

Title	Inspect fixed fire protection systems for compliance		
Level	5	Credits	40

Purpose	<p>This unit standard is for fixed fire protection systems technicians who wish to become accredited inspection personnel required to inspect fixed fire protection systems for compliance with standard NZS 4541:2013 and/or other relevant standards listed in the references.</p> <p>People credited with this unit standard are able to: prepare for inspections; inspect fixed fire protection systems; and complete inspection documentation.</p>
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Classification	Mechanical Engineering > Fixed Fire Protection Systems
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Available grade	Achieved
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Explanatory notes

- References
 - Building Act 2004
 - Ministry of Business, Innovation and Employment (MBIE) *Acceptable Solutions (AS) and Verification Methods (VM)*. Available at <http://www.dbh.govt.nz/AS/VM-documents>
 - New Zealand Building Code
 - AS 4587:1999, *Water mist fire protection systems - System design, installation and commissioning*
 - AS ISO 14520.1-2009, *Gaseous fire-extinguishing systems - Physical properties and system design - General requirements*
 - AS ISO 14520.10-2009, *Gaseous fire-extinguishing systems - Physical properties and system design - HFC 23 extinguishant*
 - AS ISO 14520.14-2009, *Gaseous fire-extinguishing systems - Physical properties and system design - IG-55 extinguishant*
 - AS ISO 14520.15-2009, *Gaseous fire-extinguishing systems - Physical properties and system design - IG-541 extinguishant*
 - AS ISO 14520.2-2009, *Gaseous fire-extinguishing systems - Physical properties and system design - CF3I extinguishant*
 - AS ISO 14520.6-2009, *Gaseous fire-extinguishing systems - Physical properties and system design - HCFC Blend A extinguishant*
 - AS ISO 14520.9-2009, *Gaseous fire-extinguishing systems - Physical properties and system design - HFC 227ea extinguishant*
 - NZS 4517:2010, *Fire sprinkler systems for houses*
 - NZS 4541:2013, *Automatic fire sprinkler systems*
 - NFPA 12:2011, *Carbon dioxide extinguishing systems*
 - NFPA 15:2012, *Water spray fixed systems for fire protection*

NFPA 16:2011, *Installation of foam-water sprinkler and foam-water spray systems*
NFPA 17:2013, *Dry chemical extinguishing systems*
NFPA 17A:2013, *Wet chemical extinguishing systems*
NFPA 750:2010, *Water mist fire protection systems*
NFPA 2001:2012, *Clean agent fire extinguishing systems*.

2 Definitions

Enterprise 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.

Fixed fire protection system refers to engineered sets of components that work together to detect fires, alert occupants, and extinguish fires, and may include fixed or automatic systems, such as those described by the standards listed in the references, used for controlling or putting out fires.

Inspection refers to an organised examination of characteristics of fire protection systems against established standards.

Special hazards fixed fire protection system refers to systems designed and installed to AS 4214:2006, AS 4587:2002, NFPA 12:2011, NFPA 15:2012, NFPA 16:2011, NFPA 17:2013, NFPA 17A:2013, NFPA 750:2010, or NFPA 2001:2012. They may include but are not limited to: carbon, inert gas; dry chemical; wet chemical; foam, foam-water, water mist; and explosion suppression types of systems.

Systems in this unit standard include: conventional sprinkler system types such as pressurised, floating pressure, pre-action, tail end anti-freeze, dry pipe, alternate wet and dry pipe and deluge systems; and special hazards fixed fire protection systems.

Systems documentation refers to the documentation required to be maintained by NZS 4541:2013 and/or other relevant standards listed in the references, including log book, 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, and test and maintenance records.

3 Range

- a All activities must comply with relevant legislative and/or regulatory requirements and recognised codes of practice.
- b All activities must demonstrate safe working practices.
- c All activities must be completed and reported within agreed timeframes.

4 Assessment

For assessment purposes, competence must be demonstrated on at least five different systems including two special hazards system.

Outcomes and evidence requirements

Outcome 1

Prepare for inspections.

Evidence requirements

- 1.1 Scope and context for the inspections are established from systems documentation, NZS 4541:2013 and other relevant standards listed in the references.
- 1.2 Systems documentation is assembled in accordance with enterprise procedures.
- 1.3 Site access and timing of the inspections are agreed with site managers or customers in accordance with enterprise procedures.
- 1.4 Site occupational safety and health implications for self and others are identified and control measures put in place in accordance with enterprise procedures and safety guidelines.
- 1.5 Inspection plans are prepared in accordance with systems documentation and enterprise procedures.

Outcome 2

Inspect fixed fire protection systems.

Evidence requirements

- 2.1 Systems are inspected to establish compliance with NZS 4541:2013 and other relevant standards listed in the references in accordance with recognised inspection procedures and enterprise procedures.
- 2.2 Customers are advised of non-complying items and arrangements made for their rectification in accordance with enterprise procedures.
- 2.3 Systems are restored to operational status in accordance with systems documentation.
- 2.4 Site personnel are advised of system status and completion of inspection.

Outcome 3

Complete inspection documentation.

Evidence requirements

- 3.1 Inspection reports and certifications are prepared, sent to stakeholders, and filed in accordance with systems documentation and enterprise procedures.
- 3.2 Details of inspections are entered in the system log in accordance with systems documentation and enterprise procedures.
- 3.3 Software versions where used and site specific configuration data are included in the report in accordance with enterprise procedures.

Replacement information	This unit standard replaced unit standard 17736.
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Planned review date	31 December 2020
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Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	21 July 2011	31 December 2017
Review	2	15 October 2015	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>.

Please note

Providers must be granted consent to assess against standards (accredited) by NZQA, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be granted consent to assess against standards by NZQA before they can register credits from assessment against unit standards.

Providers and Industry Training Organisations, which have been granted consent and which are assessing against unit standards must engage with the moderation system that applies to those standards.

Requirements for consent to assess and an outline of the moderation system that applies to this standard are outlined in the Consent and Moderation Requirements (CMRs). The CMR also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

Comments on this unit standard

Please contact Competenz on qualifications@competenz.org.nz if you wish to suggest changes to the content of this unit standard.