

Brick Pack Unloading Robot Risk Assessment

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|-------------------|--------|--------|
| 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: | 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 | 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: | | | | | | | | Notes on Hierarchy of Controls: | |
| 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. | | | | | | Remember to apply controls in the preferred order shown by the coloured pyramid: | |
| 3H | | Review and approve additional controls before task starts. Senior supervisor sign-off needed. | | | | | | 1. Eliminate | |
| 2M | | Ensure all nominated controls are in place and effective. Proceed with caution; monitor conditions. | | | | | | 2. Substitute | |
| 1L | | Proceed, following standard operating procedures. Monitor and keep records. | | | | | | 3. Isolate | |
| | | | | | | | | 4. Engineering | |
| | | | | | | | | 5. Administrative | |
| | | | | | | | | 6. PPE | |
| Consequence Scale: | | | | | | | | Always document why a lower-order control is accepted if elimination or substitution is not reasonably practicable. | |
| 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 | | | | |
| | | | | | | | | <i>aligned with Safe Work Australia's Managing the risk of fatigue at work (2023) and ISO 45001:2018 clauses 6–8.</i> | |

| 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. Preparation | Slips, trips, and falls, Vehicle collision | 3H | <ul style="list-style-type: none"> - Ensure area is dry and clear from obstacles - Conduct vehicle traffic management plan - Workers wear high-visibility clothing - Training for vehicle operators - Use clear signage indicating pathways - Communication protocols for vehicle movements - Perform site inductions for workers - Review safety management plan - Confirm communication equipment operational - Ensure adequate lighting | 2M |
| 2. Machine Setup | Electrical hazard, Entanglement | 3H | <ul style="list-style-type: none"> - Conduct electrical safety inspection - Engage lockout/tagout procedures - Ensure machine is disconnected before maintenance - Provide entanglement prevention training - Ensure operators wear appropriate PPE - Install emergency stop controls - Implement regular inspection schedule - Ensure guards are in place and secure - Use lint-free clothing - Conduct pre-operational safety checks | 2M |
| 3. Power On Machine | Electrical shock, Machine malfunction | 3H | <ul style="list-style-type: none"> - Verify grounding and bonding in all electrical systems - Regular inspection of electrical cables - Train operators in emergency response - Conduct routine machine diagnostics - Utilise surge protectors - Provide sufficient ventilation to prevent overheating - Maintain a logbook for repairs and issues - Schedule regular maintenance checks | 2M |

| | | - Ensure control panels are user-friendly |
|-------------------------------|----|---|
| ing injuries, Falling objects | 3H | |
| Unintended robot | 3H | |

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| | | | | |
| 7. Operate Robot | Collision with humans, Robot malfunction | 4A | | 3H |
| 8. Monitor Operations | Fatigue among operators, Sensor failure | 3H | | 2M |
| 9. Load Transfer | Load instability, Pinching hazards | 3H | | 2M |

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| | | | | |
| 10. Unload Bricks | Crushing injuries, Strain injuries | 3H | | 2M |
| 11. Routine Maintenance | Chemical exposure, Maintenance slip hazards | 3H | | 2M |
| 12. Emergency Procedures | Fire, Medical emergency | 4A | | 3H |

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| | | | | |
| 13. Shutdown Procedure | Stored energy release, Tripping hazards during shutdown | 3H | | 2M |
| 14. Cleaning | Chemical burns, Slippery surfaces | 3H | | 2M |
| 15. Review and Feedback | Inadequate hazard identification, Document errors | 3H | | 1L |

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| | | | | |
| 16. Training | Skill gaps, Lack of familiarity with equipment | 3H | | 1L |
| 17. Equipment Storage | Theft, Damage from elements | 3H | | 2M |
| 18. Waste Disposal | Improper waste handling, Environmental pollution | 3H | | 2M |

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| | | | | |
| 19. Record Keeping | Data loss, Non-compliance | 3H | | 1L |
| 20. Continuous Improvement | Inadequate risk response, Complacency | 3H | | 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 IF 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 2017

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>

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/laws-and-compliance/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