

Title	Describe soil properties for structural foundation works		
Level	3	Credits	3

Purpose	People credited with this unit standard are able to describe soil properties for structural 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;
 - *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/>.
- Definition
Angle of repose is the angle at which an undisturbed pile is self-supporting.

Outcomes and performance criteria

Outcome 1

Describe soil properties for structural foundation works.

Performance criteria

- 1.1 Silts are described in terms of their properties and implications for structural foundations.

Range	water control, removal and angle of repose, loading, offloading, moisture content, compaction, mobile plant.
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- 1.2 Clays are described in terms of their properties and implications for structural foundations.
- Range water control, removal and angle of repose, loading, haulage, offloading, spreading, moisture content, compaction, mobile plant.
- 1.3 Rocks are described in terms of their properties and implications for structural foundations.
- Range removal and angle of repose, loading, haulage, offloading, compaction, mobile plant.
- 1.4 Sands are described in terms of their properties and implications for structural foundations.
- Range removal and stabilisation, loading, haulage, mobile plant.
- 1.5 Founding rock is described in terms of implications for structural foundations.
- Range rock strength, rock mass, defects, disintegration.

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