



# INFORMATION SHEET

## BUILDING SERVICES

Ref: MAT 12-16  
Current at: May 2013

### **BUILDING PRODUCT CONFORMANCE & THE BCA PART 1 - DETERMINING WHEN AND HOW THE BCA APPLIES**

Manufacturers and suppliers have an obligation to understand when the products they supply to the residential building industry need to meet the requirements of the Building Code of Australia (BCA).

The aim of this series of information sheets is to provide guidance to manufacturers and suppliers so that they can:

- determine whether their product needs to conform to the BCA, and if so
- identify the relevant steps to verify the product's conformance and develop relevant information to provide to designers, builders, certifiers and consumers.

For the purposes of these information sheets the term product refers to any material, system or component that is used in the construction of a building.

**Part 1 - Determining when and how the BCA applies** covers whether the product needs to comply with the BCA, how performance criteria are identified and identifying which pathway for assessment a product should follow (Steps 1-3).

**Part 2 – Determining how to evaluate a product against the BCA** outlines the BCA requirements to verify that a product does conform to the BCA for both Deemed to Satisfy (DTS) and Alternative Solutions (Step 4).

**Part 3 –Providing evidence of suitability** sets out how to collect the necessary evidence to verify that the assessment of a product does meet the requirements of the BCA (Step 5-6).

If this process is incorporated into a company's product assurance processes it will assist in the preparation of the correct types of technical information and allow the company to inform the designers, builders, certifiers and consumers about the product's performance.

This information sheet should be read in conjunction with the BCA. References to both Volume 1 and Volume 2 are provided, however the examples provided are limited to Volume 2 (Housing Provisions). More information is available from HIA on the BCA via [hia.com.au](http://hia.com.au) or by contacting the Building Services staff in your region.

This series of information sheet is accompanied by a decision tree (Attachment A) to assist manufacturers and suppliers to systematically work through the process of determining when and how a product can demonstrate conformance with the BCA.

---

DISCLAIMER - The above is intended to provide general information in summary form. The contents do not constitute specific advice and should not be relied upon as such. Formal specific advice should be sought by members with respect to particular matters before taking action.

phone 1300 650 620 | fax 1300 655 953 | [enquiries@hia.com.au](mailto:enquiries@hia.com.au) | [hia.com.au](http://hia.com.au)

## Part 1 - Determining when and how the BCA applies

Part 1 of this series addresses the initial process a manufacturer or supplier needs to undertake to determine:

- whether a product needs to conform to the BCA,
- identify what the relevant performance requirements are, and
- identify which pathway the product would best follow in order to meet the performance requirements.

There are 6 steps in the process to verify a building material, component or system against the BCA. Part 1 covers Steps 1 – 3.

### Step 1 - Determine whether the product needs to conform to the BCA?

The first question for a manufacturer or supplier to ask about a product they are seeking to produce or distribute is 'Does the product need to conform to the BCA?' The answer is based on how the product or systems will potentially be used in a building.

Products that generally need to conform to the BCA include anything that contributes to:

- the structural stability of a building
- the waterproofing of the building
- the fire safety of the building
- safe movement and access to and within the building
- the health and amenity of a building's occupants and
- the building's energy efficiency.

Products that fall within these categories generally have to comply with the BCA and hence answer 'yes' to this question. In order to do this they will need to meet the performance requirements set out in the BCA.

Products that are non-structural generally do not need to conform with the BCA. Examples include products like kitchen cupboards, architraves, some internal lining boards, painting, floor coverings, decorative wall coverings and curtain rails.

Products that are not covered by the BCA will still be required to meet a minimum standard in relation to being 'fit for purpose'. There is state and territory legislation in place which requires this for consumer protection purposes.

### Step 2 - Determine what the BCA performance requirements are for the product

Conformance to the BCA is achieved through meeting the performance requirements. A product may need to conform to more than one performance requirement. Ultimately the purpose of this process is to show how the product meets these requirements and hence conforms to the BCA.

The performance statements of the BCA are located in:

- Volume 1 at the commencement of each section (B to J)
- Volume 2 Part 2

**It is essential at this stage to look at all of the performance requirements to determine whether it is necessary for the product to comply with the BCA.**

#### **Multiple performance requirements**

A manufacturer is developing a new lightweight cladding for fixing to a framed substrate. It is reasonable to expect that the material contributes to the waterproofing of the building and would therefore need to comply with the waterproofing performance requirements of the BCA. However as it is part of the external fabric it would almost certainly also have to meet the structural performance requirements. Finally because it is a part of the building fabric there are situations where such materials are required to meet fire performance requirements. Therefore it is likely that this product will need to meet at least three different performance requirements.

If after examining the products potential relationship with the performance requirements the answer to Step 2 is 'no', then there is no further need to follow this guide. However the consumer protection provisions in other state legislation will normally apply to ensure the product is 'fit for purpose'.

Once Step 2 is completed, you should have a clear understanding of which performance requirements your product needs to meet and whether the product is covered by one or more requirements.

### **Step 3 - Determine how the product can show it meets the performance requirements of the BCA**

A product can show that it meets the performance requirements of the BCA by following one of the prescribed BCA "pathways". These pathways are set out in:

- Volume 1 Part A 0.5, and
- Volume 2 Part 1.0.5.

The manufacturer or supplier of any building solution, including materials, that needs to meet a BCA requirement must follow one of these pathways in order to ascertain conformance of their product. Hence the third step is for the manufacturers or supplier to determine the preferred "pathway" they will use to show how the product meets the performance requirements

There are three generally accepted methods of showing compliance with the BCA. The two most commonly used pathways are generally known as a Deemed to Satisfy (DTS) solutions and Alternative Solutions.

A third less commonly used pathway is a combination of both DTS and Alternative Solution and is not covered in detail by this information sheet.

#### ***3a DTS Pathways***

A DTS Solution is a building solution which has been accepted by the Australian Building Codes Board as a standard of material or method of construction that is deemed to meet the requirements of the performance requirements. DTS solutions are generally accepted without question by building certifiers under each state and territory building legislation therefore, they are the preferred option for many builders and designers.

The application of DTS Solutions is covered in the BCA:

- Volume 1 Part A 0.7 and
- Volume 2 Part 1.0.7

This part includes guidance on what is to be followed where there may be a conflict between DTS pathways.

In Volume 1 the DTS Solutions are contained within each section, being:

- Part B Structure
- Part C Fire resistance
- Part D Access and Egress
- Part E Services and Equipment
- Part F Health and amenity
- Part G Ancillary provisions
- Part H Special use buildings
- Part I Maintenance
- Part J Energy efficiency

In Volume 2 the DTS Solutions are all contained within Part 3 in the same order as the following parts of the code:

- Part 3.1 - Site preparation
- Part 3.2 - Footings and slabs
- Part 3.3 - Masonry
- Part 3.4 - Framing
- Part 3.5 - Roof and wall cladding
- Part 3.6 - Glazing
- Part 3.7 - Fire safety
- Part 3.8 - Health and amenity
- Part 3.9 - Safe movement and access
- Part 3.10 - Additional construction requirements
- Part 3.11 - Structural design manuals
- Part 3.12 - Energy efficiency

BCA Volume 2 provides for two types of DTS Solutions:

### **(i) Acceptable Construction Practice (ACP)**

Acceptable Construction Practices are prescriptive methods of construction that over time have been uniformly accepted as safe and identified as being acceptable building practice. Within Volume 2 of the BCA almost each part has an ACP provided. ACPs will more commonly be used for a building system or method of installation, rather than an individual product.

If a system (or product) can be closely compared to that found within the relevant sections it may be possible for it to follow this pathway to prove conformance with the BCA. The ACP may specify limitations on its use, such as size or application. If this is the case, then the product may need to be assessed using one of the other pathways.

### **(ii) Acceptable Construction Manual (ACM)**

An Acceptable Construction Manual is a referenced document, generally but not always an Australian Standard. Within Volume 2 of the BCA some parts contain an ACM option but not all.

If a product can be closely compared to the details set out in the relevant ACM it may be possible for it to follow this pathway to prove conformance with the BCA. It must be noted that ACMs may be either a testing procedure, a materials quality or a construction methodology. If this pathway is to be followed it may be necessary to adhere to more than one ACM.

The ACM may specify limitations on its use, such as size or application of the product. If this is the case, then the product may need to be assessed using one of the other pathways.

### **3b Alternative solution pathway**

An Alternative Solution is generally used when there is no DTS solution(s) available to suit the problem at hand or where the DTS solution limitations are exceeded. Often design expectations will eliminate a DTS solution and an Alternative solution may be the only option available.

The application of an Alternative Solution is covered in the BCA:

- Volume 1 Part A 0.8 and
- Volume 2 Part 1.0.8

### **3c Combination of a DTS and an Alternative Solution**

The third pathway is not as commonly used as the first two. This pathway combines the DTS pathway and Alternative solution pathway and would be used when a product does not fully meet the DTS options but may address some of those requirements.

#### **Combined Pathway**

An insulation product may be able to verify that it has the required R-value to meet P2.6.1 for energy efficiency, but it may also be seeking to verify that it can provide a sound rating function for a wall. If the product does not meet the DTS options for sound rating under P2.4.6, then an Alternative solution may be developed to verify its performance.

### **Summary**

To those seeking to use it for the first time, this process may appear complicated and confusing. However, the more aware you become of the scope and provisions in the BCA, the more easily you will be able to determine whether the product needs to have proof that it meets the BCA requirements before you can supply it to designers, builders, certifiers and consumers.

By following the process set out in Part 1 for an individual product, you should be able to determine:

1. whether the product needs to meet any requirements of the BCA,
2. if so, what performance requirements the product needs to meet, and
3. what pathways are available to show (and test) conformance with the performance requirements.

Parts 2 and 3 of this series cover how to verify that a product meets, or will meet, the performance requirements and how to provide evidence of its suitability for use in the building and construction industry.