

AON SPRINKLER CERTIFICATION

Aon New Zealand
 Aon Sprinkler Certification
 Aon Building, 1st Floor,
 4 Fred Thomas Drive,
 Takapuna, North Shore City
 Telephone: 09 – 486 9761
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Aon Sprinkler Certification Technical Note

Note Number: 15-15	Issue: 1	Date: 11 May 2015
Subject	Sprinkler System Compliance Certificates	
Notice: Aon Sprinkler Certification Technical Notes provide guidance notes which may be used in certification of sprinkler installations by Aon New Zealand. If sprinkler installations are being certified by any other Sprinkler System Certifier, these Technical Notes may not apply.		

NZS4541 *Automatic Fire Sprinkler Systems* and NZS4515 *Fire Sprinkler Systems for Life Safety in Sleeping Occupancies* require that sprinkler installations are certified by a Sprinkler System Certifier. Aon is the only organisation currently trading as such an organisation. Aon is accredited by IANZ under ISO/IEC 17020:2012 to provide this service.

New Construction

If the sprinkler system is compliant with the nominated standard Aon will issue an IANZ endorsed Sprinkler System Certificate of Compliance. If the sprinkler system deviates from a nominated standard Aon may issue an unendorsed Sprinkler System Certificate.

The evidence that a Building Consent Authority can seek that a system is certified is as follows:

- For systems complying with NZS4541 a copy of Aon's Form 6 *Sprinkler System Certificate of Compliance*. This form will normally consist of three pages – a certificate, a system information summary, and a copy of the fire protection contractor's block plan, which shows the extent of protection.
- For systems complying with NZS4515, Form 14 will normally consist of three pages, also consisting of a certificate, a system information summary and a block plan.
- In some cases, a sprinkler system will be consented with deviations from a nominated standard. This will normally apply only in exceptional cases, where the Fire Safety Design for the building nominates these deviations in the Consent Documentation. In such cases, a three page "unendorsed" certificate will be issued.

Historically, some Building Consent Authorities have been accepting a letter/report from an ISO 17020 accredited Inspection Company as evidence that compliance has been achieved for the purposes of issuing a Code Compliance Certificate for the building. Such letters are not adequate evidence, albeit, in most cases, they may provide sufficient evidence that the sprinkler system is substantively complete and functional, to the extent that a Certificate of Public Use could be issued.

Figure 1 shows the format of a typical Sprinkler System Certificate of Compliance. The Building Consent Authority should expect to receive this document prior to issuing a Code Compliance Certificate for the works (except as described above).

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Extensions and Alterations to Existing Systems

Aon may issue either Sprinkler System Extension/Alteration Compliance Statement (for all or part of the building) or, if not required then the installer (contractor) will provide a Producer Statement and the Inspection Company will provide a letter of compliance.

NZS4541:2013 clause 112.7 provides reasonably clear guidelines as to when a Sprinkler System Certifier needs to be engaged on the project. Previous editions of the standard were not as clear.

This clause states:

112.7

Small alterations and extensions do not require documentation submissions to an SSC subject to the following limitations:

- (a) Alterations to ELH, OH1, or OH2 systems of less than 20 sprinklers where the *K* factor of the sprinkler is not changed. In the event that the first fix pipe work is unaffected by the works, the alteration may be up to 40 sprinklers;
- (b) Alterations to OH3 systems of less than 10 sprinklers where the *K* factor of the sprinkler is not changed. In the event that the first fix pipe work is unaffected by the works, the alteration may be up to 40 sprinklers;
- (c) Extensions to OH3 systems of less than 14 sprinklers. The contractor shall complete hydraulic calculations to show that the design requirement is no worse than the existing demand. In the event that the extension is not at the hydraulically most remote point, the extension may be up to 20 sprinklers;
- (d) Any alteration or extension not subject to documentation submission to the SSC shall either be reviewed by a contractor with either the design or routine inspection endorsement of Appendix C. See also Figure E3.

For example, in (a) if an office or retail fit-out requires that up to 40 heads be shifted or changed without altering the pipe work feeding the drops to these heads or the *K* factor of the sprinkler, then a Sprinkler System Certifier's endorsement of these works is not required. In such cases, the Building Consent Authority could reasonably expect to seek evidence of compliance in the form of a producer statement from the fire protection contractor, along with verification that the works comply in the form of a letter from an inspection company accredited under ISO17020 to carry out that work.

Unfortunately, clause 112.7 could also be open to interpretation. We are aware of some projects where alterations have occurred on multiple floors of a building undergoing seismic strengthening, with the argument that the clause applies to each individual floor. Aon believes that this is not appropriate and if such significant works are occurring, that details of the works should be submitted to a Sprinkler System Certifier for review.

If the extent of works exceeds the limitations provided in clause 112.7, then a Sprinkler System Certifier will need to be engaged to certify the works.

However, certification may not be straightforward, for the following reasons:

- The existing installation may not comply with current codes or standards.
- The construction contract may limit the works to certain parts of the building.

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In these cases, it is usually not possible to certify the building as a whole, as the complete system is not compliant and Aon will issue a Compliance Statement which is limited to the works involved. This will normally consist of a two page document in letter format, plus a block plan highlighting the area of the works. If Aon has any concerns regarding the efficacy of the sprinkler system outside the contracted works, then this will be clearly outlined in the document.

Figure 2 shows the format of a typical Compliance Statement. The Building Consent Authority should expect to receive this document prior to issuing a Code Compliance Certificate for the works (except as described above).

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Client.....
 Aon File Ref:



SPRINKLER SYSTEM CERTIFICATE OF COMPLIANCE

This is to certify that following a review of the design parameter application made by on the as-built plans and hydraulic calculations provided by dated and a physical site inspection by **Fire Protection Inspection Services Limited, Fire System Inspections Limited, Aon Inspection Services, Kensway Fire Limited** on of the sprinkler system installed at:

.....
 (name of building and full street address)

conforms with the requirements of **NZS 4541:2003, NZS 4541:2007, or NZS 4541:2013** as amended by the **New Zealand Building Code**, in all respects at the time of completion.

Date Signed
 Name **Chris Mak (IANZ Approved Signatory)**

Certificate No. To have effect from

Expires

Note:

- (1) This certificate is issued by Aon Sprinkler Services a division of Aon New Zealand.
- (2) This certificate remains the property of the sprinkler system certifier and may be withdrawn if the system ceases to comply.
- (3) On-going compliance with the Standard requires that the sprinkler system is routinely tested, serviced and maintained.
- (4) Any alteration or extension to the building, or changes in occupancy or storage practice may necessitate alterations to the system and re-submission for approval.
- (5) This certificate expires 24 months after the above date and the Standard requires that the installation is re-inspected biennially.
- (6) The system water supplies were adequate to meet the sprinkler demands at the time of final site inspection. If the water supplies have decreased to a level that does not meet the system demands, this certificate shall be deemed to have been withdrawn.
- (7) The site inspections were carried out by an accredited organisation, **Fire Protection Inspection Services Limited**
- (8) The site inspections were carried out by an accredited organisation, **Fire System Inspections Limited**
- (9) The site inspections were carried out by an accredited organisation, **Kensway Fire Limited**
- (10) The site inspections were carried out by an accredited organisation, **aon inspection services**
- (11) Please refer to page 2 of this certificate for a summary of the sprinkler system design data, which includes details of any deviations from the published standard as allowed by New Zealand Building Code Compliance Document C/AS1 Appendix D.
- (12) This certificate replaces certificate number dated
- (13) This certificate must be read in conjunction with Aon Letter Reference dated
- (14) This certificate consists of 2 pages and must only be reproduced in full.
- (15) The person who carried out the work to prepare this certificate is **CG Mak, CPEng**
- (16) This work was carried out by **MD McLellan** under the supervision of **CG Mak, CPEng**.

This certificate is issued by Aon Sprinkler Services, a division of Aon New Zealand.

This Sprinkler System Certificate of Compliance is provided in accordance with our agreement and is in accordance with the provisions of NZS 4541. In reviewing the certificate we would like to draw your attention to the fact that it is issued upon conditions observed, information supplied by the inspection agency and the as-built details provided by you for review of the specified sprinkler installations. We did not undertake, on your behalf or for the benefit of others, identification of all hazards, loss potentials, statutory or code violations or violations of any good practice pertaining to any other subjects. We also do not guarantee, assure or warrant, on your behalf, or for the benefit of others, (1) the safety of such locations; (2) that you are in compliance with all central and local Government laws, statutes, ordinances, recommendations, regulations, consensus Codes, or other standards.

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Aon File Reference No:

FORM 6

SPRINKLER SYSTEM CERTIFICATE OF COMPLIANCE System Summary Information Sheet

Building Name	
Building Address	
Building Use	
Design Standard	NZS4541:20XX as modified by the Acceptable Solutions published as a means of complying with the New Zealand Building Code
NZBC Deviations	Exposure Protection not in compliance with clause 206. Hand operated fire fighting equipment not in compliance with clause 208
Approval Date	
Original Monitoring Company	ADT Fire Monitoring Alarm New Zealand Limited Automatic Fire Alarm Monitoring Limited
Occupancies	Extra Light Hazard Ordinary Hazard Group 1 Ordinary Hazard Group 2 Ordinary Hazard Group 3 Ordinary Hazard Group 3 Special Extra High Hazard
Highest Sprinkler Demands	
Accredited Inspection Agency	Fire Protection Inspection Services Limited Fire System Inspections Limited Aon Central Inspection Services Kensway Fire Limited
Installation Contractor	
Description of Water Supplies	
Notes	

This certificate is issued by Aon Sprinkler Services, a division of Aon New Zealand.

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Fig 1 – Format of a Sprinkler System Certificate of Compliance (Block Plan not shown.)

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Aon New Zealand
Global Risk Consulting
Sprinkler Certification

15 September 2014

Aon Client
ASC File Ref: P 0000
Report Identifier: E

Via Email

Recipient Name
Client
City

Sprinkler System Extension/Alteration
Unique Identifier of Site
Identification of Works

Compliance Statement

Aon, as a Sprinkler System Certifier as defined by NZS4541, confirms on reasonable grounds that the extensions and alterations to the sprinkler system as outlined below complies with the requirements of NZS4541:2013 as amended by the **New Zealand Building Code**.

Scope of Works

Define, including a reference to block plan or other identifier.

Evidence

The evidence presented and evaluated to allow this statement to be made includes:

- i) A Design Parameter Submission made by Client dated date.
- ii) A Completion Documentation Submission, including drawings and calculations stated to be as-built made by Client dated date.
- iii) An accredited third part inspection letter/report prepared by Aon Inspection Services / Fire Protection Inspection Services Limited / Fire System Inspections Limited / Kenway Fire Limited dated date.
- iv) A Fire Safety Design Report reference, dated date.

Notes and Observations

List occupancy classifications of new works.
General description of any special features related to this report.
Provide design demands for the new works, and state if these are more onerous than previous design demands we have on file.
Detail any special compliance feature requirements.
State required date of next biennial survey.

Please note that this statement does not infer that sections of the works not described in the scope statement comply with the provisions of NZS4541:2013.

Signed _____ Date _____

Chris Mak
Technical Services Manager
IANZ Authorised Signatory



Matt McLellan
Fire Protection Consultant
IANZ Authorised Signatory

Stephen Ridder
Fire Protection Consultant
IANZ Authorised Signatory

Note:

- (1) This certificate is issued by Aon Sprinkler Certification a division of Aon New Zealand.
- (2) This certificate remains the property of the sprinkler system certifier and may be withdrawn if the system ceases to comply.
- (3) We have issued the Fire Safety Design Report and Specification presented to Aon as part of the Designer's Submission. We do not warrant that this documentation is the version under which the Building Consent was granted. If relying on this certificate for the purposes of issuing a Certificate of Code Compliance as required by the Building Act, the user should check to see that this documentation matches the Building Consent.
- (4) Ongoing compliance with the Standard requires that the sprinkler system is routinely tested, serviced and maintained.
- (5) Any alteration or extension to the building, or changes in occupancy or storage practice may necessitate alterations to the system and re-submission for approval.
- (6) This certificate expires 24 months after the above date and the Standard requires that the installation is re-inspected biennially.
- (7) The system water supplies were adequate to meet the sprinkler demands at the time of final site inspection. If the water supplies have decreased to a level that does not meet the system demands, this certificate shall be deemed to have been withdrawn.
- (8) This certificate replaces certificate number _____ dated _____.
- (9) This certificate must be read in conjunction with Aon Letter Reference _____ dated _____.
- (10) This certificate consists of 3 pages (including a block plan) and must only be reproduced in full.
- (11) The person who carried out the work to prepare this certificate is CG Mak, CPEng.
- (12) The person who carried out this work is MD McLellan/WS Ridder under the supervision of CG Mak, CPEng.

Figure 2 – Format of a Compliance Statement for an Extension or Alteration