Title	**Demonstrate knowledge of inspection and testing of interconnected control and fire alarm systems**		
Level	**4**	**Credits**	**4**

Purpose	This unit standard is for personnel employed in the fire protection industry and covers the knowledge of inspection and testing of interconnected control and fire alarm systems. People credited with this unit standard are able to demonstrate knowledge of testing requirements and procedures for interconnected control and fire alarm systems, inspection requirements and procedures for interconnected control and fire alarm systems; identify and describe the purpose of documentation required for inspection and testing of interconnected control and fire alarm systems; explain how to prepare and prepare for inspection and testing of interconnected control and fire alarm systems; and demonstrate knowledge of documentation required and complete documentation for reporting after the inspection and testing of interconnected control and fire alarm systems.

Classification	Mechanical Engineering > Fire Protection Systems Technology

Available grade	Achieved

Guidance Information

1 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,
AS 1851:2012, *Routine service of fire protection systems and equipment*,
AS/NZS 3000:2018, *Electrical installations (known as the Australian/New Zealand Wiring Rules),*
National Fire Protection Association, NFPA 72:2022, *National Fire Alarm Code® (NFPA 72)*,
NZS 4512:2021, *Fire detection and alarm systems in buildings*,
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.

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2 Definitions

Fire alarm systems, in this unit standard, include emergency warning systems, sprinkler systems, fire detection and alarm systems designed and installed to NZ Standard 4512:2021, and special hazards actuation systems.

Interconnected control systems, in this unit standard, refer to systems that are interconnected with fire detection and alarm systems including, but not limited to – the control panels and wiring for: sprinkler systems, mechanical extraction systems, air-handling systems, emergency power, and lighting systems.

Systems documentation refers to the documentation required to be maintained by NZS 4512:2021, including logbook, test reports, equipment details and drawings, specifications, contract agreement, software configurations and versions, additions and alterations, fire reports, building consents standards, codes of practice, installation instructions, test and commissioning procedures, and 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

All activities must be done in accordance with applicable aspects of NZS 4512:2021, NFPA 72, and applicable plans, systems documentation, compliance documents, and workplace procedures.

4 Recommended skills and knowledge

Unit 17713, *Demonstrate knowledge of interconnected control and fire detection and alarm systems*, or demonstrate equivalent knowledge and skills.

Outcomes and performance criteria

Outcome 1

Demonstrate knowledge of testing requirements and procedures for interconnected control and fire alarm systems.

Performance criteria

1.1 Testing requirements and procedures for the systems are identified.

1.2 Testing requirements and procedures are described.

1.3 Safety requirements for the systems are identified and referenced to the systems documentation.

Outcome 2

Demonstrate knowledge of inspection requirements and procedures for interconnected control and fire alarm systems.

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Performance criteria

2.1 Inspection requirements and procedures for the systems are identified.

2.2 Inspection requirements and procedures are described.

2.3 Safety requirements for the inspection of the systems are identified and explained.

Outcome 3

Identify and describe the purpose of documentation required for inspection and testing of interconnected control and fire alarm systems.

Performance criteria

3.1 Documentation required to be used during and after inspection and testing of systems is identified and described.

3.2 The purpose of each document is identified, and an example of each document is described.

Outcome 4

Explain how to prepare and prepare for inspection and testing of interconnected control and fire alarm systems.

Performance criteria

4.1 Steps in the preparation for inspection and testing of a system are explained.

Range contract agreements and specifications, inspection and testing requirements, system operation and interfaces with other systems, safety requirements for the systems, appointments, personnel notification, time requirements.

4.2 Plans for the inspection and testing of the system are prepared from given examples and all factors to be considered during the preparation for and the testing of systems are included.

Outcome 5

Demonstrate knowledge of documentation required and complete documentation for reporting after the inspection and testing of interconnected control and fire alarm systems.

Performance criteria

5.1 Documentation required for reporting is described in accordance with NZS 4512:2021 and alarm transport service requirements, and recipients are identified.

5.2 Descriptions of each document are provided and an example of each is completed.

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5.3 The requirements for reinstatement of systems to operational standard on completion of inspection or testing are identified and described.

Planned review date	31 December 2029

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	31 December 2000	31 December 2017
Review	2	26 March 2007	31 December 2017
Revision	3	23 April 2008	31 December 2017
Review	4	15 October 2015	31 December 2026
Review	5	27 June 2024	N/A

Consent and Moderation Requirements (CMR) reference	0013

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.

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