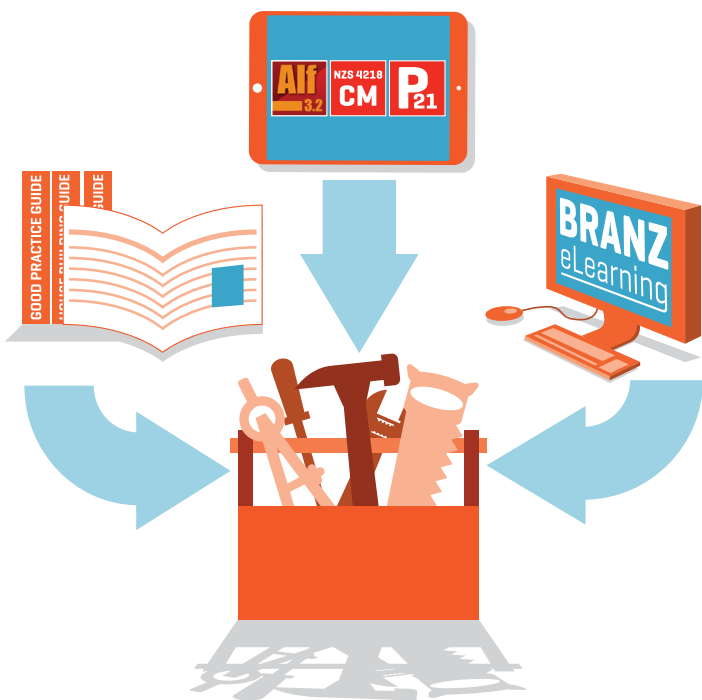


Supporting alternative methods

BRANZ has a suite of web-based calculation tools and other resources that come in handy to support an alternative method proposed in a building consent application.

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AT CONSENT STAGE, there is often a roadblock when it comes to having an alternative method consented. The two key steps for designers are to:

- clearly identify where an alternative method, whether a system, detail or component, is proposed
- provide sufficient relevant information showing that the proposed alternative method will comply with the appropriate performance requirements of the Building Code.

Select the appropriate compliance path

The process to get a building consent is called a compliance path.

The options are:

1. comparison with an Acceptable Solution
2. comparison to other documents
3. comparison with in-service history
4. expert opinion
5. comparison to a previously accepted Alternative Solution
6. CodeMark certification, provided the use is within the conditions of the certification
7. MBIE determination
8. Verification Methods
9. Acceptable Solutions.

Deemed to comply

Compliance paths 6-9 are deemed-to-comply compliance paths. If followed to the letter, the work must be accepted as Code compliant by a building consent authority (BCA).

Alternative method

Options 1-5 can be used where an alternative method is proposed. An alternative method becomes an Alternative Solution once it has been consented as being Code compliant by the BCA.

Typically, an alternative method will be needed when the design is not following a Verification Method or an Acceptable Solution. Support must:

- be directly relevant to the project and its situation
- clearly identify any variations from reference documentation
- be included in the consent documentation.

Demonstrating compliance

Several BRANZ resources can be used to assist in demonstrating building compliance in support of a building consent application.

The resources vary widely from web-based calculation tools through to published works.

Web-based calculation tools

BRANZ calculation tools can be found on the BRANZ website (www.branz.co.nz) in the Toolbox:

- The Lintels and Beams Calculator allows beam sizes to be calculated for spans and materials outside the scope of NZS 3604:2011 *Timber-framed buildings*. An example is a steel or glulam lintel over a 4.5 m wide opening (NZS 3604:2011 tables for lintels are limited to a 4.2 m span and only cover standard framing timber sizes). The key proviso when using the tool is that the building itself must fall within the scope of NZS 3604:2011. A producer statement to support the calculation can be printed off when purchased.
- ALF 3.2 is a free online aid to the thermal design of houses. It is presented in a step-by-step format providing a simple method of calculating the energy performance of conventional New Zealand houses. ALF 3.2 is a Verification Method for determining the Building Performance Index (BPI), which can be used to show compliance with the energy efficiency clause H1 of the New Zealand Building Code. If the calculated BPI is less than 1.55, the building complies with the requirements of clause H1.
- NZS 4218:2009 Calculation Method Tool is a free tool that can be used to demonstrate compliance with Building Code clause H1 when using the NZS 4218:2009 calculation method.
- BRANZ P21 test can be used to determine the capacity of sheet wall bracing elements for use with timber framing.

Expert evaluation and testing

There is further expert advice from BRANZ:

- BRANZ Appraisals - robust, in-depth independent evaluations for building products and systems to be deemed fit for purpose and ➤

Building Code compliant provided their use is within the terms of the Appraisal.

- BRANZ Type Tests - a testing regime related to a specific aspect of a material or systems performance. They are available for low to medium-risk products and systems. Tests are carried out against published criteria such as a New Zealand Building Code referenced standard.
- BRANZ Technical Opinions - a verification of performance intended for relatively low-risk products expected to have a long history of use and, therefore, a good track record of performance.

Comparison with other documents

While not a deemed-to-comply option, a range of BRANZ published information based on 'good' practice may be used in support of the use of a product, system or detail:

- Good Practice Guides - *Membrane roofing, Long-run Metal Roofing, Profiled Metal Wall Claddings, Masonry Veneer, Concrete Masonry, Tiling, Timber Cladding and Internal Linings*
- BRANZ bulletins such as Bulletin 605 *Residential glazing safety* and 505 *Acceptable plans and specifications*.

- Building Basics - *Steel Framing, Insulation, Weathertightness, Internal Moisture and Building Code Compliance*.
- BRANZ *House Insulation Guide*, BRANZ *Details*.

Further information that may be used as support for a building consent application can be found on www.weathertight.org.nz and www.seismicresilience.org.nz.

More on the building control system

For many, a building control system with a Building Code based on performance is still a bit of a mystery, particularly the information required to support an alternative way of constructing buildings.

BRANZ reference material that describes the current system includes:

- Building Basics books - *Building Code Compliance* and *Your Business*
- Online seminars (webinars) - *Compliance Paths*
- e-learning modules - *Building Control System*. Topics covered in this self-paced module are the Building Act, Building Code clauses, design, building consent and Code Compliance Certificates. ◀

For more Many of the BRANZ resources can be accessed from the BRANZ shop at www.branz.co.nz/shop.