

**BUILDING
PERFORMANCE**

Quick guide to product substitution



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Use of this guide

This guide by the Ministry of Business, Innovation and Employment (the Ministry) has been written in accordance with section 175 of the Building Act 2004 (the Building Act), which relates to guidance published by the Ministry’s Chief Executive. While the Ministry has taken every care in preparing this document, it should not be relied upon as establishing all the requirements of the Building Act. Readers should always refer to the Building Act and associated regulations as the source document and be aware that for specific situations or problems it may be necessary to seek independent legal advice.

Note that all references to the Building Act in this guide are to the Building Act 2004 and all references to the Building Code are to the Building Code (Schedule 1, Building Regulations 1992) in force at the time of writing.

Purpose

This is a quick guide for designers, contractors and building owners considering product substitution: that is, using building products other than those originally specified or requested.

Note:

The Ministry's guidance on Minor variations to building consents¹ provides more detailed guidance and may be useful if the products will be used in building work.

Introduction

Designers, contractors or building owners may consider using other building products to those specified or requested for any number of reasons including personal preference, price or availability.

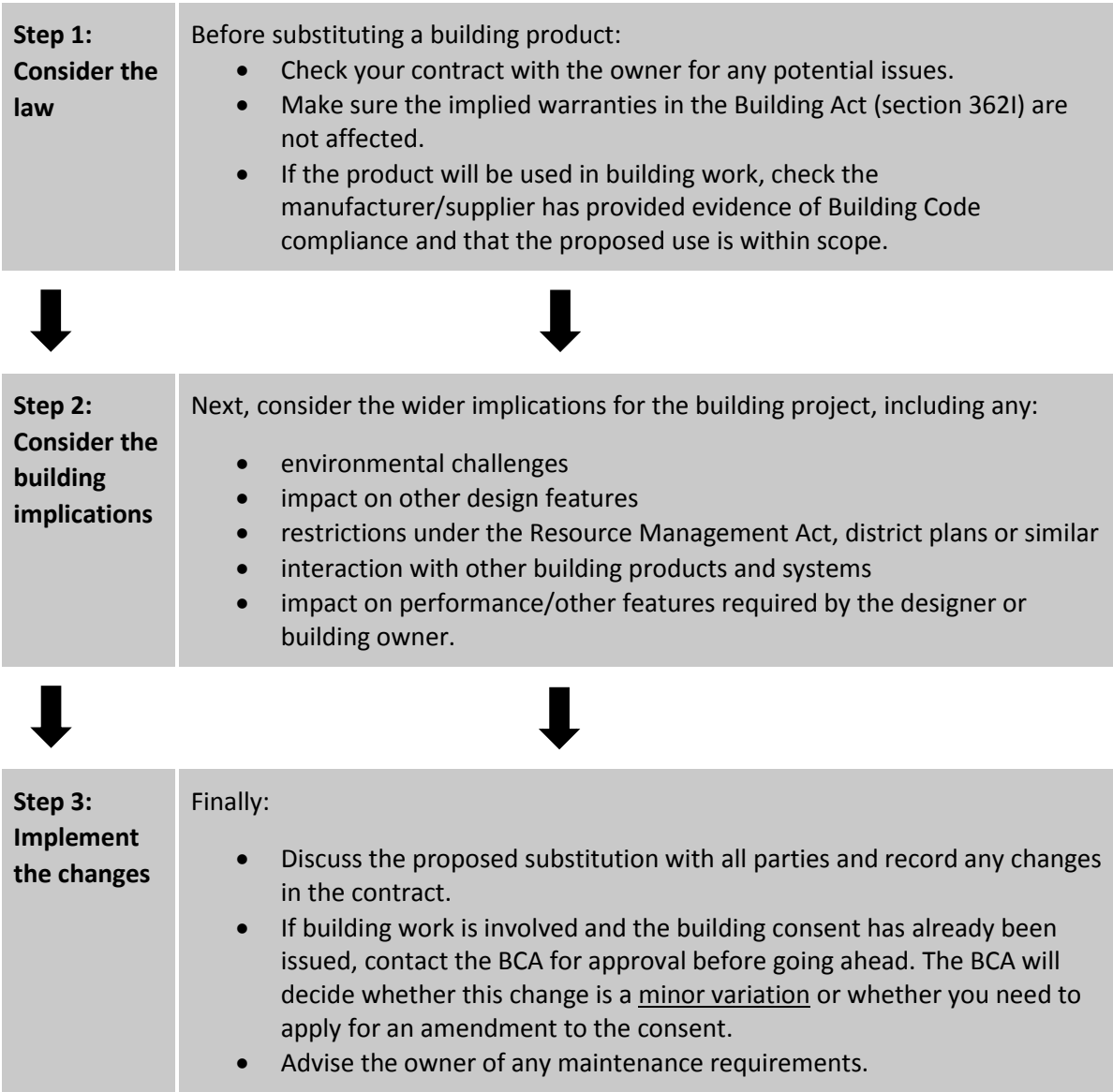
However, if you are thinking about substituting a product you need to:

1. consider the legal context, particularly any additional obligations you might incur from product substitution
2. consider the broader implications of using a different product to that specified, including whether it is fit for the same purpose and still meets the owner's needs, and then
3. implement any changes; for example, if substituting the product requires an amendment to a building consent.

We summarise these steps in the following table and explain them further below.

¹ <http://www.building.govt.nz/projects-and-consents/build-to-the-consent/making-changes-to-your-plans/>

Product substitution: three-step approach



Step 1: Consider the law

There are contractual obligations as well as requirements in the Building Act 2004 (the Building Act) that you need to take into account when substituting a building product.

Contractual obligations and implied warranties

There will be obligations specific to an individual building contract. There are also implied warranties under 362I of the Building Act applying to residential building work – and remedies for breaches of these – that you cannot contract out of and that will apply even if you have no written agreement.

The implied warranties in the Building Act include:

- The building work will be done properly, competently and in accordance with the plans and specifications.
- All the materials used will be suitable and will also be new unless otherwise stated in the contract.
- The building work will be consistent with the Building Act and the Building Code.
- If the contract states any particular outcome and the owner relies on the skill and judgement of the contractor to achieve it, the building work and the materials will be fit for purpose and of a nature and quality suitable to achieve that result.

Builders should check the contract they have with the owner. If a builder substitutes a product they may no longer be building what they have been contracted to provide and there could be potential legal or liability issues.

Reliance on product performance under the Building Act

Building owners, builders, designers, building consent authorities (BCAs), product manufacturers and suppliers all have various obligations in the building process, as outlined in sections 14B-14G of the Building Act. Product manufacturers and suppliers have particular responsibilities relating to the information they provide about their products and their subsequent performance.

If others have not met their section 14 obligations, you assume greater potential risk.

Responsibilities under the Building Act (sections 14B to 14G)

Who	Responsibilities include:
Product manufacturers and suppliers	Ensuring that the product will, if installed in accordance with the technical data, plans, specifications, and advice prescribed by the manufacturer, comply with the relevant provisions of the Building Code (section 14G)
Designers	Ensuring that the plans and specifications or the advice in question are sufficient to result in the building work complying with the Building Code, if the building work were properly completed in accordance with those plans and specifications or that advice (section 14D)

Responsibilities under the Building Act (sections 14B to 14G)

Who	Responsibilities include:
Building owners	Obtaining any necessary consents, approvals, and certificates (section 14B)
BCAs	Checking, in accordance with the requirements of the Building Act for each type of building consent, to ensure that an application for a building consent complies with the Building Code and building work has been carried out in accordance with the building consent for that work (section 14F)
Builders	Ensuring that the building work complies with the building consent and the plans and specifications to which the building consent relates and ensuring that work not covered by a building consent complies with the Building Code (section 14E). Owner-builders also have responsibilities relating to restricted building work (section 14C).

Requirements if building work is involved

Products included in 'building work', as defined in the Building Act (section 7), must comply with all the applicable clauses of the Building Code. To carry out building work, a building consent must also be obtained from the relevant BCA where the product is being used (ie the final building site). If the building work is considered 'exempt work' under Schedule 1 of the Building Act², this means a building consent is not required but, as it is still building work, it must comply with the Building Code.

When no building work is involved

Many product substitutions do not involve building work so they do not need to be advised to the BCA. Examples include substituting paint for wallpaper.

If a building consent is required the BCA assesses the plans and specifications and, before issuing consent, must be satisfied 'on reasonable grounds' that the proposed building work will comply with the Code (section 49 of the Building Act).

When the building work is complete, the owner (or person acting on their behalf) must apply to the BCA for a Code compliance certificate. This is a formal statement issued under section 95 of the Building Act that building work carried out under a building consent complies with that consent.

In other words, the building work must reflect the work shown in the consented plans. The Code compliance certificate is issued against the consented plans so any subsequent changes must be recorded and approved by the BCA before the work begins.

Product substitutions (ie using different products to those specified in the original building consent application) will fall into one of the following categories:

² The Building Act 2004 and Schedule 1 are available online at www.legislation.govt.nz

- those that can be done as of right as they do not involve building work (eg changing skirting or decorative mouldings, or using wallpaper instead of paint), or
- minor variations, which need to be approved first by the BCA and then recorded on the consent file (these may require updated drawings or new technical information to be provided), or
- more substantial variations, which will require a formal amendment to the building consent (under section 45 of the Building Act) involving new plans and specifications before they can go ahead.

Minor variations

A minor variation is defined as: “a minor modification, addition or variation to a building consent that does not deviate significantly from the plans and specifications” in Regulation 3 of the Building (Minor Variations) Regulations 2009.

It is up to the BCA to decide whether the proposed product substitution is a minor variation or whether it is more significant and requires a formal amendment to the building consent.

Step 2: Consider the building implications

When substituting a product it is important to understand the building context. Certain products may have been specified for a reason, and a substituted product may significantly alter the level of Code compliance that has been achieved or may have other implications for the project.

General points to consider

Points you should consider include the following:

What environmental challenges are there?

Is the property in a high wind or corrosion zone? What are the expected loadings on the building such as snow or seismic activity? Is the substituted product appropriate for these?

What are the existing design features?

Certain design choices have already been made. Understand why these have been made and whether substituting a product will reduce Code compliance or alter any aesthetic building features desired by the owner.

Are there any restrictions under the Resource Management Act?

For example, the building could be in a heritage zone and changing products or even colours may be an issue.

What does the product do in terms of performance required by the Building Code?

For example, does it provide structural support or help keep the building weathertight?

What are the consequences of it failing?

Is it critical to building structure, fire safety and weathertightness? Will degradation or failure be noticeable or catastrophic?

The greater the risk and consequences of failure the more robust and detailed technical information and evidence a BCA is likely to require.

Products that are components of building systems

A building system is a combination of products specified by a manufacturer, supplier or designer to be used together, as a system, to achieve the performance requirements of the Building Code.

Extra caution needs to be taken when considering substituting a product that is part of a building system. This is because the change may affect the performance of the system, the proposed substitute product may not have been tested for use with the other components, or the system may become outside the scope of use defined by the manufacturer.

Changing a component that forms part of a system may also void any warranty offered by the supplier or manufacturer.

For example: a manufacturer has designed a residential wall system consisting of cladding, framing and wall lining. The manufacturer has tested his system with a specific type of insulation and window joinery. He states that if all products are used together as specified the system will meet the Building Code clauses for structure (B1), durability (B2), external moisture (E2) and energy efficiency (H1). If one component of the system is substituted, such as the wall lining, the use of the products becomes outside the scope defined by the manufacturer. This may mean the BCA cannot rely solely on the technical information provided by the manufacturer (as it is no longer relevant) and further evidence be needed to demonstrate Code compliance.

Evaluate the current building context and proposed changes

Determine the following:

- Is there information about the product and have the manufacturers and suppliers met their obligations under section 14G of the Building Act?
- If product information has been provided, does the product's intended use fit within the scope of that information?
- Is there enough evidence to show that the product meets the relevant performance requirements of the Building Code? This could include a product technical statement (PTS)³, technical data, independent test results and assessments, product appraisals or product certification (CodeMark).
- If the product has a product certificate) is the proposed use within the scope and limitations of that certificate? (While BCAs must accept a product certificate as evidence of Code compliance, this is only one of the considerations for product substitution.)
- Will the change affect any other products? For example, check any limitations on its use that might involve other products (eg incompatibility with other building materials). What can be thought of as a minor variation could lead to necessary changes to other building products, components or the design of the building. This can turn a simple, minor variation into a complex change requiring an amendment to the building consent, and could add costs and delays to the building work.

³ www.building.govt.nz/product-assurance

- Does the designer/builder/owner have other performance requirements, preferences or considerations (eg product warranties) that you need to take into account?

In some cases, products may appear to be very similar but do not achieve the levels of performance required by the Building Code or there may not be enough good, relevant evidence to show that they do. This means the impact on Code compliance needs to be carefully assessed.

In other cases, the proposed substitute product may clearly comply with the Code but still not achieve particular performance levels (which could be higher than, or unrelated to, the Code requirements) that designers or owners are looking for.

Example

A designer specifies stainless steel fixings for a renovation at the home owner's request. The builder suggests substituting galvanised fixings as these are cheaper and will still comply with the Building Code. However, the owner prefers the stainless steel fixings as these should require less maintenance and have better durability than the galvanised option.

In deciding if it should approve a product substitution, the BCA's considerations will include whether:

- the product achieves an equivalent level of durability or the structural properties are similar
- the product has been tested or assessed (as noted earlier, product certification provides evidence of compliance but is not the only consideration for use in a particular project)
- there are any special conditions for use
- the product has a negative impact on other building elements.

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

If the BCA has existing knowledge about a suggested alternative it may choose to rely on this knowledge (and record that it has done so) rather than requiring every applicant to submit the same or similar information demonstrating that the product complies with the Building Code (eg if you are substituting well known and proven insulation products). If so, justifying its compliance can be a simple matter.

Step 3: Implement the changes

Discuss with all parties

Product substitution should be discussed between all parties – the designer, builder, project manager and building owner – as all have roles and responsibilities in the process.

Building owners will usually be responsible for making final product decisions unless they have delegated this responsibility to another person.

Record any changes in the contract

Once you have the owner's agreement (if needed) and you have decided to use materials and products different from those specified in the plans, you should record these changes in your contract.

Get BCA approval where necessary

If the substituted products are part of building work requiring a building consent, the BCA must be informed.

It is the BCA's responsibility to:

- consider all proposed variations to the building consent (including substituted products)
- decide whether these variations can be approved, and
- if they can, advise the building consent applicant whether the variations can be treated as minor variations or will require an amendment to the building consent.

Minor variations must still be approved by the BCA before going ahead. The BCA should note a sufficiently detailed description of these variations on the consented plans and specifications so that these documents remain an accurate record of what is built.

Notify the BCA promptly

Ideally, you should notify the BCA as early as possible to avoid any unnecessary delays while you wait for any amendment to be processed.

If a product is substituted without approval from the BCA it is likely that you will encounter a problem when the BCA goes to issue the Code compliance certificate, as the building work will not match what is on the consent. This can mean that the BCA may not be able to issue the Code compliance certificate and might issue a notice to fix to redo or remedy the work.

Advise the owner of any maintenance requirements

Obtain maintenance information for the substituted product from the supplier or manufacturer and make sure you give this to the owner. Builders have an obligation to do this under Section 9 of the Building (Residential Consumer Rights and Remedies) Regulations 2014, which came into force on 1 January 2015.

Examples of product substitution

The following examples describe common situations where product substitution could be considered and some of the decisions involved.

Plasterboard wall lining

A builder is in the process of carrying out alterations to an existing house. He visits his supplier to purchase the interior plasterboard wall lining needed for the building work, noting that the designer has specified a certain brand of plasterboard to be used. The suppliers advise that they are out of stock of the specified plasterboard but have a similar product of a different brand available.

The builder requires the plasterboard urgently and considers substituting the product. He is not familiar with this brand or manufacturer so he asks the supplier for detailed information about the product and its compliance with the Building Code.

The supplier is able to provide a copy of the manufacturer's product technical statement (PTS) which the builder reviews and finds clear and comprehensive. In particular, the builder checks that the product is suitable for use in wet areas as the house alteration involves the addition of a new bathroom.

As the builder's contract with the owner does not authorise him to make any decisions about which product to use, he contacts the owner to seek approval to use the alternative brand of plasterboard. The owner agrees and they both note the changes in their contract. The builder then contacts the BCA which issued the building consent for the alterations regarding the proposed change.

The BCA official is familiar with this type of wall lining and does not require any further product information from the builder. The BCA considers that using a different brand of wall lining is a minor variation to the building consent, processes the change and notes this on the consent file.

The builder is now able to go ahead with purchasing and using the plasterboard.

Exterior cladding

Building consent has been granted for a new house to be constructed and the building work has recently begun. However, there has been a delay of six months from the time the consent was granted until building work started and during this time a new exterior cladding system has been introduced into the market. As the owner would prefer to use this new product, she considers substituting it for the cladding specified in the original consent. This alternative cladding has slight differences in the way it is constructed and attached to the wall framing.

The owner discusses the proposed substitution with the designer. After reviewing the product's technical information the designer is satisfied that this cladding will be suitable, that its intended use is within the scope defined by the manufacturer, and there is clear evidence of compliance with the relevant clauses of the Building Code. The change does not affect the use of any other products that have been specified and it still provides the same level of performance for weathertightness and durability.

The designer updates the plans and specifications to reflect the proposed change and submits these to the BCA on the owner's behalf along with the product technical statement from the manufacturer. As the product is new to the market the manufacturer has provided a copy of

independent test results and assessments to help demonstrate Code compliance. This information is also provided to the BCA.

The BCA reviews the proposed substitution and advises that because this is a significant change it will require a formal application for amendment to the building consent.

Once the BCA has approved the amendment the owner contacts her builder to confirm the change. One of the manufacturer's requirements for installation of the new cladding is that it is installed by a qualified and approved contractor. The builder notes the changes on his contract to prevent any disputes or legal issues and agrees to employ a qualified contractor to install the cladding.

Insulation

Construction work is underway on a new block of apartment buildings. The designer of the apartments has (at the owners' request) specified a type of insulation that will provide high levels of soundproofing between apartments and significantly exceeds the minimum performance requirements of the Building Code.

A supplier visits the construction site. He is selling a new imported insulation product at a very competitive price. The product has been tested and used successfully overseas. It has also been assessed by a reputable New Zealand company which has determined it is suitable for use in New Zealand and will comply with the Building Code.

The construction firm is considering using the new type of insulation to cut down on costs. As it does not have the authority to substitute products, it contacts the owners to discuss this.

The owners review the product information and talk to the designer and BCA. However, they decide that they do not want to make this substitution. Although the new product is cheaper and would still comply with the Building Code, the owners want the much higher performance levels provided by the insulation they chose to begin with.

Further help

Refer to the Ministry's website for further information at www.building.govt.nz

Download specific guidance on minor variations at <http://www.building.govt.nz/projects-and-consents/build-to-the-consent/making-changes-to-your-plans/>

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