Call for the immediate declaration of all municipalities (metropolitan Melbourne & regional Victoria) as regions where homes, buildings and structures are subject to termite infestation

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CALL FOR THE IMMEDIATE DECLARATION OF ALL MUNICIPALITIES (METROPOLITAN MELBOURNE & REGIONAL VICTORIA) AS REGIONS WHERE HOMES, BUILDINGS AND STRUCTURES ARE SUBJECT TO TERMITE INFESTATION[1]

by

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ABSTRACT

Subterranean termites (termites) are prevalent throughout the whole of Victoria. Termites pose an economic risk to homes, buildings and structures in all Victorian municipalities. Responsible termite risk management calls for all municipalities state wide to be declared as regions in which homes, buildings and structures are likely to be subject to termite infestation. Redesignation of undeclared (unprotected) municipalities to declared status can simply be done, with little or no cost, by state legislation or individual council motion.

INTRODUCTION

Of a total of 78 municipalities in Victoria, there are 30 in which homes, buildings and structures are not yet designated as being subject to termite infestation **(undeclared** and **unprotected).** Recent evidence suggests that termites are prevalent in these non-designated municipalities, many at alarming levels (1). Presently, if a property is for sale in an undeclared municipality, no precaution with regard to the hazard of termite attack is generally given to the purchaser by the municipality. If constructing or renovating/extending in an undeclared municipality, a builder is not required to install a termite management system. Often, the builder may not even raise the option of a termite management system with the client or even be aware of what alternatives are available. Building surveyors, architects and construction engineers may be in a similar position. Consequently, in undeclared municipalities, the purchaser of a property and building/structure owners, as well as the building industry professionals who advise them, are lulled into a false sense of security, believing that the presence of termites in the undeclared municipalities is negligible and not considered a threat, or worse-that termites do not even exist in these municipalities. This article provides evidence to demonstrate that all Victorian municipalities (metropolitan Melbourne and regional Victoria) are regions in which all dwellings and structures are likely to be subject to termite infestation and need to be redesignated from **undeclared (unprotected)** to **declared**. By exercising this declaration, the interests of all potential building owners and the integrity and value of the built environment of these municipalities will be protected. Furthermore, the municipality will be seen to have fulfilled its duty of care by acknowledging the hazard requiring that buildings and structures within its boundaries are appropriately protected. This is clearly not the situation at present.

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[1] **Please note:** Municipal status and data given are current at the time of drafting this article (13th January 2005).

TERMITE BIOLOGY

Subterranean termites (often referred to as “white ants”) are social insects. The development pathway for termites is via a number of stages (instars). The changes are gradual, with each instar looking only slightly different from the previous one (incomplete metamorphosis) (2). A diagram showing the developmental pathway of termites is given in Figure 1. Termites gain entry to homes, buildings and structures via underground tunnels originating from the nest. Termites can feed on timber/timber products at considerable distances (up to 100 metres) from their nest. Recently conducted research has now demonstrated that termites may travel greater distances when provided with a gap, crack, crevice or even with the aid of a construction material such as a recently installed pipe or cable (3). However, the more common range of distances is considered to be in the order of 30-75 metres from the nest. Termites commonly nest in dead and living trees and tree stumps, as well as wooden poles, piles and posts. They can establish their nest inside a building, in sleeper retaining walls and other landscaping timbers, in fact **any cellulosic food source**. There are numerous incidences of termites attacking electrical wiring cables, conduits and power points, thereby posing a serious risk to personal safety (Figure 2).

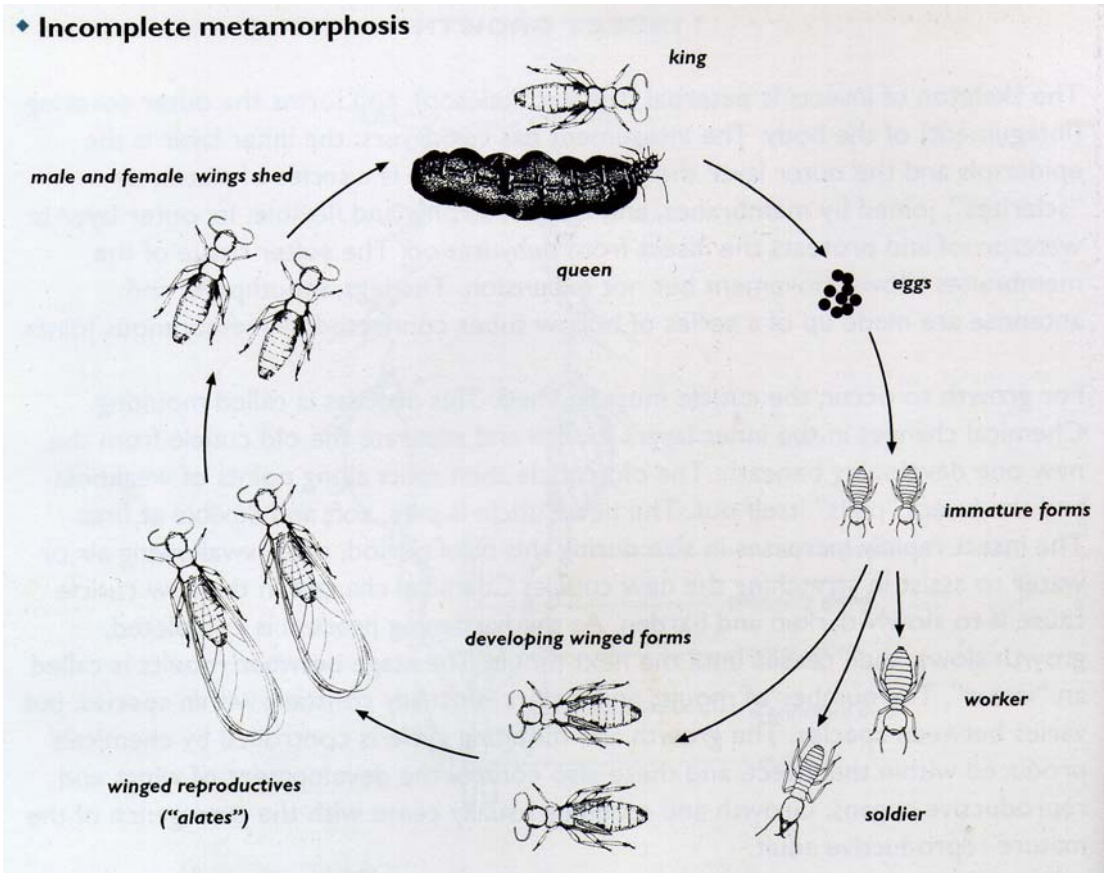

Figure 1: The life cycle of subterranean termites. (Illustration courtesy of Department of Primary Industries, Queensland).

Figure 2: A termite infestation in the wall cavity has deposited considerable "mud plastering" over the face of this electrical power point. The moisture associated with the "mud plastering" as well as attack to the plastic sheathing of the underlying electrical cables has created a serious risk to personal safety. (Photograph courtesy of Elders Pest Control Pty Ltd).

In Australia, about 15 economically important species of termites have become particularly well adapted to the urban environment. Victoria's most economically important species belongs to the genus *Coptotermes* (Figure 3). These termites are highly invasive, with the ability to enter a building through areas close to the ground and inaccessible to inspection, such as through weep holes, fire hearths, service pipe penetrations, expansion joints and cracks through concrete slab-on-ground flooring. Attack to timber and timber-based products can also occur well aboveground, either by galleries inside the wood or by the construction of 'mud' shelter-tubes built on the outside surfaces of more resistant materials. These shelter tubes also provide protection from predators and sunlight. Termites are attracted to moisture and warmth. Adequate moisture is essential for the survival of termites. Without moisture, termites will desiccate. Therefore, termites need to maintain a high humidity environment within their nest, network of subterranean tunnels and shelter tubes.

A mature nest of termites can consist of **over a million individuals,** headed by a **queen (Figure 4) capable of laying up to 2000 eggs per day.** Termites form new colonies, and thereby spread, by winged alates (sexually mature males and females). **Each termite nest can release about 50,000 of these winged alates just prior to or following a period of rain**. This happens **each year** the colony is alive. After shedding their wings, paired males and females can then form a new colony, provided they can avoid predators and quickly discover conditions conducive to their survival.

Figure 3: **Victoria's most economically important species of termite belong to the genus *Coptotermes.* Note: the colony consists mainly of workers with a small percentage of soldiers. The soldiers are depicted by their highly pigmented orange heads and well defined black mandibles (jaws).**

TERMITE DAMAGE AND RESTITUTION COSTS

In Australia, the annual cost of repair of damage to timber-in-service caused by termites has been estimated by Archicentre (the building advisory service branch of the Royal Institute of Architects) to be **$780 million per annum** (4) which is more than the costs for fire and storm damage combined. The cost for **Victoria has been estimated to be in excess of $200 million per annum** (5). It should be emphasised that these estimates are considered understated.

Once a home, building or structure is infested by termites, eradication can be difficult, and may be a long and drawn out process. An infestation is often not detected until it is so severe that structural damage has occurred and substantial repairs and material replacement are required. This, together with restitution cost and time can put the owner under severe hardship. If not treated professionally, the nest may become difficult to eradicate. **Once disturbed, termites will immediately vacate and simply feed elsewhere.** Inadvertently therefore, unprofessional eradicative treatment of termite infestations can have severe repercussions for both the homeowner concerned and those of any surrounding properties. In this instance, the ill-informed homeowner may believe that the termite infestation has been eradicated when in fact it has not. If left unchecked and untreated, the colony of termites responsible for the infestation will inevitably focus its attack on timbers elsewhere in the building or on surrounding properties.

Figure 4: Mature queen, workers and soldiers of the subterranean termite *Nasutitermes exitiosus.*

Termites proliferate in darkness and consume the interior of wooden components of structures, with ostensibly no indications of damage visible from the exterior. Sometimes, the excavated wood is replaced by a 'honeycomb' structure of digested matter through which the termites can move freely. The attacked interior of wood is often consumed without perforating the surfaces and visibly exposing the termites to the atmosphere. Termites can even attack the interior of wood right up to the paintwork, leaving only a thin film which has a characteristic 'paper-like' sound when touched. Some examples of damage caused by termites to timber in buildings are given in Figures 5, 6 and 7.

A common misconception is that all forms of concrete slab-on-ground construction are barriers against termites. On the contrary, slabs not constructed to the requirements of concrete Standards AS 2870 (6) or AS 3600 (7) can sometimes crack, thereby providing termites with concealed access to the superstructure of a home or building. Furthermore, the curing of concrete forms a shrinkage gap between plumbing and electrical conduits that pass through the slab and the slab itself. If these shrinkage gaps are not protected by appropriate approved flanges, termites can gain access to the home or building. Should termites gain access through these gaps, the termite infestation is generally difficult to eradicate. It may involve costly drilling of the slab to perform chemical treatment of the soil or the fill beneath.

Figure 5: **Severe damage caused by *Coptotermes sp.* to skirting and wall framing timbers. (Photograph courtesy of Elders Pest Control).**

Figure 6: **Typical subterranean termite damage to an internal door frame and architrave. (Photograph courtesy of Smartbuilt Victoria Pty. Ltd.).**

Figure 7: Plasterboard lining removed to reveal termite activity in a wall cavity and extensive attack to an internal timber stud and bottom plate. (Photograph courtesy of Smartbuilt Victoria Pty. Ltd.).

Archicentre has estimated that 650,000 Australian homes have become infested by termites over the last five years. The cost of treatment and repair of the resultant damage caused by these termite infestations has been estimated at $3.9 billion. The average cost of treatment by a pest manager for a home infested with termites is $1500, with an average repair cost per home of $4,500 (4). Depending upon the severity of damage caused, repair costs are not uncommonly in excess of $40,000 (5).

TERMITE MANAGEMENT SYSTEMS FOR NEW BUILDINGS

It is far more economical to have a termite management system (TMS or barrier) installed, than to incur damage and ensuing restitution costs. TMS's are designed to deter concealed termite entry into buildings. **Normal building insurance does not cover damage caused by termites. Treatment and restitution costs come directly out of the pocket of home, building and structure owners.** Depending on personal circumstances and the extent of damage, this invariably causes economic hardship and emotional distress. Once an accredited TMS has been installed, warranty insurance may apply. Furthermore, installation of a TMS during construction is far cheaper than remedial treatment and restitution costs resulting from termite damage following construction.

There are many TMS's on the market, both physical and chemical. TMS's for implementation during construction of new building work are outlined in AS 3660.1 (8). Physical TMS's are becoming more popular during construction, with several accredited systems appearing in the marketplace. Formulations used for chemically-treated soil barriers are generally water-based emulsions, and are quite environmentally safe. There are also a number of accredited composite TMS's, comprising both physical and chemical barrier options.

Physical barriers

Physical barriers such as stainless steel mesh, graded granite stone and metal shielding prevent termites from gaining concealed access to the superstructure of a home or building. The apertures in the stainless steel mesh are too small for termites to pass through. Graded granite creates a barrier preventing ingress of termites into a home or building. The granite particles are too heavy for the termites to move. Furthermore, when placed into position, the specific-size and shape of the granite particles create voids that are too small for termites to pass through. Metal shielding creates an impervious barrier. A correctly designed 'ant cap' will not prevent termites from gaining access to a house or building. However, it will cause termites to form a visible bridge over the cap, which can be readily detected during regular, competent inspections and warn of their presence.

Chemical barriers

Chemically-treated soil barriers (chemical barriers) provide another method to deter termites from gaining concealed access to a home, building or structure. Only chemical formulations registered by the Australian Pesticides and Veterinary Medicines Authority (AVPMA) as termiticides are suitable for use. Water-emulsifiable formulations currently registered for use in Australia contain synthetic pyrethroids, organophosphates or other more recently developed insecticides. Chemical barriers are applied to the soil or fill around the perimeter of the home, building or structure (8).

Nowadays, a chemical barrier is not necessarily a long-term or permanent TMS. The persistent organochlorine chemicals once used for chemical barriers have now been replaced with comparatively less persistent ones. These are considered non-hazardous by Worksafe. Therefore, chemical barriers now require re-treatment or replenishment. Consequently, reticulation or distribution systems have evolved. Reticulation systems consist of a series of tubes and chemical dispensing drippers buried underground around the underside and/or perimeter of the building at the time of construction. Periodic replenishment of the chemical barrier is thus able to be undertaken.

Composite (non-soil matrix) TMS

Composite systems comprise highly repellent termiticides sandwiched between two layers of moisture-proof membrane. The systems are installed underneath the entire building.

Termite-resistant materials and preservative-treated timbers and timber products

The use of termite-resistant materials, naturally termite-resistant timbers and/or preservative-treated timbers and timber products can form an integral part of an overall termite management strategy. However, it is advisable that any such termite-resistant materials/timbers and treated timbers be used in conjunction with other TMS's that combine to give "whole of house" protection against termite attack. Naturally termite-resistant timbers are listed in Appendix C of AS 3600.1 (8). Approved preservative treatments for timbers and timber products are specified in the AS 1604 series of Standards, Parts 1-5 (9, 10, 11, 12, 13).

'BUILDING-OUT' TERMITES

The concept of 'building-out' termites can also form an integral part of a strategy to reduce termite ingress into a building (14). Measures include ensuring that the building site is not attractive to termite foraging, improving the design of the building to allow for ease of inspection of its structural elements. A sound knowledge of termite biology is required as well as the adoption of on-going site management. It is advisable that all tree stumps, logs and any

excavated tree roots be removed from the building site. Any timber off-cuts, building debris and timber formwork should be removed from under and around the completed building construction. Good drainage should be provided to discourage termites from foraging close to the building construction. It is essential that garden beds be kept below damp-proof courses.

MANAGEMENT OF TERMITE INFESTATIONS IN EXISTING CONSTRUCTIONS

Chemical TMS's or barriers are in most instances the preferred method of treating infestation in existing constructions. However, there is now a range of options for eradication of infestations through 'trap-and-treat', dusting and baiting systems. The latter also include the use of insect pathogens. For more details refer to AS 3660.2 (15).

Inspection and maintenance

All TMS's should be regularly inspected for bridging and/or breaching, e.g. disturbance or damage caused by gardening or landscaping. Regular inspection encourages home/building owner awareness of any potential bridging and/or breaching of the TMS and the requirement for any reinstatement where necessary. Chemical TMS's should be reapplied and maintained by licensed pest managers.

THE RISK OF TERMITE ATTACK TO HOMES, BUILDINGS AND STRUCTURES

The Australian Standard Perspective

The current Australian Standard on Termite management (AS 3660.1-2000: New building work) (8) was prepared by Committee BD-074. The Committee consisted of personnel from a wide spectrum of disciplines across the building, pest management and related industries, all having an interest and expertise in the management of termites in Australia. Participants on Committee BD-074 are listed in Appendix 1.

During the revision of the 1995 edition of the standard, a precautionary note on the hazard from termites in Australia was amended and replaced with a more prominent Clause. AS 3660.1-2000 now states….. "This Standard is intended for use where subterranean termites pose an economic risk to buildings. **This risk shall be regarded as significant throughout Australia,** except in the state of Tasmania where the risk is negligible" (Page 7, Clause 1.2.1). The amendment was considered necessary because of increased awareness by committee members of known termite infestations in homes, buildings and structures throughout "undeclared, unprotected" municipalities in metropolitan Melbourne and regional Victoria.

Modern day timber-based building materials have become more susceptible to termite attack

Today, timber-based materials used in the construction of homes, buildings and structures are often more susceptible to attack by termites. Termites have a preference for the fast-grown plantation timbers that are nowadays replacing the timbers from native forests. Fast-grown plantation timber species tend to be more susceptible to attack because they are non durable (e.g. radiata pine) or that the timber contains a higher proportion of sapwood.

Subterranean termites have adapted to our urban environment

As Victoria becomes more densely populated, termites are adapting to its urban environment. The Victorian Government's 2030 Policy encouraging population concentration inadvertently exacerbates this. **Termites foraging up to 100 metres from a nest can translate to a cluster**

of neighbouring homes within a street being infested. Termite attack is not constrained by height, with many infestations being discovered in aboveground floors of residential flats, commercial buildings and in roof trusses. Modern day landscaping practices have become more conducive to termite nest establishment. As mentioned previously, subterranean termites can establish their nests in dead and living trees, landscaping timbers, old railway sleepers, timber retaining walls, and even in undisturbed piles of mulch and wood chips. In addition, tree stumps are often allowed by the builder or homeowner to remain, thereby enticing nest establishment. Homeowners frequently plant trees that are not well suited to the climate/soil type/environment etc. As these trees mature, they may become stressed, thereby increasing their likelihood of colonisation by tree-nesting species of termites.

Far too frequently, there is a lack of precaution taken during the planning and site preparation for a building. In some municipalities, native trees are felled to make way for new building work. This practice can often leave termites no option than to target recently constructed homes, buildings and structures for food replacement; in other municipalities, there is a propensity for builders to construct dwellings close to, or between, mature trees that may later be found to be termite infested. Consequently, the dwelling is highly vulnerable to potential attack by termites. Irrigated lawns and garden beds (often mulched) of homes and buildings will also attract foraging termites. This is especially so where surrounding grasslands and paddocks are dry. Emphasis on water conservation has led to the development and use of sophisticated chemicals commonly available over the counter at hardware stores, nurseries and gardening supply outlets to enhance moisture retention in gardens beds, a practice encouraged by gardening professionals and vigorously promoted by television gardening programs. Urbanisation will provide an environment conducive to increased termite proliferation, for both initial infestation and reinfestation.

Modern building practices can make it difficult to deter concealed entry by termites

Modern building practices, which create greater building density as well as construction at or near boundaries, will make it difficult to deter concealed entry by termites, resulting in a higher risk of termite infestations of homes and buildings. It should be emphasised that termites are extremely proficient at gaining undetected access to buildings and structures.

The relationship between termite infestation and age of construction

An Australia-wide survey of 5122 houses was conducted on the influence of geographical location and building construction type on subsequent infestation by subterranean termites (16). One of the conclusions of that study was “The dominant factor affecting termite incidence inside houses was house age,” and conclusively proved that **regardless of the type of construction, if left unchecked without an adequate TMS, it is just a matter of time before termite infestation can occur.** This finding confirmed the results of a previous survey conducted in Sydney some years prior (17).

Foraging distance of termites

The maximum foraging distance of approximately 100 metres from the nest, provides termites with a sizable territory within which to feed. Based on a foraging distance of 100 metres, it can be estimated that an established nest of termites in a suburban estate has the potential to **intercept and possibly infest up to 45 unprotected buildings/constructions (based on building allotments of 50 x 15 metres)**.

DESIGNATION OF TERMITE RISK BY MUNICIPALITIES OF VICTORIA

There are 78 municipalities in the state of Victoria. Of these, 32 are not currently designated as municipalities in which homes, buildings and structures are subject to termite infestation (**UNDECLARED** and **UNPROTECTED**). The remaining municipalities (46) are **DECLARED.** Undeclared and declared municipalities are shown in Figures 8 and 9. A current listing of all undeclared municipalities in metropolitan Melbourne and regional Victoria is given in Appendix 2.

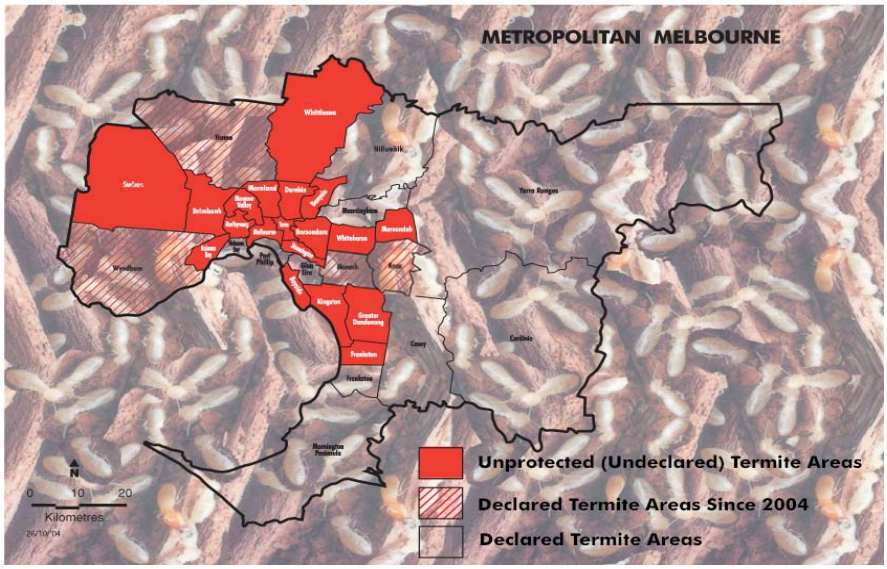

Figure 8: Declared and undeclared (unprotected) municipalities in metropolitan Melbourne, courtesy of Termite Action Victoria Inc.

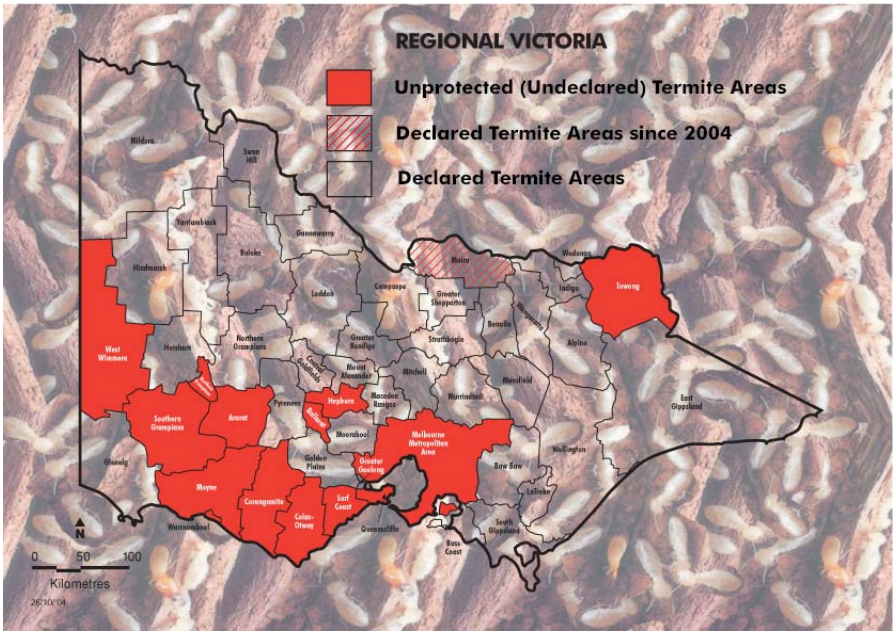

Figure 9: Declared and undeclared (unprotected) municipalities in regional Victoria, courtesy of Termite Action Victoria Inc.

KNOWN INCIDENCES OF TERMITE INFESTATION

Forty years ago, CSIRO conducted a rather limited survey on the incidence and distribution of termite attack in Melbourne and environs (18). The prime purpose of the survey was to plot known termite infestations on a map so that areas of relatively high hazard could be recognised. Data were sought from the pest management industry over a three year period (January 1962-December 1964). CSIRO emphasised that such a survey could only at best be representative and that it was unlikely that all cases of termite infestation in the regions surveyed would have been reported. Regardless, the survey did provide an indication of the general level of termite attack throughout metropolitan Melbourne and the distribution of attack.

Since that CSIRO survey, the pest management industry has noted a disturbing escalation in the number of infestations recorded in homes, buildings, structures and vegetation within Victoria. However, homeowners and building owners are generally reluctant to disclose information on the discovery of termite infestation. They often prefer to manage the problem of termite infestation themselves, in fear of repercussions relating to resale value of their properties. Owners of rented and commercial buildings are more likely to replace damaged timbers rather than seek eradicative treatment and bear the associated costs. Furthermore, many companies in the pest management industry have been reluctant to offer details regarding the locations of eradication jobs in fear of competition from rival companies. All this has made it difficult for local government officers of Victorian municipalities to ascertain the current seriousness of the situation regarding termite infestations of buildings.

A not for profit association-Termite Action Victoria Inc. (1) was formed in February 2004. Representatives of Termite Action Victoria Inc. include the CSIRO, Archicentre Pty Ltd, the Australian Environmental Pest Managers' Association (AEPMA), Bayer Environmental Science, Smartbuilt Victoria Pty Ltd and Granitgard Pty Ltd. Due to the alarming increase in numbers of termite infestations noted by the pest management industry in Victoria, one of the key duties of Termite Action Victoria Inc. is for the first time to ascertain the full extent of the termite risk posed to homes, buildings and structures in Victoria. Accordingly, Termite Action Victoria Inc. has initiated an exhaustive survey on known incidences of termite infestation in Victoria with the full cooperation of members of the pest management industry.

Owing to the redesignation of the Glen Eira municipality to "declared" in November 2003 (as a result of 500 infestations being recorded by its Manager of Building Services), Termite Action Victoria Inc.'s focus began with the more prominent pest management companies servicing Stonnington, Monash and Kingston municipalities which abut Glen Eira. To date, time constraints have only allowed for the **collation of data from just 11 pest management companies and two power companies** known to provide eradicative treatment of termite infestations in homes, buildings and structures. In the main, historical data were only available on average for up to the past 2-3 years. (Note: Termite Action Victoria Inc. has only been mapping termite infestations since its incorporation in February 2004).

Despite these limitations, Termite Action Victoria Inc. has already obtained **well over 60,000** records of termite infestation, with more than **44,000** in metropolitan Melbourne. Of the latter, **over 20,500 have been recorded in undeclared (unprotected) municipalities in metropolitan Melbourne since February 2004** (not including Monash, Hume, Wyndham and Knox, all of which redesignated to declared in 2004 after being shown the number of infestations noted to date in their boundaries). In fact, Termite Action Victoria Inc. has already obtained data on termite infestation from virtually all undeclared municipalities that surpasses the 500 records that led to the municipality of Glen Eira being redesignated to declared. **Several municipalities already have more than double and even treble that number.**

The records of known termite infestations obtained by Termite Action Victoria Inc. should be considered as being significantly understated. The data have only been able to be derived from records of eradicative treatment of termites in domestic dwellings, and more recently from records of attack in electricity power poles (obtained from a major power authority). Most records were obtained during the last 2-3 years (being the only data available) of just 13 companies out of the more than 220 Victorian pest management as well as power pole companies that undertake eradicative treatments of termites. Data were summarised from actual records of infestation, i.e. where the infestation was serious enough for treatment. The data did not include enquiries or inspections where infestations may have been found but not treated by the pest management company that supplied the quotation. A map plotting the records of known termite infestations collected so far in Metropolitan Melbourne and surrounding districts is given in Figure 10, courtesy of Termite Action Victoria Inc. It should be noted that owing to limitations of the graphics process, some sites unavoidably appear over others if in close proximity.

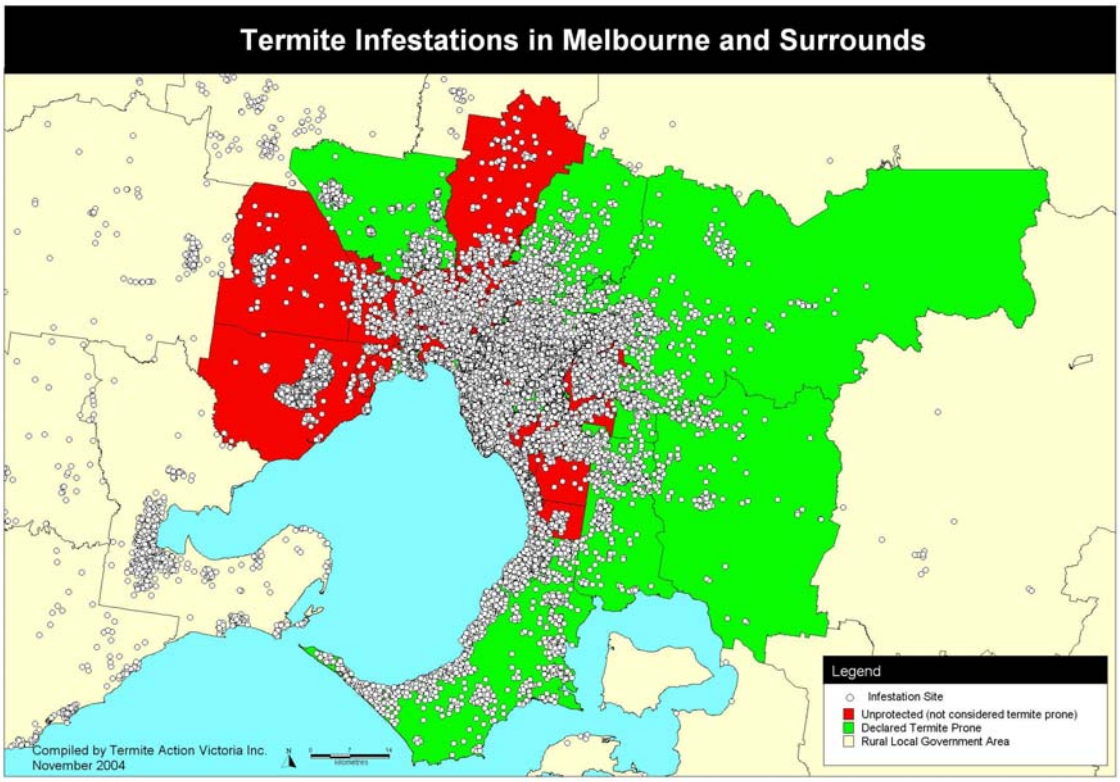

Figure 10: Known records of termite infestation in metropolitan Melbourne and surrounding districts, courtesy of Termite Action Victoria Inc. (Source:, Acacia Pest Control Pty Ltd, Ackland Pest Control Pty Ltd, Alinta Pty Ltd, Amalgamated Pest Control Pty Ltd, Dawsons Weed and Pest Control Pty Ltd, Exopest Pty Ltd, Frontline Termite and Pest Control Pty Ltd, Melbourne Pest Control Pty Ltd, Nationwide Pest Control Pty Ltd, Peninsula Pest Control Pty Ltd, Powercor Pty Ltd, Specialist Termite Control Pty Ltd Pty Ltd, WR Gay Pest Control Pty Ltd).

The survey to date (February to November 2004) has already revealed that no municipality in metropolitan Melbourne is devoid of infestation by termites. The municipality of Port Phillip ranks the highest with at least 4043 recorded infestations. The municipality of Melton ranks

the lowest with at least 351 infestations. Full details of the current numbers of recorded termite infestations in each of the metropolitan municipalities are given in Table 1.

Table 1. The number of known termite infestations recorded in municipalities of metropolitan Melbourne, courtesy of Termite Action Victoria Inc.

MUNICIPALITY	CURRENT STATUS	NUMBER OF INFESTATIONS
Port Phillip (C)	Declared	4043
Manningham (C)	Declared	2909
Mornington Peninsula (S)	Declared	2281
Monash (C)	Declared 2004	2073
Knox (C)	Declared 2004	1965
Yarra Ranges (S)	Declared	1923
Banyule (C)	Undeclared	1861
Boroondara (C)	Undeclared	1854
Hobsons Bay B(C)	Declared	1729
Frankston B(C)	Undeclared	1713
Whitehorse (C)	Undeclared	1671
Maribyrnong (C)	Undeclared	1607
Casey (C)	Declared	1606
Nillumbik (S)	Declared	1535
Bayside (C)	Undeclared	1481
Stonnington (C)	Undeclared	1353
Maroondah (C)	Undeclared	1343
Moonee Valley (C)	Undeclared	1313
Kingston (C)	Undeclared	1240
Glen Eira (C)	Declared	1152
Yarra (C)	Undeclared	1014
Melbourne (C)	Undeclared	973
Greater Dandenong (C)	Undeclared	812
Wyndham (C)	Declared 2004	805
Moreland (C)	Undeclared	763
Hume (C)	Declared 2004	707
Brimbank (C)	Undeclared	621
Darebin (C)	Undeclared	545
Whittlesea (C)	Undeclared	536
Cardinia (S)	Declared	412
Melton (S)	Undeclared	351
TOTAL		**44,191**

Note: These records of termite infestations were obtained from the initial stages (February to November 2004) of the survey currently being conducted by Termite Action Victoria Inc.

Key: C = Council
S = Shire

COST IMPLICATIONS

Should it be decided to redesignate a municipality from undeclared to declared, there will be costs associated with the mandatory installation of a TMS in new construction. However, the benefits of a professionally installed TMS are profound, providing both protection of the dwelling against termites as well as peace of mind to the owner. Buildings constructed in regions which have been designated as being prone to termite infestation in accordance with regulation 6.3(1) are required to be constructed in a manner complying with the provisions of part 3.1.3 of Volume 2 of the Building Code of Australia 2004 "Termite Risk Management", and Australian Standard 3660.1. It has been estimated by Hume City Council that protection against termites will add approximately 1-1.5% to the cost of construction. The cost will vary according to the construction type and the TMS adopted (5). AEPMA has stated that this equates to approximately $750 per dwelling. Furthermore, the installation of an approved TMS should be considered as an asset for the home, building and structure owner, particularly during the sales process.

SUMMARY OF CONCLUSIONS

Many declared municipalities are located beside undeclared municipalities. Some municipalities such as Frankston, Geelong, Hobsons Bay, Knox and Northern Grampians are part declared and part undeclared. In addition, due to past council amalgamations, previously declared suburbs like Eltham have been absorbed into undeclared municipalities like Darebin City, and by default are now undeclared. This misleads home, building and structure owners into assuming that the risk of termite infestation has diminished and that all subterranean termites will stay within declared boundaries.

The understated data provided by Termite Action Victoria Inc. should be a concern to the entire community of Victoria. In just eight months, Termite Action Victoria Inc. has obtained over 60,000 records of termite infestation in dwellings (mostly domestic) in Victoria, with more than 44,190 in metropolitan Melbourne. More disturbing is that over 22,000 records of infestation have been recorded in currently undeclared municipalities. Furthermore, it is likely that many more records will be obtained, as there are over 220 sizeable termite management companies in Victoria. Given the biology of termites and their ability to adapt and spread within the urban environment, an increasing number of homes, buildings and constructions will inevitably become infested**. It is the opinion of CSIRO that all presently undeclared (unprotected) municipalities should be immediately redesignated to declared in order to safeguard all properties, residents and structure owners in these regions.** The risk of infestation of homes, buildings and structures by termites appears to be far greater than has been previously recognised. No matter what type of construction in undeclared municipalities in Victoria, without an adequate TMS it may be just a matter of time before it may become infested by termites.

Some undeclared municipalities are now seeking guidance and information on the current level of risk of termite infestation to homes, buildings and structures within their jurisdiction. After being alerted to the level of termite infestation already in existence within their municipalities, having a sense of duty of care and wishing to mitigate possible future liability and risk of litigation (5), several Councils such as Manningham Shire, Glen Eira City, Monash City, Hume City, Wyndham City and Knox City have recently redesignated from undeclared to declared. Ironically, there is negligible cost to local Government to remedy the situation which requires nothing more than a few words altered in the Building Regulations of 1994 or an individual council motion to redesignate from undeclared to declared.

In failing to redesignate all municipalities from undeclared to declared, the State Government and Municipal Councils will continue to expose homes, other buildings and structures to the potential hazard of infestation by termites. To many Victorians, this could mean that their family home (perhaps their greatest lifetime asset), is placed at risk.

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APPENDIX 1: The Australian Standard for Termite Management was prepared by Committee BD-074., Termite management. It was approved on behalf of the Council of Standards Australia on 3 November 2000 and published on 11 December 2000.

The following interests are represented on Committee BD-074:

Australian Building Codes Board
Australian Consumers Association
Australian Environmental Pest Managers Association
Cement and Concrete Association of Australia
Clay Brick and Paver Institute
Construction, Forestry, Mining and Energy Union
CSIRO Entomology
CSIRO Forestry and Forest Products
Forest and Wood Products research and Development Corporation
Housing Industry Association
Insurance Council of Australia
Local Government and Shires Associations of New South Wales
Master Builders Australia
National Registration Authority for Agricultural and Veterinary Chemicals
Queensland Forestry Research Institute
State Forests of New South Wales
Total Environmental Centre

Additional interests participating in this Standard:

Australian Institute of Building Surveyors
Concrete Masonry Association of Australia
Consumers Federation of Australia
Department of Lands Planning and Environment, Northern Territory

APPENDIX 2: Municipalities that are currently undeclared (unprotected) as regions in which buildings and structures are likely to be subject to termite infestation.

MELBOURNE METROPOLITAN (18):

Bayside
Banyule
Boroondara
Brimbank
Darebin
Frankston
Greater Dandenong
Kingston
Maribyrnong
Melbourne
Melton
Moreland
Maroondah
Mooney Valley
Stonnington
Whitehorse
Whittlesea
Yarra

REGIONAL VICTORIA (12):

Ararat
Ballarat
Colac-Otway
Corangamite
Greater Geelong
Hepburn
Moyne
South Grampians
Surf Coast
Towong
Warrnambool
West Wimmera

TOTAL: 30 municipalities