

Low Loader Trailer

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. Vehicle Procurement and Design Suitability	<ul style="list-style-type: none"> • Low loader, detachable gooseneck and quad axle trailer not fit for intended loads, routes or operating conditions • Inadequate design certification or failure to meet PBS, ADR, NHVR and relevant Australian Standards requirements • Insufficient rated capacity for haulage combinations (prime mover + low loader + deck + quad axle) leading to overloading • Lack of engineered controls for deck detaching/attaching, including fail-safe locking systems and guarding • Incompatibility between prime mover, gooseneck, low loader deck and quad axle trailer (braking balance, suspension, EBS/ABS integration, hydraulic connections) • Poor layout of controls and connection points increasing risk of crush, pinch or fall hazards during coupling/uncoupling • Lack of provision for safe access/egress (steps, handrails, non-slip surfaces) to deck and gooseneck service areas • Inadequate lighting, visibility and camera systems for manoeuvring and load monitoring • Acquisition of second-hand or modified equipment without verification of structural integrity, certification and compliance • Noise and vibration characteristics not considered at procurement stage, leading to chronic health risks • Lack of documentation from manufacturer/supplier (manuals, load charts, maintenance instructions, SWL/WLL markings) 		<ul style="list-style-type: none"> • Establish a formal procurement procedure requiring WHS and engineering review before purchase or lease of prime movers, low loaders, detachable gooseneck decks and quad axle trailers • Specify compliance with WHS Act 2011, WHS Regulations, Heavy Vehicle National Law (HVNL), ADRs, PBS requirements for application and relevant Australian Standards (e.g. AS/NZS 4968, AS 1418, AS 3990) in purchasing documents • Require documented design certification and load rating calculations for the complete combination (prime mover, gooseneck, low loader deck, quad axle module) from a competent engineer • Mandate compatibility assessments covering braking systems (ABS/EBS), suspension settings, fifth wheel and bogpin ratings, hydraulic and electrical systems for all combinations of low loader and quad axle configurations • Include functional safety requirements in specifications, such as fail-safe gooseneck locking, positive indication of lock engagement, interlocks on hydraulic systems, and protection against unintended movement or release • Require manufacturer-supplied safe operating limits (GCM, GVM, axle group loads, deck load distribution) and ensure they are clearly displayed on durable plates and decals on equipment • Specify provision of safe access systems (steps, handrails, work platforms, non-slip coatings) to gooseneck connection points, hydraulic control locations and deck tie-down areas • Ensure design incorporates adequate fixed lighting, connection points for portable lighting and, where reasonably practicable, cameras or proximity sensors for reversing and deck monitoring • Implement a pre-purchase risk assessment and options analysis (including consultation with operators and maintenance personnel) for any new or second-hand low loader equipment • Require full documentation at handover, including OEM operation and maintenance manuals, hydraulic schematics, electrical diagrams, risk assessments and recommended inspection regimes • Include contractual clauses requiring suppliers to disclose any previous structural repairs, major modifications or known defects on second-hand units • Introduce a change-management process for any aftermarket modification (e.g. extra ramps, drawbars, hydraulic changes) requiring engineering sign-off and updated risk assessment before use 	Medium

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2. Management of Change and Configuration Control	<ul style="list-style-type: none"> Uncontrolled changes to low loader configuration (e.g. adding/removing quad axle, modifying gooseneck or deck) without engineering verification Use of incorrect or incompatible components during repairs or upgrades (kingpins, fifth wheels, hydraulic fittings, locking pins) Failure to update load charts, route approvals, or operating procedures following configuration changes Lack of traceability for modification history, leading to unknown structural or performance limitations Software/firmware changes to braking or stability systems (EBS, ABS, load-sensing valves) implemented without validation Informal workshop alterations (welding, drilling, grinding) that compromise structural integrity of gooseneck, deck or axle group Inadequate communication of configuration limits to planners and operators (e.g. when deck is shortened/lengthened or run without quad axle) Regulatory non-compliance due to unapproved changes affecting mass, dimension or performance 	High	<ul style="list-style-type: none"> Implement a formal Management of Change (MOC) procedure for any modification to prime mover, detachable gooseneck, low loader deck or quad axle trailer including written risk assessment and competent engineering review Maintain a configuration register for each unit for each combination (prime mover + trailer + deck + quad axle) capturing specification, approvals, and all modifications with dates and authorisations Require engineering certification for structural changes to chassis, gooseneck, deck, kingpin, turntables and axle assemblies to be certified in the asset record Prohibit undocumented welding, cutting or drilling on structural members and locking points via written policy and enforce through toolbox talks and supervision Ensure all control system and braking system software/firmware updates are validated by an authorised heavy vehicle specialist and recorded in maintenance systems Update load charts, operating envelopes, route risk assessments and traffic management plans whenever configuration changes impact mass, dimensions or manoeuvrability Communicate configuration changes to schedulers, operators and maintenance teams via formal bulletins and updated procedures, including clear identification of what combinations are permitted and any restrictions Link configuration data to electronic scheduling/telematics so planners can only select compliant combinations for specific loads and routes Undertake post-modification functional testing and sign-off before returning modified low loader or quad axle to service Schedule periodic audits of modifications and configuration records to confirm ongoing compliance with WHS and heavy vehicle regulatory requirements 	Medium
3. Governance, Policies and WHS Responsibilities	<ul style="list-style-type: none"> Unclear allocation of WHS responsibilities between PCBU, managers, schedulers, operators and maintenance personnel for low loader operations Lack of overarching safe transport policy incorporating WHS Act 2011 duties for complex haulage equipment Failure to consult workers and HSRs on WHS issues related to detachable gooseneck and low loader combinations 	High	<ul style="list-style-type: none"> Develop and implement a written WHS governance framework that clearly defines roles and responsibilities for low loader, detachable gooseneck and quad axle operations across the organisation Integrate a specific Heavy Vehicle and Load Transport Safety Policy into the WHS management system, referencing duties under WHS Act 2011 and Chain of Responsibility where applicable Establish formal consultation mechanisms (e.g. WHS committee, toolbox meetings, pre-start briefings) that routinely cover low loader system risks and improvement ideas Implement a management review process (at least annually) to examine WHS performance data, incident trends and audit findings related to heavy haulage equipment Embed safety performance indicators (e.g. near miss reporting, non-conformances, training completion) into management KPIs and board reporting for transport operations 	Medium

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	<ul style="list-style-type: none"> Inadequate consideration of load centre of gravity, dynamic effects and tie-down capability at planning stage Lack of integration between job intake, load information and vehicle specification data Planners or clients providing incomplete or inaccurate load data (dimensions, weights) leading to unsuitable equipment selection Mismatch between required road approvals (over-size/over-mass permits, route restrictions) and the actual combination dispatched 		[REDACTED]	
7. Journey Management and Route Risk Control	<ul style="list-style-type: none"> Selection of unsuitable routes for the length, height, width and weight of the low loader combination Inadequate assessment of ground conditions at loading/unloading sites for detaching the goods neck and positioning the deck Increased collision risk due to restricted manoeuvrability, longer stopping distances and low ground clearance Exposure to fatigue risks on long journeys with complex vehicles Poor coordination with road authorities, escorts or site traffic controllers for over-size/over-mass loads Weather conditions (rain, wind, visibility) not adequately considered in journey planning for low and long combinations No contingency planning for breakdowns or emergency stops with heavy and over-dimension equipment 	High	[REDACTED]	Medium

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			[REDACTED]	
8. Traffic Management and Site Interface	<ul style="list-style-type: none"> Interaction between low loader combinations and other vehicles, mobile plant or pedestrians at depots, client sites and public roadsides Reversing and tight manoeuvres with long and low combinations, increasing collision and run-over risk Inadequate segregation of areas used for detaching/attaching gooseneck decks and loading plant onto the low loader Conflicting directions of multiple parties (client representatives, spotters, traffic controllers) leading to confusion Insufficient signage and creation of exclusion zones around work zones when operating or near public roads Pedestrians and untrained operators entering exclusion zones around low loader and prime mover during deck movements 	High	[REDACTED]	Medium
9. Safe Systems for Coupling, Detaching and Deck Management	<ul style="list-style-type: none"> Unintended movement or collapse of detachable gooseneck deck during detaching or re-attachment Failure of hydraulic or locking systems causing separation between prime mover, gooseneck and low loader deck 	High	[REDACTED]	Medium

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	<ul style="list-style-type: none"> Inadequate control of ground stability and level when positioning the deck or operating the gooseneck Pinch, crush and shear hazards at connection points between prime mover, gooseneck, deck and quad axle module Lack of standardised procedures leading to inconsistent and unsafe practices across operators and sites Inadequate supervision or verification for complex coupling/uncoupling setups Uncontrolled release of stored energy in hydraulic, mechanical or suspension systems 		<p>[REDACTED]</p>	
10. Load Restraint and Stability Management	<ul style="list-style-type: none"> Inadequate load restraint leading to load shift, loss or change in centre of gravity during transport Use of incorrect, damaged or insufficient restraint equipment for the type of plant or structure being carried Failure to consider interaction between suspension behaviour, deck height and load geometry, particularly on quad axle modules Insufficient anchorage points on low loader deck or improper use of tie-down points and lugs on the load Lack of standardisation in load restraint methods for repeat or similar loads Inadequate monitoring of load and restraints during transit, especially over long distances or rough roads 	High	<p>[REDACTED]</p>	Medium

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			[REDACTED]	
11. Contractor and Client Management	<ul style="list-style-type: none"> • Contractor drivers and operators working under different or lower WHS standards than the PCBU's systems • Clients dictating loading/unloading methods or timeframes that conflict with safe systems of work • Inconsistent communication of site hazards, traffic plans and load information between clients, contractors and the PCBU • Subcontracting chains obscuring who is responsible for risk controls under WHS and Chain of Responsibility duties • Lack of verification of contractor competency, licensing and vehicle compliance 	Medium	[REDACTED]	Low
12. Emergency Preparedness and Incident Management	<ul style="list-style-type: none"> • Delayed or ineffective response to incidents involving low loaders, such as deck separation, rollovers, load loss or hydraulic failures • Lack of specific emergency procedures for complex combinations and detachable gooseneck systems • Insufficient information for emergency services about vehicle configuration, cargo and hazards 	High	[REDACTED]	Medium

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	<ul style="list-style-type: none"> Inadequate training of drivers and supervisors in incident reporting, initial response and scene control Failure to learn from incidents and near misses due to poor investigation and follow-up 		[REDACTED]	
13. Health, Fatigue and Human Factors Management	<ul style="list-style-type: none"> Driver fatigue due to long hours, night driving and high mental workload operating complex low loader combinations Musculoskeletal strain from accessing decks, handling restraints and operating controls without adequate ergonomic design Reduced attention and decision-making capacity due to stress, time pressure or poor health Inadequate systems for managing fitness for work, including drugs and alcohol, for drivers and support staff Poor cab and control layout leading to distractions or difficulty monitoring multiple trailer systems 	High	[REDACTED]	Medium

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			[REDACTED]	
			[REDACTED]	

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.