

## POTENTIAL LIABILITY CLAIMS FOR ENGINEERS/CERTIFIERS

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### PREFACE

The Building Code of Australia (BCA) allows alternative solutions. Engineers/Certifiers require appropriate test results to allow building product use.

Many certifiers are not aware of the testing procedure which could be very misleading as testing laboratories do not take any responsibility on the tested product.

Be aware of the following to avoid potential liability.

### Further Reading

We represent an Australian manufacturer who produces permanent formwork for the construction industry. Our investigations to-date have revealed inconsistencies in the Australian building approval system which we believe directly compromises other fellow engineers and certifiers.

Until recently the industry has been using predominantly bricks, structural steel and concrete as building products. The affordability pressures in building construction have given rise to the development of permanent formwork to be used in conjunction with concrete materials.

There are a number of articles published about non-compliant products, particularly imported products within the Australian building market place. The following explains the problems associated with the use of non-compliant products and how they affect the Australian professionals.

The Building Code of Australia (BCA) is a very comprehensive document and it can be argued that it is one of the world's leading building regulations.

The BCA supports innovation and as such offers alternative building solutions in good faith. If you consider other countries, they are still regulated with up to 50 year old requirements that are behind the times and inhibit new innovation.

Even though the BCA is a great document, the BCA's Board has no authority to police it as they advised us recently in writing. Our search has revealed the following.

- The BCA Board nor any statutory authority police the BCA.
- We have been advised by the ACCC (Australian Competition and Consumer Commission) that they do not want to associate with any building products. The ACCC states that they are only allowed to deal with consumer products. Building materials and assemblies are not consumer products.

- ❑ An organisation such as Fair Trading can only respond if:
  - A third party (customer of a purchased building product) complains under the ACL (Australian Consumer Law) – Section 151, Misleading and Deceptive Action. (However, in practice, no one lodges a complaint after using a non-compliant product).
  - The cost involved does not exceed \$40,000 per complaint (try to build less than this amount quoted!). This leads Fair Trading to deal primarily with issues such as appliances, toys and consumer goods. Our discussions with Fair Trading NSW revealed that they are aware of a variety of building products' non-compliance issues. They stated that there is no legislation for Fair Trading to be involved with non-compliant building products' issues.

It was obvious to us as engineers that we have the world's greatest regulation but we have no authority or law to support it. As an ENGINEER/CERTIFIER, this makes you ultimately responsible.

We are convinced that the majority of engineers and certifiers, for the reasons explained below, are exposed to potential costly legal actions.

Certifiers (private or local council, state) are also not immune from the liabilities. Since 1<sup>st</sup> January 2012, the Workers Health & Safety Act 2011 states that "responsibilities are not transferable". This means that certifiers, builders, project/construction managers, even contractors associated with the non-compliant products can no longer rely on the engineer's certificate. The NEW RULE is – everybody is responsible.

Consequently, the following information can be very useful for you to avoid potential problems.

The BCA allows:

- ❑ **The "Deemed to Satisfy" Condition** as described by the Australian Standards (e.g. AS3600 – 2009 – Concrete Structures Code). Be aware of the clear definition of the "Deemed to Satisfy" Condition. Read the Australian Standards and its commentaries very carefully.

For example, AS3600 – 2014 (current legal commentary for AS3600 – 2009) states that the protective coating of structural concrete elements without appropriate concrete cover is outside the scope of AS3600. Despite this you may even read "expert opinions" contradicting the code's commentary.

- ❑ **Alternative Solution**

The BCA states that the equivalency of the "Deemed to Satisfy" condition of the Australian Standards (e.g. AS3600 and AS3837) can be used provided that:

- (i) The Test Report is from an Australian N.A.T.A. registered laboratory. There are currently imported products that are distributed by major material supply companies where the product they supply is not tested by a N.A.T.A. registered laboratory.
- (ii) The certifier needs to understand what is actually being tested. The Australian N.A.T.A. registered laboratories state that they are a testing facility, and not a certification or appraisal organisation. They only test and prepare a test report for the material that is given to them.

**This is exactly where the problem lies. If you accept the relevant test report as certification from the testing laboratory you will be totally responsible.** The reason for this is, as stated clearly by the testing laboratory, they only test what has been given to them. What is given to them can be a completely different material than the product you will be certifying. Some examples are:

- A reputable testing laboratory issues a fire testing report for a concrete wall having a net concrete thickness of 108mm for a commonly available concrete mix and confirms 240/240/240 minutes of fire rating.

Is the testing laboratory aware of the characteristics of the concrete used in the testing? Has the testing laboratory checked the concrete mix and where it comes from? Worldwide concrete science has not yet achieved 240 minutes of fire rating for a concrete wall of 3m high and 108mm net concrete thickness being commercially and commonly available. What is this concrete made from? Slump, water/cement ratio, strength, normal grade or aerated concrete? Does it consist of special fibres/additives? The testing result is published without consideration for any of these and can be very misleading. For example, specially engineered concrete mix (e.g. aerated concrete) of 100mm thickness can achieve 240 minutes fire rating.

The irony is that such a test report is accepted by some practicing engineers and nearly all principal certifiers even though the achievement of 240 minutes FRL is against concrete science for a 108mm thick wall.

- A testing laboratory **MUST** ensure that the test samples are from the actual product. The photo identity of these samples should be placed in the testing laboratory's testing report. This is not current practice.

For example, under the BCA Specification C1.10, Clause 4 compliance, tests are conducted on a 100 x 100 sample with 50mm concrete backing (AS3837 testing). These samples could come from any source and the material thickness can be significantly different from the actual product itself if the testing laboratory does not identify the source and actual use of the product.

The following protocol generally takes place with the testing laboratory for AS3837 testing.

1. The customer prepares the information to appear for the description of the material on the testing laboratory report. This includes the material thickness as well.
2. The customer prepares the samples with 50mm backing of concrete and the polymer material to be tested is attached to the concrete.
3. The testing laboratory conducts the AS3837 test and issues an assessment report of the findings. This report does not have photo identification of the samples and the actual product of where the samples are coming from.

It is quite possible to provide any type of material and any thickness. It is important to point out that the results can significantly change with the material thickness and material composition.

**The testing laboratory currently does not check any of these points because there is no legislative requirement.**

This is what is currently occurring. If the certifier is using these test reports without considering these necessary questions, it is totally the certifier's responsibility as the testing laboratory clearly states that they are only testing what has been given to them. We would encourage you to write to the ABCB, local/state governments, institutions like CSIRO and Exova Warringtonfire to at least implement the full identification of the product/sample that is being tested. In my opinion, as a professional, the action of the testing laboratories is because their costs and liabilities cannot be warranted without legislative support for them. We as Australian professionals can be subjected to very heavy penalties because we only assume that testing laboratories do all the necessary checks. The reality is different.

Like many professionals, the public are not yet aware of the facts behind many inappropriate building products. We hope that all professionals can join this crusade by informing yourself and others.

We hope the above explains to all professionals that you are subjected to potential liability claims because of the above explained issues.

To address the above noted issues the following are required to be implemented.

- The BCA must be fully policed by the BCA Board or State or Federal Government.
- There is a need for a construction law and authority to be set up to follow and prevent the inappropriate use of building products.
- The ABCB or ACCC or another newly formed body supported by an appropriate legislation to police specifically building products.
- Australian N.A.T.A. registered laboratories must fully identify the products they are testing.

The above requirements will certainly take a very long time to implement. We therefore recommend that you inform your peers of the above and also contact the following associations/authorities.

- (1) The Institution of Engineers.
- (2) The Building Surveyors Association.
- (3) The Institution of Architecture.
- (4) The Local and State Government.

The root of the problem is that the Australian Government is allowing \$2.00 Shelf Companies to build Australian buildings. These companies are closed after the project's finalisation, and as a result, the company has no responsibility for any building liabilities. In this case the building's owner/body corporate has no alternative but to take legal action against any party relevant to the project. The Australian industry must ask the legislators for a new building law covering the above issues and ensuring at the same time that Australian buildings can only be built by Australian building companies which can demonstrate the necessary experience/background and can provide the necessary bank guarantees for the building's maintenance period of a minimum of 10 years.

You may contact us for your enquiries and comments on what can be done for the above noted issues.

**Burak Dincel**, BE MEngSc MIEAust CPEng RPEQ RBPEng NPER  
Email: [burak@dincel.com.au](mailto:burak@dincel.com.au)

**Alan Hamilton**, BE(Hons) MIEAust CPEng NPER  
Email: [alanh@dincel.com.au](mailto:alanh@dincel.com.au)