

# AON SPRINKLER CERTIFICATION



## Aon New Zealand

Aon Sprinkler Certification  
Aon Building, 1<sup>st</sup> Floor,  
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<b>Aon Sprinkler Certification Technical Note</b>		
<b>Note Number:</b> <b>TN20-49</b>	<b>Issue: 1</b>	<b>Date: 1 September 2020</b>
<b>Subject</b>	<b>Window Sprinklers</b>	
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.		

NZS4541:2013 clause 207.4 allows internal drenchers to be installed as part of the sprinkler system, to provide the fire rating required for compliance with the Building Code. NZS4541 does not go on to provide design guidance for how these drencher systems are to be configured. On occasion, Aon are asked “what are Aon’s requirements?” The following guidelines have been released following issues we have faced on several sites.

1. The window sprinklers must be installed in accordance with manufacturer’s data sheet. This includes details such as:
  - a. Glazing material
  - b. Framing material
  - c. Gasketing
  - d. Spacing
  - e. Mullions
  - f. Height of glazing
2. Where the application falls outside the manufacturer’s criteria we are unable to certify the engineered design as there is no path to compliance.
3. Window sprinklers cannot be used to protect operable glazing.
4. Window furnishing cannot be installed between the glazing and the window sprinklers.
5. The resilience of the water supply needs to be determined on a risk-based approach arriving at a consensus of the relevant stakeholders. Normally, the windows sprinklers will be required to remain operable when the sprinkler system is isolated. We do not believe that it is the role of the sprinkler designer nor the fire protection engineer (in isolation) to determine these requirements. We have sighted a diversity of approaches including:
  - a. Having the window sprinklers supplied by a separate sectional isolation valve, with the sprinklers also served by a floor isolation valve.
  - b. Having the window sprinklers supplied by an isolation valve upstream of the alarm valve. (We note that consideration to generate an alarm should a window sprinkler operate needs to be considered in the design.)
  - c. A separate connection to the town’s main, with a standalone fire pump supplying the drencher system.

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We are also aware of at least one site, where the window sprinklers were installed supplied by the sprinkler pipework protecting the floor. Council's Building Inspector rejected this approach, and the drencher installation had to be altered.

NZS4541 207.4 provides guidance on the simultaneous requirement for window sprinklers and the sprinkler system. The design also needs to cater for the demand when the sprinklers are isolated. This will usually require all the window sprinklers in the fire cell to operate.

A handwritten signature in black ink, appearing to read "Chris Mak", is positioned above the printed name.

Chris Mak

**MANAGER – AON FIRE PROTECTION**