacted] environments, including commercial vehicle gas supply systems and mo[redacted]e setups • Incomplete procedures for responding to suspected gas and CO leaks, including notification, evacuation and isolation	4[redacted]	[redacted]	2M
8. Isolation, Tagging and Decommissioning of Gas Systems	• Inadequate isolation and verification before disconnecting old gas appliances or altering gas systems • Residual gas in pipework not safely vented prior to decommissioning of old gas meters or systems • Poor labelling of live, isolated and decommissioned gas lines leading to inadvertent reconnection	4A	[redacted]	2M

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SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
	• Incomplete documentation of decommissioned systems, resulting in confusion for future works • Failure to manage ignition sources during partial shutdowns and decommissioning activities		[redacted]	
9. Management of Work Environments and Interfaces with Other Trades	• Uncoordinated work between gas fitters, plumbers, electricians and builders leading to damage of gas installations or creation of ignition sources • Inadequate space, access and housekeeping around gas appliances, meters and pipework affecting installation quality and inspection access • Gas work undertaken in areas with poor ventilation, confined spaces or near incompatible processes (e.g. hot works, spray painting) • Uncontrolled movement of vehicles or plant near exposed gas infrastructure, including during commercial vehicle gas supply connection • Temporary disconnection or connection of gas supplies not communicated to affected [redacted], leading to unsafe use of appliances	3H	[redacted]	2M
10. Contractor, Subcontractor and Third-Party Management	• Engagement of gas contractors without adequate verification of licensing, insurance and WHS systems • Subcontractors performing gas fitting-related tasks outside their scope of competency or contractual agreement • Inconsistent standards of gas installation checks, leak testing and documentation between different contractors • Poor communication of site-specific gas hazards, isolation points and emergency procedures to contractors • Limited oversight of contractors working on commercial vehicle gas	3H	[redacted]	2M

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SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
	supply systems, mobile plant and off-site locations			
11. Documentation, Records and Handover of Gas Installations	• Incomplete or inaccurate records of gas installations, alterations, leak tests and safety inspections • Lack of traceable evidence of compliance for regulators, auditors and insurers following gas incidents • Poor handover information to clients or building managers regarding operating limits, maintenance needs and emergency procedures • Loss of historical data on troubleshooting gas leaks, repairs and recurring faults • Inadequate documentation of commercial vehicle gas supply systems, locations and testing	3H		1L
12. Emergency Preparedness, Response and Incident Management	• Inadequate planning for gas emergencies such as major leaks, fires explosions or CO exposure events • Workers and occupa… are how to respond to gas odo…, alarm activations or suspected leaks • Insufficient availab… sibility o emergency isolation valves for gas supplies, including for commercial vehicles • Poor coordination with emergency services and gas utilities during significant incidents • Failure to investigate gas-related incidents and near misses to identify system weaknesses	4A		2M
13. Inspection, Maintenance and Lifecycle Management of Gas Assets	• Lack of planned maintenance and periodic safety inspection for gas appliances, meters, regulators, valves and pipework	3H		2M

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SPECIFIC WORK STEPS	HAZARDS THAT MAY ARISE	INITIAL RISK	SPECIFIC MEASURES TO BE PUT IN PLACE TO ELIMINATE OR CONTROL THE RISKS	RESIDUAL RISK
	• Gradual deterioration of flexible hoses, seals and fittings leading to undetected gas and carbon monoxide leaks • Extended operation of gas appliances beyond their safe service life without adequate checks • Failure to schedule re-inspection following major adjustments, such as burner flame tuning or system modifications • Poor integration of gas asset maintenance with broader building or fleet maintenance programs		[redacted]	
14. Health, Fatigue and Psychosocial Risk Management for Gas Work	• Fatigue impairing decision-making during critical gas fitting tasks, leak troubleshooting or emergency response • Time pressure leading to shortcuts in gas installation checks, leak testing and documentation • Stress and mental load associated w responsibility for high-consequence ga systems • Inadequate consid ation of lone or remote work for tr bleshooting gas leaks and after-ho call-o	2H	[redacted]	2M
15. Continuous Improvement, Audit and Review of Gas Safety Systems	• Static WHS and gas safety syste that do not adapt to new techno ies, incidents or legislative cha • Lack of systematic review of gas-related incidents, near misses and audit findings • No clear performance indicators for gas safety (e.g. defect rates, leak incidents, non-conformance trends) • Insufficient workforce consultation on effectiveness of gas fitting procedures and controls	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