

Formwork activities in construction – sample site safety checklist

Inspected by:	Record no:	Date of inspection:
Site address:		

Note: This checklist is a guide only and may be used to assist in determining compliance with safety requirements for formwork activities in construction. Further information can be obtained by contacting Workplace Health and Safety Queensland (1300 369 915) or www.deir.qld.gov.au

Formwork safety issues	Compliance indicators and Code/Regulation/Act reference	Compliant (yes/no)	Action required
1. Formwork drawings provided (drawings to include engineer/formwork designer certification)	Drawings to be readily available on site. Drawings signed by professional engineer (non basic system)/formwork designer (basic system). Formwork Code sections 2.2.2, 2.2.5		
2. Verification that the formwork structure complies with the design of the formwork system (pre pour inspections)	Pre pour sign off by professional engineer/formwork designer/competent person. Checklists and certificates similar to Appendix 3 and 4 completed and on site. Formwork Code section 2.2.5, Appendix 3 and 4		
3. Back propping details (plans and elevations including tying in)	Specific plans or notes on drawings to be readily available on site. Back propping to be completed as per drawings Formwork Code sections 2.2.3, 2.2.5		
4. Engineer certification for lifting points for column boxes and wall shutters	Specific drawings/certification provided by professional engineer nominating lifting point details to be readily available on site. Certification should verify structural adequacy of lifting apparatus and the means for attachment to load (usually welded or bolted) Work practices reflect drawings Formwork Code section 4.4.5		
5. Design documentation for jump form	Drawings specific to the jump form to be readily available on site. Drawings signed by professional engineer. Work practices reflect drawings. Formwork Code section 8.7		

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6. Design documentation for perimeter containment screening	Drawings specific to the perimeter containment screening to be readily available on site. Drawings signed by a professional engineer if screening is a part of a non basic formwork system or proprietary item. Formwork Code section 2.2.3		
7. Certification of the maximum loads from stacked materials that the formwork structure can withstand	Drawings signed by professional engineer (non basic system)/formwork designer (basic system). Drawings to be readily available on site. Work practices reflect drawings. Formwork Code sections 2.2.2, 2.2.5		
8. Design variations certified eg: <ul style="list-style-type: none"> ▪ Braces left off ▪ Frame extensions ▪ No base plates on frames ▪ Flat jacks in lieu of U heads 	Drawings/certification readily available on site certified by formwork designer/professional engineer that variations comply with AS 3610 Formwork structure reflects variations to initial design drawings. Formwork Code section 2.2.5		
9. Work method statements adequate for purpose (e.g. formwork stripping)	Work method statement readily available and addresses relevant risks (falls from height). Work practices reflect work method statement Formwork Code section 4.3.1 WQHS Regulations 1997 sections 157, 191, 194		
10. "A" frame shutter storage racks &/or shutter storage areas engineer designed	Drawings/certification from professional engineer that surface to be used for stacking of forms is capable of withstanding loads and details of how loads are to be applied. Work practices reflect drawings/certification. Formwork Code section 3.2.2		
11. Access in and around formwork structure	Designated access ways provided (hazard tape/other visual methods). Persons instructed in the use of the access ways. Access ways clear of rubbish, plant and materials. Formwork Code section 3.2.1, WHS Regulation 1997 s174(2)(b)&(c),s200(2)(d)&(e)		

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12. Systems of material storage in and around formwork structure	Materials stored so as to minimise manual tasks hazards, trip hazards and the potential for falling objects. Smaller components such as U-heads, couplers, base plates and 'Z-bars' contained in material boxes. Components stored so as to provide access to designated walkways. Formwork Code section 3.2.2, WHS Regulation 1997 s174(2)(c),s200 2(e)		
13. Systems of rubbish storage and removal in and around formwork structure	The provision of rubbish skips and wheel barrow that are moved as work progresses. Rubbish stored so as to provide access to designated walkways. Rubbish removed at regular intervals. Formwork Code section 3.2.3, WHS Regulation 1997 s174(2)(b),s200 2 (d)		
14. Form decks clean and clear e.g. no excess form oil, sawdust	The provision of rubbish skips, brooms etc on the working deck. The provision of spill kits for excess form oil. Formwork Code section 3.2.3, WHS Regulation 1997 s174(2)(b),s200 2 (d)		
15. Barricades/signs for stripping areas	Stripping area condoned off with signs and barricades. Formwork Code section 4.3.4		
16. Erectors of framing over 4m high are holders of basic scaffold certificate/trainees	Persons erecting framing over 4m high produce evidence of either scaffold certificate or that they are a trainee (up to date log book) Formwork Code section 4.1.3, WHS Regulation 1997 s17(1), (2), (3), 21, 22, 24, 25		
17. Minimum width 450mm work platform used for framing work under 2m	Minimum of two planks (450mm width) used for workers to stand on under 2m high. Formwork Code section 4.1		

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18. False deck used	<p>False deck same area as floor being formed (inside and between frames). Captive planks secured against uplift and slipping. Gaps do not exceed 225mm. Formwork Code section 4.1.</p>		
19. Edge protection/fall protection to decks	<p>Edge protection complies with Regulation (top rail, mid rail, toe boards/top rail, mesh guards). Edge protection in place prior to formwork activities or barricade in place at least 1.8m back from edge. False deck provided no more than 2.0m below formwork deck. If no false deck in place – minimum of 4 joists laid out at 450mm centres beside and 1.8m in front. Formwork Code section 2.2.3, 4.1.6 & 4.1.7, WHS Regulation 1997 s216</p>		
20. Penetrations securely covered	<p>Ply covers used which are firmly secured by bolting/concrete nailing. Ply covers which are marked with bright paint to signify that there is a “hole under”. Formwork Code section 4.1.9</p>		
21. For work on wall forms-gaps less than 225mm or edge protection installed	<p>Edge protection complies with Regulation (top rail, mid rail, toe boards/top rail, mesh guards). Formwork Code section 7.2, 8.2, WHS Regulation 1997 s216</p>		
22. Perimeter containment screening	<p>Screening complies with Regulation (gaps between screens no more than 25mm, fitted with a catch platform/deflector shields, made of mesh sheeting, plywood or timber, mesh pattern to be no more than 50mmx50mm with prescribed lining or 25mm x 25mm for square openings/25mm x 50mm for other openings). Top of screening to be no less than 1.2m higher than poured slab. Formwork Code section 5.1.1, WHS Regulation 1997 s179, 184</p>		

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23. Joist spacing no more than 450mm to deck where no false deck used	If no false deck in place – minimum of 4 joists laid out at 450mm centres beside and 1.8m in front. Formwork Code section 4.1.7,		
24. Provision for retrieval of injured worker from work areas within jump form system	Details of retrieval method (dedicated hatches, tripod etc) included in jump form design drawings. Work procedure for retrieval of injured worker readily available and workers aware of process. Formwork Code section 2.2.3, 8		
25. Access to, from and within jump form system	Designated access ways provided. Persons instructed in the use of the access ways. Access ways clear of rubbish, plant and materials. Ladders secured and used as per Regulation. Access hatches/trapdoors closed when not in use. Formwork Code section 8.1, WHS Regulation 1997 s174(2)(b)&(c) ,s200(2)(d)&(e)		
26. Amenities supplied to jump form (water, toilet, first aid kit)	Chemical toilet supplied and serviced on top of jump form. Clean drinking water available at least on top of jump form. First aid equipment readily available. Formwork Code section 8.6		
27. Work platforms	All penetrations to work platforms securely covered by ply/mesh. Controls in place to prevent a persons fall when placing reinforcing steel/pouring concrete to wall void areas. Formwork Code section 8.2		
28. Column/wall bracing (pre and post pour)	Documentation readily available to verify details of bracing elements. Work practices as per documentation. Competent person sign off prior to removal of any bracing. Any anchors used to be as per design and manufacturers requirements. Formwork Code section 7.1		

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29. PPE used in areas of excessive noise	Hearing protection of Class 2 or 3 rating worn in areas of excessive noise. Workers trained in correct use of hearing protection. Formwork Code section 6.1, WHS Act 1995 s36		
30. Effective control measure used for exposure to silica dust	Engineering controls such as dust extraction or a wet process. Use of respirators. Workers trained in correct use of PPE. Formwork Code section 6.2, WHS Act 1995 s36		
31. Regular Tool Box Talks held to maintain awareness levels of hazards, risks, controls	PC or formwork contractor has records of tool box talks readily available. Work practices reflect work method statements/work procedures. Formwork Code section 3.3, WHS Regulation 1997 s168, 191, 193, 194		
32. Use of mechanical means for movement of formwork equipment/materials (overstressing injuries)	Cranes, hoists, pallet jacks and trolleys in use. Formwork Code section 6.3		

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Definitions.

Professional Engineer

A person who is a registered professional engineer under the *Professional Engineers Act 2002 (Qld)*; and who has appropriate experience and competence in the design of formwork.

Formwork designer

A person who is competent in designing formwork and who holds a relevant degree in engineering or building or has successfully completed courses in formwork design and has appropriate experience in this field.

Competent person

In relation to performing an inspection or other task for a control measure is a person who has acquired, through training, qualifications or experience the knowledge and skills to do the work in a safe way, including—

(i) sound knowledge of relevant Australian Standards, relevant codes of practice and other relevant legislation;
and

(ii) sound knowledge of, and competence in, the risk management process for the erecting, altering and dismantling of formwork, including—

- o hazard identification and risk assessment; and
- o measures to control exposure to risks; and
- o safe work practices and procedures; and
- o how to plan and prepare formwork.

Basic formwork system

A basic formwork system includes:

- standard formwork frames which have a known tested loading capacity spaced at no more than the recommended distances apart for a normal floor thickness with bearer, joists and formboard on top of them; and
- specially manufactured and designed formwork systems with proprietary formwork components and rated load calculations in line with the manufacturers' specifications.

Non basic formwork system

Formwork systems which exceed the description of a 'basic formwork system' are, for the purposes of this Code, categorised as 'non-basic formwork systems'.

The Code requires that a professional engineer is the only person who may certify:

- the design of all temporary or permanent formwork structures categorised as 'non-basic formwork systems'; and
- any back propping used for either basic formwork systems or non-basic formwork systems.