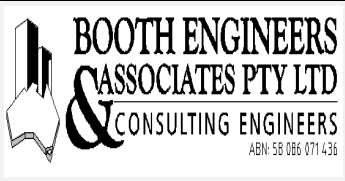


Compliance Certificate for building Design or Specification

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Document Ref No. 11175

A Compliance Certificate states building work complies with the building assessment provisions.

To be used for all classes of building and structures to certify a material, system, method of building or building element complies with the BCA or a provision of the QDC.

RESTRICTION: A building certifier (class B) can only give a compliance certificate about whether building work complies with the BCA or a provision of the QDC. A building certifier (Class B) can not give a certificate regarding QDC boundary clearance and site cover provisions.

1. Property description

This section need only be completed if details of street address and property description are applicable.

EG. In the case of (standard/generic) pool design/shell manufacture and/or patio and carport systems this section may not be applicable.

The description must identify all land the subject of the application.

The lot & plan details (eg. SP / RP) are shown on title documents or a rates notice.

If the plan is not registered by title, provide previous lot and plan details.

Street address (include no., street, suburb / locality & postcode)

Root Barrier and waterproof flexible cutoff wall system

Postcode N/A

Lot & plan details (attach list if necessary)

In which local government area is the land situated?

2. Description of component/s certified

Clearly describe the extent of work covered by this certificate.

Structural engineering check only of the following items :-

Root Barrier / flexible cut off wall

Components excluded:

Anything other than the design as noted above

3. Basis of certification

Detail the basis for giving the certificate and the extent to which tests, specifications, rules, standards, codes of practice and other publications, were relied upon.

AS 2870 – 2011 SAA Residential Slabs and Footings Code

The design depth of the root / flexible cut off walls and the layout of such a moisture barrier should be selected by an experienced designer understanding that such a method has been found to mitigate the impact of trees and uneven moisture transfers on foundation performance for typical residential applications as described in Item 4.0 below.

Typical depths of root / moisture barriers would be expected to be in the order of 2.5m minimum or to rock noting however this will vary from site to site depending on the specific site conditions / trees.

The designer and, or contractor shall take suitable precaution so as not to undermine any adjacent structures, trees or any other items during the design and installation process.

Root Barrier can be contacted for specific advice relating to specific sites.

4. Reference documentation

Clearly identify any relevant documentation, e.g. numbered structural engineering plans.

Booth Engineers and Associates Pty Ltd / Root Barrier Standard Details and Drawing ref: BE2013/11175 Standard Details

AS2870 – 2011 Appendix H

Root Barrier reference documentation and case studies

Technical information, test results, case studies and reference documentation, material tests / properties available on www.rootbarrier.com.au

LOCAL GOVERNMENT USE ONLY

Date received		Reference Number/s		Approved form 15 Version 1, 08/06
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5. Building certifier reference number	Building certifier reference number <input type="text"/>
6. Competent person details A competent person for building work, means a person who is assessed by the building certifier for the work as competent to practise in an aspect of the building and specification design, of the building work because of the individual's skill, experience and qualifications in the aspect. The competent person must also be registered or licensed under a law applying in the State to practice the aspect. If no relevant law requires the individual to be licensed or registered to be able to give the help, the certifier must assess the individual as having appropriate experience, qualifications or skills to be able to give the help. If the chief executive issues any guidelines for assessing a competent person, the building certifier must use the guidelines when assessing the person.	Name (in full) <input type="text" value="Stephane J Rebibou"/> Company name (if applicable) <input type="text" value="Booth Engineers and Associates Pty Ltd"/> Contact person <input type="text" value="Stephane J Rebibou"/> Phone no. <i>business hours</i> <input type="text" value="3397 7876"/> Mobile no. <input type="text" value="0402 839 053"/> Fax no. <input type="text" value="3847 7739"/> Email address <input type="text" value="admin@boothengineers.com.au"/> Postal address <input type="text" value="12 Old Cleveland Road"/> <input type="text" value="Stones Corner Queensland"/> Postcode 4120 Licence or registration number (if applicable) <input type="text" value="RPEQ 6842"/>
7. Signature of competent person This certificate must be signed by the individual assessed by the building certifier as competent.	I certify that the item/s described above, if installed or carried out under the certificate, including any referenced documentation, will comply with the <i>Building Act 1975</i> . Refer to Limitations of Certification below. Signature on behalf of Booth Engineers and Associates Pty Ltd Date <input type="text" value="STANDARD CERTIFICATE COPY"/> <input type="text" value="RPEQ 6842"/> <input type="text" value="18 June 2013"/> Refer to limitations of certifications below

Limitations of Certification:-

- The above certification complies with the *Building Act 1975* in so far as the structural design certified complies with Sound Engineering Principles only (as noted in items 3 and 4 above). Other consultants or competent persons should be sought to provide particular compliance with the *Building Act 1975* which fall outside of the scope of these items. This office should be contacted for clarification as required;
- It is recommended that an experienced designer / engineer consider the validity of such a method from site to site and select the layout and depth of the Root Barrier prior to installation to confirm that both design and construction is in accordance with the intent of the designer. A suitably qualified engineer should also undertake inspections of the Root Barrier during construction.
- The designer must also consider the influence of geotechnical data, any particular services, local government by laws and other data which may relate to the specific site not specifically described in this certification.
- Should the root / moisture barrier be identified as not performing at any time during the life of the structure trees should either be removed or additional works considered to mitigate against the influences identified at the time.
- The installation of a root / moisture barrier may initiate rebound action of the founding soils, particularly if these are dry and desiccated prior to the construction of a footing system / footing piers.
- It is important to note that just like the method outlined in Appendix H of AS2870, the use of a Root Barrier / flexible cut off walls as presented in this documentation "...to the design of footing systems in the presence of tree effects will not necessarily result in a footing system that achieves the performance requirements of this Standard (AS2870 - 2011). The risks of underperformance arise from factors that include the inherent variability and unpredictability of living, growing trees and their interaction with the environment, as well as imperfections in the method of modelling the effect of trees." Like methods outlined in Appendix H of AS2870 for dealing with trees or other abnormal moisture effects, the increasing success and use of this approach and its associated potential underperformance relies on an experienced designer's ability to effectively communicate this risk to owners (AS2870 – 2011 Appendix H).
- The construction and ongoing maintenance of all slab and footing systems shall also conform with the requirements of the CSIRO Information Service publication BTF 18 "Guide to Home Owners on Foundation Maintenance and Footing Performance". Failure to adequately maintain the site in accordance with the recommendations of these documents may result in the inadequate performance of the footing system.

Stephane Rebibou

B Eng MIEAust RPEQ 6842

For and on behalf of

Booth Engineers and Associates Pty Ltd