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A GUIDE to **ACCEPTABLE SOLUTIONS** to **BUILDING CODE COMPLIANCE** in relation to **PASSIVE FIRE**

All buildings must comply with the New Zealand Building Code. For information on all matters to do with compliance go first to the [Ministry of Business, Innovation & Employment official website](#).

The most obvious way to comply with the Building Code is to install systems that comply with AS1530.4 and AS4072.1. But frequently we are faced with situations where the system we want to use does not match exactly the physical installation site. In that case we need to employ one of the [different ways to comply with the Building Code](#)

There are two routes open to us – [Acceptable Solutions](#) and [Alternative Solutions](#). The difference is that Acceptable Solutions, as the name implies, are automatically accepted as complying with the Building Code. The website specifically states: “*they must be accepted by a BCA (usually the council) as complying with the related Building Code provisions*”. So you do not need to gain specific approval to use an Acceptable Solution.

An Alternative Solution, on the other hand, is not automatically accepted. This needs to be proven and requires a lot more work, usually including a Technical Opinion from an authorised source.

This guide sets out the Acceptable Solutions available to our trade, as some are not well known. To see these, go first to the section of the Building Code that covers our industry - [Clause C “Protection from Fire” Subclause C3](#). There are separate Acceptable Solutions documents for each type of building labelled C/AS1 through to C/AS7. For our industry C/AS2 to C/AS5 covers the range of buildings usually requiring passive fire and there are three Acceptable Solutions we can take advantage of.

Acceptable Solution # 1 – The 300mm Rule

4.4.5 A fire stop for a penetration is not required to have an insulation rating if means are provided to keep combustible materials at a distance of 300 mm away from the penetration and the fire stop to prevent ignition.

This is particularly useful where bare pipes are the penetrant and meeting the insulation rating requires extra insulation or expensive remedial work. Provided it can be shown that no combustible material will be close to the pipe penetration then compliance must be granted. Note that 300mm is quite a short distance – many pipe insulation systems require up to 1000mm of pipe insulation to meet the rating – so this Acceptable Solution can be very helpful.

Acceptable Solution # 2 – The Sprinkler Exemption

2.3.13 *Insulation ratings are not required to apply to:*

a)

b) All elements where sprinklers are installed throughout the *building*, in accordance with either NZS 4541 or NZS 4515 as appropriate,

A building with sprinklers does not require any penetration to have an insulation rating, so remember to always ask this question as it can save a lot of time searching for systems that end up being over-spec.

Acceptable Solution # 3 – The Sprinkler Reduction

2.3.2 *If a fire sprinkler system is provided, the FRRs for risk group WB shall be:*

Life rating = 30 minutes

(Example from C/AS5 where minimum ratings normally set at 60mins)

This clause allows the Fire Integrity rating to be halved for a building with sprinklers. Note this does not apply to buildings which are required by law to be sprinklered (care or detention facilities) as those FRRs have already been set knowing that sprinklers would be installed. However, all other buildings such as apartments, offices, shops, etc with a 60min rating can be protected with 30min systems if they are sprinklered and that must be accepted by BCAs. Remember this Acceptable Solution refers to the minimum FRRs that must be adhered to. If your fire engineer has specified a higher rating for some other reason then that higher rating must be adhered to.