

|              |  |                |           |
|--------------|--|----------------|-----------|
| <b>Title</b> | <b>Prepare for and install anchors for onsite piling and deep foundation works</b> |                |           |
| <b>Level</b> | <b>4</b>   | <b>Credits</b> | <b>15</b> |

|                |   |
|----------------|---|
| <b>Purpose</b> | <p>People credited with this unit standard are able to, for onsite piling and deep foundation works:</p> <ul style="list-style-type: none"> <li>– prepare for installation of anchors; and</li> <li>– install anchors.</li> </ul> |
|----------------|---|

|                       |   |
|-----------------------|---|
| <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 a construction or infrastructure works environment in accordance with industry requirements and the following legislation, as relevant to the role, and any subsequent amendments:
  - Health and Safety at Work Act 2015;
  - Resource Management Act 1991;
  - Heritage New Zealand Pouhere Taonga Act 2014;
  - Traffic Regulations 1976;
  - Land Transport Rule: Vehicle Dimensions and Mass 2016;
  - Land Transport Rule: Heavy Vehicles 2004;
  - *Structural Engineering Society New Zealand (SESOC), New Zealand Geotechnical Society (NZGS) Construction Specification Bored and Driven Piles 2022*, available from [www.nzgs.org](http://www.nzgs.org);
  - *Excavation Safety: Good Practice Guidelines 2016*, available from Worksafe [www.worksafe.govt.nz](http://www.worksafe.govt.nz);
  - *Operator Safety Manual for Earthmoving Machinery 2017*, available from Civil Contractors New Zealand <https://civilcontractors.co.nz/>.
  
- 2 Assessment
 

For this unit standard, anchors refer to:

  - drilling straight down within 30-90 degrees variation;
  - smaller diameter with an anchor used; and
  - the concrete pouring method allows for testing.
  
- 3 Definitions
 

*Anchors* refer to a type of pile that has an uplift element added to it to resist forces in compression and uplift using friction and bearing capacity.

*Industry requirements* may refer to but are not limited to relevant policies, processes, methodologies, industry codes of practice, site specific health and safety plans, standard operating procedures, site safety plans, quality plans, work plans, traffic management plans, contract work programmes, job safety analysis, safe work method statements, job instructions, manufacturer's requirements, contract specifications, manuals, 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.

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

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

---

## Outcomes and performance criteria

### Outcome 1

Prepare for installation of anchors for onsite piling and deep foundation works.

#### Performance criteria

- 1.1 Job specifications are reviewed to identify and confirm key components that affect installation and method chosen.
- 1.2 Test anchors and test results are used to reconfirm job specifications and make refinements.
- 1.3 Chosen methodology is confirmed with a supervisor and drilling is completed in accordance with the job specifications.
- 1.4 Quality plan requirements are confirmed, equipment for sampling and recording data is in place, and materials supplied.
- 1.5 Site is established, plant and equipment are transported and pre-checked, permits are obtained, service plans reviewed, in accordance with site specific safety plan.

### Outcome 2

Install anchors for onsite piling and deep foundation works.

#### Performance criteria

- 2.1 Anchors mark out and direction is established and set out is confirmed in accordance with the chosen installation method and job specifications.
- 2.2 Anchors are constructed in accordance with job specifications and checked by a competent person.
- 2.3 Rig is set up and drilling is completed in accordance with the drilling methodology and job specifications.

- 2.4 Drill records are produced in accordance with quality plan requirements.
- 2.5 Visual inspection is completed in terms of ensuring anchor can be installed.
- 2.6 Anchor is installed in accordance with job specifications.
- 2.7 Grout mix is confirmed, batched, injected, and poured, and samples are taken for testing as required.
- 2.8 Anchors are monitored, and post-operational procedures are completed, in accordance with the quality plan.

|                            |                  |
|----------------------------|------------------|
| <b>Planned review date</b> | 31 December 2028 |
|----------------------------|------------------|

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

| Process      | Version | Date         | Last Date for Assessment |
|--------------|---------|--------------|--------------------------|
| Registration | 1       | 27 July 2023 | 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 Waihanga Ara Rau Construction and Infrastructure Workforce Development Council at [qualifications@WaihangaAraRau.nz](mailto:qualifications@WaihangaAraRau.nz) if you wish to suggest changes to the content of this unit standard.