Title	**Demonstrate knowledge of health, safety, and environmental protection in the civil infrastructure industry**		
Level	**3**	**Credits**	**7**

Purpose	People credited with this unit standard are able to: – demonstrate knowledge of civil infrastructure worksite hazards and their controls; – explain safe practice for civil infrastructure worksites; – explain best practice procedures in the event of unsafe work conditions and actions; – explain how the environment is protected in the civil infrastructure industry.

Classification	Infrastructure Works > Infrastructure Civil 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 relevant to this unit standard include:
- Health and Safety at Work Act 2015;
- Resource Management Act 1991;
- Heritage New Zealand Pouhere Taonga Act 2014;
- 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.
Work zone refers to the area immediately around a specific work activity. There may be more than one work zone at a worksite.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of civil infrastructure worksite hazards and their controls.

Performance criteria

1.1 Hazards associated with climate are identified and methods of control are explained.

1.2 Hazards associated with entering work zones are identified and methods of control are explained.

1.3 Hazards associated with working among moving plant, equipment, and vehicles are identified and methods of control are explained.

Range on road, off road.

1.4 Hazards associated with using and storing specific substances are identified, and methods of control are explained.

Range substances may include but are not limited to – soils, fuels, lubricants, adhesives, burnt lime, cement, paints, hot bitumen, emulsions, agrichemicals, bacteria, explosives;
evidence is required for at least four substances.

1.5 Hazards associated with different ground surfaces and locations and methods of control are explained.

Range ground surfaces – sloping, wet, slippery, unstable;
locations – at height, at depth, confined.

1.6 Hazards associated with working near utility services and methods of control are explained.

Range power, gas, communication services, water supply, drainage, high pressure/hot water, steam.

1.7 Hazards associated with working near structures are identified and methods of control are explained.

Range pylons, buildings, poles.

1.8 Hazards of working with auxiliary equipment and tools are identified and methods of control are explained.

Range electrically powered, pneumatically powered, hydraulically powered, powder powered, cables, hoses.

1.9 Hazards of manual handling and lifting are identified, and methods of control are explained.

1.10 Hazards of mounting and dismounting plant and vehicles are identified and methods of control are explained.

1.11 Hazards associated with specific work activities are identified and methods of control are explained.

Range activities – excavating, trenching, concreting, slinging, loading and unloading, working at height;
evidence is required for at least three activities.

1.12 Hazards associated with confined spaces, chemicals, and unsafe atmospheres are identified and methods of control are explained.

Range atmospheres – toxic, explosive, enclosed.

1.13 Personal factors that affect safety are explained in terms of controlling their impact on the worksite.

Range poor nutrition, lack of sleep, dehydration, drugs, alcohol, poor hygiene.

Outcome 2

Explain safe practice for civil infrastructure worksites.

Performance criteria

2.1 Safe practice for personal protective equipment for work activities is explained.

Range type, level of protection, use, and condition.

2.2 Safe use of different types of civil infrastructure equipment is explained.

Range evidence is required for three different types of equipment.

2.3 Safe use of different types of civil infrastructure plant is explained.

Range evidence is required for three different types of equipment.

2.4 Types and safe use of worksite protective devices are explained.

Range operator protective structures, safety chains, safety lockout, placarding.

2.5 Safe use of emergency equipment for worksites is explained in terms of legislative requirements.

2.6 Safe practice is explained in terms of information provided at worksites.

Range site safety plan, material safety data sheets, codes of practice.

2.7 Requirements for worksite tidiness and cleanliness are explained.

2.8 First aid requirements are explained.

Outcome 3

Explain best practice procedures in the event of unsafe work conditions and actions.

Performance criteria

3.1 Immediate response required on finding unsafe equipment is explained.

3.2 Lock out/tag out procedures are explained.

3.3 Reporting of unsafe plant and equipment is explained.

3.4 Response to finding unsafe work practice is explained.

Outcome 4

Explain how the environment is protected in the civil infrastructure industry.

Performance criteria

4.1 Runoff and sediment control is explained.

4.2 Dust control is explained.

4.3 Vibration control is explained.

4.4 Noise mitigation is explained.

4.5 Containment and clean up of spillage are explained.

Range petrol/diesel, oil, one other substance.

4.6 Worksite waste disposal is explained.

Range contaminated material, general waste, hazardous waste.

4.7 Protection of heritage and conservation sites is explained.

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	27 October 2010	31 December 2023
Review	2	28 October 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.