

Auckland Council position statement for acceptance of fire stopping



The following position outlines Auckland Council's expectations for acceptance of fire stopping systems (*fire stops*) as put forward within building consent applications and for acceptance on site during the construction, inspection and Code Compliance stages of building work.

General

All fire stopping systems (*fire stops*) to be specified and accepted as part of the building consent and inspection approvals process shall be in accordance with AS 4072: Part 1.

Fire test reports or *Variations subject to Formal Opinion* complying with the requirements of AS1530: Part 4 and AS 4072 shall be available upon request to support the system proposed and demonstrate on site installation where necessary.

Auckland Council will accept reference to AS 1530.4:2014 as well as the cited and superseded 2005 version.

It is recommended that all passive fire stopping systems proposed to be used are to be registered on the FPANZ [Passive Product Register](#).

Alternative Solutions and systems that do not meet the above requirements will only be accepted in the following circumstances:

1. It can be demonstrated that there is no available system or solution readily available on the market that complies with AS 4072.
2. Any Alternative Solutions or '*Engineering Judgements*' need to be fully supported by the product manufacturer/test sponsor given the proposed circumstances representative of their use in service. This is to include the respective durability and warranty requirements for the product.
3. Products and systems that have been tested to an overseas standard such as BS476, UL1479, EN 1366 etc are to be treated as Alternative Solutions. Systems tested to an overseas standard will only be accepted where accompanied by suitable evidence that demonstrates equivalency to a product tested in accordance with AS1530.4. Any such system will require the provision of appropriate evidence, by person(s) with suitable experience and knowledge of the relevant testing requirements, as part of the consent process. This is expected to be the manufacturer of the product.

Any deviations from the approved consented documents will require a consent amendment unless otherwise specifically agreed with the Council. Alternative Solutions not identified during the design and consent stages will only be accepted as part of a consent amendment unless otherwise specifically agreed with the Council.

For existing buildings undergoing Alterations, Change of Use or remediation of non-compliant and damaged elements of construction/construction defects, Alternative Solutions may be accepted given the specific nature of the situation and extent of works proposed.

Acceptance in accordance with the principles of '*As Nearly As Is Reasonably Practicable*' ANARP, as required by the Building Act and as established by relevant guidance¹ may allow the acceptance of products/systems that have not been verified to fully comply with the compliance documents and AS 4072. Supporting evidence will need to include consideration of a risk-based approach to support proposals on the grounds of ANARP.

¹ Auckland Council Practice Note AC2226 Applying the term as near as is reasonably practicable

Where un-verified systems are proposed, or a solution is to be adopted without supporting test evidence or manufacturers support i.e. systems that consist of different manufacturers products that when combined are expected to perform in a particular manner. Such approaches will need to be agreed with the Council during the design stages and cannot be accepted on site once installation has occurred unless specific circumstances have come to light during construction such as as-built assumptions being incorrect. In these circumstances, the approach must be supported by the fire design engineer.

Consent Documentation and Approval Requirements

In accordance with the Building Act it is the responsibility of the building consent applicant to demonstrate to the relevant Building Consent Authority (BCA) that the design submitted for building consent when built will meet the requirements of the New Zealand Building Code.

Consent documentation requirements for passive fire stopping must include the following information to confirm how passive fire systems are to be installed and inspected.

All building consent applications must include drawings indicating all fire separations, the required Fire Resistance Rating (FRR) and details the construction of the separation or include reference to appropriate specifications.

Passive fire protection is both complex and detailed and adequate time should be spent researching the correct product before specifying, designing, sourcing or installing any product to ensure the chosen system is fit for purpose and can be constructed to meet the Building Code. BRANZ guidance² is available to support the correct design of passive fire protection.

For simple buildings and *Low and Medium risk designs*³, confirmation of compliance with the Acceptable Solution compliance documents (C/AS1-6) is expected as detailed above for fully compliant systems. Typically, the BCA will undertake the inspections without the need for 3rd party independent inspection.

For complex buildings and *High-risk designs*³, full details of all products and systems to be used including relevant specifications and the process for construction, installation and inspection should be provided to support consent approval. Where there is limited information and details provided to confirm product selection and system installation within the building consent application, the following information shall be provided as a minimum:

1. Details of the passive installer/contractor and confirmation that a PS3² is to be provided to support the installation
2. Confirmation that a suitable 3rd party inspector is to oversee installation and undertake inspections of the fire stopping in accordance with the approved building consent. The extent of inspections and process to be undertaken by the 3rd party inspector is to be provided to Council as part of the building consent

Auckland Council expects that all installers and inspection contractors are suitably qualified and experienced in passive fire stopping systems. As a minimum all passive fire stopping *installers* should be registered with the Fire Protection Association of New Zealand (FPANZ) and listed on their website.

² Guide to Passive Fire Protection in Buildings. BRANZ Ltd. 2017

³ Auckland Council Practice Note AC2301 Producer Statement Policy

Onsite Labelling of Penetrations

Appendix B4 of AS4072.1 state that all service penetrations and control joints be labelled. It is not practical in all situations e.g. penetrations visible to living spaces to provide labels. Council expects that all service penetrations and control joints be provided with a label unless it can be justified otherwise. Where labels are not provided evidence of the system installation must be provided and recorded to ensure identification and traceability.

Quality Management Systems and 3rd Party Inspections

Option 1: At application stage

For complex projects a Quality Management System (QMS) and Project Quality Plan (PQP) to support the installation of fire stopping and passive fire protection systems may be necessary to support the building consent application. The requirement for a QMS to form the consent document needs to be balanced against the complexity of the proposed building works and ability for the Council to undertake appropriate inspections.

Option 2: After consent issued and tendering completed

For complex projects a Quality Management System (QMS) and Project Quality Plan (PQP) to support the installation of fire stopping and passive fire protection systems will necessitate a Pre-Con meeting prior to installation of any Fire Stopping/Passive products with the Project Manager and Installer. This is to allow Council to comment on the QMS and the Project Quality Plan (PQP) for the process going forward. The requirement for a QMS and Project Quality Plan (PQP) needs to provide evidence that the installation complies with the following requirements to form the consent document and needs to be balanced against the complexity of the proposed building works and ability for the Council to undertake appropriate inspections.

Where 3rd party inspectors are to be used as part of any QMS the inspectors shall be completely independent of, and divested from, the installer, contractor, manufacturer, or supplier of any material being inspected. The inspector shall not be a competitor of the installer, contractor, manufacturer, or supplier of any material being inspected.

The following is suggested as guidance for the necessary frequency of inspections:

- The inspector shall be on site during installation and randomly witness a minimum of 10% of each type of fire stopping system being installed, or
- The inspector shall conduct a post installation inspection, which shall require destructive type verification of the fire stopping system and repair of the fire stopping system. A minimum of 2%, but not less than one of each type of fire stopping system shall be inspected per floor or for each area of a floor when a floor is larger than 10,000 m².

Council Inspections

In order for a Code Compliance Certificate (CCC) to be issued, Council needs to be satisfied on reasonable grounds that the completed building work complies with the approved building consent. To enable this to be achieved, the building owner is responsible for ensuring the inspections are booked, undertaken and that relevant documentation such as Producer Statements, testing certificates and warranties to confirm compliance during construction are provided.

Typically fire rated linings and passive fire protection measures will be inspected by Council inspectors. Fire rated linings; materials, collars, wraps and other passive fire protection measures including suspended ceilings will be inspected as part of a post-line inspection prior to any fire stopping. The extent of Council inspection of fire stopping will depend on the quality of documentation presented as part of the building consent application and will include consideration of the level of confidence that can be gained by agreeing to the installer and any 3rd party inspector.

Council inspections may include destructive verification of different installation types to confirm compliance with the relevant data sheets and installation requirements. The expectation is that all of these inspected installations will be found to be compliant. Should one installation be found to be non-compliant then Council will undertake a further invasive investigation of another 10 installations and so on until 100% compliance is achieved.

The decision as to which installations are inspected and tested remains the sole decision of Council. The applicant will agree to repair and replace any installations chosen for inspection.

Fire PS4 and Construction Monitoring

How the applicant intends to undertake and execute building works to demonstrate compliance with the New Zealand Building Code is ultimately the responsibility of the applicant. Projects involving complex building work will likely require a PS4 from the projects fire designer/engineer. Supplying a Fire PS4 is one way in which the Council can be satisfied that compliance with the consented fire design has been achieved. The intention to provide a fire PS4 to support a building consent should be made clear within the documentation submitted within the building consent application. This should include confirmation as to what extent of construction monitoring is to be undertaken, by whom and how.

The producer statement process is one way but not the only way that could be used to show that compliance has been achieved. Where applicants do not wish to use the producer statement process or provide a fire PS4 that includes passive fire protection within its scope, the applicant needs to clearly set out how they intend to complete the building work and show that compliance with the consented design has been achieved.

Compliance Schedule Items / Building Warrant of Fitness

Plans are required identifying the location of all fire separations within the building to enable the future inspection of fire separations and identification of any fire stopping and passive fire protection systems installed. Such plans are also necessary to facilitate annual inspection of Specified Systems and to enable future works to maintain compliance of the fire separation.

Where any alterations to fire separations are undertaken, the building plans identifying the necessary fire separations shall also be updated and submitted to the Council to ensure that the BWOF information remains current.