

Plant and Machinery Transport Tilt Tray Operations

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 before task starts. 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, WHS Leadership & Legal Compliance	<ul style="list-style-type: none"> Lack of clear WHS accountability for tilt tray transport activities Directors and officers not aware of due diligence obligations under WHS Act 2011 Inadequate WHS policy coverage for plant and machinery transport operations Failure to consult workers and elected HSRs on changes to transport systems No formal process to identify, access and apply current WHS legislation, Codes of Practice and Australian Standards relevant to road transport and load restraint Insufficient monitoring and review of WHS performance indicators for transport operations 	4A	<ul style="list-style-type: none"> Establish and maintain a WHS governance framework that assigns clear responsibilities for plant and machinery tilt tray operations, including PCBU, officers, managers, supervisors and workers Develop and endorse a company WHS policy that explicitly covers road transport of plant and machinery, safe load restraint, fatigue and contractor management, aligned to WHS Act 2011 and WHS Regulation Implement an officer due diligence program (briefings, training, regular reporting) to ensure executives actively verify WHS systems for tilt tray operations are in place and effective Create a compliance register for applicable legislative, Australian Standards (e.g. AS/NZS 4024, AS 4991, AS/NZS 4101, load restraint guides) and industry guidelines, and review it at least annually Implement a structured WHS consultation procedure that requires engagement with workers and HSRs before introducing or changing vehicles, load restraint systems, routes or client requirements Set and monitor performance metrics specific to tilt tray activities (e.g. near misses, load shifts, fatigue breaches, mechanical defects, speeding events, reversing incidents) and review them at regular management meetings Undertake periodic independent WHS audits of transport systems and use findings to drive continuous improvement 	3H
2. Fleet Selection, Design & Engineering Controls	<ul style="list-style-type: none"> Tilt tray trucks not fit-for-purpose for the types and weights of plant and machinery being transported Inadequate load ratings for trays, winches, chains, tie-down points and headboards Lack of engineered prevention of edge protection on tilt trays during loading and unloading Insufficient guarding around winch cables, fairleads and pinch/crush points Absence of modern driver safety technology (e.g. ABS, stability control, reversing cameras, proximity sensors) Poor cab layout and visibility, increasing blind spots around the vehicle Non-standard or modified plant tie-down locations that are incompatible with the truck's restraint systems 	4A	<ul style="list-style-type: none"> Develop and apply a fleet procurement standard that specifies minimum performance, load capacity, safety features and compliance requirements for all tilt tray vehicles and trailers Ensure all components (tray, chassis, anchorage points, winches, chains and lashing points) are selected and documented based on certified load ratings and engineering specifications Engage a competent engineer to design or review any tilt tray modifications, additional anchor points, ramps or headboards, ensuring compliance with relevant Australian Standards and vehicle approval requirements Specify mandatory fitment of engineering controls such as anti-lock braking systems, electronic stability control, reversing cameras, work lights, emergency stop devices and warning beacons on tilt tray vehicles Integrate fixed or deployable fall prevention measures (e.g. folding handrails, non-slip surfaces, edge markings) on tray decks where reasonably practicable Install physical guards, covers and exclusion zones for winch drums, cables and other moving components to minimise entanglement and crush risks Maintain manufacturer documentation and engineering certificates for all tilt tray configurations and make them accessible to workers and maintenance providers 	2M
3. Vehicle Procurement, Commissioning & Decommissioning	<ul style="list-style-type: none"> Acquisition of second-hand or leased vehicles with unknown maintenance and crash history 	3H	<ul style="list-style-type: none"> Implement a documented procurement procedure that requires pre-purchase inspection, service history review and compliance checks for all tilt tray vehicles and equipment 	2M

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	<ul style="list-style-type: none"> Failure to verify compliance of new vehicles with road authority requirements and load restraint standards Inadequate commissioning checks prior to placing a tilt tray into service Retention of older, substandard vehicles in service beyond their safe life Inadequate process for removing high-risk or damaged vehicles from service after incidents 		<ul style="list-style-type: none"> Require statutory roadworthy inspections and verification of load rating plates, compliance plates and modification approvals before commissioning vehicles Use a commissioning checklist to verify operation of brakes, steering, hydraulics, winches, anchor points, safety systems, lights, cameras and communication equipment prior to use Define objective criteria and trigger points for vehicle decommissioning or major overhaul (e.g. age, kilometres, defect frequency, critical incident history) Ensure decommissioned vehicles have all company branding removed and are documented as removed from the fleet register to avoid inadvertent re-use Record all procurement, commissioning and decommissioning decisions in the fleet management system for audit and due diligence purposes 	
4. Maintenance, Inspection & Defect Management Systems	<ul style="list-style-type: none"> Inadequate preventative maintenance program for tilt tray trucks and load restraint equipment Failure to detect or repair critical safety defects (brakes, steering, tyres, hydraulics, winches, PTOs) Inconsistent pre-start checks or reliance on informal driver inspections No process for quarantining defective plant and vehicles from use Use of damaged or incorrect chains, binders, slings or hooks for restraining machinery Poor record keeping of maintenance activities and inspections 	4A	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	2M
5. Driver & Operator Competency, Licencing & Training	<ul style="list-style-type: none"> Drivers operating tilt tray vehicles without appropriate class of licence or endorsements Operators using winches, chains and load restraint equipment without adequate training Insufficient understanding of plant and machinery securing points and manufacturer tie-down requirements 	4A	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	2M

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	<ul style="list-style-type: none"> Inadequate training on fatigue management, journey planning and remote area risks No structured refresher training leading to skill decay or unsafe shortcuts Lack of competency verification for labour hire workers and subcontractors 		[REDACTED]	
6. Journey Management, Route Planning & Scheduling	<ul style="list-style-type: none"> Poor route selection leading to low-clearance structures, inadequate turning space or unsuitable road surfaces for heavy tilt tray vehicles Unrealistic delivery timeframes that encourage speeding or unsafe driving behaviours Lack of planning for oversize or overweight plant and machinery, including permit requirements Inadequate risk assessment for remote or unfamiliar locations, including emergency access and location issues Failure to consider weather, traffic conditions and road works when making decisions No formal process for journey approval or review for high-risk missions 	4A	[REDACTED]	2M
7. Fatigue, Hours of Work & Fitness for Duty Management	<ul style="list-style-type: none"> Drivers working excessive hours or multiple jobs leading to fatigue Inadequate breaks between long-distance or night shifts Lack of a system to identify and manage workers with medical conditions, medications or substance use impacting fitness for duty Cultural acceptance of extended hours or 'rushing to finish' in the transport team 	4A	[REDACTED]	2M

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	<ul style="list-style-type: none"> Insufficient monitoring of actual hours worked, including overtime and secondary employment 		[REDACTED]	
8. Load Restraint Systems & Load Planning (Plant & Machinery)	<ul style="list-style-type: none"> Incorrect selection or use of restraints (chains, binders, straps) leading to load shift or loss Inadequate number or placement of restraints for the mass and centre of gravity of the machinery Incompatible or unknown tie-down points on client-supplied plant and machinery Inconsistent application of the Load Restraint Guide and manufacturer instructions Lack of documented load planning for complex or unusual machinery configurations Use of damaged, worn or uncertified restraint equipment 	4A	[REDACTED]	2M
9. Site Access, Client Interface & Traffic Management	<ul style="list-style-type: none"> Poorly controlled site access with inadequate traffic management for loading and unloading Restricted access, uneven ground or unsuitable gradients for safe operation of tilt trays Multiple contractors operating plant simultaneously in loading areas without coordination Unclear responsibilities between PCBU and client for managing site risks during delivery and collection Lack of information about site-specific hazards (overhead powerlines, underground services, pedestrians, public roads) 	4A	[REDACTED]	2M

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			[REDACTED]	
10. Contractor, Subcontractor & Labour Hire Management	<ul style="list-style-type: none"> • Use of subcontracted tilt tray operators with unknown WHS performance or inadequate systems • Inconsistent application of company safety requirements by subcontractors and labour hire workers • Lack of clarity over who controls key WHS risks when multiple PCBUs are involved in the same transport task • Inadequate onboarding and monitoring of external drivers using company-branded vehicles • Commercial pressures on subcontractors encouraging unsafe practices 	3H	[REDACTED]	2M
11. Communication, Navigation & Remote / Lone Work	<ul style="list-style-type: none"> • Loss of communication with drivers in remote or poor reception areas • Inability to summon assistance promptly after an incident or vehicle breakdown • Reliance on mobile phones without backup communication methods • Inadequate location tracking for vehicles working alone or after hours • Confusion about escalation paths and emergency contacts during critical events 	3H	[REDACTED]	2M
12. Incident Reporting, Investigation & Corrective Actions	<ul style="list-style-type: none"> • Under-reporting of near misses, minor incidents and load shift events 	3H	[REDACTED]	2M

SAMPLE

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	<ul style="list-style-type: none"> Failure to identify systemic or organisational causes behind incidents Inconsistent investigation quality and lack of follow-through on corrective actions Poor sharing of lessons learned across drivers, depots and subcontractors Non-compliance with notifiable incident requirements under WHS legislation 		[REDACTED]	
13. Emergency Preparedness & Response (On-Road & Site)	<ul style="list-style-type: none"> Lack of clear procedures for responding to vehicle accidents, rollovers or load loss events Inadequate emergency equipment in vehicles (spill kits, fire extinguishers, first aid) Drivers untrained in managing plant and machinery stability following normal load shifts Confusion about roles, responsibilities and communication during emergencies Failure to coordinate effectively with emergency services and clients at incident scenes 	3H	[REDACTED]	2M
14. WHS Documentation, Records, Monitoring & Review	<ul style="list-style-type: none"> Policies, procedures and risk assessments for tilt tray operations not kept current or accessible Inconsistent application of documented procedures across depots and shifts 	3H	[REDACTED]	2M

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	<ul style="list-style-type: none"> Lack of reliable WHS data to inform management decisions and resource allocation Failure to review and update controls following incidents, regulatory changes or operational changes Poor documentation of training, maintenance, inspections and contractor verification 		<div style="background-color: black; height: 15px; width: 100%;"></div>	

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/factsheets-and-resources/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.