

Printing Safety

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. WHS Governance, Consultation and Safety Culture	<ul style="list-style-type: none"> Lack of clear WHS policy specific to printing and finishing operations Insufficient board and senior management oversight of printing-related risks Poor consultation mechanisms with operators across shifts and sites Failure to integrate WHS Act 2011 due diligence duties into management roles Inadequate incident reporting and learning culture leading to under-reporting Confusion over responsibilities between host employer, labour hire and contractors No systematic review of WHS performance indicators for printing operations 	4A	<ul style="list-style-type: none"> Develop, approve and communicate a printing specific WHS Policy endorsed by senior management, referencing WHS Act 2011 duties and relevant WHS Regulations and Codes of Practice Establish a documented WHS governance structure that assigns clear responsibilities for printing plant, chemicals and manual handling risks to competent persons Implement formal consultation processes (HSC, HSRs, toolbox talks) with printing operators on Auto-Platen, Cylinder presses, large format digital, label presses and screen printing teams Integrate WHS risks and objectives into business plans, KPIs and performance reviews for supervisors and managers overseeing printing activities Introduce a just culture incident management procedure that encourages reporting of near misses, hazards and equipment faults without blame Schedule regular WHS meetings where printing risk trends, injury data and improvement actions are reviewed and documented Under take annual management system audits (e.g. ISO 45001 aligned) with a specific module for printing and finishing operations 	3H
2. Plant Procurement, Design and Modification Governance	<ul style="list-style-type: none"> Procurement of Auto-Platen, Hand-Platen and Cylinder Die Cutters without adequate guarding or safety interlocks Balloon screen printer, C-screen and silkscreen curing equipment lacking proper engineering controls and safety features Large format digital printers and plotters supplied without emergency stop systems or safe access features Uncontrolled modifications to label presses, Heidelberg cylinder presses or curing systems bypassing original safety design Failure to obtain and retain manufacturer's instructions, design verification, and conformity documentation Purchasing second-hand machinery without formal suitability and compliance assessment 	4A	<ul style="list-style-type: none"> Implement a formal plant procurement procedure requiring WHS risk assessment and design review before purchasing any printing or die cutting equipment Specify minimum safety requirements in purchase contracts, including compliance with relevant Australian Standards, guarding, interlocks and emergency stop systems Require supplier-provided safety documentation, commissioning plans and training materials for all new printing machinery and curing systems Establish a management of change procedure for any modifications to presses, curing lines, guards or control systems, including engineering sign-off Maintain a central register of all printing and finishing plant, including design risk assessments, manuals and service history Prohibit the purchase and installation of second-hand printing plant unless assessed by a competent person for compliance and suitability Integrate WHS and engineering review into capital expenditure approval processes for printing plant 	2M

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3. Guarding, Interlocks and Access Control Systems	<ul style="list-style-type: none"> Inadequate or missing fixed and interlocked guards on Auto-Platen, Hand-Platen and Condor cylinder die cutters Defeated or overridden interlocks on cylinder presses, label printing presses and curing tunnels Uncontrolled access to in-running nips, rollers, grippers and cutting areas Inadequate guarding around moving paper rolls and unwind/rewind systems Poorly designed access platforms and ladders around large format digital equipment Lack of lockable isolation points leading to maintenance conducted on live equipment 	4A	<ul style="list-style-type: none"> Develop and enforce a guarding standard for all printing and die cutting plant, referencing WHS Regulations requirements for guarding of plant Conduct a site-wide guarding audit for Auto-Platen, Hand-Platen, cylinder presses, label presses and paper roll systems, with rectification plans Install and maintain appropriate fixed, interlocked and perimeter guards designed to prevent access to moving parts and in-running nips Introduce an engineering control policy prohibiting the defeat or bridging of interlocks, backed by disciplinary procedures and regular inspections Require isolation and lockout/tagout procedures and hardware for all maintenance, cleaning and jam-clearing on printing and curing equipment Ensure safe access systems (platforms, steps, handrails) are designed and inspected for large format machinery and electrical servicing points Implement periodic verification testing of safety circuits, light curtains and emergency stop systems, with documented results 	2M
4. Energy Isolation, Lockout/Tagout and Maintenance Systems	<ul style="list-style-type: none"> Maintenance or cleaning on Auto-Platen, cylinder or label presses without isolation of electrical, pneumatic or hydraulic energy Unexpected start-up during jam clearance on paper feeds, plotters or curing lines Lack of standardised lockout/tagout procedures across all printing and finishing areas Reliance on informal isolation practices or verbal instructions only Inadequate preventative maintenance program leading to malfunction of brakes, clutches and safety devices Use of unqualified personnel to conduct repairs or bypass safety systems 	4A	<p>[REDACTED]</p>	2M
5. Hazardous Chemicals, Solvents and Inks Management	<ul style="list-style-type: none"> Use of solvent-based printers and inks without adequate controls for vapours and skin contact Storage and handling of flammable solvents near ignition sources or hot curing systems 	4A	<p>[REDACTED]</p> <p>[REDACTED]</p>	2M

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	<ul style="list-style-type: none"> Inadequate chemical inventory and Safety Data Sheet (SDS) management for inks, thinners and cleaning agents Improvised decanting and labelling practices leading to unknown substances on the floor Lack of risk assessments for hazardous chemicals used in screen printing and curing processes Inconsistent training on safe handling of cleaning solvents and screen reclaiming chemicals 		[REDACTED]	
6. Airborne Contaminants, Ventilation and Indoor Air Quality	<ul style="list-style-type: none"> Accumulation of solvent vapours from solvent-based printers in poorly ventilated spaces Aerosolised inks and mists from screen printing and curing processes Ozone and other by-products from large format digital equipment Inadequate general and local exhaust ventilation around curing tunnels and drying racks Failure to monitor airborne contaminant levels against exposure standards Health impacts from chronic low-level exposure such as headaches, respiratory irritation and long-term illness 		[REDACTED]	1L
7. Fire and Explosion Risk Management	<ul style="list-style-type: none"> Ignition of flammable solvent vapours near silkscreen curing units and solvent-based printers Build-up of combustible dust or paper off-cuts around paper roll manipulation and die cutting machinery Inadequate control of hot surfaces associated with curing ovens and drying tunnels Improper storage of flammable liquids and rags soaked in solvents 	4A	[REDACTED]	2M

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	<ul style="list-style-type: none"> Lack of formal hot work control processes for maintenance on presses and curing lines Insufficient emergency firefighting equipment or inappropriate extinguisher types 		[REDACTED]	
8. Machine Operation Competency, Training and Supervision	<ul style="list-style-type: none"> Operators of Auto-Platen, Hand-Platen and cylinder presses not formally assessed as competent Inconsistent induction training for new staff and labour hire workers on printing risks Reliance on informal on-the-job instruction with no standardised training materials Insufficient supervision of high-risk operations such as die cutting and paper roll handling Inadequate training for plotter usage large format digital machinery and lab presses No formal process to verify understanding of emergency stop, isolation and fault reporting procedures 	4A	[REDACTED]	2M
9. Safe Work Procedures, Work Instructions and Standardisation	<ul style="list-style-type: none"> Absence of documented safe operating procedures for different printing plan types Variation in practices between shifts leading to unsafe shortcuts on die cutters and presses Procedures not updated after equipment modifications or incident learnings Workers unable to access or understand procedures due to poor format or language barriers Overly generic procedures that fail to address risks of specific equipment such as balloon screen printers or plotters 	3H	[REDACTED]	1L

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10. Manual Handling, Paper Roll Manipulation and Ergonomics	<ul style="list-style-type: none"> • Systematic reliance on manual lifting, pushing and pulling of heavy paper rolls and print stock • Inadequate roll manipulation equipment or poor layout around unwind/rewind stations • Repetitive and awkward postures at screen printing, curing and plotter workstations • Lack of job rotation policies leading to cumulative musculoskeletal disorders • Insufficient training in manual task risk control for printing and finishing tasks 	3H	[REDACTED]	1L
11. Fatigue, Workload and Shift Management	<ul style="list-style-type: none"> • Extended hours and night shift operation of presses and curing lines without structured fatigue management • High production pressures encouraging bypassing of safety systems and shortcuts • Insufficient staffing levels leading to excessive workload for key operators • Lack of documented break scheduling and rest periods for continuous run jobs • Inadequate consideration of fatigue risks for on-call maintenance support to printing plant 	3H	[REDACTED]	1L
12. Contractor, Labour Hire and Visitor Management	<ul style="list-style-type: none"> • Contractors conducting maintenance on Auto-Platen, cylinder presses or curing systems without understanding site-specific risks • Labour hire staff operating printing equipment without adequate training or supervision • Visitors entering production areas without awareness of printing hazards 	3H	[REDACTED]	1L

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	<ul style="list-style-type: none"> Poor communication of isolation procedures, emergency arrangements and PPE requirements to non-employees 		[REDACTED]	
13. Emergency Preparedness, Response and First Aid	<ul style="list-style-type: none"> Inadequate planning for entrapment, crush or amputation incidents on die cutters and presses Poorly developed response procedures for solvent spills, fires or chemical exposures Insufficient first aid resources and training for printing-specific injuries (cuts, crush, chemical splashes) Unclear roles and communication channels during emergencies in noisy production environments Lack of drills involving automatic printing incident scenarios 	3H	[REDACTED]	1L
14. Housekeeping, Traffic Management and General Workplace Environment	<ul style="list-style-type: none"> Paper waste, pallets and finished goods obstructing access routes and emergency exits Uncontrolled movement of forklifts and roll handling equipment around presses and plotters Slips, trips and falls due to off-cuts, ink spills and solvent drips on walkways Inadequate lighting and noise control in printing and finishing areas Poor segregation of pedestrian routes from mobile plant movements 	3H	[REDACTED]	1L

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15. Health Monitoring, Injury Management and Wellbeing	<ul style="list-style-type: none"> Undetected health effects from chronic exposure to solvents, inks and noise Delayed reporting and management of musculoskeletal disorders from repetitive tasks Inadequate processes for early intervention following near misses and minor injuries Psychosocial hazards including high workload, shift work and production pressure in printing environments Poor return-to-work coordination leading to aggravation of injuries 	3H	<p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p> <p>[REDACTED]</p>	1L
16. WHS Performance Monitoring, Audit and Continuous Improvement	<ul style="list-style-type: none"> Failure to detect deteriorating safety performance in printing operations No systematic evaluation of the effectiveness of controls in printing plant and chemical areas Corrective actions from incidents and audits not implemented or delayed Over-reliance on lag indicators such as injury rates without considering leading indicators Lack of management review focused on printing-specific WHS issues 	3H	<p>[REDACTED]</p> <p>[REDACTED]</p> <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.