



PROPOSAL FOR CHANGE – BUILDING CODE OF AUSTRALIA

SUBJECT : TERMITE MANAGEMENT

BCA Volume One:

Vol. 1. Part B. 1. Section (i) which relates to and references AS 3660.1.
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BCA Volume Two:

Vol. 2. Part 3. 1. 3. Sections 1-5 which relate to Termite Risk Management and Acceptable Construction Practice and references AS 3660.1 and AS 2870.
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THE PROPOSAL

The proposal is that :

1) All termite management systems currently in the market and those being released for market acceptance be independently and objectively tested with a prescribed set of performance criteria and testing protocol that extensively investigates and analyses the durability and efficacy of all systems as well as testing the hydraulics and dispersion rates of all chemical termiticide delivery systems. This proposed set of guidelines should be included in the Standard as a reference for the BCA at the earliest possible opportunity.

2) There be a complete review, overhaul and update of the AS 3660 series of standards (as referenced by the BCA) so as to address areas of inadequacies and misrepresentations contained therein.



3) That a revamped AS 3660 series of standards simply present the methodology, performance criteria and testing protocol suitable for the testing of all termite management systems (as per proposal 1) above) as opposed to including proprietary or patented systems in the Standard.

4) That the ABCB exclude references in 3.1.3.1. of the BCA that relate to patented or proprietary systems and products and simply refer to performance criteria or reference the Standard requirements as referred to in proposal 1) above.

5) That the ABCB extensively consult with the APVMA in relation to the registration and introduction of patented and generic chemical termiticides utilised in pest management. That all chemical termiticides inclusive of soil applications, matrix systems and timber preservative treatments (H2-H5) be exposed to the rigorous criteria in proposal 1) with past performances and issues relating to alkalinity, soil mediums, sunlight and penetration be investigated.

6) That the ABCB request that a note such as that contained in the previous Standard (*i.e. 'To compensate for impervious soils such as clay where application of these rates would cause run-off, concentrations greater than those prescribed may be used, with correspondingly lower rates of application, eg the concentration of the termiticide in the emulsion doubled and the volume applied halved. In this way the required amount of termiticide is distributed over the total area to be protected.'*) with a description of these soil types and required by the APVMA to be placed on the MSDS labels to prevent over-applications.

7) That the ABCB carefully monitor any and all modifications, reviews and updates to the AS 3660 series of Standards and effect the immediate removal of proprietary or patented systems and products referenced in AS 3660.1., and that there be an immediate review of these Standards.

8) That the ABCB examine and review durability issues relating to all products and systems integrated into the construction of a building so as to assess and address 'lifetime of the building' in relation to the 'lifetime of the system or product' inclusive of limited warranties and suggested 'design life'.



What is the problem and why is it a problem?

BACKGROUND

Until the discontinuance of organochlorine (O/Cs) termiticides in mid-1995, the pest industry was able to heavily rely on hand spraying treatments, when applied as per the labelled rate, to be effective termite barriers. The subsequent decision to accept the slab as a physical barrier negated the requirement for full underslab treatments. The reliance on partial treatments created a new plethora of problems in relation to the attachment of termite management products and systems to the slab. The concrete slab, in effect, became the major component of most termite management systems.

Chemicals

The APVMA's 'User Agreement Returns System', which was supposed to be administered by the DPI in each state and territory and was designed to track chemical termiticides from manufacture through to practical application on-site, was an abject failure as is clearly evidenced by the Pearson/Guardian QBT Findings.

(Refer to the attached QBT Findings and References documents)

Since the discontinuation of O/Cs most chemical termiticide barriers were either insufficient or non-existent and therefore were unable to prevent termites entering structures because of universal corrupt practices throughout the pre-construction area of pest management. There were little or no constraints on chemical termiticides and many treatments were performed at a cost to the builder that was often less than the wholesale cost of the chemical termiticide required to perform the treatment in accordance with the Standard and the MSDS labelled rate. Builders were content to receive a treatment certificate which falsely prescribed that the treatment had been performed at the appropriate rate when, in most instances, there was little or no chemical applied in a treatment.

In West Australia, there were many recorded instances occurring where there were dangerous over-applications of chemical termiticides. This involved applications of the appropriate amount of chemical termiticides being applied with insufficient water. This meant that an application that required an hour or more to significantly groom and percolate the soil medium to provide an appropriate chemical termiticide barrier was being performed in 5-10 minutes.



A 'job completion sheet', which is a typical example of many such sheets that were provided to the ACCC in Western Australia by TAG to effect a prosecution of these practises, is attached to this proposal. In the 'job completion sheet' are details of the work performed by a single operator in a period of nine (9) hours and fifteen (15) minutes. If you subtract two (2) hours and fifty-five (55) minutes for travel time the operator performed eleven (11) trenchings, seven (7) pre-treatments and two (2) concrete cures in a period of six (6) hours and twenty (20) minutes. Any competent pest manager would advise that these works cannot possibly be performed in that period of time. **(Refer to the attached job completion sheet)**

Unfortunately, despite the ACCC investigating the situation, they were unable to prosecute these practices because of perceived inadequacies in the Standard that relate to the treatment of difficult or impervious soils. The advice that was provided stated that the previous Standard contained notes which were not contained in the current Standard. These practices, which are patently criminal in nature, were left unpunished. Details of this are contained in the attached letter (email) from the ACCC in the assessment section of the letter. **(Refer to the attached AEPMA Chlorpyrifos Letter)**
(Refer to attached ACCC Letter)

The problem continued to be that because of under-applications and over-applications, the chemical termiticides were not applied in an appropriate manner so as to effectively be a barrier to termite movement. In the simplest of terms, "If it isn't applied properly or it isn't there, then it obviously won't work!"
(Refer to the attached QBT Findings and References documents)

There were concerns surfacing at the time in relation to the efficacy and durability of chlorpyrifos which had been registered and approved for preconstruction use by the NRA now known as the APVMA. These concerns involved testing data which was centred round factors such as the chemical's reaction to soil alkalinity and exposure to sunlight. All chemical applications are affected to varying degrees by the soil medium that they inhabit.
(Refer to the attached QBT Findings and References documents)

Physical Barriers (Monitoring Systems)

There was a proliferation of new 'physical termite management systems' improperly described as 'physical barriers' and more aptly described as physical monitoring systems. The upsurge of the use of these systems coincided with the fraudulent chemical treatment practices occurring at the time, and the introduction of the AS 3660 series of termite management Standards which included several examples of these physical systems and products in the Standard and mistakenly referred to them as 'Physical Barriers'. The mistaken inference conveyed to all parties, in the description of these physical systems



and products as 'Physical Barriers', was that they stopped termites entering a structure. This is exacerbated by the fact that many manufacturers and installers promoted these systems as protection which, as any good pest manager would advise, is simply not the case.

Physical termite management systems were generally promoted by manufacturers and promoters of these products as a 'chemical-free' form of termite protection. This appealed immensely to environmentally sensitive members of the public and further engendered a reliance on these supposedly 'green' systems as 'stand alone' systems. This was despite the fact that all of these systems were only chemical-free until such time as they encounter termites. They were also sold and promoted as 'termite protection' when, in essence, they could only be considered to be termite monitoring systems that redirected termites to an inspection zone where they could be observed and chemically treated.

It is farcical in the extreme to have companies split into divisions whereby one division promotes a chemical-free physical barrier system which protects homeowners against termites whilst another division goes around applying chemical whenever these systems encounter termites. Homeowners are being deceived by these practices and need education as to how these systems are not chemical-free and why their warranties are unable to cover 'bridging' and cannot therefore be considered as a barrier to termite ingress.

The simplest termite monitoring system for many years when homes were constructed on stumps was the humble ant cap. The purpose of the ant cap was to redirect termite movement to the outer edges of the disc where they could be observed and treated prior to their continued movement around the obstacle and into the dwelling.

The principle of how an ant cap functioned was the same principle that applied to all physical termite management systems currently used in 'slab on ground' constructions, and varies in practical application in having an inspection zone that is more extensive and generally easier to view. Many of the new physical systems are a mixture of several composite materials (parge, metal, plastics, etc.) that, generally without exception, include the slab as the single largest component. Physical termite management systems are best described as 'giant ant caps' so as to best describe their mode of operation.

It would be a strong suggestion of TAG that the BCA remove all references to 'Physical Barriers' in the Standard and more accurately relate to them as "Physical Termite Monitoring Systems" so as to more precisely describe their mode of operation to all parties. This would prevent their promotion in onward sale to unsuspecting homeowners as 'protection that requires no chemical' and would also feature the inalienable fact that manufacturers are unable to provide bridging warranty for these systems.

The difference between chemical barriers and the physical barriers (as described in the Standard) is that chemical barriers are a barrier to all entry



whilst physical systems are only a barrier to ‘concealed’ entry and not entry per se. This situation is exacerbated by manufacturers advising consumers that they have termite protection and in some cases advising homeowners that they do not require regular inspections to retain their warranty. What is not being explained is that going around or over the system (bridging), which is what both the system and the termites are designed or able to do, are not covered in their warranty. Physical barriers should more aptly be referred to as monitoring systems in the same manner that white ants are referred to as termites.

Testing and Assessment

There are several ways whereby termite management systems and products gain qualification for market acceptance. There are technical assessments of products and systems made by varying entities with the pre-eminent technical assessment, as considered and universally accepted throughout industry, being that which is produced by the CSIRO and commonly referred to as the ABSAC appraisal.

Whist an ABSAC technical assessment document has weighty references to data and documentation provided by the applicant and appears to provide a thorough research of the designated product or system it is appraising, further investigation shows that this is not the case. Many of these technical assessments have not had the product evaluated by an independent assessor with much of the testing in many cases often being undertaken by the applicant or the applicant’s agent. An applicant would not be objective given that he stands to benefit financially once his product or system receives the much lauded technical assessment.

Most people do not go past the letters CSIRO and simply accept that the product has achieved their endorsement and approval as a tested product suitable for use in pre-construction termite management. However, despite the weighty references and information contained in these assessments we find an interesting statement that gets to the gist of the subject in which a technical assessment states, and I quote, ***“Technical assessments are intended to help all those concerned with the approval, specification and use of new products or systems. They are objective assessments of the fitness for purpose of the product, system or material but are not approvals or endorsements. They may be submitted to approval authorities as part of the justification process required to obtain approval.”***

What is the real value of a technical assessment and why is it accorded such a standing when it does not test for durability and simply relies on technical information provided by the applicant. Test data/results of a product or a system that are either provided and/or undertaken by the applicant can hardly be viewed as objective. Despite this, most sections of the industry hold CSIRO ABSAC technical assessments up as the necessary qualification for market acceptance.



Furthermore, the CSIRO in most cases seems to ignore the provisions of AS 3660.3 which addresses the assessment criteria for termite management systems and states in the opening sentence of section 2.5.4., which deals with experimental design and relates to field assessments and assessment methodology that states, and I quote, ***“The exposure period may vary, depending on the intended durability of the system. Assessments of termite-resistant cellulosic or non-cellulosic materials shall be for a minimum of 36 months, unless otherwise specified in this Standard.”*** In the race to reap financial return on these products and systems in the market place, seldom do they undergo the necessary time trials to establish efficacy and durability.

The discontinued ABCB Certificate of Conformity, which has been replaced by the newly introduced CodeMark system, was intended to provide products and systems with national mandatory acceptance. In providing these products and systems with this nationally recognised endorsement did the ABCB commission independent and objective testing and analysis relating to hydraulics on the reticulation systems? Furthermore, did the ABCB commission independent and objective testing and analysis in relation to efficacy and durability issues? How heavily did the ABCB rely on the CSIRO technical assessment in providing the Certificate of Conformity, which is considered by many in the building and pest management industry to be the highest accolade that can be achieved by a product or system?

The pest management industry has been inundated with a plethora of novel new physical termite management systems and products that are employed in the area of pre-construction since the introduction of the AS 3660 series of Standards. These physical systems and products have generally been introduced without having undertaken independent and objective long term testing so as to provide a detailed analysis of their fitness for use.

There is often no testing or analysis of the inter-relationship of the materials and elements that they are combined with when integrated into a building (i.e. Bricks, mortar, moisture, efflorescence, lime, etc). Dispersion rates and hydraulics which relate to reticulation systems are a major source of concern to the pest management industry. A pest manager needs to be provided with proven technologies that have been independently and objectively tested by an established and accepted means of performance criteria and testing protocol.

The relative merits of most systems have generally not been exposed to independent and objective testing, and in many instances were never tested for durability. The initial paragraph in the foreword to AS 3660.1 states, and I quote, that ***“The purpose of termite barriers is to deter concealed entry by termites into a building, above the termite barrier. Termites can build around barriers but their workings or evidence thereof are then in the open where they may be detected more readily during regular inspections.”*** I believe that the first sentence in this paragraph should have read, ***“The purpose of termite barriers is to deter concealed entry by termites into a building, below the termite barrier.”***



The sentence that immediately follows the initial paragraph in the abovementioned foreword states that, ***“This Standard contains no procedures or details on durability, maintenance and inspection issues.”*** To builders, pest managers and homeowners alike, the inclusion of a product or system in the Standard would carry an implicit endorsement of that product or system. What is conveyed in the statement above and also in 1.1.(c) of AS 3660.1, is that while these systems and products are referenced in the Standard, there is no responsibility assumed for the ‘durability, maintenance and inspection procedures’ of these included systems and products.

Efficacy and performance issues also extend to the area of timber preservative treatments with on-site cutting and sawing of treated timber framing often voiding the warranty thereon. Chemical infusions often simply provide an envelope treatment which is compromised by cutting or chipping which can provide termite access.

General Information

This background to the problems exposes a number of areas where problems exist and demonstrates the universal nature of the situation. TAG has previously been commissioned by the Australian Environmental Pest Managers Association (AEPMA) to review and assess termite management systems and products in the market. In broad terms what was found was that many systems were evaluated wrongly and promoted as primary systems of termite protection when their purpose was simply to detect termite movement. This subject requires further examination and public education to demonstrate the limitations and inadequacies of all these systems.

Physical termite management systems are incorporated into the construction of a building and are thereby integrated into the home for its lifetime. These systems generally have a warranty of ten years. Some system manufacturers and providers state that the system has a ‘design life’ of fifty years or that their system or product should last the lifetime of the home. This is a suggested outcome without warranty for the stated ‘design life’ time. This needs addressing as it obviously provides no certainty to homeowners.

Ethical and appropriately qualified pest managers have advised, and continue to advise, that a properly applied chemical barrier in an appropriate soil medium provides the best defence against termites. Unfortunately, the inability of the APVMA to sufficiently maintain the ‘User Agreement Returns System’ has resulted in most chemical applications being used as a cure for termite ingress and not as a preventative barrier treatment.

Many homeowners would prefer to have known these facts prior to the occurrence of infestations that devalue their home, rather than finding out after the event that they have no warranty covering the bridging of their system and a financial burden. Prevention is obviously better than cure.



What is definitely required is a means by which greater surety is provided to all parties, including builders, specifiers, certifiers, pest managers and homeowners, in the construction process and the onward life expectancy of Australian homes.

THE PROBLEMS

The problems that exist with the inter-relationship between termite management, building practices and the regulatory practices and controls are set out as follows :

- 1) The APVMA “User Agreement Returns System” collapse into a state of total disrepair caused chemical termiticide applications to become unaccountable and corrupt practices relating to under-application and over-applications of chemicals to flourish and spread throughout Australia.
- 2) The introduction of a multitude of physical termite management systems which were provided with market acceptance without undergoing objective analysis and establishing performance criteria in relation to their durability and suitability for purpose. (Insufficient time trials and tests)
- 3) The AS 2870 and AS 3600 provisions for the construction of concrete slabs, called up in the AS 3660 series, were not observed in general practice. This relates to issues involving watering on-site, slump, vibrating, curing, temperatures and slab edge construction.
- 4) The inaccurate description of physical termite management systems as physical barriers which was exacerbated by manufacturers and installers in subsequent promotion as termite protection. A chemical barrier is a barrier to all entry whilst a physical barrier is only a barrier to ‘concealed’ entry and not a barrier to entry per se. Physical systems are monitoring devices.
- 5) The physical management systems and chemical reticulation delivery systems reliance on the CSIRO ABSAC Technical Assessment as the appropriate document for their acceptance for use when the document, by its own admission, was not an endorsement or an approval of the product or system.
- 6) There has been insufficient consumer education provided on the subject of termite management which has caused people to believe that they have protection as is suggested by manufacturers



of physical termite management systems. Warranty bridging issues and the concept of protection require immediate redress.

- 7) The difficulty that the BCA, the Standards, the APVMA and various State Authorities have in standardising and integrating the regulations and requirements to provide uniformity and a combined approach on the subject of termite management so as to provide some certainty to homeowners throughout Australia.
- 8) The inane situation whereby systems are integrated into a building during the construction process and are provided with warranties that are substantially less than the suggested lifetime of the home. A 'design life' is suggested but does not invoke any claim or responsibility outside of the warranty period.

How will the proposal solve the problem?

HOW THESE PROPOSALS ASSIST IN SOLVING THE PROBLEMS

1) All termite management systems currently in the market and those being released for market acceptance be independently and objectively tested with a prescribed set of performance criteria and testing protocol that extensively investigates and analyses the durability and efficacy of all systems as well as testing the hydraulics and dispersion rates of all chemical termiticide delivery systems. This proposed set of guidelines should be included in the Standard as a reference for the BCA at the earliest possible opportunity.

This initial proposal addresses the problem in relation to the lack of independent and objective testing which demonstrates that the products and systems used in termite management are able to perform the purpose for which they are designed. Extensive testing in relation to efficacy and durability are necessary to determine suitability for purpose. This would seem to be a primary requirement for all termite management systems and products.

2) There be a complete review, overhaul and update of the AS 3660 series of standards (as referenced by the BCA) so as to address areas of inadequacies and misrepresentations contained therein.

The AS 3660 series of Standards are poorly written and need to be reviewed to more adequately deal with problems of inter-relationship with the MSDS



labelled requirements and the BCA provisions. The renaming of 'physical barriers' as 'physical monitoring systems' is necessary to more accurately reflect the manner in which they operate and to onwardly inform people of their limitations in preventing termite ingress and their reliance on chemical termiticides when they have contact with termites.

3) That a revamped AS 3660 series of standards simply present the methodology, performance criteria and testing protocol suitable for the testing of all termite management systems (as per proposal 1) above) as opposed to including proprietary or patented systems in the Standard.

The purpose of the BCA in referencing the Standard is not to provide a brochure for the promotion of systems and products to be used in buildings. In referencing certain systems and products, the view that is conveyed and what people would derive is that of an implicit endorsement of the nominated system or product. In fact, I have been previously advised by representatives of companies who have systems or products featured in the Standard advising this to be the case and further conveying that because it was in the Standard issues relating to efficacy and durability should not be questioned. This is not the purpose of the BCA or the Standard. If the Standard simply contained performance criteria and testing protocol this provides all systems and products with an equal footing whereby they are required to compete on an even playing field with equal opportunities.

4) That the ABCB exclude references in 3.1.3.1. of the BCA that relate to patented or proprietary systems and products and simply refer to performance criteria or reference the Standard requirements as referred to in proposal 1) above.

This is self-explanatory and relates, for the same reasons, to the rationale applied immediately above to proposal 3).

5) That the ABCB extensively consult with the APVMA in relation to the registration and introduction of patented and generic chemical termiticides utilised in pest management. That all chemical termiticides inclusive of soil applications, matrix systems and timber preservative treatments (H2-H5) be exposed to the rigorous criteria in proposal 1) with past performances and issues relating to alkalinity, soil mediums, sunlight and penetration be investigated.

Many registrations are provided to generic derivatives of patented termiticides when they come off patent. In some cases the generic has a higher efficacy rating than the initial patented product on which it was modelled, but in most cases these generics are not as effective and not subjected to rigorous testing to demonstrate their efficacy and persistency. This is again a situation where the testing of systems used in termite management needs to be extensive so as to provide certainty to all parties including the builders, pest managers and homeowners.



6) *That the ABCB request that a note such as that contained in the previous Standard*

(i.e. 'To compensate for impervious soils such as clay where application of these rates would cause run-off, concentrations greater than those prescribed may be used, with correspondingly lower rates of application, eg the concentration of the termiticide in the emulsion doubled and the volume applied halved. In this way the required amount of termiticide is distributed over the total area to be protected.')

with a description of these soil types and required by the APVMA to be placed on the MSDS labels to prevent over-applications.

This again should be self-explanatory and the assists in explaining as to why proposal 2) needs to occur. The Standard was remiss in not addressing the MSDS label information in a manner such as that which was provided in the previous Standard. This would assist in the prosecution of dangerous practices that relate to the over-application of chemical termiticides.

7) *That the ABCB carefully monitor any and all modifications, reviews and updates to the AS 3660 series of Standards and effect the immediate removal of proprietary or patented systems and products referenced in AS 3660.1., and that there be an immediate review of these Standards.*

The current AS 3660 series desperately needs updating and revision to immediately implement the statement made at the end of the Preface to AS 3660.1 which states, and I quote, **“Future editions of this Standard will not include proprietary or patented systems. While reference will be made to the existence of such systems, each system manufacturer must demonstrate compliance with the performance requirement of this Standard, where required.”** Any proprietary and/or patented systems or products should never have been included in the Standard in the first instance. The BCA calls up the Standard and therefore should monitor and scrutinize carefully what is entered into or omitted from the document. The ACCC's inability to protect homeowners because of the failings of the Standard, and the insertion of the misleading initial sentence in the Foreword to AS 3660.1 provide adequate reason to effect immediate change.

8) *That the ABCB examine and review durability issues relating to all products and systems integrated into the construction of a building so as to assess and address 'lifetime of the building' in relation to the 'lifetime of the system or product' inclusive of limited warranties and suggested 'design life'.*

The requirement that the system or product integrated into the construction of a building should last the lifetime of the building should be a basic performance requirement of a system or product. This should especially be the case when these systems or products are encased or sandwiched in the lower course brickwork of a building. The term 'design life', without being supported by warranty, provides no comfort for homeowners.



Who will be affected by the proposal and how will they be affected?

THOSE AFFECTED BY THESE PROPOSALS

A raft of people including builders, specifiers, certifiers, pest managers, homeowners, product and system manufacturers and providers will be affected by these proposals. There would be costs involved in the introduction and implementation of the proposed changes and the impact on competition in the industry would be immense. It is, however, a necessary change to create parity for all systems and products whereby they are all subjected to the same testing, scrutiny and performance criteria.

It should be expected that several products and systems may not continue on in the industry on the basis of data collected and collated by TAG to date and future testing on chemical delivery systems may provide more casualties in relation to perceived efficacy issues. However, the case is that if a product or system has efficacy or durability issues that are discovered in objective and independent testing to impede the product or system's performance, then it should not be in the market place until these issues are addressed to the satisfaction of all parties. The benefits are enormous given the size of the problem which is estimated by the Archicentre to be approaching a billion dollars per annum.

On another level TAG sees the real impact of the problem on mums and dads who have their major financial investment in the great Australian dream – their home. Australian families are seeing their major asset crumble in becoming food for termites because of the illicit practices or reliance on products and systems that do not perform as per the advice provided thereby leaving people out of pocket and sometimes out of a home. This is the real cost that needs to be addressed.

In providing these rational approaches to the problem and addressing the problems that beset the pest management and building industries in relation to termite management, we provide Australian homeowners with termite management that is accountable and based on appropriate checks and balances to provide some certainty to all concerned parties.

Who has been consulted and what are their views?



PETITION

Unfortunately, due to time constraints relating to only discovering the 'PFC' documents on your website on the 26th of January being five days prior to the cut-off date for acceptance of the document, I seek leave to present a petition from concerned stakeholders in relation to this submission.

As the consultation section of this document does not form the main body of the proposal that has been submitted, I would request that you provide me with thirty (30) days in which I provide you with feedback and evidence of the extent of support for these proposals. Please provide written advice in relation to this request.

Kindest Regards,

Andrew M. Campbell

Termite Action Group (TAG)