

Liquefied Petroleum Gas LPG

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:	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. Governance, Compliance and WHS Duties	<ul style="list-style-type: none"> Lack of clear allocation of WHS duties for LPG storage and use under WHS Act 2011 and WHS Regulation Inadequate understanding by officers and managers of due diligence obligations relating to LPG as a hazardous chemical and dangerous good Absence of an overarching LPG management plan and hazardous chemicals plan aligned with applicable Australian Standards (e.g. AS/NZS 1596 for LPG storage and handling) Failure to consult, cooperate and coordinate with other duty holders (suppliers, contractors, landlords) regarding LPG hazards and controls Inadequate review of legal changes, standards and industry guidance related to LPG, resulting in outdated systems 	High	<ul style="list-style-type: none"> Develop and implement a documented LPG Management Plan that forms part of the broader WHS Management System, referencing WHS Act 2011, WHS Regulation, and AS/NZS 1596 Formally assign WHS responsibilities for LPG (e.g. BU, officers, workers, contractors) within position descriptions, contracts and WHS role statements Provide specific due diligence briefings for officers regarding LPG risks, control hierarchies and regulatory requirements, with records of attendance Establish a legal and standards register covering LPG-related legislation, codes of practice and Australian Standards, with scheduled reviews and updates and responsible persons Implement a program to verify that landlords, suppliers and contractors have compatible LPG systems and procedures, including information-sharing and joint inspections where relevant Include LPG risks and controls in WHS committee agendas and toolbox talks, ensuring ongoing consultation with workers affected by LPG operations 	Medium
2. LPG Procurement, Supply Chain and Cylinder Management	<ul style="list-style-type: none"> Procurement of non-compliant LPG cylinders, hoses, valves or regulators that do not meet Australian Standards or supplier specifications Inadequate supplier vetting leading to unreliable filling practices and incorrect gas mix or contamination Poor control over cylinder ownership, leasing, test dates and traceability, increasing the risk of using out-of-test or damaged cylinders Lack of systems for managing delivery schedules, manual handling risks and secure transfer of LPG at the workplace Insufficient documentation and specifications for LPG installations, leading to incompatible fittings or over-pressurisation risk 	High	<ul style="list-style-type: none"> Develop a formal LPG procurement procedure requiring only approved suppliers who comply with relevant Australian Standards and can provide test certificates and safety data sheets (SDS) Maintain an approved products list for LPG-related equipment (cylinders, valves, hoses, regulators, detectors) with technical specifications and compliance documentation Implement a cylinder register that tracks cylinder serial numbers, ownership, test dates, locations and status (in service, quarantine, returned, scrapped) Include LPG supply contracts or agreements that specify delivery requirements, emergency arrangements, cylinder testing responsibilities and compliance expectations Require pre-qualification of LPG suppliers and transport providers based on WHS performance, incident history and evidence of appropriate licences and training Ensure all LPG installation and modification work is carried out or signed off by competent and, where required, licensed persons, with as-built drawings and certification filed 	Medium
3. Design, Engineering and Fixed Installation Management	<ul style="list-style-type: none"> Poorly designed LPG storage and piping systems that do not meet separation distances, ventilation requirements or ignition source controls 	High	<ul style="list-style-type: none"> Require LPG system design, installation and alteration to be undertaken or reviewed by appropriately qualified and competent engineers or gas fitters in accordance with AS/NZS 1596 and relevant building codes 	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
	<ul style="list-style-type: none"> Lack of formal design review and risk assessment for new or modified LPG installations Insufficient pressure regulation, over-pressure protection and emergency shut-off arrangements Inadequate ventilation and gas detection in enclosed or semi-enclosed spaces where LPG is used or stored Failure to manage change when plant layout, building use or adjacent work activities change, affecting LPG risk profiles 		<ul style="list-style-type: none"> Implement a formal Management of Change (MOC) process for any modification to LPG plant, layout or related processes, including risk assessment, consultation and updated documentation Ensure design documentation includes P&IDs, layout drawings, valve schedules, emergency shut-off locations, ventilation design and gas detection coverage, all kept up to date and accessible Mandate installation of suitable pressure regulators, relief valves and emergency shut-off valves at strategic points in the system, supported by written operating and maintenance procedures Establish design standards for hazardous area classification, ensuring ignition sources (electrical equipment, hot work areas, vehicles) are controlled in LPG risk zones Incorporate passive fire protection, crash barriers, bollards or separation walls into design where LPG tanks or cylinders are exposed to vehicle traffic or potential impact 	
4. Storage, Segregation and Site Layout Management	<ul style="list-style-type: none"> Improper storage of LPG cylinders (e.g. indoors without adequate ventilation, near ignition sources, in thoroughfares or egress routes) Inadequate segregation of LPG from incompatible substances, heat sources and public access areas Lack of up-to-date site plans showing LPG storage areas, location points and emergency access routes Overstocking of LPG in limited spaces without consideration of maximum safe quantities and fire load Poor controls on temporary short-term storage for projects, events or maintenance activities 		<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	Medium
5. Documentation, Information and Safety Data Sheet Management	<ul style="list-style-type: none"> Outdated, inaccessible or incomplete safety data sheets (SDS) for LPG Lack of clear written procedures and work instructions for LPG-related tasks, leading to inconsistent practices Poor labelling and signage on cylinders, pipework and storage areas, resulting in misidentification during routine work or emergencies 	Medium	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	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
	<ul style="list-style-type: none"> Insufficient documentation of plant registration, compliance certificates, inspection records and test reports Workers and contractors not being provided with relevant LPG hazard information before commencing work 		[REDACTED]	
6. Training, Competency and Supervision Systems	<ul style="list-style-type: none"> Workers using or managing LPG without adequate training in hazards, controls and emergency response No formal competency assessment for high-risk LPG-related roles (e.g. maintenance personnel, supervisors, contractors performing hot work near LPG) Inadequate supervision of new or inexperienced workers dealing with LPG systems Failure to provide refresher training, resulting in skill fade and normalisation of unsafe shortcuts Contractor personnel assuming their own company training is sufficient without verification by the client 	High	[REDACTED]	Medium
7. Maintenance, Inspection and Testing Regimes	<ul style="list-style-type: none"> Lack of a planned maintenance system for LPG plant, resulting in deteriorated hoses, valves, regulators and fittings Failure to monitor cylinder test dates and integrity, leading to use of out-of-test or damaged cylinders Inadequate periodic inspection of storage areas, pipework, supports and protective barriers Maintenance and repairs being carried out by unqualified or unsupervised personnel using inappropriate parts No verification that gas detection systems, alarms and emergency shut-off devices are functional 	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]	
8. Emergency Preparedness, Response and Incident Management	<ul style="list-style-type: none"> Inadequate emergency planning for LPG leaks, fires, explosions or cylinder failures Workers and contractors not knowing how to isolate LPG systems safely in an emergency Poorly coordinated response between in-house personnel, emergency services and neighbouring businesses or tenants Emergency equipment (fire extinguishers, spill control, shutdown devices) not suited to LPG risks or not readily accessible Insufficient incident reporting and investigation for LPG-related near misses and events, resulting in repeat incidents 	High	[REDACTED]	Medium
9. Contractor, Visitor and Third-Party Interface Management	<ul style="list-style-type: none"> Contractors performing work on LPG systems without understanding site-specific hazards and controls Hot work, excavation or building modifications impacting LPG lines or storage areas due to poor coordination Visitors and third parties (delivery drivers, customers, tenants) entering LPG risk zones without controls Multiple PCBUs on site failing to coordinate LPG emergency arrangements and isolation procedures Insufficient control over temporary works (scaffolding, fencing, events) that obstruct access to LPG equipment or emergency isolation points 	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]	
10. Monitoring, Auditing and Continuous Improvement	<ul style="list-style-type: none"> No systematic monitoring of LPG risk controls, leading to gradual degradation of standards over time Failure to analyse trends in LPG-related incidents, near misses, inspection findings and maintenance data Audit programs not covering LPG-specific requirements, resulting in gaps in compliance and risk control Lack of worker consultation and feedback mechanisms on the effectiveness of LPG controls Management not receiving timely information on LPG risk performance, affecting decision-making and resource allocation 	Medium	<ul style="list-style-type: none"> [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] 	Low

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/factsheets-and-resources/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.