Title	**Demonstrate knowledge of stabilisation of pavement layers for road works**		
Level	**4**	**Credits**	**5**

Purpose	People credited with this unit standard are able to explain reasons for, and effects of, pavement layer stabilisation; and describe methods of pavement layer stabilisation, for road works.

Classification	Infrastructure Works > Generic Road Works

Available grade	Achieved

Guidance Information

1 Evidence presented for assessment against this unit standard must be consistent with safe working practices and be in accordance with relevant legislative and industry requirements.

2 Legislation and references relevant to this unit standard include:
- Health and Safety at Work Act 2015;
- TNZ M/15:2012 *Lime for use in Soil Stabilisation*;
- TNZ B/5:2008 *Specification for In-situ Stabilisation of Modified Pavement Layers,* available at https://www.nzta.govt.nz/resources/;
  and all subsequent amendments and replacements.

3 Definitions
Industry requirements refer 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.
Pavement includes layers from subgrade to finished surface.

Outcomes and performance criteria

Outcome 1

Explain reasons for, and effects of, pavement layer stabilisation for road works.

Performance criteria

1.1 Reasons for using stabilising materials are explained in terms of pavement layer improvement.

Range materials include – subgrade, sub-base, base course.

1.2 Reasons for choice of stabilising materials are explained in terms of soil type.

Range reasons include – moisture, plasticity, cementation.

1.3 Stabilising of materials is explained in terms of economic requirements.

1.4 Tests for the bearing capacity of soils and traffic load on pavements are explained.

Range tests may include but are not limited to – unconfined compressive test, California Bearing Ratio (CBR), soaked CBR, Clegg hammer, Benkelman beam;
evidence of two tests is required.

1.5 Stabilising of road pavements is explained in terms of the strengthening required for each layer and the need for preconditioning.

1.6 Climate and temperature are explained in terms of how they impact on stabilising materials.

Outcome 2

Describe methods of pavement layer stabilisation for road works.

Range methods include – cement, lime, foam bitumen, bitumen emulsion, fabric, mesh; evidence of three methods is required.

Performance criteria

2.1 Equipment, materials, and process for method are described.

2.2 Procedures for construction of joints are described.

Replacement information	This unit standard replaced unit standard 17323.

Planned review date	31 December 2026

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	25 September 2006	31 December 2016
Review	2	19 February 2015	31 December 2021
Review	3	27 September 2018	31 December 2023
Review	4	30 September 2021	N/A

Consent and Moderation Requirements (CMR) reference	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 Industry Training Organisation qualifications@connexis.org.nz if you wish to suggest changes to the content of this unit standard.