

**Laser Level**

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.	<b>Administrative</b> Change	
								<b>PPE</b>	

  

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 before task starts. 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. Procurement, Design and Selection of Laser Level Equipment	<ul style="list-style-type: none"> <li>• Purchase of laser levels that are not compliant with relevant Australian Standards (e.g. AS/NZS IEC 60825.1 for laser safety)</li> <li>• Selection of laser levels with higher laser class output than required for the task, increasing exposure risk</li> <li>• Inadequate consideration of environmental conditions (indoor/outdoor, reflective surfaces, wet areas, explosive atmospheres) during selection</li> <li>• Lack of compatibility between laser levels, tripods, brackets, power supplies and mounting systems leading to unsafe improvisation</li> <li>• Procurement decisions based solely on cost without reference to WHS risk or lifecycle maintenance requirements</li> <li>• Insufficient technical information from suppliers regarding laser classification, safe operating distances and control requirements</li> </ul>	High	<ul style="list-style-type: none"> <li>• Establish a documented procurement procedure that requires WHS review of all new or replacement laser levels prior to purchase</li> <li>• Specify compliance with relevant Australian Standards and manufacturer safety requirements in purchase documentation and supplier agreements</li> <li>• Adopt a standard for maximum laser class permitted for machine work (e.g. Class 2 or 2M only for general construction layout) unless a documented risk assessment justifies a higher class</li> <li>• Require suppliers to provide written technical data, laser classification, safety instructions, and recommended control measures with each model quoted</li> <li>• Include WHS and end-user representatives in the evaluation of laser level models to assess suitability for typical workplace environments and tasks</li> <li>• Standardise brands and models across the business where reasonably practicable to simplify training, maintenance and risk controls</li> <li>• Ensure all purchased laser levels have appropriate ingress protection (IP rating), robustness, and stability features suitable for likely field conditions</li> <li>• Implement a pre-purchase checklist that considers electrical safety (for mains-powered chargers), battery type, emergency shut-off features, and secure mounting options</li> </ul>	Medium
2. Governance, WHS Management System and Legislative Compliance	<ul style="list-style-type: none"> <li>• Lack of a documented organisational standard for the safe use and management of laser levels</li> <li>• Non-compliance with WHS Act 2011 and associated Regulations leading to inadequate identification and management of laser risks</li> <li>• Absence of a formal laser safety risk assessment process for projects and workplaces using laser levels</li> <li>• Inconsistent expectations and practices across different sites and supervisors in relation to laser level safety</li> <li>• Poor integration of laser safety into broader WHS policies, consultation arrangements and contractor management systems</li> </ul>	High	<ul style="list-style-type: none"> <li>• Develop and maintain a company-wide Laser Safety Procedure specific to laser levels, aligned with the WHS Act 2011, WHS Regulations and relevant Australian Standards</li> <li>• Formally recognise laser levels as plant within the WHS management system and ensure they are included in plant registers, risk assessments, and inspection regimes</li> <li>• Implement a standardised WHS risk assessment template for laser level use that must be completed for relevant projects and high-risk environments (e.g. public interface, traffic corridors)</li> <li>• Define clear organisational roles and responsibilities for approving laser equipment, maintaining registers, coordinating training, and monitoring compliance</li> <li>• Include laser level risks and controls within the organisation's WHS policy, risk management procedure and site-specific WHS plans</li> <li>• Ensure consultation with Health and Safety Representatives (HSRs) and workers regarding the development, review and implementation of laser level safety systems</li> <li>• Integrate laser level controls into contractor prequalification, induction and monitoring processes, including requirements for evidence of training and equipment compliance</li> <li>• Schedule periodic management review of laser level incidents, near misses and audit findings to verify effectiveness of controls and drive continuous improvement</li> </ul>	Medium

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3. Training, Competency and Information for Laser Level Users	<ul style="list-style-type: none"> <li>Workers operating laser levels without adequate training in laser safety principles or Australian regulatory requirements</li> <li>Assumption that general construction experience equates to competency in managing laser radiation and optical hazards</li> <li>Inadequate understanding of manufacturer instructions, safe operating distances, beam alignment and control zones</li> <li>Failure to recognise indirect exposure risks from reflections off shiny surfaces, glass or water</li> <li>Poor communication of hazards to apprentices, new starters and short-term labour hire personnel</li> </ul>	High	<ul style="list-style-type: none"> <li>Develop a competency-based training program for laser level users covering laser classifications, potential health effects, safe positioning, and system controls</li> <li>Require all users and supervisors of laser levels to complete documented training and assessment prior to unsupervised use</li> <li>Incorporate manufacturer instructions and model-specific features into training sessions and competency checklists</li> <li>Ensure training highlights indirect exposure risks, reflective surfaces, and the importance of keeping beams away from public areas and roadways</li> <li>Provide simple, easy-to-read guidance material (e.g. laminated field cards, intranet resources) summarising key system requirements for laser level use</li> <li>Implement refresher training at defined intervals or following incidents, equipment changes, or legislative updates</li> <li>Maintain a central training and competency register that records which workers are authorised to use which types of laser levels</li> <li>Include laser level safety content in general site inductions, toolbox talks and pre-start meetings where relevant</li> </ul>	Low
4. Supervision, Planning and Work Coordination	<ul style="list-style-type: none"> <li>Use of laser levels in uncontrolled environments without adequate planning of exclusion zones and line-of-sight paths</li> <li>Inadequate supervision leading to unsafe placement of lasers on level or in public thoroughfares</li> <li>Poor coordination between trades resulting in workers unintentionally crossing beam paths or removing equipment unsafely</li> <li>Rushed work programs and time pressure driving short-cuts and bypassing established safe systems of work</li> <li>Lack of consideration of nearby roads, footpaths or public access routes when setting up laser levels</li> </ul>	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>	Medium
5. Equipment Inspection, Maintenance and Calibration Systems	<ul style="list-style-type: none"> <li>Laser levels operating out of calibration leading to inaccurate measurements and downstream structural or installation defects</li> </ul>	High	<p>[REDACTED]</p>	Low

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	<ul style="list-style-type: none"> <li>Deterioration of housings, mounts or tripods resulting in instability or unexpected movement of the laser unit</li> <li>Lack of scheduled servicing and calibration causing unnoticed drift in laser output or alignment</li> <li>Use of damaged power cords, batteries or chargers leading to electrical hazards or sudden loss of power</li> <li>Informal repair or modification of laser levels by unqualified personnel</li> </ul>		[REDACTED]	
6. Laser Classification, Exposure Control and Signage	<ul style="list-style-type: none"> <li>Inadequate identification of the laser class and associated control requirements for each</li> <li>Uncontrolled access to areas where laser beams are present, particularly at or near eye level</li> <li>Workers and visitors being unaware that lasers are in use due to lack of signage or demarcation</li> <li>Unmanaged reflections from glass, metal, water or other reflective surfaces increasing exposure zones</li> <li>Use of higher class lasers without appropriate administrative or engineering controls</li> </ul>	High	[REDACTED]	Medium
7. Electrical, Battery and Power Management	<ul style="list-style-type: none"> <li>Battery failure or overheating leading to fire, burns or sudden loss of function</li> </ul>	Medium	[REDACTED]	Low

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	<ul style="list-style-type: none"> <li>• Use of incompatible or non-genuine chargers and power supplies creating electrical and fire risks</li> <li>• Charging of batteries in unsuitable locations (e.g. confined spaces, poorly ventilated areas or near flammable materials)</li> <li>• Trip hazards and damage from poorly managed power leads or charging cables around work areas</li> <li>• Lack of procedures for safe transport, storage and disposal of batteries (including lithium-ion)</li> </ul>		[REDACTED]	
8. Environmental and Site Condition Management	<ul style="list-style-type: none"> <li>• Use of laser levels in wet or dusty environments beyond the equipment's rated protection, leading to malfunction or loss of control</li> <li>• Instability of tripods or mounts on uneven, soft or vibrating surfaces leading to unexpected movement of the beam</li> <li>• Adverse weather (wind, rain, glare, low visibility) affecting beam visibility, encouraging unsafe viewing or relocation to hazardous positions</li> <li>• Interaction with mobile plant vehicles or overhead structures causing knock-over or collision with equipment</li> <li>• Insufficient lighting and housekeeping leading to trip hazards around mounted laser equipment</li> </ul>	Medium	[REDACTED]	Low
9. Health Monitoring, Incident Management and Reporting	<ul style="list-style-type: none"> <li>• Unreported or poorly managed laser exposure incidents leading to untreated eye injuries or delayed health effects</li> <li>• Lack of guidance for workers on recognising potential symptoms of laser exposure or eye strain</li> </ul>	Medium	[REDACTED]	Low

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	<ul style="list-style-type: none"> <li>Inadequate recording and analysis of near misses and incidents involving laser levels, limiting learning opportunities</li> <li>Failure to engage appropriate medical assessment following suspected significant laser exposure</li> </ul>		[REDACTED]	
10. Documentation, Records, Audit and Continuous Improvement	<ul style="list-style-type: none"> <li>Loss or absence of critical records such as training, calibration certificates, maintenance logs and risk assessments</li> <li>Inconsistent application of laser level procedures across different projects and regions due to poor document control</li> <li>Outdated procedures that do not reflect current legal requirements, standards and equipment in use</li> <li>Lack of systematic communication that control measures for laser levels are being implemented and remain effective</li> </ul>	Medium	[REDACTED]	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.