



Study of the Attack Rates by Termites and Costs of Associated Damage on Domestic Housing in New South Wales

By Professor Alan P. Jeary
Construction, Property and Planning
University of Western Sydney

July 2003



SUMMARY

An independent assessment of the rate of attack by termites, and the associated costs of the ensuing damage on domestic housing in Sydney was undertaken by surveying home owners of randomly selected steel and timber framed houses. The survey was constructed to obtain information with a high level of confidence. The suburbs were chosen in urbanised areas of Sydney, which are considered to be typical of suburban developments around major Australian cities. Houses in bushland were not included.

The following results are apparent from the study:

1. slightly more than 6% of the sampled building stock had been attacked by termites.
2. the rate of attack on timber framed housing is approximately 12%
3. the rate of attack on steel framed housing is indistinguishable from zero
4. the average cost of an attack is over \$2300
5. the attack rate on timber framed housing is approximately once every 130 years of exposure
6. the use of piers in conjunction with ant caps is less effective than when a slab construction is used
7. residents of steel framed housing, in general, do not feel the necessity to check for termite activity

CONTACTS



Professor Alan P Jeary
Construction Property and Planning
University of Western Sydney
Locked Bag 1797
South Penrith Distribution Centre
NSW 1797

Email a.jeary@uws.edu.au



National Association of Steel-Framed Housing Inc
PO Box 1085
Hartwell VIC 3124

Web site www.nash.asn.au

Email enquiries@nash.asn.au

Ph (03) 9809 1333

Fax (03) 9809 1399

Freecall 1800 656 986

© 2003

INTRODUCTION

At the request of Mr. Michael Kelly, and through him, the National Association of Steel-Framed Housing (NASH), the author was invited to undertake an independent assessment of the rate of attack by termites, and the associated costs of the ensuing damage on domestic housing in Sydney.

It is clear that there is an interest in a comparison between the performance of steel-frame and the timber-frame houses. It was essential therefore, that the investigation should be conducted with complete independence from NASH. This has indeed happened, and this survey of attack rates has been conducted using randomly selected housing and a survey instrument that was applied in exactly the same manner in all cases.

The full survey of domestic housing was conducted during the months of June, August and September in 2002, and was applied to housing in suburbs in Sydney. In general, the suburbs were located in the urbanised areas of Sydney, and were concentrated in the western parts. No attempt was made to include housing in Bushland. The areas chosen were considered to be typical of suburban developments around major Australian cities.

The objective of the survey was not only to obtain information about the attack rates on domestic housing, but also to attempt to assess the costs involved in damage repair when such attacks occurred. Necessarily a large sample was involved, since information about subcategories was required and strict statistical criteria for significance were applied throughout the study.

The survey instrument was carefully constructed to obtain the information required with a high degree of confidence. It is normal for the response rate to a survey of the type produced, to be in the region of 30 percent. In practice, in the application of this survey, there was initially a heavy bias in the returned survey sheets. The early returns were predominantly from owners of timber framed houses. Accordingly, the final stage of the survey involved house-to-house visits of owners, or occupiers, of steel-framed houses. In each suburb surveyed in this way a small sample, randomly chosen, of houses from the surrounding area were also surveyed.

The confidence in the results obtained is high. 274 replies were obtained from an application of approximately 900 survey requests. In the case of 11 of the replies the type of construction was unknown, and these buildings were excluded from the comparison of different types of construction. In some cases the respondents did not supply answers to all of the questions, and accordingly the population for such cases was reduced.

THE PROBLEM

There are several hundred species of termites that live in Australia, and approximately half a dozen of these are considered to be major pests in that they attack timber building products. The main pest species in Australia are subterranean, and once they have gained access to cellulosic material, may excavate it leaving a thin layer of timber to protect themselves, thereby make detection more difficult. The major indications of termite presence are as follows:

1. Shelter tubes
2. Subterranean tunnels
3. Blowholes in trees
4. Earth on the surface of timber
5. Flight tubes
6. Excavation in timber
7. Noises from inside timber
8. Odour
9. Presence of Alates
10. Single presence of soldiers or workers from air-conditioning
11. Nests in trees
12. Collapsed timber

In this investigation, the residents of houses surveyed were asked to assess whether termite activity occurred at their property. The list above gives the major ways in which termite activity may be discerned by experts. The request for non-experts to assess the presence of termites implies that there may be some under-reporting of the actual presence. It is clear from the experience of interviewing a large number of people that the general perception is that termite activity may be assessed by searching for the presence of tunnels or debris on the surface of timber, and that the other methods listed above are largely unknown. Notwithstanding the comments above it is clear that a number of people interviewed were extremely well-informed.

THE POPULATION

It was intended that the population chosen should be representative of typical domestic housing in the suburbs of large cities throughout Australia. The survey was conducted in Sydney and as such, results are directly applicable only to that city. Extrapolation to other cities is justified in the cases where similar environmental conditions and construction methods apply. In general terms this area encompasses the cities of the south of Australia, although there are indications about the efficacy of different construction types from the results of the survey, and these indications may be generalised.

Of the 263 usable replies to the survey 144 were from occupants of timber framed housing and 119 were from occupants of steel framed housing.

Fig. 1 below gives the distribution of the ages of the houses for which surveys were returned.

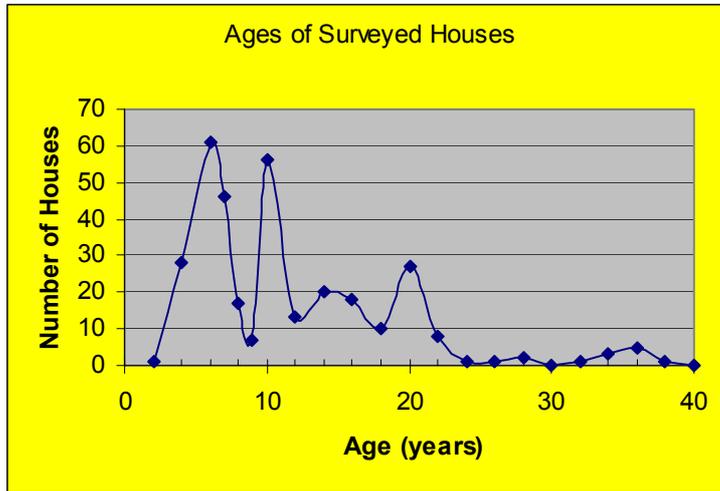


Fig 1. Ages of surveyed houses

The distribution of ages of the respondents' houses shown in Fig. 1 emphasises the fact that the majority of houses were less than 20 years old, as would be expected for developing suburbs. The figure also shows that 90 houses less than 7 years old were included in the returned results.

The areas surveyed were in Western Sydney, Southern Sydney, Northern Sydney, the North Shore and the Inner West. The housing varied from the very new to those in the region of 40 years old. The responses from the owners (or residents) of 144 timber frame houses and 119 steel frame houses were used for the analysis. The range of values of the houses was from low-cost up to medium/high cost. In terms of Sydney prices for the year 2002 this range of values is in the region of \$200,000 to \$800,000. A decision was taken that no properties in the northern suburbs of Sydney, in which sparse housing is located inside Bushland areas, would be surveyed. It is considered that the risk factors of constructing in such areas are somewhat different from those in the urbanised areas, and that an assessment of the risk of termite attack in such areas would necessitate a separate study.

THE SURVEY

The survey instrument was developed in early 2002, and was applied in a pilot study. This pilot study was then assessed and the full study was conducted with only minor changes introduced. Initially, locations were assessed at random, and survey forms were posted to the occupants. This was the methodology used for the initial pilot study. This stage of the survey showed that there was a difficulty with obtaining the normal response rate of 30 percent. Accordingly, the full survey was conducted using a larger sample and hand delivery inside selected areas. Careful records were kept of the areas and addresses to which surveys have been delivered. A group of helpers was recruited for this stage of the application. Stamped addressed return envelopes were provided in all cases.

It became clear, that there was a differential return rate between the occupants of timber framed housing and those of steel framed housing. The response rate from occupants of steel framed housing was initially less than 10%. Accordingly, a final stage was introduced in which the same survey was applied specifically in areas known to contain larger concentrations of steel framed housing. In these areas residents were interviewed in a house-to-house survey.

The survey was divided into two sections. In the first section information was requested about the house, its type and age, and a small quantity of demographic information about the occupants. In the second section of the survey, questions were asked about the respondents' knowledge of termite deflector systems and their vigilance in checking for evidence of termite activity. (Note that in the survey the term 'deflector' was used to describe many different types of device that are referred to by several different generic names). Additionally, in the event that a termite attack had occurred, information was requested about the costs and methods of treatment of the problem. Finally, the respondents were asked to supply any information that they thought might be useful. The responses to this final question were particularly interesting in cases where attacks had occurred and a sample is produced in Appendix 1 at the end of this report.

Despite the fact that the survey was designed to maximise the response rates there was a differential response from owners of different types of housing. It has been found in the past that a short survey, with a polite covering letter explaining the purpose of the survey and asking for help, produced a response rate of approximately 30 percent. In the case of this survey, for the residents of steel framed buildings, the response rate was quite poor. The reason for this poor response became apparent when the door-to-door survey was conducted. This point is considered in the results section.

Information was collected both about the age of the house, and the period of occupancy. In a small number of cases the occupants were unsure about the age of the house. In these cases the age of the house has been estimated by considering the length of occupancy and the age of surrounding houses. This methodology has been applied in seven cases.

Four spoiled returns were received. In all cases these were forms in which no mark had been made on the sheet, and a stamped addressed envelope had been supplied.

The form of the full survey is included in Appendix 2.

GENERAL RESULTS

This section should be read in conjunction with the following section on the statistical accuracy of the results. Unless otherwise stated the results have a 10% confidence interval associated with them. The survey was aimed at answering specific questions and these are considered in turn in the sections below:

Attack percentages

	No. of attacks	% of type
Total	18	6.64
Timber frame	18	12.50
Steel frame	0	0.00

These figures are normalised against the 263 valid replies received in the survey. Overall, termites attacked approximately 6 ½% of the surveyed buildings. However, there is an extreme disparity in the attack rates depending upon the form of construction. Where the form of construction is timber frame, approximately 12 ½ percent of the surveyed stock of timber framed buildings had received attacks. ***There were no reported attacks whatsoever on those houses constructed with steel frames.***

Since the survey was conducted with a large population, these figures are correct with a better than 10% confidence interval. It is therefore possible to infer that for a population of buildings that is similar to the group surveyed, and that is subject to similar physical conditions, then over 10% of those with timber frames will be subject to termite attack. ***The attack rate on those houses constructed with steel frames is, on the basis of this survey, indistinguishable from a 0% attack rate.***

***Average cost of attack: \$2322
 (\$18 per house per year)***

The average cost of an attack was calculated by taking each of the houses that had been attacked, and summing the costs reported. This total figure was then divided by the number of attacked buildings (18 in all). The cost per year of attacks on all housing was derived by taking the total cost involved in repairs for the 18 attacked houses, and dividing this figure by the number of years of exposure (with units of house-years). The result is given as a cost per house per year, averaged over all the surveyed properties. The total exposure surveyed was 2,335.9 house-years.

The range of costs per attack reported in this survey was from \$400 up to \$10,000. The average cost of repairs for all of the attacks reported in this survey was a little over \$2300. As reported in Appendix 1 there is circumstantial evidence that minor attacks go unreported, and it is also clear that the owners of attacked houses cover their own costs. A total of 18 attacks has been analysed, and in several cases the respondents reporting such attacks have referred to attacks occurring in neighbouring houses from which no response to the survey has been obtained. Such an occurrence is a normal part of the sampling process and no compensation for such instances has been made to the data.

When all housing is considered and the costs of attack are averaged over the entire population then the cost averages to just under \$20 per year. All of the respondents who recounted instances of termite attacks reported that they had received no insurance payout whatsoever. The average cost of termite attack repairs to steel framed housing is indistinguishable from zero. If the attack costs reported here were to be repeated throughout the country then the overall costs would be more than a hundred million dollars per year.

There is very little information about the costs to the nation of termite attacks. Literature on the world wide web (see weblibliography) from interested parties puts the annual costs at anything from \$100 million to nearly \$800 million. The estimates at the lower end come from Queensland government departments, and the University of Queensland, whilst the one at the higher end comes from a company conducting termite inspections. The cost results presented here are consistent with these estimates, and more closely correlate with the Queensland data.

Analysis of timber framed housing

Since all the reported attacks by termites on domestic housing occurred on those houses that had been constructed with timber frames, an analysis of the timber framed housing was conducted in somewhat more detail. A number of aspects are considered here:

Frequency of attack

The attack rate on timber framed housing averages to one attack every 129.8 years. If only the timber framed houses more than seven years old are considered, then this figure rises to one attack every 130.4 years. The responses from residents of timber framed houses less than seven years old were insufficient to merit an estimate of the attack rate in this sub category. However, the results obtained in this study point towards a rate of attack that is little different from the attack rate on the older buildings, although the sample in this sub-category is too small to draw firm conclusions. A study of a sample from this younger group would be of considerable interest to see what the effect of the new protection strategies is.

The stock of timber frame housing was divided into two categories, corresponding with the changes in legislation which led to the different application of chemical protection. These two categories have been depicted above as being greater than or less than seven years old. The stock of housing in these two categories has then been assessed in terms of the observation period (as reported by the respondents) and the number of attacks that have occurred during that period. Of the 18 reported attacks 17 occurred in the older category, and only one reported attack occurred in the younger group. Accordingly, there is confidence in the attack rate in the older group.

Average age of attacked houses: 12.72 years

The 18 attacked houses were an average age of 12.72 years old when they were attacked. This figure was obtained from information received about the age of each of the attacked properties, when the attack took place. This figure is simply an average of the age of the 18 attacked houses, when the attacks occurred. On looking at the ages of the houses when the attacks occurred it was clear that there were two groups of attacked houses. 22% of the attacked houses (four out of eighteen houses) were attacked within two years of the start of occupation. The remaining attacks (with one exception) occurred after at least ten years of occupation. Whilst this is a small sample it does suggest that there may be two processes occurring, in which the defences of the new building may be tested early. Having survived the original testing it is likely that a period of ten years passes before the successful defences deteriorate sufficiently to allow a termite invasion.

Comparison of slabs and piers

Attack rate by type	%	No.	1 attack per
Timber with piers	21.82	12	91.92 years
Timber with slab	8.91	9	161.66 years

The collected data allowed the comparison of the methods of protection of timber framed housing. The form of construction was used to compare the attack rates, irrespective of the protection methods used. In the case that the construction uses a slab, then the attack rate is once every 162 years of exposure. Traditionally, it has been assumed that piers in conjunction with ant caps, should provide protection against termite attack. In fact, the data show a large differential of attack rates between the two types of construction. The difference between the 92 year and 162-year attack rates is significant and better than the 99% confidence level.

Residents checking behaviour

House frame type	Timber		Steel		Total	
	No	%	No	%	No	%
Performing Checks						
Don't Check	47	32.9	49	48.0	104	40.5
Personal - perusal check	59	41.3	5	4.9	66	25.7
Personal - detailed check	19	13.3	8	7.8	27	10.5
Have professional checks	18	12.6	40	39.2	60	23.3
Totals	143	100.0	102	100.0	257	100.0

An interesting aspect of the survey was the response of the owners or occupants of properties, and in particular their attitude towards checking for termite activity. The data above show the reported checking rates of the respondents separated into categories according to the type of construction used for the homes in which they live.

The first point to be observed is that approximately 40 percent of the population do not perform any checks whatsoever for termite activity. There is a significant differential between those living in steel frames houses and those living in timber framed houses, with approximately half of those who live in steel framed housing not performing any checks and one-third of those living in timber framed housing not performing any checks.

A large number of respondents reported that they carry out personal checks for termite activity. Just over 40 percent of those living in timber framed houses carried out such checks, whilst approximately 5% of those living in steel framed houses carried out checks. This large difference is statistically significant, and is supported by comments from respondents living in steel framed housing, in which there is a general perception that it is not necessary to check for termite activity if you live in a steel framed house.

Approximately 10 percent of the population is extremely well-informed about the risks of termites attacks, and this is largely independent of the form of construction.

Interestingly, steel framed building occupants tend to use professional pest inspectors to a much greater extent than do residents of timber framed housing.

Responses returned were from 143 timber framed houses and 118 steel framed houses.

GENERAL COMMENT ON ACCURACY OF THE RESULTS

The confidence in each result is slightly different because of the different numbers of houses in the sub categories. However, a general target of the sampling was to achieve a 10% error bound at the 95% confidence level. All results (including the attack rate on post 1995 timber houses) achieved at least this confidence.

COMMENTS ON THE RESULTS

The following results are apparent from the study:

1. slightly more than 6% of the sampled building stock had been attacked by termites.
2. the rate of attack on timber framed housing is approximately 12%
3. the rate of attack on steel framed housing is indistinguishable from zero
4. the average cost of an attack is over \$2300
5. the attack rate on timber framed housing is approximately once every 130 years of exposure
6. the use of piers in conjunction with ant caps is less effective than when a slab construction is used
7. residents of steel framed housing, in general, do not feel the necessity to check for termites activity

Reference was made earlier to the poor response rate amongst residents of steel framed houses in the initial stages of this survey. During the operation of the door to door surveys the reason for this became clear. Several residents of steel framed houses made comments along the lines that “it is an irrelevance asking if termites attack steel, they don’t, so it’s difficult to be interested in a survey on the subject”. The door to door part of the survey redressed the imbalance introduced by this feeling amongst this sub-category that their opinions on the subject were of no consequence.

The difference in attack rates for houses constructed on slabs or with piers is interesting. The reasons for the difference were not investigated, since the result was unexpected. It is possible that the result is produced because of residents’ strategies for protection, rather than any implicit difference in the protection afforded by the form of construction. In other words, ant caps at the head of piers, are intended to make an attack noticeable (with a resultant quick response), but residents may well consider that the ant caps actually prevent breaching by termites, and accordingly offer protection. Ant caps are actually just another form of termite deflector.

The overall cost to the nation of termite attacks is over \$100 million dollars per year. If the figures obtained in this survey are extrapolated to the entire country then the figure is close to \$100 million. However, the location of the survey is an area that is less severely affected than areas in the north of Australia. This survey has not sought to estimate the effect of that factor. However, it is possible to say that the figure of \$100 million dollars for annual damage caused by termites is likely to be a lower bound figure.

CONCLUSIONS

It is clear from the results of the survey that there is no measurable attack rate by termites on houses with steel framed construction. In addition, the increased security experienced by the residents of such housing allows them to spend less time and effort on checking for termite activity.

In the case of timber framed housing, the attack rate reported in this survey is just over 12% of the entire timber frame building stock. The cost of each attack averages at a little over \$2300, and this cost, averaged over the entire housing stock is just less than \$20 per household per year.

The use of piers to prevent termite access to timber framed housing is considerably less effective than the use of a slab type construction. The reasons for this finding are not clear.

The occupants of steel framed housing appear to have a considerably greater degree of comfort when considering the risk of termite attack than do the occupants of timber framed housing.

The cost to the country of termite attacks on homes is at least \$100 million dollars annually.

WEBLIOGRAPHY

University of Queensland Entomology Department (2002)
www.uq.edu.au/entomology/entonet/outlines/html.2/et2010/2010.term.html

Department of Primary Industries, Queensland (1999), www.dpi.qld.gov.au/forestry/5040.html

Queensland Forestry Research Institute (1998), <http://www.forests.qld.gov.au/library/tn43.pdf>

Archicentre (2003), <http://www.archicentre.com.au/media/archinews18012003.htm>

APPENDIX 1 Comments from respondents

The following is a selection of write-in comments obtained from respondents:

1. From North Richmond. Reporting that no insurance claim had been made for an attack the cost of which was approximately \$4000, the respondent also commented “but we’ve had termites. Can’t get reasonable insurance without changing heaps so you might as will move. Bring back powers to kill of termites. i.e. I understand termites groom each other and in W. A. you can use a powder that can be transported back to the nest to kill them all off at source. As you can guess I am not keen on termites.”
2. From North Richmond. Reporting damage in the region of \$10,000 the respondent commented “previous owner built room in the garage-under house on slab. This let the termites gain access to the underside of the shower area which was leaking. We found that chemicals are a waste of money and we removed all access from the ground to the timber areas of the house. termites are in all timber structures around our property but not in our house anymore four years on. Moral to the story:-don’t buy a house on a slab.”
3. From North Richmond. Pest inspection done on purchase-no evidence of termites stated But five proposed properties before this one all had positive to termites-did not proceed on purchases with this information.”
4. From North Richmond. The respondent reported that the property had previously been attacked but did not estimate the cost of the attack. “I moved sleepers around from the garden area and found evidence of termites decay. There is a few houses in our area that has termites invasion.”
5. From North Richmond. “Our previous home in Richmond did have termites protection just prior to the change. When we sold, termites were found close to the house that did not penetrate the protective barrier surrounding the house.”
6. From North Sydney. “I’m not sure that methods used today on new building will be as effective as those used 20 years ago-time will tell.”
7. From North Richmond. The respondent reported that his house had been attacked each year since 1996, and the cost of the last damage, in 2002, was approximately \$4000. “I am in a row of five houses that have all been attacked in the last few years. As owners we all repair the damage ourselves. In speaking to local builders I’ve been told that products such as Termimesh don’t work, as during construction the brickies invariably damage the mesh. In hot humid weather e.g. February each year attacks can appear overnight up the side of the concrete slab. These can be mud tunnels up to 100 mm wide. Even when these areas are saturated with current chemicals legally available, another attack can come up a year later in the same underground tunnel.”
8. From Western Sydney. This respondent reported damage in 1997 that cost approximately \$10,000 to repair. “The cost includes termite eradication, timber replacement and site repair. termite treatment to prevent future attacks on entire property is expensive-\$1000 for house extra for remainder of property.”
9. From Castle Hill. This respondent reported damage which cost about \$1000 to repair in 1989. The damage was too timber under the house and to a retaining wall/fence. “Two barriers-installed 1967 and chemical barrier drilled at 1 m intervals through the slab and perimeter of the house in 1990. Glad I moved out during treatment as I was pregnant at the time and later heard of the risks and banned chemicals! Neighbouring houses (two sides) significant termite damage since 1990 (one brick-in roof-one fibro). No problems with ours.”
10. From Castle Hill. “Although we had no insurance claim for termite infestation, the previous owner needed to treat the bathroom area due to a termite attack.” (note that this property has been listed in the data as not having had a termite attack during the observation period).

11. From Castle Hill. This respondent reported an attack in 1998 and the cost of repairs was approximately \$400. They also comment that they were led to believe the insurance did not cover attacks. "Due to us living at the back of the bush we are under constant threat of termites. Consequently after initial fright of the infestation we had the chemical treatment in and around the home and are diligent in checks."
12. From Castle Hill. Reporting an attack six years ago the respondent observed: "replaced timber sleepers in the garden with brick walls. Didn't claim on insurance."
13. From North Richmond. The respondent reported an attack to a workbench in the garage in 1998: "there was a tree 'gum' in the next doors. When they cut it down the pest man said it probably was the main nest for the white ants. After they sprayed it. I haven't found a white ant since. Touch timber? Ha ha."
14. From North Sydney. The respondent reported an attack in 1998 that cost approximately \$500 to repair. They reported that they did the repairs themselves and did not claim against household insurance. "Check around and under house every six months. Have the house checked by a professional every five years."
15. From North Sydney. The respondent reported no termites attacks, but made the following comment: "on purchasing the house the inspection report said that there had been a previous attack but no signs of reinfestation." (Note that this property has been listed in the data as not having had a termite attack during the observation period).
16. From Western Sydney. A resident of a steel framed house commented: "there's no chance of attack with steel, they're much better than those timber frame houses over there. The only problem is you can hear them groaning when it gets hot."

APPENDIX 2 The survey instrument

From Professor Alan Jeary, University of Western Sydney.

Attached is a survey asking questions **about termite attacks on domestic houses in Sydney**. The purpose of this questionnaire is to determine the severity and locations of termite attacks, and your help in getting this information would be very much appreciated.

All information gathered will be strictly confidential and no personal information will be divulged to anyone whatsoever. The survey is part of a final year undergraduate program. If there are questions that you would prefer not to answer, please simply leave that section blank. It would still be valuable if you return the survey.

In 1995, potent chemicals previously used to deter termites were banned, and as a result different types of barrier were introduced. The purpose of this survey is to try to estimate the efficiency of these new barriers. The questionnaire should only take a few minutes to complete. I would be most obliged if you would then return the completed questionnaire in the attached stamped addressed envelope.

Information about the property and the owners is asked for, so as to determine the most likely circumstances under which termite attacks are likely to be perceived. For this purpose we need to know about the materials used in constructing the property (the potential food for the termites), the types of barrier (or deflector) used, your own vigilance in watching for termite activity, and the severity of attacks

The questions are divided into three sections:

Section 1 is about your house and the way it's constructed. This information is to allow us to determine whether termites are more likely to attack certain types of house or whether the attacks occur more in some areas.

Section 2 is about the risk of termite attack, and asks about the protection that you have (both termite deflectors and any checking that you do).

Section 3 is only for people who have already had a termite attack. In this case we would like to know about the severity of the attack.

Your help in this project is very much appreciated, and is part of an effort on behalf of the School of Construction, Property and Planning of the University of Western Sydney. The overall objective is to be able to provide builders with information that will enable them to be more aware of methods of achieving high quality in construction. A knowledge of what has worked well in the past is a vital part of the information flow in the process, and by participating you will be part of a continuously improving Australian Construction Industry.

If you would like to know more about the risk of termite attacks, and you have access to the internet, useful information can be found at

<http://ohioline.osu.edu/hyg-fact/2000/2092.html>

Many thanks for your help

**Alan Jeary Foundation Professor, School of Construction Property and Planning,
UWS. Tel: 02-9852-4303 Email: a.jeary@uws.edu.au**

Section 1: Your Property

1. What is your address

2. Approximately how old is your house

3. Are you the owner or tenant (please tick)

Owner Tenant

4. Which of the following types most accurately describes your property (please tick the box that best describes your property)

	Brick exterior	Timber exterior	Metal exterior
Timber frame	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Steel frame	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not known	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. What best describes the foundation (please tick):

Built on a slab Supported on piers Other

6. When did you first occupy the property (year)

7. How would you describe the general repair of your property (please tick)

Good medium poor

8. What is your principal occupation

Section 2: Risk of Termite attacks

1. Do you have a termite deflector system (please tick)

Yes No Don't Know

2. If you have a termite deflector system, what type is it

3. Do you perform any checks for termite activity (please tick)

Yes No

4. If you do check, what do you look for (please explain)

5. Have you ever had any termite related insurance claim in this property (please tick)

Yes No

If you answered yes to this last question please complete section 3. If you answered 'no', then this completes the questionnaire.

Section 3: If you have had a termite attack

1. How did you first notice the termite presence (please explain)

2. When did the last attack occur (year)

3. How did you treat the problem (please explain)

4. What was the total cost of the damage (in dollars)

5. Was the repair covered by insurance

Yes No

6. Did the insurance cover the full cost of the repairs

Yes No

7. What area of the house was affected (please explain)

8. Has your property previously been attacked by termites.

Yes No

9. If so when did that happen (year)

Is there any other information you think would be useful to us?