Queensland Government
Building Codes Queensland
Department of Local Government, Planning, Sport and Recreation

Building Newsflash

Termite Management Systems – Assessment against the Performance Requirements of the BCA

Purpose

The purpose of this Newsflash is to provide advice on the assessment of termite management systems, for Class 1 and 10 buildings.

Background

Volume 2 of the BCA requires the primary building elements of all susceptible Class 1 and Class 10 buildings to be protected against damage by subterranean termites. Termite management systems must either comply with the deemed-to-satisfy provisions, or the performance requirements of the BCA.

Termite management systems complying with the deemed-to-satisfy provisions of Australian Standard *AS3660.1 - 2000 Termite Management - Part 1 – New building work*, are deemed-to-satisfy the BCA.

AS3660.1 contains deemed-to-satisfy provisions for most commonly used types of termite management systems. However, the deemed-to-satisfy provisions may not cover some new and innovative systems. These new systems must therefore satisfy the performance requirements of the BCA.

Section 2 of AS3660.1 specifies the performance criteria that can be considered if systems are to be used that don't comply with the deemed-to-satisfy provisions of the Standard. However, regardless of whether an alternate system satisfies the performance requirements of the Standard, the BCA performance requirements must also be satisfied.

Legislation

BCA performance requirements
The performance requirements of the BCA for termite management systems are P2.1 and P2.1.1. P2.1 contains the general requirements while P2.1.1 is a Queensland specific requirement. P2.1.1 states –

All primary building elements of a Class 1 and 10 building must be protected against damage by subterranean termites by a suitable termite management system appropriate to—

(a) the ability to replenish the termite management system if it relies on replenishment; and
(b) the level of accessibility to enable the installation, maintenance and inspection of the termite management system to be carried out; and
(c) the likelihood of the termite management system inadvertently being damaged or bridged.

BCA Deemed-to-satisfy provisions

For the BCA, the deemed-to-satisfy termite management provisions for Class 1 and 10 buildings are contained in Part 3.1.3 of Volume 2. Queensland has a number of State variations to those requirements, which must be applied. They are:

1. Queensland clause 3.1 amends the definition of "primary building element" to incorporate additional joinery items that must be protected.
2. Queensland clause 3.1.3.0:
   - Prevents hand sprayed chemical barriers from being used under a concrete slab-on-ground (clause 8.8.2) or where visual inspection is not possible (clause 8.8.3)
   - Requires a concrete cap to protect the top of the barrier where chemicals are used as an external perimeter barrier.
   - Requires two notices detailing the type of barrier used to be displayed in a conspicuous location.

AS3660.1 performance requirements

The performance criteria of AS3660.1 are contained in Section 2 of the Standard. For example, the criterion in AS3660.1 for a chemical barrier is clause 2.3.4. Clause 2.3.4 states –

A chemical barrier shall be termite resistant and consist of a product registered by the National Registration Authority for Agricultural and Veterinary Chemicals (NRA [now the Australian Pesticides and Veterinary Medicines Authority]) and approved for that purpose.

AS3660.1 Deemed-to-satisfy provisions

Section 3 of AS3660.1 contains the deemed-to-satisfy provisions of the Standard. As far as the Standard is concerned, any system that complies with section 3 of the Standard is deemed to meet the performance requirements of the Standard. However, it is important to note that BCA performance requirements and the Queensland variation to the termite management provisions override the Standard where there is an inconsistency. Also, the BCA may require additional matters to be addressed that are not required by the Standard.

Interpretation

A system meets the deemed-to-satisfy provisions of the BCA if it complies with any of the systems specified in section 3 of AS3660.1 excluding systems covered by clauses 8.8.2 and 8.8.3 of the Standard. Any system that does not meet the deemed-to-satisfy provisions of the BCA must be assessed against the applicable performance requirements of the BCA.

If there is an inconsistency between a provision of the Standard and a provision of the BCA, under section 1.1.4 of the BCA, the BCA takes precedence.

The performance requirements of the BCA are different to the performance criteria of AS3660.1. This means that even though a building certifier may decide that a system complies with the performance criteria of AS3660.1, the BCA performance requirements

must still be satisfied. For example, with chemical barriers, even though the NRA may have registered a chemical as being suitable for use as a pre-construction barrier, it may not be sufficient to justify approving it under the BCA because the approved chemical may not be able to be replenished (eg if hand sprayed under a concrete slab) and may not be protected from inadvertent damage as required under P2.1.1 of the BCA.

Details on development applications
When a development application for building work is submitted to a certifier, the application should contain sufficient detail to enable the certifier to make an assessment as to whether the work will comply with the BCA.

For termite management systems, the certifier should ensure the system to be used is adequately detailed. For example, a statement on the application to the effect that the termite system will comply with AS3660.1 is not considered adequate. This does not enable the certifier to determine whether a system will comply with the BCA before the application is approved. This is particularly relevant if the system to be used needs to be assessed against the performance requirements of the BCA. Failure to properly detail the system to be used will not enable a certifier to meet their obligations with regard to a "notice of reasons" under 26(1)(e) of the *Standard Building Regulation 1993* (SBR).

For example, AS3660.1 requires an inspection zone of 75mm to be provided around perimeter termite management systems to allow visual inspection to be carried out. A system relying on an inspection zone of less than 75mm will not meet the deemed-to-satisfy provisions of the Standard. This means that the building certifier must approve an alternative solution that satisfies the performance requirements of the BCA before the system can be used.

Evidence of suitability
Part 1.2.2 of the Housing Provisions of the BCA provides details on the forms of evidence that can be used to support the use of a termite management system that is being assessed against the performance requirements of the BCA and Standard. The building certifier is responsible for deciding whether the evidence submitted in support of a system is adequate. The certifier can request additional information or opinions from competent persons in support of a decision about the use of a system.

Building certifiers may wish to consider using *AS3660.3 - Termite management Part 3: Assessment criteria for termite management systems* to assist in deciding whether or not a system meets the performance criteria of the BCA.

AS3660.3 specifies the criteria for assessing the effectiveness of termite management systems intended for use in buildings and structures as required by AS 3660.1. The Standard outlines procedures to assess the ability of a system and its components to manage termite activity in and around buildings and structures.

Ultimately, the building certifier responsible for approving the building work must be satisfied that the system meets the performance criteria of the BCA. With regard to the BCA, this means that the certifier must be satisfied that the system:

- Can be replenished if it relies on replenishment. This is likely to be the case with chemical soil barriers. Physical barriers and chemical non-soil matrix barriers that do not have a reasonable life expectancy may also need to be replaced over the life of the building.
- Is reasonably accessible so that the barrier can be installed, maintained and, where necessary, inspected. For example, a suspended floor with stumps and ant caps should have access to the sub-floor to enable inspections to be carried out.

- Is protected if the barrier is subjected to inadvertent damage or bridging. For example, it may not be readily obvious that a perimeter chemical barrier has been placed around a building. This could result in the barrier being disturbed by the homeowner placing garden beds on top of the barrier.

Inspection and certification of installed systems
Section 87A of the SBR allows the chief executive of the Department to approve guidelines for aspects of building work that **must** be inspected at various stages of the work mentioned in the guideline checklists (refer to http://www.lgp.qld.gov.au/docs/building_codes/inspection_guidelines.pdf). For a final inspection, the "guidelines" require the termite treatment to be inspected (to AS 3660 .1 and the approved plans). The inspection can be carried out by the certifier or alternatively by a competent person.

Under section 87C (5)(c) of the SBR, if a competent person carries out the inspection, the competent person must provide a certificate, which contains all of the relevant details specified in Appendix A of AS3660.1.

Summary
In summary, termite management systems that do not comply with the deemed-to-satisfy provisions of AS3660.1 must be assessed by a building certifier against the BCA performance requirements. The certifier must ensure the usual documentation in support of the proposed alternative solution is provided.

CodeMark
CodeMark is a product accreditation system administered by the Australian Building Codes Board. It replaces the previous certificate of conformity, which gave automatic approval in every State to approved products and systems. Systems that have a current certificate of conformity are still recognised under section 13 of the SBR.

Changes will be made to the SBR to provide the same automatic recognition for systems approved under the CodeMark scheme as the certificate of conformity.

Under 1.2.2 of the BCA, a certificate issued under the CodeMark scheme will also be considered suitable evidence of compliance with the BCA.

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