

Pallet Racking

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:	
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 for the task parts. 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, Legal Compliance and WHS Duties	<ul style="list-style-type: none"> Lack of documented WHS governance for pallet racking and shelving systems, leading to unclear accountability for design, installation, inspection and maintenance Failure to identify and comply with WHS Act 2011, WHS Regulations, relevant Australian Standards (e.g. AS 4084 Steel Storage Racking) and manufacturer requirements No formal process to ensure that design, procurement, assembly and installation of racking are reviewed by a competent person Inadequate consultation with workers and Health and Safety Representatives (HSRs) regarding racking layout changes or new shelving systems Poor integration of pallet racking risks into the organisation's WHS management system and risk register 	High	<ul style="list-style-type: none"> Establish and document a WHS governance framework that clearly allocates PCBUS', officers' and workers' responsibilities for the design, procurement, installation, inspection, repair and decommissioning of pallet racking and shelving units in accordance with WHS Act 2011 duties Develop and maintain a legal and standards compliance register referencing WHS Act 2011, WHS Regulations, AS 4084 (steel storage racking), manual handling, plant and traffic management requirements and ensure periodic review by a competent person Implement a formal change management procedure for new warehouse racking, shelving assemblies and layout alterations including documented WHS risk assessments and engineering review where required Integrate pallet racking system risks into the corporate WHS risk register, with defined risk owners, review frequencies and reporting requirements to senior management and the Board (or equivalent) Establish a documented consultation and communication procedure to involve workers, HSRs and contractors when planning, installing or modifying shelving and racking systems Introduce a due diligence checklist for officers to periodically verify that adequate resources, competent advice and effective controls are in place for racking operations and maintenance Ensure all contracts with designers, suppliers and installers clearly allocate WHS responsibilities, competency requirements and compliance with Australian Standards and manufacturer specifications 	Medium
2. Design, Layout and Engineering of Racking Systems	<ul style="list-style-type: none"> Poorly engineered or non-compliant racking design leading to structural failure or collapse under load Racking layout not compatible with mechanical handling equipment (e.g. forklifts, order pickers) resulting in impact to uprights, beams and shelving Insufficient aisle widths and clearances increasing collision risk and restricting emergency egress Inadequate design consideration of seismic, wind or floor loading capacities leading to compromised structural integrity Mixing of incompatible racking components or shelving systems from different manufacturers without engineering verification Lack of clearly specified safe working load limits (SWL) for bays, beams and shelving levels 	High	<ul style="list-style-type: none"> Mandate that all new pallet racking and fixed shelving installations are designed by a competent engineer or manufacturer's qualified designer in accordance with AS 4084 and relevant structural standards Implement a formal design approval process requiring sign-off by a competent person before installation, including verification of floor loading capacity, pallet types, load distribution and handling methods Adopt corporate design standards for warehouse racking and shelving systems including minimum aisle widths, clearance from walls, doors, fire systems and emergency exits, as well as maximum racking heights Prohibit the mixing of racking components from different manufacturers unless a qualified engineer certifies compatibility and capacity in writing Ensure that design documentation specifies safe working loads for each racking type, bay and level and that corresponding load signs are installed prominently and maintained legible Include impact protection, rack guards, end-of-row protection, barriers and bollards as part of the engineering design rather than as an afterthought Maintain a controlled repository of all racking and shelving design drawings, engineering certifications and commissioning reports and ensure they are updated after any modifications 	Medium

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3. Procurement and Contractor Management for Racking and Shelving	<ul style="list-style-type: none"> Purchasing low-quality, non-compliant pallet racking or shelving systems that do not meet Australian Standards or are unsuitable for intended loads Engaging installers or contractors who are not competent, licensed or experienced in AS 4084-compliant racking work Lack of pre-qualification and WHS evaluation of suppliers and installers leading to poor installation practices and undocumented modifications Inadequate specification of WHS performance, engineering certification and documentation requirements within procurement contracts Use of second-hand or refurbished racking without adequate inspection, certification or traceability of components 	High	<ul style="list-style-type: none"> Develop procurement procedures that require racking and shelving products to be certified as compliant with applicable Australian Standards and manufacturer specifications, with supporting documentation provided prior to purchase Introduce a contractor pre-qualification process that assesses installers' competence, licences, training, safety performance and experience with AS 4084 installations and warehouse environments Include clear WHS and technical requirements in all purchase orders and contracts, including load ratings, engineering certification, installation methods, components, inspection after installation and provision of manuals Establish a policy for the acquisition and use of second-hand or refurbished racking that mandates inspection and certification by a competent person prior to installation or re-use Require contractors to work under a documented contractor management procedure, including site induction, supervision arrangements, and verification that works do not modify racking beyond certified design Maintain records of supplier performance, non-conformances and incidents related to racking works and use these as criteria in ongoing vendor selection and performance reviews 	Medium
4. Installation, Assembly and Modification Management	<ul style="list-style-type: none"> Improper assembly of shelving units and pallet racking (incorrect fixings, missing components, poor anchoring) resulting in instability or collapse Uncontrolled modification of racking configuration, beam levels or bracing by untrained workers or contractors Lack of verification that installation is consistent with certified design, manufacturer instructions and slab capacity Insufficient segregation of installation areas from live warehouse traffic and operations, increasing collision and struck-by risks Incomplete handover documentation following installation, with no record of as-built configuration or baseline inspection 	High	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	Medium

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			[REDACTED]	
5. Load Management, Labelling and Operating Rules	<ul style="list-style-type: none"> • Overloading of pallet racking or shelving due to unclear or missing safe working load signage and rules • Use of incorrect pallet types, damaged pallets or non-standard loads that compromise racking stability • Inconsistent stacking patterns between shifts or sites leading to point loading and uneven weight distribution • Lack of system-level controls over what can be stored where, leading to heavy or incompatible items being stored at inappropriate levels • Uncontrolled changes in product mix packaging or storage equipment that alter load characteristics without reassessment 	High	[REDACTED]	Medium
6. Traffic Management and Interaction with Mobile Plant	<ul style="list-style-type: none"> • Forklift and mobile plant collisions with racking uprights, end frames and shelving units causing structural damage and potential collapse • Poorly designed traffic routes and narrow aisles increasing the likelihood of impact with racking during turning or reversing • Lack of physical separation between pedestrian walkways and racking aisles used by high-risk mobile plant • Inadequate systems to report, record and respond to impacts or near misses involving pallet racking • Inconsistent speed control, visibility and housekeeping standards around racking systems 	High	[REDACTED]	Medium

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7. Inspection, Maintenance and Repair Systems	<ul style="list-style-type: none"> Progressive deterioration or damage to racking and shelving (bent uprights, missing bolts, damaged beams) going unnoticed and unaddressed Lack of a structured inspection regime leading to inconsistent checks and undocumented defects Repairs carried out by unqualified persons using incorrect components or methods, weakening the structure No formal process for tagging, isolating or unloading damaged racking until repairs or engineering assessment are completed Failure to track defect trends, repeat issues or systemic design problems across sites 	High	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	Low
8. Training, Competency and Supervision	<ul style="list-style-type: none"> Workers assembling, shelving and installing racking or operating within racking aisles without adequate training in system risks and load limitation Supervisors lacking competence to recognise unsafe configurations, damage or overloading Inconsistent understanding of site rules for stacking, pallet quality, use of fall protection and interaction with mobile plant around racking Failure to train contractors and temporary staff in racking-specific hazards and reporting requirements Inadequate refresher training leading to drift from safe practices over time 	High	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	Medium

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			[REDACTED]	
9. Documentation, Information Management and Signage	<ul style="list-style-type: none"> • Critical information about racking design limits, inspection requirements and modification history not readily available to workers or supervisors • Outdated or missing procedures, drawings and manuals leading to incorrect assumptions about system capacity and configuration • Inadequate signage regarding load limits, restricted use areas, emergency exits and no-climb rules around racking and shelving • Fragmented storage of documentation across emails, paper files and personal drives causing loss of traceability • Lack of clear instructions for reporting racking defects, near misses or unauthorised alterations 	Medium	[REDACTED]	Low
10. Emergency Preparedness and Incident Management	<ul style="list-style-type: none"> • Inadequate planning for partial or full collapse of pallet racking or shelving, leading to delayed response and increased harm • Emergency procedures that do not specifically address racking incidents such as structural failure, falling loads or trapped persons in aisles • Lack of practice drills in warehouse areas considering real racking configurations and potential blocked egress routes • Failure to preserve evidence and accurately investigate racking incidents or near misses, preventing identification of root causes • Insufficient integration of racking risks into fire, evacuation and business continuity planning 	Medium	[REDACTED]	Low

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11. Organisational Culture, Consultation and Continuous Improvement	<ul style="list-style-type: none"> • Production and storage pressures leading to acceptance of unsafe practices such as overloading, blocking aisles or delaying racking repairs • Workers feeling unable or unwilling to report damage, near misses or concerns about shelving and racking conditions • Insufficient involvement of HSRs and worker representatives in decisions about new racking systems, warehouse expansions or major re-layouts • Lack of structured review of racking system performance, incidents and audit findings at management level • Inconsistent WHS standards and expectations across multiple warehouses or sites within the organisation 	Medium	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	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/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.