



# Performance Solutions for housing projects

**This industry bulletin provides guidance on developing performance solutions for housing projects. The information is based on material available at the time of publication and may be subject to change.**

Western Australia adopts the Building Code of Australia (BCA), being Volumes One and Two of the National Construction Code (NCC), as the applicable building standards. The BCA sets the minimum required level for the safety, health, amenity and sustainability of buildings.

The BCA is a performance based document, giving the option to follow Deemed-to-Satisfy Provisions or develop Performance Solutions to comply with the Performance Requirements.

There have been concerns raised by industry about Performance Solutions developed for housing projects including for:

- termite management;
- corrosion protection;
- installation of gutters;
- weatherproofing of masonry (e.g. flashings above and below windows and at slab level); and
- waterproofing of bath and shower installations.

Please note parts referenced from the BCA in this bulletin relate to NCC 2016 Volume Two, which contains requirements for Class 1 and Class 10 buildings (housing). NCC 2019 will be adopted on 1 May 2019, which may change the numbering for clauses and parts in the NCC.

## Performance Solutions

Part 1.0 of the BCA sets out general requirements for Performance Solutions, including that:

- a Performance Solution must comply with the Performance Requirements or be at least equivalent to the Deemed-to-Satisfy Provisions;
- a Performance Solution must be assessed according to one or more of the Assessment Methods;
- a Performance Solution will only comply with the BCA when the Assessment Methods used satisfactorily demonstrate compliance with the Performance Requirements; and
- relevant Performance Requirements must be determined in accordance with part 1.0.7 of the BCA.

Developing a Performance Solution can be complex, requiring considerable thought and justification. Performance solutions are site specific and should not be used as

a pseudo Deemed-to-Satisfy Solution or used as a last minute fix to poor design or construction.

A Performance Solution is not a mechanism for accepting non-compliance with building standards rather it is a pathway for demonstrating compliance with Performance Requirements of the BCA based on the merits of the individual case.

A registered building surveyor is responsible for approving a Performance Solution as part of issuing a certificate of design compliance. A Performance Solution for a swimming pool barrier requirement must be approved by the relevant permit authority before a certificate of design compliance is issued.

### Assessment methods

The following assessment methods are listed in the NCC and each or any combination, can be used:

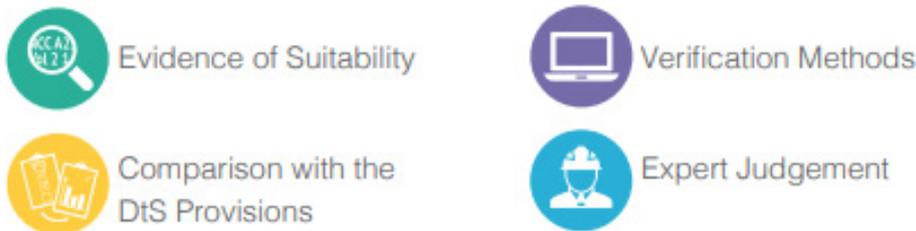


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### Expert judgement

It is common for Expert Judgement to be used in combination with other Assessment Methods for developing Performance Solutions.

An expert is someone who can make a judgement relating to BCA compliance and they need to be skilled and experienced in the area they are providing judgement. For example, the expert may be a suitably qualified engineer in the field, or a subject matter expert. In Western Australia, experts are not required to be registered with State accreditation bodies or registrars.

Ultimately, a certifying registered building surveyor determines whether a person undertaking an Expert Judgement is an expert. The engineering or scientific expertise of the expert must be directly relevant to the Performance Solution. For example a corrosion expert may have the knowledge and experience to provide expert opinion on corrosion matters or a professional entomologist may have the knowledge to provide expert opinion on termite matters.

It is possible that a combination of experts will be needed based on the case. For example in termite management, the expertise may be required on various aspects of termite biology; termite management; construction practices and engineering.

Each situation is different and the capacity of the expert to provide credible evidence in relation to the particular issue must be assessed on an individual basis.

A building surveyor should:

- scrutinise the information and details provided in an Assessment Method;
- fully understand the proposal or design; and
- be satisfied on compliance with the BCA before signing a certificate of design compliance.

### **Whole of life cost of a Performance Solution**

Building surveyors and those involved in design should regard the whole of life cost when developing or approving a Performance Solution.

A Performance Solution may be attractive in providing cost savings at the design stage, but may result in a costlier and an unreasonable burden to the homeowner in the long term if ongoing maintenance or management requirements prove stringent or complicated.

The Performance Solution should consider future impact on owners. Any post construction maintenance or management requirements should be practical and include a mechanism that would bring it to the attention of all future owners and occupiers as necessary. This may include a durable notice permanently fixed in a conspicuous location.

### **Documenting Outcomes**

Building surveyors should document decisions made under the BCA and retain copies of all relevant documentation.

For Performance Solutions, the following information should be documented:

- details of the relevant Performance Requirements; and
- the Assessment Method or methods used to establish compliance with the relevant Performance Requirements; and
- details of any Expert Judgement—including the extent to which the judgement was relied upon—and the qualifications and experience of the expert. Expert judgement should be justified and the logic used in applying it explained; and
- details of any tests or calculations used to determine compliance with the relevant Performance Requirements; and
- details of any Standards or other information which were relied upon.

The requirements of the Performance Solution should be clearly identified and must be detailed on the plans and specification forming part of a building permit application.

For a house in bush fire prone area, the building surveyor must also ensure that the certificate of design compliance contains:

1. a statement about each Performance Solution to the bush fire Performance Requirement (if proposed); and
2. details of the Assessment Method used to establish compliance with that requirement.

### Further guidance and other links

In addition to publishing the NCC which is available for free online, the Australian Building Codes Board (ABCB) has published useful information to assist in developing Performance Solutions including:

- [Development of Performance Solutions](#) - This document outlines a simple to follow four step process to assist practitioners with the development and approval of Performance Solutions.
- [Understanding the NCC - Using assessment methods](#) - providing information for all users about the various assessment methods contained in the NCC.

Videos and various case studies on Performance Solutions are available on the ABCB website – [www.abcb.gov.au](http://www.abcb.gov.au)

Other related information published by the Department of Mines, Industry Regulation and Safety – Building and Energy Division::

- [Guidance on fire safety Performance Solutions](#)
- [Industry Bulletin 83 – New termite management standards](#)
- [Industry Bulletin 93 - Documentation for timber framed roof construction](#)

#### Disclaimer

The information contained in this bulletin is provided as general information only and should not be relied upon as legal advice or as an accurate statement of the relevant legislation provisions. If you are uncertain as to your legal obligations you should obtain independent legal advice.

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