

<b>Title</b>	<b>Demonstrate knowledge of and carry out structural foundation site operations for infrastructure works</b>		
<b>Level</b>	<b>3</b>	<b>Credits</b>	<b>15</b>

<b>Purpose</b>	People credited with this standard are able to demonstrate knowledge of and carry out structural foundation site operations for infrastructure works.
----------------	---

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

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

---

## Guidance Information

- 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.

- Definitions

*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 plans, policies, and procedural documents.

*Operating process* may include but is not limited to – layout, levels, positioning, drilling shaft, reinforcing, casing installation and removal, tremie pour, over pour, piling, soil removal.

*Quality plan* refers to any contract specific policy, processes, procedures, testing or certification requirements.

*Site safety plan* means the comprehensive plan dealing with issues relating to health, safety, and the environment. This plan may be generic or site specific and will include and emergency plan. It may include a hazard register.

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

---

## Outcomes and performance criteria

### Outcome 1

Demonstrate knowledge of structural foundation site operations for infrastructure works.

**Performance criteria**

- 1.1 The optimum layout of the worksite is explained in terms of the work area and staying in site of the plant operator relevant to structural foundation works.
- Range work area may include but is not limited to – spoil area, crane operation, attachments, site marks, cages, raft area.
- 1.2 Site conditions that might impact on site operations are explained in terms of the tasks to be completed and in accordance with the site safety plan.
- 1.3 Types of plant, equipment, piles, and materials associated with site operations are identified in terms of the requirements of the work plan.
- 1.4 The importance of the groundsmen and spotter role is explained in terms of site awareness, personal safety and the safety of the structural foundations crew.
- Range groundsmen role may include but is not limited to – spoil removal, breaking down piles, laying out equipment, water removal, hosing, communications with the operator and crew, regular maintenance, cleaning equipment, oil checks;  
spotter role may include but is not limited to – concentration, communication, patience, peripheral vision, safety zones, visual barriers, reference points, placement tolerance checks, alignment, site awareness, hand signals, unusual noises, staying on task.
- 1.5 The operating process for the structural foundation site is explained in terms of the requirements of the work plan and delegated authorities.
- 1.6 The impact of variations and unusual findings are explained in terms of productivity, meeting deadlines, and the quality plan.
- 1.7 The requirements of integrity testing during the site operations is explained in accordance with the work and quality plans.
- 1.8 The value of crew members to the business is explained in terms of company expectations for down time, reducing variations and meeting deadlines.
- 1.9 Environmental concerns that may impact on the completion of the work plan are explained in terms of risk to the crew and the local environment.
- Range environmental concerns may include but are not limited to – noise, dust, hazardous substances, soil erosion, de-watering, liquefaction.

**Outcome 2**

Carry out structural foundation site operations for infrastructure works.

**Performance criteria**

- 2.1 Pre-start checks and meetings are completed and directions for the day are implemented in accordance with company requirements.

- 2.2 Work plan tasks are completed in terms of own role and quality plan.
- 2.3 Changing and checking of attachments is completed and any safety issues are communicated to the team leader and crew.
- 2.4 Communication between crew members is timely, accurate, and effective in terms of addressing any communication barriers.
- 2.5 Debrief and end of day checks are completed in terms of the safety procedures for the site, plant, end of day checks, equipment checks and in accordance with company requirements.
- 2.6 Issues and recommendations for improvements to site operations are discussed with a leading hand or supervisor in accordance with company requirements.
- 2.7 Timelines and documentation requirements are met in accordance with company requirements.

<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.