

Title	Install driven piles for onsite piling and deep foundation works		
Level	4	Credits	15

Purpose	People credited with this unit standard are able to install driven piles for onsite piling and deep foundation works.
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Classification	Infrastructure Works > Structural Foundations
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Available grade	Achieved
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Guidance Information

- 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;
 - Hazardous Substances and New Organisms Act 1996;
 - 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;
 - *Excavation Safety: Good Practice Guidelines 2016*, available from Worksafe www.worksafe.govt.nz;
 - *Operator Safety Manual for Earthmoving Machinery 2017*, available from Civil Contractors New Zealand <https://civilcontractors.co.nz/>.

2 Definitions

Driven pile refers to a pre-constructed, slender column with a preformed shape and size which is installed by impact hammering, vibrating or pushing into the earth and used to resist axial and/or lateral loads. Driven piles can be steel, timber, or concrete, including H piles and steel pipe piles.

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.

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 driven piles for onsite piling and deep foundation works.

Performance criteria

- 1.1 Advantages of using driven piles are explained in terms of suitability for the context.
- Range site conditions, soil conditions, rock layer, stability, strength, environmental concerns, noise, access, length, capacity, pre-inspection, pile installation method.
- 1.2 A stable platform for the pile driver is prepared.
- 1.3 Set out for driven piles is completed in terms of positioning and in accordance with the requirements of the site plan and surveyor.
- Range datum line, string lines, offset, required levels.
- 1.4 Communication requirements including hand signals are determined.
- 1.5 Pile lifting is monitored throughout the pile installation process and meets the requirements of the lifting plan.
- 1.6 Positioning of the pile is monitored throughout the pile installation process and meets the requirements of the job specifications.
- 1.7 Installation process is monitored, and any unusual vibration activity is actioned in accordance with installation guidelines in job specifications.
- 1.8 Disturbances are minimised in terms of noise and vibrations and in accordance with job specifications.
- 1.9 Loose, disturbed, or softened spoil is removed using an appropriate method and in accordance with job specifications.
- 1.10 Pile card is completed and submitted on time to stakeholders in accordance with the work plan and job specifications.
- 1.11 Issues are recorded and discussed with a supervisor.
- Range site conditions, obstructions, collapse, unknown soil, water, changing rock levels, noise, vibrations.

- 1.12 Engineer inspections of the pile installation are completed, and outcome documented in accordance with job specifications.
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Planned review date	31 December 2028
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	26 July 2018	31 December 2026
Review	2	27 July 2023	N/A

Consent and Moderation Requirements (CMR) reference	0101
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact Waihangā Ara Rau Construction and Infrastructure Workforce Development Council at qualifications@WaihangāAraRau.nz if you wish to suggest changes to the content of this unit standard.