Plumbing Drainage and Gas Fitting			
Business Name:		ABN:	
Business Address:			
Contact Person:	Phone:	Email:	

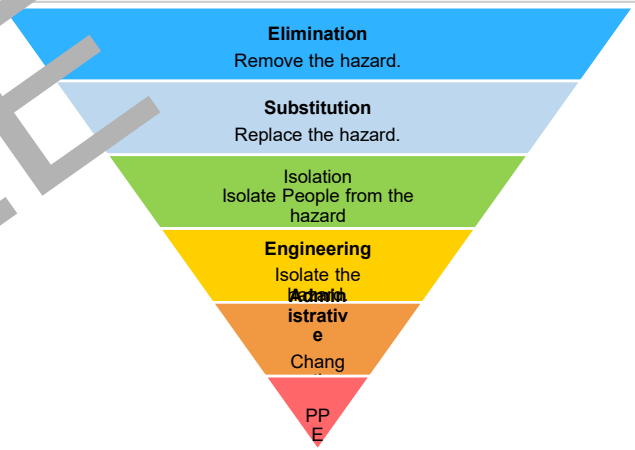
THIS RISK ASSESSMENT IS APPROVED BY THE PCBU OF THE PROJECT		
Under the Work Health and Safety Regulation (WHS Regulation), a person conducting a business or undertaking (PCBU) is required to ensure that a RISK ASSESSMENT is prepared before the proposed work starts.		
Full Name:		
Signature:	Title:	Date:

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. Governance, Legal Compliance and Consultation	• Lack of formal WHS governance framework for plumbing, drainage and gas fitting activities • Failure to understand and implement duties under WHS Act 2011 and WHS Regulations (e.g. PCBUs, officers, workers, contractors) • Inadequate consultation with workers and Health and Safety Representatives (HSRs) on WHS issues and changes to systems of work • Poor integration of plumbing, drainage and gas safety requirements into overall business management systems • No systematic review of incidents, near misses and audit findings related to plumbing and gas work • Insufficient due diligence by officers in monitoring WHS performance of plumbing and gas operations • Failure to ensure appropriate licensing and authorisations for ga[illegible]g and high-risk work • Inadequate cons[illegible]eration of interface risks where multip[illegible]PCBU[illegible]are t workplace (e.g. builde[illegible], electricians, plumbers, gas fitters on construction sites)	High	• Establish and maintain a documented WHS [illegible]anagement system aligned to WHS Act 2011, WHS Regulations and relevant Australian Standa[illegible]s for plumbi[illegible], drainage and gas fitting (e.g. AS/NZS 5601, AS/NZS 3500) • Define and document WHS roles, responsibili[illegible]and accounta[illegible]ities for officers, managers, supervisors, leading hands a[illegible]workers involved [illegible]plumbing[illegible]rainage and gas fitting • Implement a formal legal comp[illegible]nce register cover[illegible]elevant WHS, licensing and technical standards, with annual review[illegible]d s[illegible]off by [illegible]nior management • Develop a W[illegible]S consultat[illegible] proce[illegible]e that[illegible]andates regular toolbox talks, WHS committee or HSR meetings, and[illegible]nsultation[illegible]ior to intr[illegible]g new plant, substances or processes • Crea[illegible]n issue[illegible]s[illegible]tion and escalation procedure for WHS concerns arising from plumbing and gas work, [illegible]ing exp[illegible]ed response timeframes • Requi[illegible]of[illegible]rs to p[illegible]odically review WHS performance indicators (incidents, audits, training complet[illegible]n, co[illegible]ctive a[illegible]ions) specific to plumbing, drainage and gas fitting • E[illegible]blis[illegible]a doc[illegible]mented process for managing overlapping duties with other PCBUs, including coordi[illegible]n meetings, agreed responsibilities, and shared risk assessments for complex worksites • [illegible]onduct scheduled WHS management system audits (internal and external) that include targeted re[illegible]ws of plumbing, drainage and gas fitting operations • Implement a documented licence and competency verification process prior to allocation of plumbing and gas fitting work, with a central register maintained and periodically reviewed • Ensure policies and procedures clearly differentiate between general plumbing work and restricted/specialised gas fitting activities and define authorisation pathways for each	Medium
2. Contractor, Subcontractor and PCBU Interface Management	• Selection of contractors and subcontractors based solely on price without assessing WHS capability for plumbing, drainage and gas fitting • Unclear allocation of WHS responsibilities between principal contractor, plumbing subcontractor, and other trades • Inadequate review of contractor SWMS, job safety analyses and risk assessments for high-risk construction and gas fitting work	High	• Implement a contractor management procedure that includes prequalification of plumbing and gas contractors based on WHS performance, licensing, training and system maturity • Include WHS requirements, standards and performance expectations for plumbing, drainage and gas fitting in tender and contract documentation • Require submission and review of contractor WHS documentation (e.g. SWMS for high-risk construction work, gas commissioning procedures, confined space permits) prior to work commencing • Define in writing the allocation of WHS duties and specific responsibilities between PCBUs in line with WHS Act 2011, including who controls the worksite, plant, and critical isolations • Mandate site inductions for all contractors that address site-specific hazards relevant to plumbing, drainage and gas fitting including existing underground services, asbestos registers, and gas service plans	Medium

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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
	• Contractors using unsafe work practices or non-compliant materials on plumbing and gas systems • Poor communication of site-specific hazards (e.g. existing services, asbestos, confined spaces, live gas lines) to plumbing and gas contractors • Lack of monitoring, supervision and verification of contractor WHS performance on site • Failure to manage variations or scope changes that introduce new hazards to plumbing, drainage and gas fitting work		• Establish a schedule of WHS inspections and verifications of contractor activities, with findings recorded and corrective actions tracked • Introduce performance-based metrics and leading indicators (e.g. inspections completed, corrective actions closed out, competency checks) into contractor performance reviews • Require formal approval and review of WHS impacts for variations to plumbing, drainage and gas scopes before work proceeds • Include the right to suspend work in contracts for non-compliance with WHS requirements related to plumbing and gas activities • Maintain a central record of contractor incidents, near misses, performances and lessons learned for continuous improvement and contractor selection decisions	
3. Planning, Design and Engineering of Plumbing, Drainage and Gas Systems	• Inadequate design consideration of WHS risks for installation, testing, commissioning, maintenance and decommissioning of plumbing and gas systems • Designs that create confined or difficult-to-access locations for valves, clean-outs, regulators and isolation points • Failure to design for safe isolation, lock-out and verification on gas and pumped systems • Insufficient assessment of interactions between plumbing, drainage, gas and other building services (e.g. electrical, HVAC) leading to systemic risks • Use of materials, components or layouts that are not compliant with relevant Australian Standards or manufacturer requirements • Lack of consideration for backflow prevention, cross-connection control and contamination hazards in design • Failure to plan for adequate ventilation and gas dispersion in areas with gas appliances or pipework • Omission of provisions for safe handling of trade waste, sewage and potentially hazardous effluents	High	• Establish design and engineering procedures that require formal WHS risk review for plumbing, drainage and gas systems at concept and detailed design stages • Require designers and engineers to be competent in relevant Australian Standards (e.g. AS/NZS 3500 series, AS/NZS 5601, AS/NZS 1596) and to document how standards have been applied • Mandate documented design risk assessments that consider installation, operation, maintenance, emergency response, and eventual modification or demolition • Specify in design documentation locations for isolation valves, meters, regulators, clean-outs and inspection openings that allow safe and ergonomic access • Integrate gas isolation zoning, clearly marked emergency isolation points and provisions for lock-out/tag-out into system design • Require coordination workshops (clash detection) between plumbing, drainage, gas, electrical and structural designers to identify and control interface risks • Implement a formal design review and approval process that includes WHS, operations and maintenance representatives before construction drawings are issued • Incorporate backflow prevention, trade waste pre-treatment and cross-connection control requirements into standard design templates and specifications • Ensure design briefs and specifications explicitly address ventilation, hazardous areas classification (where relevant) and gas leak detection needs • Maintain controlled design documentation and revision control so installers and maintainers always work from current approved drawings and specifications	Medium

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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
4. Procurement of Materials, Plant and Equipment	• Procurement of non-compliant or counterfeit plumbing and gas components (e.g. pipes, fittings, valves, flexible connectors, appliances) • Selection of plant and tools that are unsuitable or unsafe for the type of plumbing, drainage or gas work being undertaken • Suppliers failing to provide required safety information, certificates, or installation instructions • Inconsistent use of approved suppliers leading to variable quality and traceability of critical gas and pressure components • Lack of consideration for whole-of-life safety, maintenance and replacement requirements during procurement • Inadequate processes for verification pressure ratings, materials compatibility and corrosion resistan ecific applications • No formal systen o manage lls, product safety aler ges to standards affecting procured items	High	[redacted]	Medium
5. Training, Competency, Licensing and Supervision	• Workers and contractors undertaking plumbing, drainage and gas fitting tasks without appropriate formal qualifications or current licences • Inadequate training in the specific risks associated with gas, confined spaces, hot works, working at heights and excavation for drainage • Over-reliance on informal on-the-job training without verification of competence • Supervisors lacking capability to identify unsafe plumbing and gas work,	High	[redacted]	Medium

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
	non-compliant installations or poor workmanship • No structured induction or refresher training program addressing changes to standards, codes or company procedures • Failure to verify the competency of new or agency workers before allocating complex or high-risk plumbing and gas work • Insufficient supervision of apprentices and new starters in high-risk plumbing and gas tasks		[redacted]	
6. Safe Systems of Work and Procedures	• Absence of documented procedures for high-risk plumbing, drainage and ga activities • Reliance on inform custom and practice leading to consistent control of systemic risks • SWMS and risk assessments that a generic, outdated or not specific to t plumbing and gas tasks being undertaken • Lack of integration between procedures for related risks such as hot works, confined spaces, excavation and live services • Workers not understanding or following existing procedures due to complexity or poor communication • Inadequate controls for sequencing of multi-trade work where plumbing and gas work interacts with electrical, structural or civil tasks	High	[redacted]	Medium

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
			[redacted]	
7. Plant, Tools, Equipment and Maintenance Systems	• Use of poorly maintained or defective tools and plant for plumbing, drainage and gas work • Inadequate inspection, testing and tagging programs for electrical tools and equipment • Lack of scheduled maintenance for high-risk plant such as pumps, pressure equipment and gas test instruments • Uncontrolled introduction of new or hired plant without WHS risk assessment or familiari[redacted] • No formal system[redacted] workers to report, tag out and remov[redacted] defective to[redacted] equipment from se[redacted] • Inadequate calibration and maintenance of gas detection and[redacted] pressure testing equipm[redacted]ng to false readings	[redacted]	[redacted]	Medium
8. Hazardous Substances, Biological Risks and Environmental Interfaces	• Exposure of workers to sewage, grey water, trade waste and associated biological contaminants during drainage and maintenance work • Use of hazardous chemicals such as adhesives, primers, sealants, cleaning agents and descalers without appropriate controls	High	[redacted]	Medium

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
	• Inadequate management of substances that may generate flammable atmospheres in drains and pits • Lack of systems for managing asbestos and other legacy hazardous materials in existing buildings during plumbing alterations • Poor management of waste from plumbing and gas work, including contaminated soils, sludge and removed components • Insufficient information and training on safe handling and disposal requirements for hazardous substances relevant to plumbing and gas		[redacted]	
9. Emergency Preparedness, Incident Management and Gas Leak Response	• Inadequate plan[illegible] for ga[illegible] fires, explosions or [illegible]ater relea[illegible]s related to plumbing and gas systems • Workers and supervisors not k[illegible]ing emergency roles, respons[illegible]s or communication protocols • Lack of appropriate emergency equipment (e.g. gas detectors, isolation plans, spill kits) for plumbing and gas tasks • Delayed or ineffective response to incidents due to poor reporting and escalation processes • Failure to capture underlying systemic causes of plumbing and gas incidents for learning and prevention • Insufficient coordination of emergency response with building management,	High	[redacted]	Medium

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
	principal contractors and emergency services on shared worksites		[redacted]	
10. Monitoring, Auditing, Reporting and Continuous Improvement	• Failure to detect deterioration in WHS performance of plumbing, drainage and gas operations over time • Limited analysis of WHS data leading to repeated systemic issues and similar incidents • Under-reporting of hazards, near misses and minor events that indicate larger system • Audits focusing only on documentation rather than field verification of plumbing and gas practices • No structured management review to evaluate effectiveness of WHS systems for plumbing and gas work • Lack of worker involvement in reviewing the effectiveness of WHS controls and suggesting improvements	Medium	[redacted]	Low

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
			[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 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