

Concrete pumping Code of Practice 2019

2024 five-yearly review

Code section	Key changes
Foreword	<p>The foreword has been updated for consistency with other codes of practice, including explanations about:</p> <ul style="list-style-type: none"> • section 26A of the <i>Work Health and Safety Act 2011</i> (WHS Act) which requires a person conducting a business or undertaking (PCBU) to: <ul style="list-style-type: none"> – comply with an approved code of practice; or – manage hazards and risks arising from the work in a way that is different to the code but provides an equivalent or higher standard of work health and safety than the standard required in the code. • the use of terms ‘must/requires/mandatory’, ‘should’ and ‘may’ in the code.
Scope and application	<p>The scope and application section has been updated to include references to other legislation in the code, such as <i>Electrical Safety Act 2002</i>, <i>Electrical Safety Regulation 2013</i> and the <i>Professional Engineers Act 2002</i>.</p>
1.1 What is concrete pumping?	<p>Amendments have been made to include:</p> <ul style="list-style-type: none"> • A general description of concrete pumping. • Additional detail in the description of the three main types of concrete placing equipment (line pumps, mobile concrete placing booms and satellite concrete placing booms). • A reference to continuous flight augers (CFA), robotic shotcrete and grout machines. • Minor editorial changes for clarity.

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1.2 Who has health and safety duties in relation to concrete pumping?	<p>Amendments have been made to include:</p> <ul style="list-style-type: none"> • A description of the WHS Act duty of a person with management or control of a workplace. • Minor editorial changes for consistency (for example, replacing 'PCBU with management or control of a construction workplace' with 'principal contractor').
1.3 What is involved in managing risks associated with concrete pumping?	<p>Amendments have been made to include:</p> <ul style="list-style-type: none"> • Flanges, valves and outriggers in the list of plant and equipment from which hazards may originate as additional information has been included on these topics in the code. • Line clearing in the dot point for line cleaning.
1.4 Safe work methods	<p>Amendments have been made to:</p> <ul style="list-style-type: none"> • Include minor edits for legislative consistency to reflect references to 'high risk construction work'.
1.5 Information, training, instruction and supervision	<p>Amendments have been made to include:</p> <ul style="list-style-type: none"> • Specific dot points related to training for operators of mobile concrete placing booms from the Mobile concrete placing boom stability (2020) Safety Alert. • Minor editorial changes for clarity.
1.5.1 High risk work licence for use of a concrete placing boom	<p>Amendments have been made to:</p> <ul style="list-style-type: none"> • Include a new section 1.5.1 to refer to the high risk work licence required for operating a concrete placing boom.

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2.1 Design of satellite concrete placing boom installations	Amendments have been made to: <ul style="list-style-type: none"> • Include minor editorial changes for legislative consistency.
2.2 Design registration and plant registration for concrete placing booms	Amendments have been made to include: <ul style="list-style-type: none"> • 'Plant registration' in the heading to reflect updated content in this section regarding plant registration. • Content regarding the requirements for plant item registration of concrete placing booms. • Minor editorial changes for consistency and clarity.
3. Planning and preparation for concrete pumping operations	Amendments have been made to include: <ul style="list-style-type: none"> • Minor editorial changes for consistency and clarity. • Additional points with information from the Piling rig concrete pumping hose whip fatality (August 2025) safety alert.
3.1.1 Person conducting a business or undertaking	Amendments have been made to: <ul style="list-style-type: none"> • Include minor editorial changes for legislative consistency and clarity.
3.1.2 Concrete pump owner	Amendments have been made to: <ul style="list-style-type: none"> • Include minor editorial changes for legislative consistency (for example, replacing 'owner' with 'person with management or control of concrete placing equipment'). • Relocate a dot point regarding maintenance, inspection and testing to reflect that it is a mandatory requirement • Relocate the following dot points together as actions the person with management or control of the concrete placing equipment should do: <ul style="list-style-type: none"> – ensure records and inspection reports being available and signed off before deployment of concrete placing plant – ensure the design, maintenance records and all inspection reports for the plant are available and signed off before deployment of the concrete pumping plant for use

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	<ul style="list-style-type: none"> - ensure pads and/or timbers supplied will adequately support the plant.
<p>3.1.3 Concrete pumping equipment operator</p>	<p>Amendments have been made to include:</p> <ul style="list-style-type: none"> • Minor editorial changes for legislative consistency including: <ul style="list-style-type: none"> - replacing 'exercising proper diligence' with 'taking reasonable care and complying with reasonable instructions', which reflects the language used in a worker's duty under the WHS Act - replacing 'owner' with 'person with management or control of the plant' - replacing 'must' with 'should' in the list of dot points for things a concrete pump operator (worker) should check before and during concrete pumping operations.
<p>3.2 Planning by the principal contractor or person with management or control of the workplace</p>	<p>Amendments have been made to:</p> <ul style="list-style-type: none"> • Update section 3.2 heading for legislative consistency. • Include minor editorial changes to remove outdated terminology references and ensure clarity and legislative consistency including: <ul style="list-style-type: none"> - replacing 'person in control of the workplace' with 'person with management or control of the workplace' - in relation to the general reference to Australian Standards, replacing 'appropriate' with 'relevant' - replacing 'Environment Protection Authority' with a more general reference to environmental protection requirements.

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3.3 Planning by the concrete pumping PCBU	<p>Amendments have been made to:</p> <ul style="list-style-type: none"> • Include minor editorial changes for clarity or legislative consistency including: <ul style="list-style-type: none"> - replacing 'person in control of the workplace' with 'person with management or control of the workplace' - correcting a grammatical error by replace 'injures' with 'injuries' - re-ordering and consolidating dot points regarding electrical safety - requiring maintenance and repair manuals to be readily accessible rather than kept 'at the registered premises', which recognises that electronic versions may be accessible by people from various places and not just at a centralised workplace. Workplaces generally are not 'registered' under WHS legislation (i.e. there are separate licensing requirements for major hazard facilities and major amusement parks but not workplaces generally). • Clarify duties of concrete pumping PCBUs and persons with management or control of the workplace.
3.3.1 Concrete pump selection	<p>Amendments have been made to include:</p> <ul style="list-style-type: none"> • An additional point on trailer mounted pumps under the main types of concrete pumping equipment. • Minor editorial changes for clarity (for example, replacing 'citing' with 'site', removing 'latent and inclement' as a general reference to ground conditions is sufficient here due to multiple ground factors being discussed more comprehensively elsewhere in the code).
4.1.1 Concrete placing booms	<p>Amendments have been made to:</p> <ul style="list-style-type: none"> • Update the risk control statement regarding maintenance in accordance with manufacturer's instructions - 'should' has been replaced with 'must' to reflect the requirement in section 213 (Maintenance and inspection of plant), Work Health and Safety Regulation 2011 (WHS Regulation).

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<p>4.1.3 Concrete pipelines and restraint equipment</p>	<p>Amendments have been made to:</p> <p>Pipe clamps</p> <ul style="list-style-type: none"> • Include information from the safety alert on Concrete pumping clamp failures (May 2024) in the sections outlining risks and risk controls. <p>Welding flanges to steel pipe</p> <ul style="list-style-type: none"> • Include information from the Failures of concrete pumping delivery pipeline and end fittings and hoses (April 2021) safety alert. <p>Rubber hoses</p> <ul style="list-style-type: none"> • Include information from the Failures of concrete pumping delivery pipeline and end fittings and hoses (April 2021) safety alert. <p>Anchor brackets</p> <ul style="list-style-type: none"> • Include minor editorial changes to state the 'concrete pumping PCBU' rather than 'the PCBU'. <p>Manual shut-off valves</p> <ul style="list-style-type: none"> • Include information from the Concrete pumping manual shut-off valve failure (May 2024) safety alert. <p>Pipe movement</p> <ul style="list-style-type: none"> • Include a minor editorial change for clarity.
<p>4.14 Hose whip</p>	<p>Amendments have been made to:</p> <ul style="list-style-type: none"> • Include minor editorial changes for clarity and consistency. • Include information from the Piling rig concrete pumping hose whip fatality (August 2025) safety alert including additional guidance on what hose whip is and when it can occur. • Update reference to personal protective equipment (PPE) for legislative consistency. • Include additional risk control information for air in the lines.

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4.2.1 Setting up on site	Amendments have been made to include: <ul style="list-style-type: none"> • Minor editorial changes for clarity and consistency (for example, replacing 'machine' with 'plant'). • 'And suitable PPE' to two dot points regarding people working in exclusion zones. • Additional information regarding where outriggers are required.
4.2.2 Maintaining stability of mobile concrete placing booms	Amendments have been made to: <ul style="list-style-type: none"> • Include minor editorial changes for clarity.
4.2.2.1 Ground factors	Amendments have been made to include: <ul style="list-style-type: none"> • Two additional dot points regarding ground support from the Mobile concrete placing boom overturn incidents (April 2022) safety alert. • Minor editorial changes for clarity. • Additional guidance when lowering outrigger feed and unfolding the boom.
4.2.2.2 Plant proximity to excavations and trenches	Amendments have been made to: <ul style="list-style-type: none"> • Include minor editorial change for clarity (for example, replacing 'plant' with 'concrete placing boom').
4.2.2.3 Timbers, pads and bog mats	Amendments have been made to: <ul style="list-style-type: none"> • Include minor editorial change for clarity (for example, replacing 'plant' with 'concrete placing boom').
4.2.2.4 Calculating ground pressure and outrigger pad area	Amendments have been made to include: <ul style="list-style-type: none"> • Minor editorial changes for consistency (for example, replacing 'unit' with 'plant'). • Clarification of alternative methods of calculating outrigger pressure.

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4.2.2.5 Short legging	<p>Amendments have been made to include:</p> <ul style="list-style-type: none"> • Minor editorial changes for consistency (for example, replacing 'worksite' with 'workplace', 'unit' with 'plant'). • Additional guidance information when short legging.
4.2.2.6 Other considerations for mobile concrete placing boom stability	<p>Amendments have been made to:</p> <ul style="list-style-type: none"> • Include a new section with information from the Mobile concrete placing boom stability (November 2020) safety alert.
4.2.3.2 Planning for work near overhead powerlines	<p>Amendments have been made to include:</p> <ul style="list-style-type: none"> • Minor changes for consistency and clarity (for example, replaces 'should' with 'must' due to requirement (under section 47 of the WHS Act) for consultation between relevant parties about risks associated with the work). • Information from the safety alert on Three incidents involving electric shock when plant contacted or came within striking distance of overhead powerlines (March 2024).
4.2.3.3 Exclusion zones for operating a concrete placing boom near overhead powerlines	<p>Amendments have been made to include:</p> <ul style="list-style-type: none"> • Information on making powerlines and poles more visible and the role of safety observers/spotters. This information is from the safety alert on Three incidents involving electric shock when plant contacted or came within striking distance of overhead powerlines (March 2024). • Minor editorial changes for consistency and clarity (for example, replacing 'moving plant' with 'mobile plant').

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4.2.4 Traffic control	<p>Amendments have been made to include:</p> <ul style="list-style-type: none"> • A reference to section 315 of the WHS Regulation in the text box. This relates to the principal contractors' duty to manage risks associated with traffic in the vicinity of the workplace that may be affected by construction work. • Minor editorial changes for consistency and clarity (for example, replacing 'worksite' with 'workplace', 'signing' with 'signs' and 'signage'). • A reference to further information being available in the Manual of Uniform Traffic Control Devices.
4.3.1 Concrete delivery	<p>Amendments have been made to:</p> <ul style="list-style-type: none"> • Include minor editorial changes for consistency and clarity (for example, removing a duplicated dot point that refers to where more than one concrete delivery truck is required to approach the receiving hopper).
4.3.2 Pump and boom operation	<p>Amendments have been made to include:</p> <ul style="list-style-type: none"> • A minor editorial change to replace 'line' with 'accordance'. • Additional points regarding pump and boom operator guidance.
4.3.3 Wind loading	<p>Amendments have been made to:</p> <ul style="list-style-type: none"> • Include minor editorial changes for consistency (for example, 'pump unit' rather than 'unit').
4.3.4 Concrete pumping	<p>Amendments have been made to include:</p> <ul style="list-style-type: none"> • Minor editorial changes for clarity (for example, correction of spelling errors). • Additional information from the Concrete placing boom reducer drop (December 2025) safety alert, including information about the use of safety slings.

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4.3.5 Concrete line blockages	<p>Amendments have been made to include:</p> <ul style="list-style-type: none"> • Additional information on the inner wall of a twin wall pipe failing resulting in pieces of the inner wall detaching and entering the flow of concrete. This information is from the Discard criteria for twin wall concrete pumping pipe (May 2024) safety alert. • Information from the Piling rig concrete pumping hose whip fatality (August 2025) safety alert. • Minor editorial changes for clarity (for example, correcting spelling errors, replacing 'can't with 'cannot').
4.3.6 Line cleaning (on site)	<p>Amendments have been made to include:</p> <ul style="list-style-type: none"> • Information from the Piling rig concrete pumping hose whip fatality (August 2025) safety alert including information about the methods and risk controls for line cleaning. • Minor editorial changes for consistency (for example, replacing 'pumping personnel' with 'workers').
4.3.7 Pump cleaning (on site)	<p>Amendments have been made to:</p> <ul style="list-style-type: none"> • Include minor editorial changes for consistency and clarity (for example, including an introductory sentence for the dot points under risk control).
4.3.8 Preparation for road travel	<p>Amendments have been made to:</p> <ul style="list-style-type: none"> • Include minor editorial changes for clarity (for example, replaces 'fellow motorists' with 'other motorists').
4.4 Other risks	<p>Amendments have been made to:</p> <ul style="list-style-type: none"> • Replace the heading 'By-products' with 'Other risks'.
4.4.1 Noise	<p>Amendments have been made to:</p> <ul style="list-style-type: none"> • Include minor editorial changes for clarity and simplifying the reference to the 'Managing noise and preventing hearing loss at work Code of Practice'.
4.4.2 Fumes	<p>Amendments have been made to:</p> <ul style="list-style-type: none"> • Include minor editorial change for consistency.

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5.2 Compliance plates and certification	<p>Amendments have been made to include:</p> <ul style="list-style-type: none"> • Minor editorial change for consistency with terminology (for example, 'pump unit' instead of 'unit'). • Minor editorial changes to reflect the role of the National Heavy Vehicle Regulator in issuing permits for heavy vehicles exceeding prescribed mass or dimension requirements.
5.3 Pre-operational inspections	<p>Amendments have been made to:</p> <ul style="list-style-type: none"> • Include minor editorial changes for consistency and clarity (for example, refers to 'competent person' rather than 'competent personnel').
5.4 Routine maintenance inspections	<p>Amendments have been made to:</p> <ul style="list-style-type: none"> • Include minor editorial changes for consistency and clarity (for example, refers to the 'concrete pumping PCBU' rather than the 'PCBU').
5.5 Annual inspections	<p>Amendments have been made to:</p> <ul style="list-style-type: none"> • Include minor editorial changes for consistency and clarity (for example, breaks the first paragraph into two sentences to improve readability, replaces 'unit' with 'plant').
5.6 Major inspection for concrete placing booms	<p>Amendments have been made to:</p> <ul style="list-style-type: none"> • Include minor editorial changes for consistency and clarity (for example, replaces 'unit' with 'plant', 'certificate' rather than 'certification'). • Include minor changes in the description of non-destructive testing to refer to accreditation by an acceptable testing authority (for example, National Association of Testing Authorities). • Clarify that a registered engineer under the Queensland <i>Professional Engineers Act 2002</i> is a Registered Professional Engineer of Queensland (RPEQ).
5.7 Inspection report	<p>Amendments have been made to:</p> <ul style="list-style-type: none"> • Include minor editorial changes for consistency and clarity (for example, replaces 'unit' with 'plant').

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5.9 Reporting defects	Amendments have been made to: <ul style="list-style-type: none"> • Include minor formatting changes.
5.10 Repair following an incident	Amendments have been made to: <ul style="list-style-type: none"> • Include minor editorial changes for consistency in terminology (for example, replaces 'unit' with 'plant').
5.11 Log books, manuals and inspection record sheets	Amendments have been made to include: <ul style="list-style-type: none"> • 'Manuals' in the heading for section 5.11. • Minor formatting and editorial changes for consistency and clarity.
5.13 Pipe testing, identification, marking and discarding	Amendments have been made to: <ul style="list-style-type: none"> • The heading for section 5.13 to include a reference to 'discarding'. • Include additional guidance information on the measurement of wear on pipes. • Include additional information regarding inspection and discarding twin wall pipes, from the Discard criteria for twin wall concrete pumping pipe (May 2024) safety alert.
6.1 Provision of personal protective equipment	Amendments have been made to include: <ul style="list-style-type: none"> • Minor changes to reflect what is stated about PPE in combination with other control measures in page 19 of the 'Managing the risks from plant in the workplace Code of Practice 2021'. • Minor editorial changes for consistency.
6.2 Additional equipment	Amendments have been made to: <ul style="list-style-type: none"> • Include minor editorial changes for consistency.

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Appendix 1 Dictionary	<p>Amendments have been made to:</p> <ul style="list-style-type: none">• Include minor edits to the definition of 'Australian Standard'.• Update definition of 'clean out adaptor' to refer to it as a 'blowout cap' to align with code content.• Include minor edits to the definition of 'competent person' for major inspections so it is consistent with the definition of a competent person for major inspections of cranes.• Include a definition of 'construction work' with reference to the WHS Regulation.• Omit the definition for 'employee representative' as this term is not used in the code.• Include a definition of 'exclusion zone' for clarity as referenced in the code content.• Include a definition of 'go-devil' as included in the code content.• Include a definition of 'high risk construction work' with reference to the WHS Regulation.• Omit the definition of 'relevant workplace area' which was a term used in the repealed <i>Workplace Health and Safety Act 1995</i>. The term 'workplace' or 'site' is used in the code as appropriate for the context.• Include a definition of 'safe work method statement' with reference to the WHS Regulation.