

Product substitution and variations

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If you want to substitute a building product originally specified in your building consent application, you need to show the council how it meets the Building Code requirements.

The Building Code sets out minimum performance requirements for buildings. These requirements can be met through the use of a variety of different products, systems or both. In some cases, the products or systems may well exceed the minimum requirements of the Building Code. In other cases they only meet the minimum requirements.

Often the degree of product performance is dictated by cost or owner/designer preferences.

When deciding how to deal with a product substitution, the responsibility falls on the applicant to demonstrate that the proposed substitute will meet the performance requirements of the Building Code. Where the new product performs differently to the one specified, the applicant should also describe the effect of the change on other work.

If the building consent authority has existing knowledge about a suggested alternative, or an already-evaluated building product or system, justifying its compliance can be a simple matter.

Minor variations that involve product substitution

In assessing proposed minor variations that involve substituting products, councils in their capacity as BCAs, builders, designers and project managers should note that:

- some building products substantially exceed the minimum Building Code requirements
- product performance is often dictated by the preferences of the owner or designer or by considerations of cost
- the consent applicant (or their agent) is responsible for demonstrating that a substitute product will comply with the Building Code. If a substitute product performs differently from the original product, the applicant should also describe the effect of the change on other building products or work
- if the BCA already has knowledge about the substitute product, it may choose to rely on this knowledge (and record that it has done this) rather than requiring every applicant to submit the same or similar information demonstrating that the product complies with the Building Code (for example, substituting well known and proven insulation products)
- applicants should be made aware that substituting an element of a supplier's proprietary system may void any warranty offered by the supplier
- if the minor variation includes the use of a product outside the conditions of a product certificate, the product certificate is no longer valid.

Example 1

Example 1 is where changing products from those specified may mean that the level of compliance required by the owner may no longer be met even though the minimum requirements of the Building Code are met.

The owner/designer specifies stainless steel fixings (which are not otherwise required by an Acceptable Solution or Verification Method). However, the builder intends to use galvanised fixings. The galvanised fixings still comply with the Building Code, but they will require more maintenance and may not have the durability of stainless steel fixings.

The inspector confirms this is a minor variation on site because compliance with the Building Code is still achieved, but the requirements of the owner are not met. The change is recorded on the consent file by the inspector. It is the builder's responsibility to communicate the product substitution to the owner/designer.

Example 2

Example 2 is where sometimes products are not available, or the amendment is a minor variation product substitution, as it talks about a change

to a product or method that still complies with the Building Code, but provides a different level of performance against the Building Code from that described in the consented plans.

R2.4 insulation is specified for use in the walls. The owner wants to use R1.8 instead. Both types may meet the performance requirements of the Building Code, but R1.8 insulation provides a lower level of performance against the Building Code requirements.

The building consent authority will have a good understanding of the impact of the proposed change on the performance requirements of the Building Code, and will advise the applicant of what needs to occur.

The building consent authority should still be asked to approve the minor amendment before it takes place. The applicant could be asked to provide evidence to show the amendment will comply with the Building Code.

If the building consent authority decides to approve the amendment, it will have a process in place to do so, including noting the change on the consent records.

Some building consent authorities may ask the builder and/or designer to detail and sign changes on the consented plans. The paper record is important. It ensures the inspectors know exactly what work has been approved, so they can take this into account when undertaking inspections and deciding whether to issue the code compliance certificate once the work has finished.

If the situation was reversed and the owner wanted to go from R2.4 insulation to R3.6 batts then the building consent authority should simply record that a greater level of compliance has been achieved on an inspection note/consent file.

What is important in these examples is that the performance requirements of the Building Code continue to be met and that building consent authorities are consulted first and they have an accurate record of what is built.

Product substitutions where the variation is major

In some cases, products appear to be very similar, yet do not achieve the levels of performance required by the Building Code. This means the impact on compliance with the Building Code needs to be carefully assessed. In deciding whether to approve a product substitution, the building consent authority will need to consider whether:

- the product achieves an equivalent level of durability, strength etc
- the product has been tested
- the technical literature is from a reliable source
- there are any special conditions for use
- the product has an impact on other building elements.

It is the applicant's responsibility to justify the proposed substitution in these terms. The building consent authority's role is to consider this and decide if it is satisfied that the alternative complies with the Building Code.

The building consent authority will inform the applicant how the proposed amendment is best considered and, if approved, how it is recorded. It is likely this type of substitution will require a formal amendment to the building consent, using Form 2 of the Building (Forms) Regulations 2004, supplied by the building consent authority.

Example

The inspector visits an existing dwelling to inspect the roof installation on an addition. During the inspection, the inspector identifies that although the specifications and drawings show a trough section roof on a 3-degree pitched roof, the existing roof is corrugated profile. The roofer is planning on installing a corrugated profile to match the existing roof. The roofer asks the inspector to give approval on site. The inspector explains that the material is outside the scope of the approved solutions and verification methods and manufacturer's specifications. Because the proposal is considered a little bit tricky in this specific building situation, and the change is a relatively significant, the variation is considered major and the applicant is required to submit a formal building consent amendment for consideration of the alternative solution.

Note: Owners should be aware that where they intend to change a component that forms part of an entire supplier's system, they may void any warranty offered.

Additional information for product substitutions

Additional detail on product substitutions below, from Appendix 2 of the Guide to amendments.

Appliances, furnishings and fittings

Documents submitted with a building consent application may include instructions to the builder or practitioners about customer preferences for certain appliances, furnishings and fittings. These features do not always relate to the Building Code, but it can be difficult to determine.

Appliances

Plans may detail the location of certain appliances, such as a dishwasher or electric heater. In most cases these do not relate to compliance with the Building Code, but there are some exceptions. The appliance could be a solid fuel burner, in which case Clause C1 (Outbreak of Fire) is relevant. Or it could be a sanitary appliance, to which Clause G12 (Water Supplies) applies.

Furnishings

The building consent documentation may include details about certain furnishings, such as curtains, floor coverings, wallpaper and paint.

Most furnishings do not relate to the Building Code, but there are some exceptions. Food preparation areas have special hygiene requirements.

Furnishings can also affect fire loads and have an effect on the building's fire design.

Fittings

Building plans often show fittings (built-in features such as internal doors, wardrobes, laundry cupboards and other storage spaces, for example).

Fittings can be very important. At the very least the structure of the building has to be able to withstand imposed loads, so they should not be added or repositioned without careful consideration.

Certain fittings are also necessary to achieve compliance with the Building Code. For example, areas containing a sanitary fixture (such as a toilet) must be fitted with an internal door to provide privacy and certain clearance requirements.

Kitchens must have certain kinds of workbenches and cupboards to meet the requirements in the Building Code around food preparation, hygiene and prevention of contamination. In some situations, fittings are required to provide for people with disabilities to be able to use them.

Varying approved building work in relation to appliances, furnishings and fittings

A building consent is granted on the basis of the information in the application that relates to the Building Code. Other information does not form part of the approval process for the building consent. However, this does not mean people can change appliances, furnishings and fittings mid-way through a project without careful consideration as these may relate to Building Code compliance, and therefore should be approved by the building consent authority before they are changed.

Factory-manufactured elements and services plans

Factory-manufactured elements (for example, roof trusses)

Before the Building Act 2004, building consent authorities were often prepared to issue a building consent based on outline information for proposed factory-manufactured building elements. Now there is more emphasis on including complete 'for construction' documentation in the application for building consent.

Before lodging a building consent application, applicants should obtain a buildable design from a fabricator. This design needs to be attached to the building consent application and submitted to the building consent authority for approval.

During construction, the fabricator is likely to visit the site to check all relevant measurements in order to manufacture the trusses or flooring system.

The fabricator will produce 'shop drawings', which are highly detailed drawings for the person who makes the trusses or flooring system.

They will also produce a series of on-site instructions, and a layout plan for the person who erects the building elements.

Once the installation has been inspected and completed, the as-built information should be supplied to the builder, designer, building owner and building consent authority for their records.

The building consent authority may place a note to this effect on the building consent records.

[Off-site construction \(https://www.building.govt.nz/projects-and-consents/apply-for-building-consent/support-your-consent-application/off-site-construction/\)](https://www.building.govt.nz/projects-and-consents/apply-for-building-consent/support-your-consent-application/off-site-construction/) has more information about components constructed off-site.

Service plans

The Building Code requires that sanitary fixtures and sanitary appliances are provided with a safe and adequate water supply, and an adequate plumbing and drainage system.

At the time of the building consent application, the building consent authority will require certain information about the water supply system and the foul water and surface water (storm water) disposal systems. Precisely how a water supply, or a waste or foul water disposal system, is to be laid out may not be apparent when the applicant applies for a building consent. However, the applicant should provide the location and specification of all fixtures and fittings, together with a plan or diagrammatic layout of foul and storm water drainage. When the project is finished, the building consent authority will ask for an as-built drainage plan for its consent records.



New Zealand Government

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