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

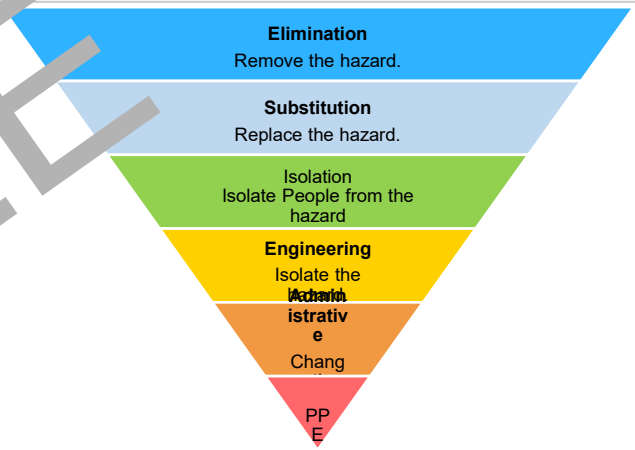
THIS RISK ASSESSMENT IS APPROVED BY THE PCBU OF THE PROJECT		
Under the Work Health and Safety Regulation (WHS Regulation), a person conducting a business or undertaking (PCBU) is required to ensure that a RISK ASSESSMENT is prepared before the proposed work starts.		
Full Name:		
Signature:	Title:	Date:

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, Duties & Consultation	• Unclear allocation of WHS duties between PCBU, officers, supervisors and workers under WHS Act 2011 • Inadequate consultation with workers and Health and Safety Representatives (HSRs) on plumbing drainage risks and controls • Absence of a documented WHS management plan for plumbing drainage activities • Failure of officers to exercise due diligence in monitoring WHS performance of plumbing drainage operations • Poor integration of contractor management into the PCBU's WHS governance arrangements	4A	• Develop and implement a WHS governance framework that clearly allocates responsibilities under WHS Act 2011 and WHS Regulation to officers, managers, supervisors and workers involved in plumbing drainage • Establish formal WHS consultation arrangements, including HSRs where applicable, regular toolbox talks and WHS committee meetings focused on plumbing drainage risks and system performance • Maintain a written WHS management plan for plumbing drainage works that outlines responsibilities, reporting lines, key procedures and performance indicators • Require officers to receive regular due diligence briefings on key WHS risks, incident trends and compliance gaps associated with plumbing drainage activities • Integrate subcontractor and labour-hire workers into the same WHS governance, consultation and reporting systems as direct employees • Conduct periodic independent or internal WHS audits of plumbing drainage governance and implement corrective action plans	3H
2. Competency, Licensing & Training Systems	• Workers performing plumbing drainage tasks without appropriate state-based plumbing licences or registrations • Inadequate verification of third-party qualifications and high-risk work licences (e.g. confined space, excavation, traffic control) • Insufficient induction and site-specific training for new workers and contractors on drainage systems and site rules • No formal assessment of competency for high-risk tasks such as confined space entry, use of drain cameras, jetting units or excavators • Training records incomplete or not updated, leading to expired licences or outdated skills • Supervisors lacking skills to verify competency and to coach workers in safe systems of work	4A	• Implement a competency management procedure that defines mandatory licences, registrations and qualifications for each plumbing drainage role • Establish a verification of competency (VOC) process for high-risk activities including confined space work, excavation support, operation of jetting units and CCTV drain equipment • Maintain a central training and licence register with expiry alerts and evidence of all training, inductions and VOCs • Develop structured induction programs (company-wide and site-specific) covering key drainage hazards, emergency arrangements, environmental risks and client requirements • Ensure supervisors receive training in WHS supervision, hazard identification, incident reporting and competency assessment • Audit contractor and labour-hire competency systems to ensure they meet or exceed the PCBU's standards	2M
3. Planning, Design & Consultation with Other Duty Holders	• Inadequate pre-planning of drainage layout leading to clashes with other services and increased excavation risk	4A	• Implement a pre-construction planning procedure requiring review of drainage design, staging, access, isolation points and maintenance provisions	2M

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	• Lack of early design review for access, isolation and maintenance, creating ongoing safety issues for future workers • Poor coordination with principal contractor, designers and other trades, increasing risk of service strikes and site congestion • Failure to obtain and review dial-before-you-dig (DBYD) and as-built service information before works commence • No structured pre-start risk assessment for changes in design, staging or sequencing of drainage works • Insufficient consideration of environmental conditions (flooding potential, groundwater, soil type, traffic interface) during planning		• Require early design safety reviews (e.g. Safety in Design workshops) involving designers, principal contractors and plumbing supervisors for major drainage projects • Mandate use of DBYD, utility plans and service locating (including non-destructive digging where appropriate) before excavation approvals are granted • Integrate plumbing drainage sequencing into the overall construction program to manage interfaces with other trades and minimise congested work areas • Use formal risk assessment tools (JSA, OHS risk assessment) at planning stage to identify key system risks and required engineering controls (e.g. shoring systems, pump-out systems) • Document and communicate planning outcomes via pre-start meetings, method statements and site management plans	
4. Contractor, Subcontractor & Labour-Hire Management	• Reliance on subcontractors without verifying their WHS capability or previous performance on drainage works • Inconsistent WHS standards between principal and subcontractors leading to confusion and gaps in control measures • Poor prequalification of jetting, vacuum, CCTV and excavation contractors regarding confined space and plant safety systems • Lack of clear communication of client and site-specific WHS requirements to subcontractors • Inadequate monitoring and supervision of subcontractor activities and compliance with agreed safe systems • No structured process to manage under-performance or repeated WHS non-conformances by subcontractors	4A	[redacted]	2M
5. Plant, Equipment & Tool Management	• Use of poorly maintained plant such as jetting units, trenchers, compactors, excavators and generators	4A	[redacted]	2M

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	• Lack of guarding or safety interlocks on rotating plant, augers and mechanical drainage equipment • No systematic inspection regime for ladders, lifting gear, confined space tripods, gas monitors and rescue equipment • Defective hand tools and electrical equipment (e.g. damaged leads, non-tested RCDs) creating shock or fire risks • Inadequate plant selection, such as undersized pumps leading to manual handling or flood hazards • Failure to manage plant isolation, lock-out/tag-out and unauthorised operation		[redacted]	
6. Excavation, Trenching & Ground Stability Management	• Inadequate system for assessing ground conditions, leading to trench collapse or ground instability • Failure to design and implement appropriate trench support systems (shoring, benching, batt[redacted]or deepe[redacted] or unstable excavati[redacted] • Poor control of lo[redacted]ds, spoil he[redacted]and plant operating nea[redacted]ges causing collapse • Inconsistent application of exclus[redacted] zones, barriers and acce[redacted]s for open excavations • Lack of procedure for backfilling, compaction and reinstatement to prevent later subsidence or service damage • Insufficient review of weather events (heavy rain, flooding) on excavation stability and access	4A	[redacted]	2M
7. Confined Spaces & Atmospheric Risk Management	• Uncontrolled entry into confined spaces such as manholes, pits, tanks and large diameter drains	4A	[redacted]	2M

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	• Inadequate identification and labelling of confined spaces within drainage systems • Lack of formal entry permits, atmospheric testing and continuous monitoring for hazardous gases or oxygen deficiency • Insufficient emergency response and rescue capability for workers in confined drainage assets • Reliance on ad-hoc ventilation methods without engineering review • Poor coordination with asset owners regarding isolation of flows, pumps and valves feeding into confined spaces		[redacted]	
8. Hazardous Substances, Biological & Sewerage Exposure	• Exposure to sewage, grey water, trade waste, hydrocarbons and other contaminated effluent during drainage works • Inadequate systems for managing chemical additives, sealants, adhesive and cleaning products used in plumbing drainage • Lack of vaccinati programs (e.g. Hepatitis A/B, Teta us) and healt monitoring for wor exp to sewage • Insufficient decontamination and hygiene facilities, increas ri disease transmission • Poor storage, labelling and segregation of hazardous chemicals and trade waste • Inadequate procedures for spill response, waste transport and disposal in accordance with environmental and WHS obligations	4A	[redacted]	2M
9. Traffic, Public Interface & Site Security	• Drainage works conducted near live traffic without adequate traffic management planning • Uncontrolled public access to open excavations, pits, manholes and plant work zones	4A	[redacted]	2M

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	• Poor separation of pedestrian pathways from vehicle movements and plant operations • Inadequate signage, lighting and barriers for night or low-visibility works • Lack of coordination with road authorities, councils or asset owners regarding road closures or traffic control levels • Theft, vandalism or unauthorised interference with drainage work sites and equipment		[redacted]	
10. Manual Handling, Ergonomics & Work Organisation	• Repetitive or sustained manual handling of pipes, fittings, shoring and compactors without mechanical aids • Poor work design leading to awkward postures in trenches, confined pits and under-floor spaces • Inadequate planning of deliveries, storage and material placement resulting in unnecessary double-handling • Lack of job rotation and workload management contributing to musculoskeletal disorders • Insufficient training in safe handling techniques specific to plumbing drainage tasks • Tool and equipment selection that increases vibration and force requirements (e.g. heavy compactors, poorly balanced power tools)	3H	[redacted]	2M
11. Fatigue, Work Hours & Psychosocial Risk Management	• Extended work hours, night works and emergency call-outs for drainage blockages leading to fatigue • Inadequate rostering and on-call arrangements that do not allow sufficient rest and recovery • High job demands, time pressure and customer expectations causing stress and reduced decision-making capacity	3H	[redacted]	2M

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	• Poor communication and support for workers dealing with traumatic events (e.g. sewage overflows in homes, severe incidents) • Lack of clear policies limiting shift length, overtime and driving after long shifts • Insufficient supervisor training in recognising and managing psychosocial risks and fatigue indicators		[redacted]	
12. Environmental Conditions, Weather & Site Access	• Unmanaged impact of heavy rain, storms or flooding on open excavations and drainage networks • Heat stress or cold exposure for workers during prolonged outdoor drainage works • Poor access and egress to remote or difficult sites, increasing response time in emergencies • Slips, trips and falls due to uneven ground, mud, water and construction debris around drainage works • Lack of contingency [redacted] for severe weather eve[redacted]s and site shutdowns • Inadequate lightin[redacted]y morni[redacted] evening or underground drainage activities	3H	[redacted]	2M
13. Emergency Preparedness, Response & First Aid	• Lack of site-specific emergency response plans for trench collapse, confined space incidents or sewage exposure • Inadequate first aid resources, training and equipment for plumbing drainage risks • Poor communication systems to raise alarms, especially in remote or underground drainage work locations • Unclear roles and responsibilities during emergencies leading to delayed response	4A	[redacted]	2M

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	• Failure to coordinate with emergency services and asset owners for complex or high-risk drainage operations • Insufficient drills and exercises to test emergency readiness for likely drainage scenarios		[redacted]	
14. Incident Reporting, Investigation & Corrective Actions	• Under-reporting of near misses, minor injuries and unsafe conditions in plumbing drainage operations • Ineffective incident investigations that focus on worker behaviour rather than system and management failures • Delayed implementation or tracking of corrective actions, allowing repeat incidents • Lack of analysis of incident trends specific to drainage activities (e.g. repeated service strikes, minor collapses) • Failure to meet notifiable incident reporting obligations to the regulator under WHS Act 2011 • Poor communication [illegible]ons learned to workers, [illegible]upervisors and contractors	3H	[redacted]	2M
15. Documentation, Information Management & Compliance Monitoring	• Outdated or incons[illegible]WHS procedures, SWMS and risk assessments for plumbing drainag[illegible] • Inadequate control over d[illegible]ument versions leading to use of superseded information on site • Poor retention and accessibility of records such as training, inspections, permits and maintenance logs • Failure to systematically review compliance against WHS Act 2011, WHS Regulation and relevant Australian Standards • Lack of integration between WHS documentation, quality and environmental management systems	3H	[redacted]	2M

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	• Insufficient internal audit programs targeting key drainage risk areas			

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