# Excavation Work Over 1.5

| | | |
|---|---|---|
| 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: |

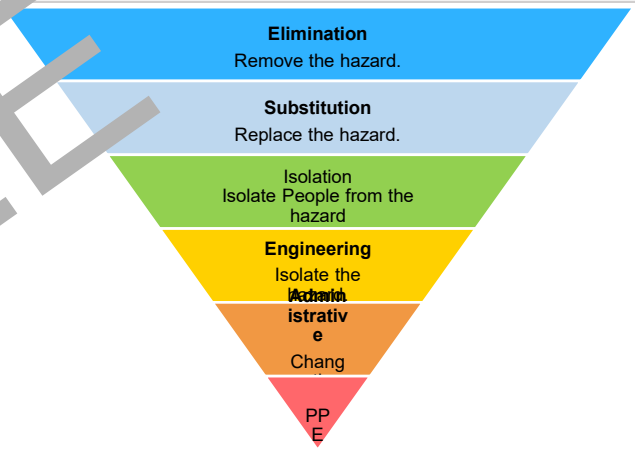
## CLIENT OR PRINCIPAL CONTRACTOR DETAILS

| | |
|---|---|
| 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 WHS Duties | • Failure to identify and comply with WHS Act 2011, WHS Regulation 2011 and relevant Codes of Practice for excavation work<br>• Lack of clear allocation of WHS responsibilities for excavation activities within the organisation<br>• Inadequate consultation, cooperation and coordination between PCBUs on multi-contractor excavation sites<br>• Absence of a formal excavation risk management procedure for work deeper than 1.5 m (including trenching)<br>• Failure to require competent person involvement in planning and oversight of excavation work<br>• Poor integration of excavation risks into the organisation's WHS management system and risk register | High | • Develop and implement an excavation work go[illegible]nance procedure that references WHS Act 2011, WHS Regulation 2011 (particularly excavation pro[illegible]ons) and relevant Safe Work Australia and jurisdictional Codes of Practice<br>• Define and document WHS roles, responsibi[illegible]s and due diligence expectations for officers, managers, supervisors and workers in relation to excavatio[illegible]ver 1.5 m<br>• Establish a formal process fo[illegible]nsultation, coope[illegible]ion and coordination with other PCBUs on shared worksites, including written inter[illegible]e agreements tha[illegible]ecify responsibilities for excavation planning, supervision and e[illegible]gen[illegible]respo[illegible]e<br>• Mandate th[illegible]ll excavatio[illegible]work ov[illegible]1.5 [illegible]e planned, risk assessed and periodically reviewed by a competent pe[illegible]n with dem[illegible]nstrated e[illegible]ence in excavation safety<br>• Inte[illegible] excav[illegible]sks and controls into the organisation-wide WHS risk register, including triggers for rev[illegible]w[illegible]g. nea[illegible]isses, incidents, design changes, geotechnical changes)<br>• Devel[illegible] a [illegible]mpliance assurance framework that includes scheduled audits against WHS legal requirements, [illegible]des of practice and internal excavation procedures, with corrective actions tracked to [illegible]ure | Medium |
| 2. Planning, Design and Engineering Controls | • Inadequate early-stage design consideration of excavation stability, access and services<br>• Failure to obtain [illegible]eview geotechnical and soil condition [illegible]ormation prior to excavation design<br>• Poor coordination of design betwee[illegible] structural, civil and temporary work[illegible] engineers for shoring, ba[illegible]ing and benching<br>• Lack of standardised engineering criteria for excavation support systems over 1.5 m<br>• Design changes on site not formally reviewed or approved by a competent person or engineer<br>• Insufficient planning for separation of excavations from structures, roads, plant and underground utilities | High | • Embed excavation risk review into project concept and detailed design phases, requiring formal design safety reviews (e.g. HAZID/HAZOP style workshops) for excavations over 1.5 m<br>• Require current geotechnical investigations and reports to inform excavation design, including soil classification, groundwater conditions and stability assumptions<br>• Develop design guidelines and standard details for excavation support (shoring, battering, benching, shielding) that must be used or formally departed from with engineering justification<br>• Mandate that temporary works and excavation support systems be designed, or verified, by a suitably qualified engineer where depth, ground conditions or adjacent loads present higher risks<br>• Implement a formal design change management process so that any variation to excavation geometry, support systems or proximity to structures is risk assessed and approved by a competent person<br>• Specify minimum stand-off distances and load restrictions near excavations in design documentation, including for mobile plant, stockpiles and adjacent structures | Medium |
| 3. Contractor Management and | • Engagement of contractors without verified competency or systems for managing excavation risks over 1.5 m | High | • Develop excavation-specific contractor prequalification criteria, including evidence of previous excavation work over 1.5 m, competent supervision and relevant training records | Medium |

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| Procurement of Services | • Procurement processes focused on lowest price rather than demonstrable WHS performance and excavation experience<br>• Lack of prequalification criteria specific to excavation safety (e.g. shoring design experience, underground service protection systems)<br>• Inadequate review of contractors' WHS management plans, excavation procedures and safe systems of work<br>• Poor alignment between principal contractor requirements and subcontractor systems, resulting in gaps or conflicts<br>• No contractual requirements for reporting, incident notification and WHS performance metrics specific to excavation work | | • Incorporate WHS performance, particularly excavation-related performance, as a weighted evaluation factor in tendering and procurement decisions<br>• Require contractors to submit project-specific exca[illegible]ion management plans, including their risk assessment methodology, supervision arrange[illegible]s and emergency procedures, for review and approval before work commences<br>• Include clear WHS obligations in contracts, [illegible]ecifyin[illegible]ompliance with the WHS Act 2011, Regulations, Codes of Practice and site-specific excavation [illegible]ures<br>• Establish a structured mobil[illegible]tion process that [illegible]ludes joi[illegible]eview of excavation risks, alignment of procedures, and agreement o[illegible]ontrol standards a[illegible]veri[illegible]ation mechanisms<br>• Set contractual re[illegible]nts fo[illegible]HS reporting (e.g. leading and lagging indicators for excavation work, incident and ne[illegible]iss rep[illegible]ing ti[illegible]rames) an[illegible]nk these to performance reviews | |
| 4. Competency, Training and Supervision | • Supervisors and workers lacking competency in excavation risk recognition, including ground instability and service strikes<br>• No formal compete[illegible]y criteria for key roles such as exca[illegible]tion supervisor, spotter and plant o[illegible]erator wo[illegible]ear excavations<br>• Insufficient training on organisation[illegible] specific excavation procedures a[illegible] permit systems<br>• Over-reliance on on-the-job learning without structured assessment of knowledge and skills<br>• Inadequate supervision ratios or absence of competent supervision during critical excavation activities<br>• Failure to maintain up-to-date training and competency records related to excavation work | High | [redacted] | Medium |
| 5. Underground and Overhead Services Management | • Systemic failure to identify, record and communicate the location of underground services before excavation | High | | Medium |

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| | • Reliance on outdated or incomplete utility plans without verification<br>• No standardised process for engaging service locators or using detection technologies<br>• Poor integration of service information into design, risk assessments and permits<br>• Inadequate management of overhead electrical and other services near excavation plant and spoil<br>• Lack of clear organisational rules about working distances, isolation and coordination with asset owners | | [redacted] | |
| 6. Permit to Work and Authorisation Systems | • No structured permit system for controlling excavation work over 1.5 m<br>• Permits treated as a paperwork exercise rather than a risk management and verification tool<br>• Unauthorised persons initiating or altering excavation without approval<br>• Lack of integration between excavation permits and other permits (e.g. confined space, hot work, service isolation)<br>• Failure to ensure permits reflect changing conditions such as weather, groundwater, or adjacent works<br>• Inadequate training of permit issuers and receivers in excavation-specific risks | High | [redacted] | Medium |
| 7. Plant, Equipment and Shoring System Management | • Procurement of plant and shoring equipment that is unsuitable or inadequately rated for the planned excavation conditions | High | [redacted] | Medium |

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| | • Lack of standard specifications and inspection criteria for excavation support systems<br>• Inadequate maintenance and inspection of plant used for excavation and lifting of shoring equipment<br>• Use of improvised or non-certified shoring components<br>• Poor control of hire equipment brought onto site without verification of condition and documentation<br>• Absence of a system to ensure that manufacturers' instructions and engineering requirements are followed | | [redacted] | |
| 8. Site Planning, Traffic Management and Public Interface | • Poor site layout leading to interaction between excavations, vehicles, pedestrians and other work fronts<br>• Inadequate separation between public areas and excavation zones, particularly in urban or brownfield environments<br>• Lack of standard requirements for barricading, edge protection and signage around excavations<br>• Insufficient control of deliveries and subcontractor movements near excavation edges<br>• Unclear responsibilities for maintaining safe access and egress routes around excavation areas<br>• Failure to account for third-party property, utilities and traffic corridors in excavation planning | High | [redacted] | Medium |
| 9. Monitoring, Inspection, and Change Management | • Irregular or informal inspection of excavations, shoring and surrounding ground conditions<br>• Lack of defined triggers for increased monitoring (e.g. heavy rainfall, vibration, adjacent excavation, groundwater ingress) | High | [redacted] | Medium |

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| | • Changes to excavation shape, depth or support not formally assessed or signed off by a competent person<br>• Inconsistent recording and communication of inspection findings to relevant parties<br>• Failure to respond promptly to signs of ground movement, subsidence, or shoring distress<br>• No systematic review of excavation-related incidents, near misses and non-conformances | | [redacted] | |
| 10. Emergency Preparedness and Incident Response | • Absence of excavation-specific emergency response planning (e.g. ground collapse, engulfment, service strike, plant rollover)<br>• Emergency plans not reflecting the particular constraints of deep or narrow excavations<br>• Inadequate coordination with emergency services regarding site access and rescue from excavations<br>• Workers and supervi[illegible] not trained or drilled in excavation emergency procedures<br>• Lack of appropriate [illegible] equipment and communication systems for excavation emergencies<br>• Failure to include excava[illegible] scenarios in broader site emergency exercises and debriefs | High | [redacted] | Medium |
| 11. Health, Wellbeing and Environmental Conditions | • Failure to consider environmental factors such as heat, cold, rain and groundwater in excavation risk management<br>• Workers exposed to fatigue, stress or time pressure leading to poor decisions regarding excavation safety<br>• Inadequate systems for managing noise, vibration and dust generated by excavation activities | Medium | [redacted] | Low |

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| | • Poor control of water ingress, dewatering and its effect on excavation stability<br>• No organisational standards for working hours, breaks and rotation for high-risk excavation tasks<br>• Lack of integration of health monitoring (e.g. heat stress, fatigue) with excavation work planning | | [redacted] | |
| 12. Documentation, Records and Continuous Improvement | • Critical excavation information (designs, permits, inspections, service locations) not captured or stored systematically<br>• Difficulty retrieving historical excavation records for audits, incident investigations or later works<br>• No structured process for learning from excavation-related incidents and near misses across projects<br>• Inconsistent documentation quality between different sites or contractors<br>• Failure to review and update excavation procedures and standards based on operational experience and regulatory changes<br>• Limited management visibility of key excavation risk indicators and compliance status | High | [redacted] | Medium |
| | | | | |
| | | | | |

## 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