

Title	Install deluge and pre-action fire sprinkler systems		
Level	4	Credits	20

Purpose	<p>This unit standard is for personnel employed in the fire protection industry and covers the installation of deluge and pre-action fire sprinkler systems.</p> <p>People credited with this unit standard are to: plan and prepare for installation of deluge and pre-action fire sprinkler systems; receive, prepare, and install components for deluge and pre-action fire sprinkler systems; test installations and complete records for deluge and pre-action fire sprinkler systems.</p>
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Classification	Mechanical Engineering > Fixed Fire Protection Systems
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Available grade	Achieved
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Guidance Information

- Legislation, regulations and/or industry standards relevant to this unit standard include but are not limited to the:

Building Act 2004,
 Building (Forms) Regulations 2004,
 Ministry of Business, Innovation and Employment (MBIE) *Acceptable Solutions (AS) and Verification Methods (VM)*,
 MBIE New Zealand Building Code Handbook,
 NZS 4541:2020, *Automatic fire sprinkler systems*.

Any new, amended or replacement Acts, regulations, standards, codes of practice, guidelines, or authority requirements or conditions affecting this unit standard will take precedence for assessment purposes, pending review of this unit standard.
- Definitions**

As installed refers to the drawings and other relevant documentation giving details of the actual work completed on site.

Plan in this unit standard means the procedures developed to enable the work to be carried out in a logical and safe manner.

Systems documentation refers to the documentation required to be maintained by the relevant special hazards fixed fire protection system standards, including logbook, test reports, equipment details and drawings, specifications, contract agreement, additions and alterations, fire reports, building consents standards, codes of practice, installation instructions, test and commissioning procedures, test and maintenance records.

Workplace procedures refer to the documented procedures used by the organisation carrying out the work and applicable to the tasks being carried out. They may include but are not limited to – standard operating procedures, site safety procedures, equipment operating procedures, codes of practice, quality assurance procedures, housekeeping standards, charging of time and materials, management of drawings and documentation, procedures to comply with legislative and local body requirements.

3 Assessment information

- a All activities must comply with relevant legislative and/or regulatory requirements and recognised codes of practice.
- b All activities demonstrate safe working practices.
- c All activities must be completed and reported within agreed timeframes.
- d Systems requirements include but are not limited to – extinguishant, extinguishant containers, control valves, isolating valves, pipe works, outlets, fixings, and seismic restraints.
- e All activities must be done in accordance with applicable systems documentation, and workplace procedures.

4 Range

For assessment purposes, competence must be demonstrated on installation of one deluge and one pre-action fire sprinkler system.
Electronic detection system installation is beyond the scope of this unit standard.

Outcomes and performance criteria

Outcome 1

Plan and prepare for installation of deluge and pre-action fire sprinkler systems.

Performance criteria

- 1.1 Deluge and pre-action fire sprinkler systems are identified and described.
- 1.2 Systems documentation is located.
- 1.3 Installation requirements are checked against the physical site requirements.

Range access, site measurement, structural details, other services.
- 1.4 Plans for installations are prepared.
- 1.5 Components and materials are purchased or drawn from stock, and delivery to the sites is confirmed.

Outcome 2

Receive, prepare, and install components for deluge and pre-action fire sprinkler systems.

Performance criteria

- 2.1 Components and materials are received and checked for conformance.
- 2.2 Components and materials are prepared and set out.
- 2.3 Components are installed.
- 2.4 Safety requirements are complied with during installation of components.

Outcome 3

Test installations and complete records for deluge and pre-action fire sprinkler systems.

Performance criteria

- 3.1 Installation tests are completed.
- 3.2 Test results are analysed and recorded, and corrective actions are taken.
- 3.3 As installed details of systems are recorded and distributed.
- 3.4 Safety requirements are complied with during testing of systems.
- 3.5 Premises are cleared of all surpluses introduced materials and equipment and left in a clean and tidy condition.

Planned review date	31 December 2029
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	15 October 2015	31 December 2026
Review	2	27 June 2024	N/A

Consent and Moderation Requirements (CMR) reference	0013
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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 the Hanga-Aro-Rau Manufacturing, Engineering and Logistics Workforce Development Council qualifications@hangaarorau.nz if you wish to suggest changes to the content of this unit standard.