

<b>Title</b>	<b>Install bored piles for infrastructure structural foundation works</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>15</b>

<b>Purpose</b>	People credited with this unit standard are able to install bored piles for infrastructure structural foundation works.
----------------	-------------------------------------------------------------------------------------------------------------------------

<b>Classification</b>	Infrastructure Works > Structural Foundations
-----------------------	-----------------------------------------------

<b>Available grade</b>	Achieved
------------------------	----------

---

### Guidance Information

- 1 Learning and assessment within this unit standard must be carried out in an infrastructure works environment and in accordance with the following, as relevant to their role, and any subsequent amendments:
  - Health and Safety at Work Act 2015;
  - Resource Management Act 1991;
  - Heritage New Zealand Pouhere Taonga Act 2014;
  - Hazardous Substances and New Organisms Act 1996;
  - Excavation Safety, Good Practice Guidelines 2016, available from [www.worksafe.govt.nz](http://www.worksafe.govt.nz).
  
- 2 Definitions
 

*Bored pile* refers to a reinforced concrete pile constructed, often using permanent or temporary steel liners. They are excavated to a required depth and backfilled with reinforced concrete.

*Company requirements* include the policy, procedures, and methodologies of the company. They include legislative and regulatory requirements that may apply across the company or to a specific site. Requirements are documented in the company health and safety plans, traffic management plans, contract work programmes, quality assurance programmes, policies, and procedural documents.

*Job specifications* are instructions given to the operator prior to undertaking a job. They may include site safety instructions, contract drawings, and written memos.

*Work plan* refers to any job specifications or plans given to the operator prior to undertaking a job.

---

### Outcomes and performance criteria

#### Outcome 1

Install bored piles for infrastructure structural foundation works.

**Performance criteria**

- 1.1 Advantages of using bored piles are explained in terms of suitability for the context.
- Range may include but is not limited to – site conditions, rock layer, stability, strength, noise, access, length, capacity.
- 1.2 A stable platform for the piling rig is prepared in accordance with company requirements.
- 1.3 Set out for bored piles is completed in terms of positioning and in accordance with the requirements of the site plan and surveyor requirements.
- Range may include but is not limited to – off set pegs, datum line, string lines, offset, secondary positioning, reduced levels (RLs).
- 1.4 Communication requirements including hand signals are determined in accordance with company requirements.
- 1.5 Positioning of the pile is monitored throughout the pile installation process and meets the requirements of the job specifications.
- 1.6 Reinforcing cage is checked in terms of spacing and slippage and installed to engineer's specifications.
- 1.7 Casing is installed to specifications, and if temporary, is removed in terms of reducing delays and ensuring there is no separation of the pile shaft.
- 1.8 Quality of the concrete pile is monitored including placement, continuous pour, straight sides, uniformity, and contact with the ground over the full length.
- 1.9 Loose, disturbed or softened spoil is removed using an appropriate method and in accordance with job specifications.
- 1.10 Bored pile card is completed and submitted on time to stakeholders in accordance with the work plan and job specifications.
- Range may include but is not limited to – supervisor, engineer, leading hand.
- 1.11 Issues are recorded and discussed with a supervisor in accordance with company requirements.
- Range may include but is not limited to – overbreak, site conditions, unknown soil, water, changing rock levels.
- 1.12 Engineer inspections of the excavation and pile quality are completed and outcome documented in accordance with job specifications.

---

<b>Planned review date</b>	31 December 2023
----------------------------	------------------

**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	26 July 2018	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0101
------------------------------------------------------------	------

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

**Comments on this unit standard**

Please contact Connexis Infrastructure ITO [qualifications@connexis.org.nz](mailto:qualifications@connexis.org.nz) if you wish to suggest changes to the content of this unit standard.