

Title	Apply risk management to well-defined civil engineering problems		
Level	6	Credits	15

Purpose	People credited with this unit standard are able to apply risk management to well-defined civil engineering problems.
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Classification	Infrastructure Civil Engineering > Generic Infrastructure Civil Engineering
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Available grade	Achieved
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Guidance Information

- 1 The following legislation and requirements apply to this unit standard:
 - Health and Safety at Work Act 2015;
 - Health and Safety at Work (Major Hazard Facilities) Regulations 2016;
 - Resource Management Act 1991;
 - Current New Zealand jurisdiction requirements and regulatory framework including but not limited to: compliance regimes covered by statute or local body by-law, design specifications, conditions of contract (including applicable registered standards and approved codes of practice), and public consultation procedures.
 - Client and/or company specifications and standards;
 - AS/NZS 31000:2009, *Risk Management – Principles and Guidelines* available at <https://www.standards.govt.nz>;
 - The ethical codes and standards relevant to bodies such as Engineering New Zealand, the Institute of Refrigeration, Heating and Air Conditioning Engineers of New Zealand Inc, or New Zealand Asset Management Support.

- 2 Definitions

Accepted procedures and methodologies are the procedures and methodologies required by the candidate's engineering sector and which meet applicable legal and code requirements, registered standards, organisational policies and procedures, and manufacturers' specifications.

Well-defined civil engineering problems are problems that include some or all of the following:

 - Several issues, but only a few that result in conflicting constraints
 - Can be solved using a systematic approach
 - Resolved with limited theory but extensive practical knowledge
 - Frequently experienced and so familiar to most practitioners in the practice area
 - Covered by standards and/or documented codes of practice
 - Limited range of stakeholders with differing needs
 - Consequences that are important locally but aren't far-reaching
 - Discrete components of engineering systems.

3 Assessment

Assessment against this unit standard must be based on evidence from the practice area the candidate is engaged in. The practice area for the candidate may include but is not limited to: engineering consultancy, maintenance or asset management, design, manufacturing, installation, production engineering, technical sales and customer service, draughting services, construction, or contracting in the civil engineering disciplines.

All outcomes and performance criteria in this standard must be demonstrated in accordance with accepted procedures and methodologies.

Evidence of two problems is required.

Outcomes and performance criteria
Outcome 1

Apply risk management to well-defined civil engineering problems.

Performance criteria

- 1.1 Risks are identified and documented.
- 1.2 The likelihood of events occurring, and the magnitude of their potential consequences, are evaluated.
- 1.3 Actions are taken to mitigate the risk.
- 1.4 Actions are monitored and reviewed.

Replacement information	This unit standard, unit standard 27473, unit standard 27474, and unit standard 27476 replaced unit standard 23410.
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Planned review date	31 December 2024
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	17 November 2011	31 December 2018
Review	2	16 June 2016	31 December 2021
Review	3	12 December 2019	N/A

Consent and Moderation Requirements (CMR) reference	0234
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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 Connexis - Infrastructure Industry Training Organisation qualifications@connexis.org.nz if you wish to suggest changes to the content of this unit standard.