

**Trolleys Wheelbarrows and Mechanical Handling Aids**

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			<b>Elimination</b> Remove the hazard.	
LIKELY	2 MODERATE	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4A ACUTE	DO NOT PROCEED	<b>Substitution</b> 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.	<b>Engineering</b> 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:	
<b>4A</b>	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.
<b>3H</b>	Review and approve additional controls for the task parts. Senior supervisor sign-off needed.
<b>2M</b>	Ensure all nominated controls are in place and effective. Proceed with caution; monitor conditions.
<b>1L</b>	Proceed, following standard operating procedures. Monitor and keep records.

  

Consequence Scale:			
Consequence	People (injury/illness)	Project / Assets	Compliance / Reputation
<b>Catastrophic</b>	Fatality or permanent total disability	project shutdown	Significant regulator intervention; criminal prosecution
<b>Major</b>	Serious injury/illness (hospital > 5 days)	critical delay	Improvement notice; major media coverage
<b>Moderate</b>	Medical-treatment injury; lost-time > 1 day	moderate delay	Minor breach; adverse client comment
<b>Minor</b>	First-aid only, no lost time	negligible delay	Isolated non-conformance
<b>Insignificant</b>	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, WHS Leadership and Legal Compliance	<ul style="list-style-type: none"> <li>Lack of clear organisational WHS policy for trolleys, wheelbarrows and mechanical handling aids</li> <li>Failure to comply with WHS Act 2011 and WHS Regulations regarding plant, manual handling and consultation</li> <li>No defined duties or accountability for managing risks associated with mechanical aids and bulk handling systems</li> <li>Insufficient consultation with workers and Health and Safety Representatives on use of trolleys, pallet trucks, duct lifters and similar plant</li> <li>Inadequate integration of mechanical handling risk controls into broader WHS management system</li> <li>Inconsistent enforcement of safe systems of work across different sites/shifts</li> </ul>	4A	<ul style="list-style-type: none"> <li>Develop and endorse a documented WHS Policy that explicitly covers plant and mechanical handling aids, referencing WHS Act 2011 duty of care obligations</li> <li>Assign clear WHS responsibilities for procurement, installation, maintenance and safe use of trolleys, wheelbarrows, pallet trucks, duct lifters, load skates and other handling equipment</li> <li>Ensure governance processes (e.g. WHS committee meetings/leadership walk-arounds) specifically review mechanical handling risks and performance indicators</li> <li>Establish a documented WHS management system aligned with ISO 45001 or similar, incorporating plant risk management, manual tasks risk controls and consultation processes</li> <li>Implement a formal consultation procedure ensuring workers are involved in decisions about selection, modification and safe use of trolleys, wheelbarrows and mechanical aids</li> <li>Include compliance with the WHS Act, WHS Regulations and relevant Codes of Practice (e.g. Hazardous Manual Tasks, Managing the Risks of Plant) in internal WHS audit schedules</li> <li>Require senior management sign-off for high-risk changes to bulk handling processes, ramp systems, pulley systems or mobile handling equipment</li> <li>Implement a disciplinary and recognition framework to address repeated non-compliance or exemplary compliance with mechanical handling procedures</li> </ul>	3H
2. Plant Procurement, Design and Selection	<ul style="list-style-type: none"> <li>Purchase of unsuitable or low-quality trolleys, hand trucks, wheelbarrows, pool table trolleys or pallet trucks not fit for intended loads or environment</li> <li>Lack of braking systems or poor brake performance on trolleys, dollies and stock trolleys</li> <li>Mechanical handling aids (materials duct lifters, jacks, load skates) without adequate guarding, stability or load rating information</li> <li>Failure to consider ergonomic design, handle height, wheel type and push/pull forces for manual handling</li> <li>Use of non-compliant or homemade pulley systems and ramps with no engineering verification</li> <li>No standardisation of equipment types, leading to varied risk profiles and training confusion</li> </ul>	4A	<ul style="list-style-type: none"> <li>Implement a formal plant procurement procedure requiring risk assessment prior to purchasing trolleys, wheelbarrows, pallet trucks, duct lifters, ramps, pulley systems and similar plant</li> <li>Specify minimum design and safety requirements for all handling equipment, including brakes on trolleys and dollies, load ratings, stability factors and ANZS/ISO standards compliance</li> <li>Ensure all equipment is supplied with manufacturer instructions, load ratings and test certificates where applicable (e.g. duct lifters, jacks, pulleys, ramps and lifts)</li> <li>Standardise preferred models and suppliers for key mechanical aids (stock trolleys, pallet trucks, hand trolleys, wheelbarrows, pool table trolleys) to allow consistent training and maintenance</li> <li>Require ergonomic assessment for new equipment to ensure appropriate handle height, wheel configuration, brake design and acceptable push/pull force limits</li> <li>Engage a competent engineer to design and review any fixed or mobile bulk handling systems, ramps, rails or pulley systems</li> <li>Prohibit procurement of homemade or modified handling devices unless subject to formal plant design verification</li> <li>Include whole-of-life cost and safety performance criteria (e.g. braking reliability, wheel durability, corrosion resistance) in purchasing decisions</li> </ul>	2M

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3. Plant Registration, Inventory and Risk Register Management	<ul style="list-style-type: none"> <li>Incomplete register of trolleys, wheelbarrows, pallet trucks, jacks, duct lifters, load skates and mobile handling aids</li> <li>Unclear status of equipment (in service, out of service, under repair) leading to use of unsafe plant</li> <li>No formal risk assessments for different categories of handling equipment or bulk handling systems</li> <li>Failure to identify high-risk plant that may require additional controls or registration under WHS Regulations</li> <li>Inability to track recurring defects, brake failures or wheel issues due to lack of systematic records</li> </ul>	3H	<ul style="list-style-type: none"> <li>Create and maintain a plant and equipment register capturing all trolleys, wheelbarrows, stock trolleys, pallet trucks, pool table trolleys, duct lifters, jack stands, load skates and pulley systems</li> <li>Record key information for each item including location, serial number, load rating, inspection frequency, responsible manager and status (service/out of service)</li> <li>Develop a risk register specific to mechanical handling plant, documenting identified hazards, risk ratings and control measures at a system level</li> <li>Apply a formal process to flag and manage high-risk equipment types (e.g. high-capacity duct lifters, elevated platforms, heavy pulley systems) for additional control and supervision</li> <li>Implement tagging or colour-coding system to clearly indicate whether equipment is fit for use or locked out pending repair</li> <li>Periodically review the risk register and plant inventory in WHS meetings to identify trends and prioritise improvement actions</li> </ul>	2M
4. Inspection, Maintenance and Repair Systems	<ul style="list-style-type: none"> <li>Inadequate preventative maintenance of trolleys, pallet trucks, wheelbarrow ramps and duct lifters leading to sudden failure</li> <li>Brakes on trolleys and trucks not functioning or poorly adjusted</li> <li>Worn, flat-spotted or seized wheels increasing push/pull force and risk of musculoskeletal injury</li> <li>Damaged frames, cracked welds, bent handles on stock trolleys and hand trucks compromising stability</li> <li>Unreliable lifting mechanisms on jacks, materials duct lifters and pulley systems leading to dropped loads</li> <li>Lack of formal pre-use inspection process by operators</li> <li>Use of temporarily repaired or jury-rigged equipment without proper verification</li> </ul>	4A	<p>[REDACTED]</p>	2M

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5. Load Management, Capacity and Bulk Handling Systems	<ul style="list-style-type: none"> <li>• Overloading of wheelbarrows, trolleys, pallet trucks and hand trucks beyond safe working load</li> <li>• Uneven or poorly secured loads increasing risk of tip-over or loss of control</li> <li>• Ineffective bulk handling system design creating excessive manual handling or awkward pushes/pulls</li> <li>• Inappropriate use of load skates and pulley systems for heavy containers without engineered load assessment</li> <li>• No standard procedures for carrying loaded barrows and trolleys, or wheel-out of heavier equipment</li> <li>• Use of stock trolleys for loads they were not designed to handle (e.g. tall, unstable items)</li> </ul>	4A	[REDACTED]	2M
6. Manual Tasks, Ergonomics and Musculoskeletal Risk Management	<ul style="list-style-type: none"> <li>• Excessive push and pull forces when using heavily loaded pallet trucks, hand trucks, stock trolleys and wheelbarrows</li> <li>• Repetitive or sustained pushing, twisting and reaching while operating trolleys, load skates, pinch bars and duct lifters</li> <li>• Poor handle design, incorrect height or awkward grip leading to strains and sprains</li> <li>• Manual handling lifts carried out instead of using appropriate mechanical aids</li> <li>• Inadequate assessment of tasks involving ramps, gradients and uneven surfaces that increase force requirements</li> <li>• Fatigue from high physical workloads over shifts without adequate breaks or task rotation</li> </ul>	4A	[REDACTED]	2M

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			[REDACTED]	
7. Route, Traffic and Workplace Layout Design	<ul style="list-style-type: none"> <li>Inadequate planning of routes for trolleys, wheelbarrows and pallet trucks causing interaction with vehicles, forklifts and pedestrians</li> <li>Congested aisles, blind corners and poor line-of-sight increasing collision risk for stock trolleys and mobile equipment</li> <li>Steep ramps, inadequate landings or non-compliant gradients making it difficult to control loaded trolleys and wheelbarrows</li> <li>Uneven surfaces, potholes, door thresholds and transitions causing load instability or sudden stops</li> <li>Insufficient turning space for long pallet trucks or duct lifter assemblies</li> <li>Lack of designated parking and storage locations for trolleys leading to trip hazards and ad hoc blocking of access ways</li> </ul>	4A	[REDACTED]	2M
8. Safe Systems of Work, Procedures and Work Instructions	<ul style="list-style-type: none"> <li>Absence of documented procedures for safe use of trolleys, wheelbarrows, pallet trucks, ramps, and duct lifters</li> <li>Confusion between SWMS task steps and higher-level system controls, leading to gaps in risk management</li> <li>Inconsistent methods used between shifts or sites for moving heavy containers using pulley systems or load skates</li> <li>No standard process for applying brakes on trolleys or dollies when parked, on ramps or in lifts</li> <li>Lack of defined escalation process when loads cannot be moved safely using available mechanical aids</li> </ul>	3H	[REDACTED]	2M

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			[REDACTED]	
9. Competency, Training and Authorisation	<ul style="list-style-type: none"> <li>Workers operating pallet trucks, materials duct lifters, jacks and pulley systems without adequate training or assessment</li> <li>Supervisors unaware of their responsibilities for monitoring safe use of trolleys and mechanical aids</li> <li>No verification of competence for roles involving complex handling (e.g. moving pool tables, large equipment or heavy containers)</li> <li>Informal, peer-to-peer training passing on unsafe shortcuts</li> <li>Failure to provide refresher training, particularly after incidents or plant changes</li> <li>Limited understanding of system controls such as load limits, route planning and inspection requirements</li> </ul>	4A	[REDACTED]	2M
10. Supervision, Monitoring and Behavioural Compliance	<ul style="list-style-type: none"> <li>Insufficient supervision of high-risk tasks involving heavily loaded pallet trucks, ramps or pulley systems</li> <li>Normalisation of unsafe behaviours such as overloading, bypassing brakes, or manually lifting instead of using aids</li> <li>Failure to identify and respond to repeated non-compliance with procedures for mobile equipment</li> <li>Lack of field verification that inspections, pre-use checks and route controls are being implemented</li> <li>Supervisors prioritising productivity over safety when schedules are tight</li> </ul>	3H	[REDACTED]	2M

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			[REDACTED]	
11. Contractor, Visitor and Third-Party Management	<ul style="list-style-type: none"> <li>Contractors using their own trolleys, pallet trucks, ramps or pulley systems that do not meet site standards</li> <li>Insufficient induction of delivery drivers or service technicians using stock trolleys and mobile equipment on site</li> <li>Conflicting procedures between principal and contractor creating confusion about control measures</li> <li>Visitors and customers entering areas where mechanical handling plant is operated without understanding associated risks</li> </ul>	3H	[REDACTED]	2M
12. Site-Specific Environmental and Housekeeping Controls	<ul style="list-style-type: none"> <li>Spills, clutter and poor housekeeping on trolley and wheelbarrow routes increasing slip, trip and collision risks</li> <li>Outdoor use of wheelbarrows and trolleys on wet, uneven or sloped ground without environmental controls</li> <li>Insufficient lighting in storage areas, docks and corridors affecting the safe use of stock trolleys and pallet trucks</li> <li>Obstructions at doorways, lifts and ramps making manoeuvring of loaded equipment unsafe</li> <li>Weather conditions (rain, heat, wind) impacting control of mobile equipment and worker fatigue</li> </ul>	3H	[REDACTED]	1L
13. Emergency Preparedness and Incident Management	<ul style="list-style-type: none"> <li>Lack of planning for incidents involving runaway trolleys, tipped wheelbarrows or dropped loads from duct lifters and jacks</li> </ul>	3H	[REDACTED]	2M

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	<ul style="list-style-type: none"> <li>• Delayed response to injuries such as crush injuries, sprains or fractures arising from mechanical handling activities</li> <li>• Inadequate procedures for safely recovering jammed or overturned equipment on ramps, in lifts or in confined spaces</li> <li>• Failure to investigate incidents and near misses to identify underlying system and management failures</li> </ul>		<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	
14. Change Management and Continuous Improvement	<ul style="list-style-type: none"> <li>• Introduction of new trolleys, bulk handling systems, ramps or pulley arrangements without risk assessment</li> <li>• Layout changes, new products or heavier containers increasing handling risk without corresponding control updates</li> <li>• Upgrades or repairs to mechanical aids altering performance (e.g. different wheel type, brake behaviour) without worker briefing</li> <li>• Failure to use data from inspection, incidents and worker feedback to improve systems</li> </ul>	3H	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	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 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/laws-and-compliance/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.