



**ABCBC**

# Evidence of Suitability



2018

# Handbook

**NON-MANDATORY DOCUMENT**



**ABCB**

**EVIDENCE OF SUITABILITY**

HANDBOOK

**2018**

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## **Preface**

The Inter-Government Agreement (IGA) that governs the ABCB places a strong emphasis on reducing reliance on regulation, including consideration of non-regulatory alternatives such as non-mandatory handbooks and protocols.

This Handbook is one of a series produced by the ABCB. The topics of Handbooks expand on areas of existing regulation or relate to topics which have, for a variety of reasons, been deemed inappropriate for regulation. The aim of the Handbooks is to provide construction industry participants with non-mandatory advice and guidance on specific topics.

The Evidence of Suitability Handbook has been developed as a companion document to the NCC evidence of suitability provisions in A2.2 of the National Construction Code (NCC) Volume One.

This Handbook has been developed to provide practitioners, product manufacturers and suppliers with further detail in understanding how to interpret and apply the NCC provisions to ensure that materials, products, forms of construction and designs being used are fit for their intended purpose in accordance with the requirements of the NCC.

This Handbook includes an evidence of suitability framework and a decision flow chart to assist in the correct use of the evidence of suitability provisions of the NCC.

Determining the appropriate form of documentary evidence to be used, and obtaining that evidence, is only part of achieving a building that complies with the NCC. Having appropriate documentary evidence for a specific building component is of no relevance if a different, non-conforming building component is procured and installed. All parties that have a role in the building product supply chain should ensure that their obligations or duties to check and assure that the right products are used, and are used correctly, are met.

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## 1 Introduction

### **Reminder:**

This Handbook is not mandatory or regulatory in nature and compliance with it will not discharge a user's legal obligations. The Handbook should only be read and used subject to, and in conjunction with, the general disclaimer at page ii.

The Handbook also needs to be read in conjunction with the relevant legislation of the appropriate State or Territory. It is written in generic terms and it is not intended that the content of the Handbook counteract or conflict with the legislative requirements, any references in legal documents, any handbooks issued by the Administration or any directives by the *appropriate authority*.

### 1.1 Objective of the Handbook

This Handbook has been developed to assist National Construction Code (NCC) users in understanding and applying the evidence of suitability provisions in A2.2 of NCC Volume One. The Handbook will be of interest to all parties who are involved in selecting or assessing elements of buildings that must comply with the NCC. This includes designers, builders and approval authorities.

The Handbook explains the various forms of documentary evidence that can be used to support a claim that a material, product, form of construction or design meets a *Performance Requirement* or a *Deemed-to-Satisfy Provision*.

The Handbook introduces and promotes the use of a risk assessment framework to assist in making a decision about the most appropriate form of documentary evidence to use in a particular circumstance. A flow chart is provided to demonstrate how the types of documentary evidence can apply in different situations.

Version 1 of this Handbook is to accompany NCC 2016 Volume One Amendment 1. A later version of the Handbook will be developed to include guidance for use of the corresponding provisions in NCC Volumes Two and Three.

### 1.2 Limitations

This Handbook is not intended to:

- override or replace any legal rights, responsibilities or requirements; or
- provide users with the specifics of the NCC.



This Handbook is intended to make users aware of provisions that may affect them, not exactly what is required by those provisions. If users determine that a provision may apply to them, the NCC should be read to determine the specifics of the provision.

### 1.3 Other Handbooks by the ABCBC

The ABCBC produces a range of Handbooks and other educational material relevant to topics related to the NCC. They can be downloaded from the ABCBC [website](http://www.abcb.gov.au): [www.abcb.gov.au](http://www.abcb.gov.au).

### 1.4 Acronyms

The following acronyms are used in this Handbook:

ABCBC	Australian Building Codes Board
BCA	Building Code of Australia
FRL	Fire-resistance level
JAS-ANZ	Joint Accreditation System of Australia and New Zealand
NATA	National Association of Testing Authorities
NCC	National Construction Code

## 2 The National Construction Code

### 2.1 Legislative arrangements

The NCC is an initiative of the Council of Australian Governments developed to incorporate all on-site construction requirements into a single code. The NCC is produced and maintained by the ABCBC on behalf of the Commonwealth Government and each State and Territory government. The NCC is a uniform set of technical provisions for the design and construction of buildings and other structures, and plumbing and drainage systems throughout Australia.

The NCC is given legal effect by relevant legislation in each State and Territory. This legislation prescribes the NCC to fulfil any technical requirements that have to be satisfied when undertaking building work or plumbing and drainage installations. Each State and Territory's legislation consists of an Act of Parliament and subordinate legislation that empowers the regulation of certain aspects of building work or plumbing and drainage installations, and contains the administrative provisions necessary to give effect to the legislation.

The NCC should be read in conjunction with the legislation under which it is enacted. Any queries on such matters should be referred to the State or Territory authority responsible for building and/or plumbing regulatory matters.

### 2.2 Performance Requirements

The NCC is a performance based code containing *Performance Requirements* for the construction of buildings. A *Building Solution* will comply with the NCC if it satisfies the *Performance Requirements*, which are the mandatory requirements of the NCC.

### 2.3 NCC compliance solutions

Compliance with the *Performance Requirements* is achieved by using:

- a *Performance Solution*; or
- a solution that complies with the *Deemed-to-Satisfy Provisions* (a *Deemed-to-Satisfy Solution*); or
- a combination of a *Performance Solution* and a *Deemed-to-Satisfy Solution*.

### 2.4 Building law compliance

The responsibility for administering building legislation rests with the relevant State or Territory administration. *Appropriate authorities* are authorised by the State and

Territory administrations to certify that the design and construction of a building complies with the NCC. The *appropriate authority* may be private practitioners or government officials.

## 2.5 NCC text and defined terms

For ease of use, some provisions from the NCC are repeated in this Handbook. These provisions appear in a blue shaded box.

This Handbook uses words and terms that are defined in the NCC and have a specific meaning. These defined words and terms appear in *italics*. Some of these defined terms, relevant to the evidence of suitability provisions, are included below.

### **Reminder:**

Defined terms are amended in the NCC from time to time, so it is important to always refer to the current edition, or the relevant edition at the time, for the correct explanation of these terms. States and Territories may also vary or add to the definitions contained in the NCC. These are detailed in the relevant State or Territory appendix in the NCC.

**Accredited Testing Laboratory** means—

- (a) an organisation accredited by the National Association of Testing Authorities (NATA) to undertake the relevant tests; or
- (b) an organisation outside Australia accredited to undertake the relevant tests by an authority, recognised by NATA through a mutual recognition agreement; or
- (c) an organisation recognised as being an *Accredited Testing Laboratory* under legislation at the time the test was undertaken.

**Appropriate authority** means the relevant authority with the statutory responsibility to determine the particular matter.

**Appropriately qualified person** means a person recognised by the *appropriate authority* as having qualifications and/or experience in the relevant discipline in question.

**Certificate of Accreditation** means a certificate issued by a State or Territory accreditation authority stating that the properties and performance of a building material or method of construction or design fulfil specific requirements of the BCA.

**Certificate of Conformity** means a certificate issued under the ABCBC scheme for products and systems certification stating that the properties and performance of a building material or method of construction or design fulfil specific requirements of the BCA.

**Certification body** means a person or organisation operating in the field of material, product, form of construction or design certification that has been accredited by the Joint Accreditation System of Australia and New Zealand (JAS-ANZ) for a purpose other than as part of the CodeMark Australia or CodeMark Certification Scheme.

**Deemed-to-Satisfy Provisions** means provisions which are deemed to satisfy the *Performance Requirements*.

**Deemed-to-Satisfy Solution** means a method of satisfying the *Deemed-to-Satisfy Provisions*.

**Fire-resistance level (FRL)** means the grading periods in minutes determined in accordance with Specification A2.3, for the following criteria:

- (a) structural adequacy; and
  - (b) integrity; and
  - (c) insulation,
- and expressed in that order.

**Note:** A dash means that there is no requirement for that criterion. For example, 90/-/- means there is no requirement for an FRL for integrity and insulation, and -/-/- means there is no requirement for an FRL.

**Performance Requirement** means a requirement which states the level of performance which a *Performance Solution* or *Deemed-to-Satisfy Solution* must meet.

**Performance Solution (Alternative Solution)** means a method of complying with the *Performance Requirements* other than by a *Deemed-to-Satisfy Solution*.

**Product Technical Statement** means a form of documentary evidence stating that the properties and performance of a material, product or form of construction fulfil specific requirements of the NCC, and describes—

- (a) the application and intended use of the material, product or form of construction; and
- (b) how the use of the material, product or form of construction complies with the requirements of the NCC; and

- (c) any limitations and conditions of the use of the material, product or form of construction relevant to (b).

**Professional engineer** means a person who is—

- (a) if legislation is applicable — a registered professional engineer in the relevant discipline who has appropriate experience and competence in the relevant field; or
- (b) if legislation is not applicable—
  - (i) a Corporate Member of the Institution of Engineers, Australia; or
  - (ii) eligible to become a Corporate Member of the Institution of Engineers, Australia, and has appropriate experience and competence in the relevant field.

## 3 Documentary evidence to support NCC compliance

### 3.1 Acceptance of design and construction

Part A2 of NCC Volume One contains the acceptance of design and construction provisions. This Part contains options that can be used as evidence to support that the use of materials, products, forms of construction or designs meet the requirements of the NCC. Materials, products, forms of construction and designs are collectively referred to as “building components” in this Handbook.

**Alert:**

The use of the general evidence of suitability options contained in A2.2 is subject to specific requirements for:

- determination of fire resistance of building elements – in A2.3; and
- determination of fire hazard properties – in A2.4; and
- a ceiling having a resistance to the incipient spread of fire – in A2.5.

### 3.2 Evidence of suitability framework

The most appropriate form of evidence of suitability to be used will vary depending on the specific circumstance. The forms of evidence have been arranged in a framework to reflect a hierarchy of rigour, with the options listed higher providing stronger forms of evidence.

The evidence of suitability framework is shown in Figure 3.1.

Figure 3.1 NCC evidence of suitability framework



New or innovative building components, as well as building components where the consequences of failure have been assessed as high, typically require assessment using more rigorous options to prove compliance. Certification schemes, such as CodeMark and CodeMark Australia, provide users with a reliable source of recognition for building components that comply with the NCC. Such schemes aim to achieve conformity in certification practices and establish market confidence.

Building components that require less extensive forms of assessment to prove NCC compliance may include elements of buildings that present little risk, have been used in Australia for many years and have a strong history of successful performance in the built environment, i.e. they have a low probability of failure. They may also include building components where the consequences of failure, should it occur, have been assessed as low.

The options are not mutually exclusive. The selected option may include elements of other options or more than one option may be required as evidence of compliance with the NCC. The suitability of the selected option/s will be subject to acceptance by the *appropriate authority*.

**Alert:**

Other forms of documentary evidence, such as but not limited to a *Product Technical Statement*, could be based on test results from an in-house or independent body such as a testing laboratory.

### 3.3 Introduction to the evidence of suitability options

#### 3.3.1 CodeMark or CodeMark Australia Certificate of Conformity

A2.2(a)(i) A current CodeMark Australia or CodeMark *Certificate of Conformity*

**Alert:**

On 1 August 2017, transition from the previous CodeMark scheme to the new CodeMark Australia scheme commenced. A *Certificate of Conformity* issued under the previous CodeMark scheme can still be used as supporting evidence while the certificate remains valid.

A *Certificate of Conformity*, issued under the CodeMark or CodeMark Australia scheme by an accredited certification body, provides independent confirmation that a building product or system complies with the NCC. Information contained in or referenced on the *Certificate of Conformity* should provide clear guidance about how to specify and install the building product or system to ensure it complies with the *Performance Requirement* or *Deemed-to-Satisfy Provision* for which compliance is claimed. The *Certificate of Conformity* must outline any conditions or limitations on the use of the building product or system.

CodeMark and CodeMark Australia are voluntary third-party building product and system certification schemes owned by the Commonwealth of Australia, acting on behalf of the Commonwealth and all States and Territories. The schemes were designed to streamline and fast-track the building approval and inspection processes by avoiding repeated assessment of products and systems that have proven NCC compliance. The schemes also support the use of new or innovative building products and systems in specified circumstances by providing a nationally accepted process for demonstrating compliance with the requirements of the NCC.

Only certification bodies accredited by the Joint Accreditation System of Australia and New Zealand (JAS-ANZ) can issue *Certificates of Conformity*. They are responsible for evaluating applications for *Certificates of Conformity* in accordance with the scheme rules and within their scope of accreditation.

A *Certificate of Conformity* may be the best route for a manufacturer or supplier to take where a product or system is highly innovative or novel and, as a consequence, does not comply with the *Deemed-to-Satisfy Provisions*, or where there are significant consequences if the product or system was to fail.

### 3.3.2 Certificate of Accreditation

#### A2.2(a)(ii) A current *Certificate of Accreditation*

A *Certificate of Accreditation* is issued by a State or Territory accreditation authority under the applicable State or Territory building legislation. A State or Territory accreditation authority will assess a building component for compliance with the NCC.

The definition of a *Certificate of Accreditation* requires the certificate to state that the properties and performance of a building component fulfil specific requirements of the NCC. The certificate will also contain any conditions and limitations on the use of the building component and any other relevant information that is required to ensure compliance.

A *Certificate of Accreditation* issued by a State or Territory accreditation authority may be used as evidence of suitability in another jurisdiction for the purpose of demonstrating compliance with the NCC, if the *appropriate authority* deems it appropriate to do so. The *appropriate authority* would need to be confident that the criteria used in the appraisal which the certificate is based upon is appropriate for the particular State or Territory in which the building component is to be used.

#### **Example: Certificate of Accreditation in Victoria**

The Victorian Building Authority (VBA) operates an accreditation system and a *Certificate of Accreditation* issued under the accreditation system is evidence that a product meets the requirements of the Victorian Building Regulations and the NCC. Once a product is accredited, legislation in Victoria requires that building control authorities accept the product, design, component or system if the use complies with the accreditation.

The VBA accreditation system only applies to a product, design, component or system that is used as part of a *Performance Solution*. The VBA maintains a register on its website of current certificates. Further information on the building product accreditation system can be found on the VBA [website: www.vba.vic.gov.au](http://www.vba.vic.gov.au).

### 3.3.3 Certificate issued by a certification body

A2.2(a)(iii) A current certificate, other than a certificate described in (a)(i) and (ii), issued by a *certification body* stating that the properties and performance of a material, product, form of construction or design fulfil specific requirements of the NCC.

A certificate issued by a *certification body* provides independent confirmation that a building component complies with the NCC.

JAS-ANZ can accredit *certification bodies*, commonly referred to as Conformity Assessment Bodies (CABs), under an industry-operated building product certification scheme. The certificate issued by a CAB under an industry-operated scheme is required by A2.2(a)(iii) to state that the properties and performance of a building component fulfil specific requirements of the NCC. Key details such as the issue date of the certificate, how long it is valid for, a signature of the issuing body and other relevant information should be included on the certificate.

Industry-operated schemes that utilise a *certification body* are voluntary, and can work well for families of products. Manufacturers who participate in such a scheme are responsible for ensuring their products comply with the requirements of the scheme.

Attributes of an effective scheme are:

- Publicly available rules that outline the framework of the scheme and the activities/functions of the scheme for the CAB to operate under.
- A regular schedule of independent audits of compliance.
- A governance framework that has a continuing role of ensuring the scheme's ongoing integrity.

### 3.3.4 Report issued by an Accredited Testing Laboratory

A2.2(a)(iv) A report issued by an *Accredited Testing Laboratory* that—

- (A) demonstrates that a material, product or form of construction fulfils specific requirements of the NCC; and
- (B) sets out the tests the material, product or form of construction has been subjected to and the results of those tests and any other relevant information that has been relied upon to demonstrate its suitability for use in the building.

A report is issued by an *Accredited Testing Laboratory* to show that a building component has been subjected to particular tests, and sets out the results of those tests including any other relevant information that demonstrates its suitability for use in the building. An *Accredited Testing Laboratory* can also issue test certificates to certify that a particular product or system satisfies specified requirements.

An *Accredited Testing Laboratory* is a testing laboratory accredited by the National Association of Testing Authorities (NATA), a laboratory accredited by an organisation that has a mutual recognition agreement with NATA or an organisation recognised as being an *Accredited Testing Laboratory* under legislation at the time the test was undertaken.

NATA is a not-for-profit organisation recognised by the Commonwealth Government as the national authority for accreditation of laboratories performing tests, measurements, calibration and related services to standards of good laboratory practice. NATA, and those organisations with a mutual recognition agreement with NATA, accredit these laboratories to undertake relevant tests to specified standards.

The report issued by the *Accredited Testing Laboratory* should list how the building component complies with the relevant requirements of the NCC and set out the tests it has been submitted to, the results of those tests and any other relevant information that has been relied upon to demonstrate suitability.

NATA maintains a register on its website of current accredited testing facilities and laboratories.

#### ***NATA and organisations that have a mutual recognition agreement with NATA***

NATA is part of the International Laboratory Accreditation Co-operation Mutual Recognition Arrangement (ILAC MRA). Other accreditation bodies that are signatories to the ILAC MRA are responsible for maintaining a list of testing laboratories that they have accredited.

The ILAC MRA Signatory Search provides the contact details for all the accreditation bodies that are signatories to the ILAC MRA. Using the ILAC MRA Signatory Search can assist the *appropriate authority* in determining if a particular testing laboratory has a mutual recognition agreement with NATA.

### **3.3.5 A certificate or report from a professional engineer or other appropriately qualified person**

A2.2(a)(v) A certificate or report from a *professional engineer* or other *appropriately qualified person* that—

- (A) certifies that a material, product, form of construction or design fulfils specific requirements of the NCC; and

(B) sets out the basis on which it is given and the extent to which relevant standards, specifications, rules, codes of practice or other publications have been relied upon to demonstrate its suitability for use in the building.

A *professional engineer* or *appropriately qualified person* may issue a certificate or report verifying the suitability of a building component, form or construction or design so long as the certificate or report:

- provides the basis on which verification of suitability has been made in a form that can be subjected to scrutiny; and
- references any standards, specifications, software or other publications or documents relied upon in verifying suitability.

A *professional engineer* is a person who is registered in that discipline if applicable legislation requires it. It is also required that the *professional engineer* has experience and competence relevant to the building component that is the subject of the report.

An *appropriately qualified person* is a person who through experience, qualification or both is able to verify the suitability of a building component for a given application. The person does not necessarily need to be licenced or registered by the State or Territory authority unless applicable legislation requires it.

A *professional engineer* or *appropriately qualified person* is a person recognised by an *appropriate authority* to provide documentary evidence. When assessing the suitability of a certificate or report under this evidence option, an *appropriate authority* will need to verify that the report author has experience and competence commensurate with the subject of the report.

**Alert:**

In some States or Territories, applicable legislation may contain additional requirements to those found in the NCC for *professional engineers* or *appropriately qualified persons* who provide evidence of suitability.

**Example: determining suitability of a professional engineer**

An engineer has provided an *appropriate authority* with their professional resume. The resume shows that the engineer is experienced in the design and construction of sewerage infrastructure, with no experience in the design and installation of building fire services. Based upon the degree of experience, the *approval authority* may not consider

the engineer to have the appropriate and relevant experience to certify the design and installation of fire services in a building.

### 3.3.6 Another form of documentary evidence

A2.2(a)(vi) Another form of documentary evidence, such as but not limited to a *Product Technical Statement*, that—

- (A) demonstrates that a material, product, form of construction or design fulfils specific requirements of the NCC; and
- (B) sets out the basis on which it is given and the extent to which relevant standards, specifications, rules, codes of practice or other publications have been relied upon to demonstrate its suitability for use in the building.

This evidence option is another form of technical documentation, other than a document already covered by A2.2(a)(i)-(v), which demonstrates compliance with the NCC.

This evidence option is included on the basis that the other options are not an exhaustive list and there may be other forms of documentary evidence that are appropriate for some circumstances. This may include, but is not limited to, information provided by a product manufacturer.

Evidence submitted under this option should:

- suitably describe the subject of the document;
- set out any conditions that the statement of verification relies upon;
- describe limitations to the statement of verification where applicable;
- contain or refer to construction or installation standards where necessary; and
- reference any standards, test reports, specifications, or other publications relied upon for verifying suitability.

In many instances, documentary evidence submitted under this option may need to be supported by other documentation such as an appraisal or opinion from a recognised industry body or qualified professional. The *appropriate authority* should consider if this form of evidence is suitable for determining compliance with the NCC.

As previously mentioned, this form of documentary evidence may be more appropriate for building components that have historically demonstrated successful performance in

the built environment and where the consequences of failure have been assessed as low.

A *Product Technical Statement* is one type of other documentary evidence that is specifically mentioned in A2.2(a)(vi). Further information on *Product Technical Statements* is provided in section 4.

**Example: other documentary evidence**

An *appropriate authority* receives an application for a building which contains a *required* stair that is not *required* to be within a *fire-resisting shaft*. This stair is to be constructed from timber as permitted by NCC Volume One provision D2.3. Plans indicate that the timber species is blackbutt, that the timber will not be glued, and that each member will have a finished thickness of at least 44 mm. D2.3(c)(ii) requires that the timber must have an average density not less than 800 kg/m<sup>3</sup> at a moisture content of 12%. To verify that blackbutt meets this requirement, the *appropriate authority* is provided with a datasheet that quotes research which found that blackbutt typically achieves an average density of 930 kg/m<sup>3</sup>. The *appropriate authority* accepts the datasheet as evidence that the timber elements of the stair meet the minimum density requirement of D2.3(c)(ii).

**Alert:**

Documentary evidence of suitability must be current for the project it is applied to. Documentary evidence of suitability ceases to be current if it is:

- expired; or
- attesting compliance with a superseded NCC requirement that does not apply to the project it is submitted for; or
- withdrawn.

## 4 Product Technical Statements

The introduction of *Product Technical Statements* as an example of another form of documentary evidence under A2.2(a)(vi) is intended to promote the provision of consistent and comprehensive technical information in a format that is easy to read and understand. A *Product Technical Statement* differs from advertising brochures and other marketing material, including product warranties, as it focuses on technical detail.

A *Product Technical Statement* summarises key details about a building component. It is a statement from the manufacturer or supplier who declares compliance with the NCC. Using a *Product Technical Statement* will assist practitioners involved in the building process to select, specify and accept a building component.

A *Product Technical Statement* should include the following:

- **Statement of NCC compliance:** a clear statement demonstrating that the building component complies with specific requirements of the NCC.
- **Basis of statement:** an outline of the basis on which the statement of compliance is made, including the extent to which other documents are relied upon.
- **Description of application:** a statement of the application and intended use of the building component.
- **Limitations:** all limitations and conditions of use insofar as they relate to compliance with the NCC.

A *Product Technical Statement* should be accompanied by technical information and cross-reference any other documents that provide evidence to support:

- compliance claims, such as test reports or technical opinions/appraisals
- the use of the building component, such as installation or maintenance manuals.

A *Product Technical Statement* and any supporting documents should be uniquely identifiable by date or version number.

A suggested layout of a *Product Technical Statement* is shown in Figure 4.1.

Figure 4.1 Product Technical Statement suggested layout

<p><b>PRODUCT TECHNICAL STATEMENT</b></p> <p>for</p> <p><b>NAME OF MATERIAL, PRODUCT OR FORM OF CONSTRUCTION</b></p>
<p>Unique reference number, version and date of issue</p> <p>Name and contact details of company issuing Product Technical Statement</p>
<p><b>PRODUCT DESCRIPTION:</b></p> <p>A brief description of the material, product or form of construction.</p>
<p><b>APPLICATION AND INTENDED USE:</b></p> <p>A statement of how and where the material, product or form of construction can be used within a building.</p>
<p><b>COMPLIANCE WITH THE NATIONAL CONSTRUCTION CODE:</b></p> <p>A statement of the Performance Requirements and/or Deemed-to-Satisfy Provisions (including the NCC edition) which the Product Technical Statement asserts compliance with.</p> <p>A summary of how the use of the material, product or form of construction complies with the Performance Requirements and/or Deemed-to-Satisfy Provisions listed above.</p> <p>Details of evidence to support the compliance claims, such as test reports, technical opinions or other supporting information.</p>
<p><b>LIMITATIONS OF USE:</b></p> <p>Details of any limitations on the use of the material, product or form of construction relevant to its compliance claims, which may include the following:</p> <ul style="list-style-type: none"> <li>• Building classification</li> <li>• Building height or size</li> <li>• Type of construction</li> <li>• Environmental limitations, such as permissible wind regions</li> <li>• Maximum structural loads</li> </ul>
<p><b>CONDITIONS OF USE:</b></p> <p>Details of any conditions on the use of the material, product or form of construction relevant to its compliance claims.</p> <p>Details of any conditions on the use of the Product Technical Statement, such as expiry provisions.</p>
<p><b>INSTRUCTIONS FOR DESIGN, CONSTRUCTION OR INSTALLATION:</b></p> <p>Details of any instructions for design, construction or installation of the material, product or form of construction.</p>
<p><b>MAINTENANCE INSTRUCTIONS:</b></p> <p>Where applicable, instructions for maintenance.</p>
<p><b>SUPPORT:</b></p> <p>Full contact details, including website links, for the manufacturer, supplier and technical support service.</p>

## 5 Choosing the best documentary evidence option

### 5.1 Understanding the NCC

Every building is composed of thousands of products. Even supposedly simple buildings can be highly complex. This highlights the importance of understanding how and where a particular building component will be used in a building.

It is important to be familiar with the NCC to help identify the requirements that are relevant to a particular building component. It is also important to understand whether it forms part of a *Performance Solution*, a *Deemed-to-Satisfy Solution*, or a combination of the two.

### 5.2 Demonstrating compliance

#### 5.2.1 Selecting an appropriate form of evidence

A2.2(b) requires that the form of evidence selected must be appropriate to the use of the building component to which it relates. The process described in this Handbook provides guidance on selecting appropriate forms of evidence using a risk-based approach.

#### 5.2.2 Decision flow chart

In order to systematically work through the process of demonstrating compliance against the NCC there are a number of matters that need to be considered. The flow chart in Figure 5.1 outlines key matters for consideration and shows pathways for determining the appropriate documentary evidence options for demonstrating compliance with the NCC.

#### 5.2.3 Determining compliance with the NCC

The first and most important step is to identify whether the particular building component needs to comply with the NCC. In order to determine this, you need to go through the NCC and work out which *Performance Requirements* and associated *Deemed-to-Satisfy Provisions* apply to the building component.

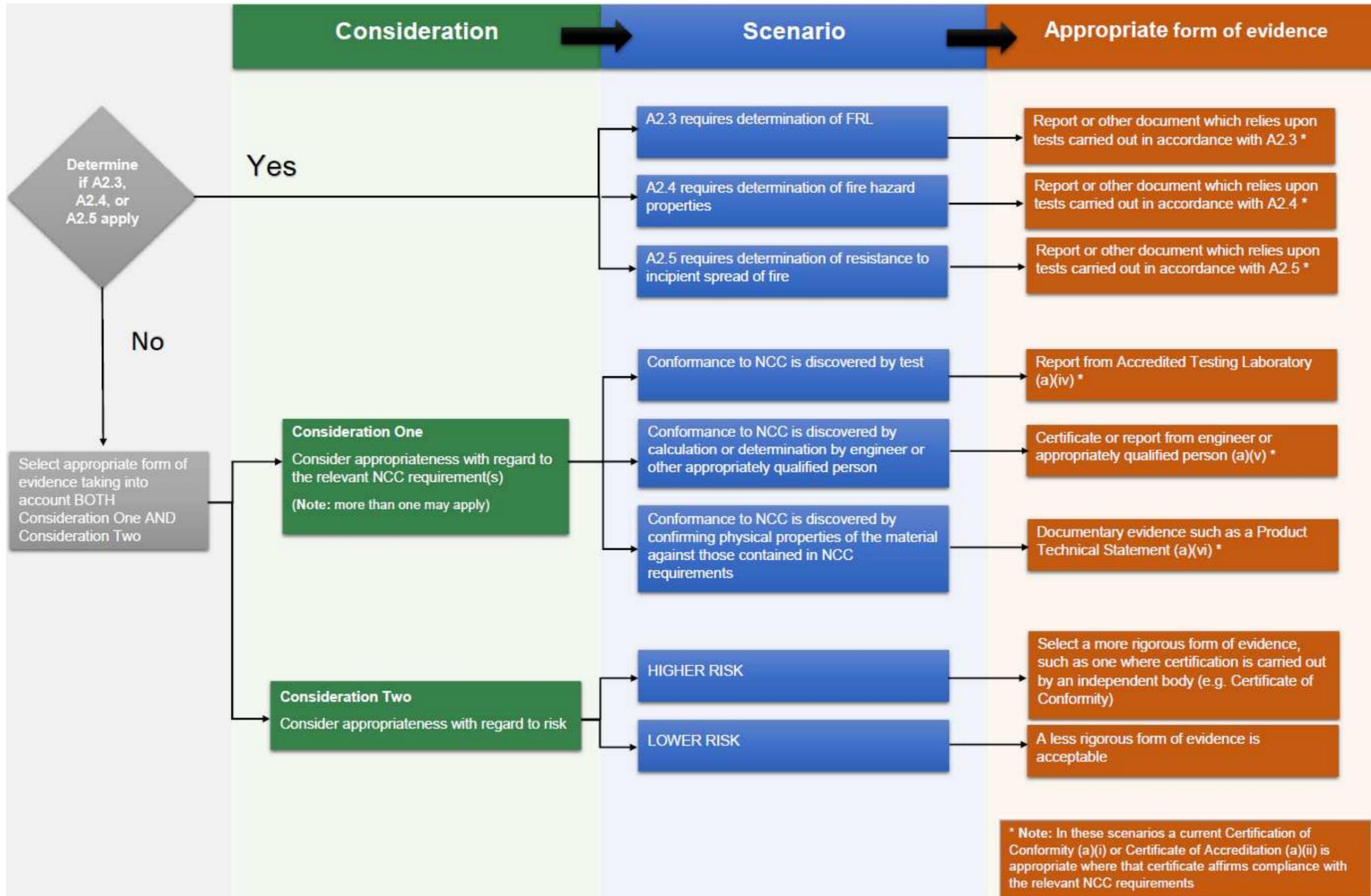
#### **Alert:**

Building components that are not required to comply with the NCC may still be subject to other relevant legislation. Designers and manufacturers need to be aware of other

legislation that may be in force and be applicable such as Australian Consumer legislation and Workplace Health and Safety legislation.

Examples of building components that would not be covered by the NCC include kitchen cupboards, door hinges and architraves.

Figure 5.1 Decision flow chart



### 5.3 Risk assessment

The steps described in the flow chart at Figure 5.1 include, for some pathways, consideration of the risk associated with the building component. The following risk assessment framework describes how risk assessment could be undertaken.

The framework looks at the likelihood of a building component failing (Table 5.1), and what the consequences might be if it did fail (Table 5.2). For this purpose, failure is defined as failure to meet the relevant requirements of the NCC. The combination of these two factors will give an indication of the level of risk. In turn, this will indicate what level of rigour is likely to be required to demonstrate compliance with the NCC.

Where the outcome of the risk assessment is towards high, a more rigorous form of documentary evidence would be warranted, such as via a certification scheme. Conversely, where the outcome of the risk assessment is lower, documentation such as a *Product Technical Statement* may suffice.

**Table 5.1 Likelihood of failure**

<b>Likelihood of failure</b>	<b>Description</b>
Rare	Only in very exceptional circumstances
Unlikely	Would not be expected to happen in durability lifetime of product
Possible	May happen at end of durability lifetime of product
Likely	Might happen in durability lifetime of product

**Table 5.2 Consequence of failure**

<b>Consequence of failure</b>	<b>Description</b>
Insignificant	No risk of harm to building users Failure does not impact on any other components (e.g. insulation fails to meet specified R-Value)
Minor	Might cause harm to building users Failure is visible, quickly apparent and isolated (e.g. minor element falls on account of faulty masonry anchor)
Significant	Causes injury or illness (e.g. injury from broken glass) Causes gradual/hidden failure of another component (e.g. failed under-slab membrane causes moisture ingress and results in damage)
Major	Potential loss of life (e.g. fire-isolated exit does not achieve required FRL and is compromised prematurely)

<b>Consequence of failure</b>	<b>Description</b>
	Causes catastrophic failure of another component (e.g. movement of concrete slab causing structural collapse)

The likelihood (rare to likely) and the consequence (insignificant to major) assessment for a building component is then used in applying the risk assessment framework shown in Figure 5.2.

**Figure 5.2 Risk assessment framework**

		<b>Consequence</b>			
		<b>Insignificant</b>	<b>Minor</b>	<b>Significant</b>	<b>Major</b>
<b>Likelihood</b>	<b>Rare</b>	<b>Low</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>
	<b>Unlikely</b>	<b>Low</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>
	<b>Possible</b>	<b>Low</b>	<b>Medium</b>	<b>High</b>	<b>High</b>
	<b>Likely</b>	<b>Medium</b>	<b>Medium</b>	<b>High</b>	<b>High</b>

**Alert:**

Assessing risk requires informed judgement to be exercised – this sample framework is only a guide which may assist in your decision-making process.

### 5.4 Achieving compliance with the NCC

Determining the appropriate form of documentary evidence to be used, and obtaining that evidence, is only part of achieving a building that complies with the NCC. Having appropriate documentary evidence for a specific building component is of no relevance if a different, non-conforming building component is procured and installed. All parties that have a role in the building product supply chain should ensure that their obligations or duties to check and assure that the right products are used, and are used correctly, are met.

Further information on non-conforming building products can be found at <http://www.abcb.gov.au/NCBP/Non-conforming-building-products>.