Structural Carpentry (Framing and Trusses)

Business Name:	ABN:	
Business Address:		
Contact Person:	Phone:	Email:

THIS RISK ASSESSMENT IS APPROVED BY THE PCBU OF THE 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:

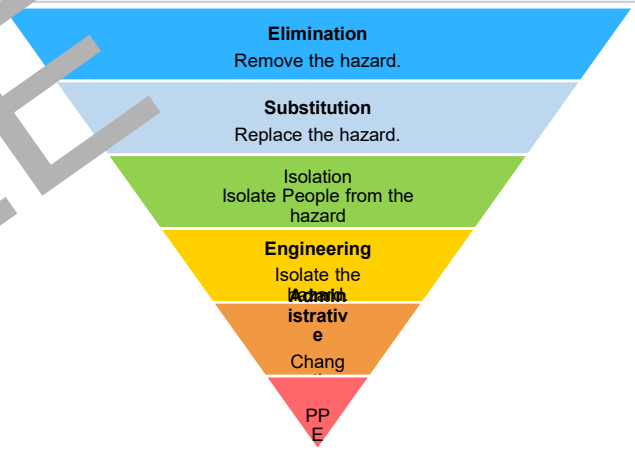
CLIENT OR PRINCIPAL CONTRACTOR DETAILS

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
ALMOST CERTAIN	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4 ACUTE		
LIKELY	2 MODERATE	3 HIGH	3 HIGH	4 ACUTE	4 ACUTE	4A ACUTE	DO NOT PROCEED
POSSIBLE	1 LOW	2 MODERATE	3 HIGH	4 ACUTE	4 ACUTE	3H HIGH	Rev before work
UNLIKELY	1 LOW	1 LOW	2 MODERATE	3 HIGH	4 ACU	2M MO RATE	Ensure control measures in place.
RARE	1 LOW	1 LOW	2 MODERATE	3 HIGH	3 H	1L LOW	Monitor and keep records.

HIERARCHY OF CONTROLS



Risk Rating & Required Action:

4A	Stop work. The risk is intolerable. E inate the hazar redesign the activity before proceeding. A Safe Work Method Statement (SWMS) or hi er-level authorisati is required.
3H	Review and approve additional c rols b ask arts. Senior supervisor sign-off needed.
2M	Ensure all nominated controls are in ace and effe ive. 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, Roles and PCBU Duties	• Unclear allocation of WHS responsibilities between PCBU, principal contractor, supervisors and subcontractors • Failure to consult, cooperate and coordinate activities with other duty holders on multi-PCBU sites • Inadequate WHS policies specific to structural carpentry and framing/truss activities • Lack of documented due diligence processes by officers under WHS Act 2011 • Insufficient monitoring and review of WHS performance for framing and truss operations • Failure to integrate WHS legislative changes and updated Australian Standards into company systems	4A	• Establish and implement a WHS governance frame[illegible]rk that clearly defines duties, authorities and accountabilities for structural carpentry and framin[illegible]works in line with WHS Act 2011 and WHS Regulation 2017 • Develop a written WHS policy endorsed by [illegible]fficers tha[illegible]xplicitly covers structural carpentry, framing and truss installation (timber and steel) for bo[illegible]new[illegible]ilds and repairs • Document officer due diligen[illegible]e activities (e.g. s[illegible]eduled WH[illegible]eports, site walks, resourcing decisions) to demonstrate proactive ove[illegible]ht of framing-rela[illegible]risks • Implement formal co[illegible]ltation, [illegible]operation and coo[illegible]nation arrangements with other PCBUs (e.g. principal contract[illegible]crane[illegible]mpan[illegible]engineering[illegible]esigners, scaffolders) including WHS coordination meetings and[illegible]itten interfa[illegible]agree[illegible]nts • Includ[illegible]e struc[illegible]l carpen[illegible]y risk profile[illegible]d performance in regular management review meetings, with actio[illegible]cked i[illegible]W[illegible]improvement plan • Estab[illegible]sh[illegible]legal r[illegible]ister and standards register (e.g. NCC/BCA, AS 1684, AS 1720, AS 4440, AS 4100, AS 499[illegible]re[illegible]ant co[illegible]s of practice) and assign responsibility to review and update procedures when require[illegible]nts [illegible]ange • [illegible]sure [illegible]upervi[illegible]s have clearly documented WHS leadership responsibilities such as enforcing safe syste[illegible]rifying competence, and stopping unsafe work	3H
2. Design, Engineering and Structural Integrity Management	• Use of non-engineered or out-of-date designs for framing, trusses and structural timber/steel m[illegible]c • Designs not suita[illegible]for site conditions (wind load, terrain[illegible]now load, [illegible]ynamic regions, bushfire z[illegible]s) • Lack of coordination between struc[illegible]al design and temporary works requirements (propping, [illegible]ai[illegible] skeleton framing enlargement stages) • Inadequate detailing for connections (dovetail joints, timber joints, metal fasteners, brackets) leading to structural failure risk • Failure to consider build methodology for pre-built frames, wall frame forming jigs and cabin modules in the design phase • Poor management of design changes and site-initiated modifications to frames, trusses, columns and door openings	4A	• Require that all structural framing, trusses and key connections are designed or certified by a qualified structural engineer in accordance with NCC/BCA, AS 1684 (timber), AS 1720, AS 4100 (steel) and relevant manufacturer guidance • Implement a formal design review process that includes constructability, lifting points, installation sequencing and temporary bracing/stability requirements for wall frames, roof trusses and cabin structures • Ensure design documentation clearly specifies member sizes, grades of timber/steel, connection details, bracing layouts and load paths for both permanent and temporary conditions • Establish a change-management procedure for any site alterations to structural elements (e.g. door openings, column framing changes, skeleton framing enlargement) requiring written engineer approval before implementation • Require suppliers of pre-built frames, trusses, cabin modules and wall frame forming jigs to provide engineering certification, installation manuals and limitations of use • Maintain a controlled drawing register to ensure only latest revisions are used on site, with superseded drawings removed from work areas • Include structural engineers in high-risk works planning meetings for complex framing (multi-storey, long spans, mixed timber-steel frameworks)	2M

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3. Procurement and Material Quality Management (Timber and Steel)	• Procurement of sub-standard or non-compliant timber, steel or fixings (incorrect grade, moisture content, treatment class) • Use of incompatible fasteners and brackets for timber-steel interface or treated timbers • Lack of traceability of pre-fabricated frames and trusses to engineering certification and batch records • Storage and handling systems that allow damage, warping or corrosion of structural members • Inadequate specification controls for specialised components (dovetail jigs, proprietary timber joint systems, wall frame forming jigs) • Use of counterfeit or untested lifting points and rigging hardware attached to frames or cabins	3H	• Develop procurement procedures that mandate sourcing from pre-qualified suppliers providing evidence of compliance with relevant Australian Standards for structural timber, steel and fixings • Specify minimum grades, treatment levels, corrosion protection and compatibility requirements for all structural materials and document these in purchase orders and technical specifications • Require test certificates, batch records and engineering certificates for pre-built frames, trusses and proprietary joint systems, and store these within a project quality system • Implement receiving inspection procedures (including dimensional checks, damage assessment and verification of markings/labels) before materials are accepted for use • Establish controlled storage systems (off-ground racking, weather protection, segregation of treated vs untreated timber, rust protection for steel) with documented responsibilities • Prohibit the use of non-certified lifting points or improvised lifting attachments on frames, trusses and cabin modules; require compliance with AS 4991 and manufacturer instructions • Include specific procurement criteria for jigs, templates and fixtures used in creating timber joints and dovetail joints, ensuring they are fit-for-purpose and maintained	2M
4. Competency, Licensing and Training for Structural Carpentry	• Carpenters and trades assistants performing structural work without appropriate qualification or verification of competence • Inadequate training in reading structural drawings and layout plans • Lack of specific training on engineered timber and steel framing systems, including limitations and failure modes • Insufficient instruction on safe handling of heavy frames, trusses and cabin modules in conjunction with cranes or mechanical lifting aids • No structured training program for creating structural timber joints, dovetail joints with jigs and high-duty connection details • Supervisors not trained in WHS risk management or high-risk construction work requirements for structural tasks	4A	[redacted]	2M

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5. Planning of Work Sequencing, Temporary Stability and Bracing	• Inadequate planning of work stages resulting in partially completed frames or skeleton structures being unstable • Failure to plan temporary bracing and propping during wall frame erection, skeleton framing enlargement and truss installation • Concurrent works (e.g. services installation, interior cabin fit-out) compromising structural stability or bracing • Lack of defined limits for removal or alteration of existing structural elements during repair of wooden structures or door framing • Poor coordination of sequencing between timber and steel framework trades leading to unplanned load paths or unsupported members	4A	[redacted]	2M
6. Plant, Tools and Jigs Management (Including Wall Frame and Joint Jigs)	• Inadequate selection and maintenance of power tools, saws, nail guns, drills and fastening systems used in structural work • Use of non-engineered or poorly maintained jigs and fixtures for wall frame forming, dovetail joints and timber joints • Lack of standardised settings and calibration for fastening tools affecting structural performance of joints • Uncontrolled use of improvised lifting or support devices for frames and trusses • Poor storage and inspection systems for plant and jigs leading to unnoticed defects • Inadequate guarding, dust extraction and noise controls for workshop-based framing and joint fabrication	3H	[redacted]	2M

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7. Working at Height and Edge Protection Systems	• Inadequate fall prevention systems during erection of wall frames, roof trusses and elevated cabins • Poorly designed or incomplete edge protection, scaffolding or temporary work platforms around structural frames • Failure to integrate framing sequence with scaffold design and progressive modification requirements • Lack of procedures for working on top chords of trusses or upper-level framing members • Insufficient control over ladder use for accessing partially constructed frameworks	4A	[redacted]	2M
8. Lifting, Handling and Logistics of Frames, Trusses and Cabins	• Inadequate planning of crane lifts for long-span trusses, wall frames and cabin modules • Manual handling of h[redacted]awkward structural members [redacted]hout mechanical assistance • Poor traffic and la[redacted]a management leading to interaction between mobile plant and personn[redacted] • Incorrect rigging metho[redacted]ing pre-built frames and trusses causing structural damage or dropped loads • Congested material storage around framing work zones creating trip hazards and restricted egress	4A	[redacted]	2M
9. Structural Connection, Fastening and Joint Quality Control	• Incorrect installation of fixings, connectors and brackets affecting structural capacity • Inconsistent quality of timber joints and dovetail joints due to poor jig setup or operator error	4A	[redacted]	2M

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	• Substitution of specified fasteners with non-equivalent products without engineering approval • Hidden defects in connections at interfaces between timber and steel frameworks • Lack of systematic inspection and testing of critical structural joints, including door framing, column connections and cabin attachment points		[redacted]	
10. Environmental and Site Condition Management	• Adverse weather (wind, rain, heat) compromising stability of partially completed frames and trusses • Working on uneven or unstable grou when erecting or adjusting pre-built frames and cabin structures • Inadequate lighting in a where detailed joint fabricati or interior cabin installation is unde ken • Poor housekeepi arou works causing slips, and falls o offcuts, fasteners and packaging • Exposure to excessive timber/engineered wood dust during framing and joint-making operations		[redacted]	2M
11. Existing Structures, Repairs and Alterations Management	• Unidentified load-bearing elements removed or weakened during repair of wooden structures or structural work for door installing • Inadequate assessment of existing building condition (rot, termite damage, corrosion) before tying in new framework • Unexpected services (electrical, plumbing, gas) concealed within existing framing	4A	[redacted]	2M

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	• Uncontrolled vibration or movement during structural alterations affecting adjacent occupied areas • Lack of occupancy controls when working within or above areas used by other trades or building occupants		[redacted]	
12. Health Monitoring, Ergonomics and Fatigue Management	• Cumulative musculoskeletal strain from repetitive framing, lifting and joint-making tasks • Extended work hours and high physical demand leading to fatigue-related decision errors during structural work • Insufficient systems to manage exposure to hazardous substances such as wood dust, adhesives and sealants used in cabins and joints • Inadequate consideration of ergonomic design in workshop layouts, wall frame forming jigs and repetitive joint-cutting tasks	3H	[redacted]	2M
13. Contractor, Subcontractor and Workforce Engagement	• Inconsistent WHS standards among subcontract carpentry crews and frame/truss installers • Lack of consultation with workers about practical issues in framing, truss installation and cabin building methods • Poor induction processes leading to workers being unaware of structural specific controls (e.g. bracing rules, lifting procedures) • Insufficient monitoring of subcontractor compliance with WHS systems for high-risk structural work	3H	[redacted]	2M

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14. Documentation, Records and Verification Systems	• Incomplete or inaccurate documentation of structural inspections, bracing checks and truss tie-down verifications • Loss or non-availability of critical design, certification and installation records during or after construction • Lack of traceability between installed components (frames, trusses, joints) and their engineering approvals • Inefficient or paper-based systems leading to missed sign-offs and uncontrolled use of outdated procedures	3H	[redacted]	1L
15. Emergency Preparedness and Incident Management for Structural Works	• Inadequate planning for emergencies such as partial structural collapse, dropped frames/trusses or failure of temporary bracing • Lack of specific rescue procedures for workers injured while working at height on frames or trusses • Delayed response due to unclear communication channels or site access constraints around framing • Failure to investigate structural near misses (movement, deflection, cracking) that indicate systemic weaknesses	3H	[redacted]	2M

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

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-of-codes-of-practice

Northern Territory
Work Health and Safety (National Uniform Legislation) Act 2011
Work Health and Safety (National Uniform Legislation) Regulations 2011
Legislation NT: https://worksafe.nt.gov.au/laws-and-compliance/workplace-safety-laws
Codes of Practice NT: https://worksafe.nt.gov.au/forms-and-resources/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

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.

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

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

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

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