



ADVANCED BUILDING INSPECTIONS

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Visual Timber Pest Inspection & Report in accord with AS 4349.3

PROPERTY

INSPECTION DATE January 2008

CLIENTS

TELEPHONE

email

REF 10875

Summary Only

IMPORTANT DISCLAIMER

- ◆ This Summary is supplied to allow a quick and superficial overview of the inspection results.
- ◆ This Summary is NOT the Report and cannot be relied upon on its own.
- ◆ This Summary must be read in conjunction with the full report and not in isolation from the report.
- ◆ If there should happen to be any discrepancy between anything in the Report and anything in this Summary, the information in the Report shall override that in this Summary.
- ◆ The Report is subject to Terms and Limitations.

ACCESS

Are there any Area(s) and/or Section(s) to which Access should be gained?

Yes, read report in its entirety.

TIMBER PEST ACTIVITY

Were active subterranean termites (live specimens) found? No, read report in its entirety.

Was visible evidence of subterranean termite workings or damage found? Yes, read report in its entirety

Was visible evidence of borers of seasoned timbers found? Yes, read report in its entirety.

Was evidence of damage caused by wood decay (rot) fungi found? Yes, read report in its entirety

Important: We strongly recommend the purchaser make inquiry from the vendor about Timber Pests and in particular Termites for this property.

For complete and accurate information You must refer to the following complete Visual Timber Pest Report.

TERMS & LIMITATIONS:

Important Information Any person who relies upon the contents of this report does so acknowledging that the following clauses which define the Scope and Limitations of the inspection form an integral part of the report.

- 1. THIS IS A VISUAL INSPECTION ONLY** in accord with the requirements of AS 4349.3 Inspection of buildings Part 3: Timber pest inspections. Visual inspection was limited to those areas and sections of the property to which reasonable access (See Definition) was both available and permitted on the date of Inspection. The inspection DID NOT include breaking apart, dismantling, removing or moving objects including, but not limited to, foliage, mouldings, roof insulation/sisalation, floor or wall coverings, sidings, ceilings, floors, furnishings, appliances or personal possessions. The inspector **CANNOT** see inside walls, between floors, inside skillion roofing, inside the eaves, behind stored goods in cupboards, in other areas that are concealed or obstructed. The inspector **DID NOT** dig, gouge, force or perform any other invasive procedures. An invasive inspection will not be performed unless a separate contract is entered into. In an occupied property it must be understood that furnishings or household items may be concealing evidence of Timber Pests which may only be revealed when the items are moved or removed. In the case of Strata type properties only the interior of the unit is inspected.
- 2. SCOPE OF REPORT:** This Report is confined to reporting on the discovery, or non discovery, of infestation and/or damage caused by subterranean and dampwood termites (white ants), borers of seasoned timber and wood decay fungi (hereinafter referred to as "Timber Pests"), present on the date of the Inspection. The Inspection did not cover any other pests and this Report does not comment on them. Dry wood termites (Family: KALOTERMITIDAE) and European House Borer (*Hylotrupes bujulus Linnaeus*) were excluded from the Inspection, but have been reported on if, in the course of the Inspection, any visual evidence of infestation happened to be found. If *Cryptotermes brevis* (West Indian Dry Wood Termite) or *Hylotrupes bujulus Linnaeus* are discovered we are required by law to notify Government Authorities. If reported a special purpose report may be necessary.
- 3. LIMITATIONS:** Nothing contained in the Report implies that any inaccessible or partly inaccessible areas or sections of the property being inspected by the Inspector on the date of the Inspection were not, or have not been, infested by Timber Pests. Accordingly this Report is not a guarantee that an infestation and/or damage does not exist in any inaccessible or partly inaccessible areas or sections of the property. Nor is it a guarantee that a future infestation of Timber Pests will not occur or be found.
- 4. DETERMINING EXTENT OF DAMAGE:** The Report is NOT a structural damage Report. We claim no expertise in building and any inexperienced opinion we give on timber damage **CANNOT** be relied upon. The Report will not state the full extent of any timber pest damage. The Report will state timber damage found as 'slight', 'moderate', 'moderate to extensive' or 'extensive'. This information is not the opinion of an expert. If any evidence of Timber Pest activity and/or damage resulting from Timber Pest activity is reported either in the structure(s) or the grounds of the property, then You must assume that there may be concealed structural damage within the building(s). This concealed damage may only be found when wall linings, cladding or insulation are removed to reveal previously concealed timbers. An invasive Timber Pest Inspection (for which a separate contract is required) is strongly recommended and You should arrange for a qualified person such as a Builder, Engineer, or Architect to carry out a structural inspection and to determine the full extent of the damage and the extent of repairs that may be required. You agree that neither We nor the individual conducting the Inspection is responsible or liable for the repair of any damage whether disclosed by the report or not.
- 5. MOULD:** Mildew and non wood decay fungi is commonly known as Mould and is not considered a Timber Pest. However, Mould and their spores may cause health problems or allergic reactions such as asthma and dermatitis in some people. No inspection for Mould was carried out at the property and no report on the presence or absence of Mould is provided. Should any evidence of Mould happen to be noticed during the inspection, it will be noted in the Other Information (5.11) section of this report. If Mould is noted as present within the property and you are concerned as to the possible health risk resulting from its presence then you should seek advice from your local Council, State or Commonwealth Government Health Department or a qualified expert such as an Industry Hygienist.
- 6. DISCLAIMER OF LIABILITY:** No liability shall be accepted on account of failure of the Report to notify any Termite activity and/or damage present at or prior to the date of the Report in any areas(s) or section(s) of the subject property physically inaccessible for inspection, or to which access for Inspection is denied by or to the Licensed Inspector (including but not limited to any area(s) or section(s) so specified by the Report).
- 7. DISCLAIMER OF LIABILITY TO THIRD PARTIES:** Compensation will only be payable for losses arising in contract or tort sustained by the Client named on the front of this report. Any third party acting or relying on this Report, in whole or in part, does so entirely at their own risk.

8. **COMPLAINTS PROCEDURE:** In the event of any dispute or claim arising out of, or relating to the Inspection or the Report, or any alleged negligent act or omission on Our part or on the part of the individual conducting the Inspection, either party may give written Notice of the dispute or claim to the other party. If the dispute is not resolved within twenty one (21) days from the service of the written Notice then either party may refer the dispute or claim to a mediator nominated by Us. The cost shall be met equally by both parties or as agreed as part of the mediated settlement. Should the dispute or claim not be resolved by mediation then one or other of the parties may refer the dispute or claim to the Institute of Arbitrators and Mediators of Australia who will appoint an Arbitrator who will resolve the dispute by arbitration. The Arbitrator will also determine what costs each of the parties are to pay.

VISUAL TIMBER PEST REPORT

1. BRIEF DESCRIPTION OF STRUCTURE(S) INSPECTED:

- 1.1 **Building Type:** Semi. **Construction:** Floor: Timber. Walls: Brick and timber framed. Roof: Tiles / glass. Garage: None. Outbuilding(s): None. Fences etc: Brick / timber.

Any building or part of a building that is constructed on a concrete slab is always more susceptible to termite attack because of possible concealed termite entry.

- 1.2 **Areas Inspected:** Only structures, fences &/or trees within 50m of the building but within the property boundaries were inspected. The areas inspected were: - Interior, Roof Void, Subfloor, Exterior, Grounds, Fences, Timber Retaining Walls, Other areas also inspected, if any, were: .

- 1.3 **Areas NOT Inspected:** No inspection was made, and no report is submitted, of inaccessible areas. These include, but may not be limited to, cavity walls, concealed frame timbers, eaves, flat roofs, fully enclosed patios subfloors, soil concealed by concrete floors, fireplace hearths, wall linings, landscaping, rubbish, floor coverings, furniture, pictures, appliances, stored items, insulation, hollow blocks/posts, etc.

- 1.4 **Other Area(s)* to which REASONABLE ACCESS for Inspection was NOT AVAILABLE and the Reason(s) why include:** Part roof spaces due to very tight clearances, and part of the under floor due to stored goods, and limited access openings at the front of the building

Please note since a complete inspection of the above areas was not possible, timber pest activity and/or damage may exist in these areas.

- 1.5 **Area(s) in which Visual Inspection was Obstructed or Restricted and the Reason(s) why include:** As above

Please note since a complete inspection of the above areas was not possible, timber pest activity and/or damage may exist in these areas.

- 1.6 **High Risk Area(s) to which Access should be gained, or fully gained, since they may show evidence of Timber Pests or damage:** Under floor areas - and all stored timber and cardboard needs to be removed

- 1.7 **Was the property furnished at the time of inspection?** Yes.

Where a property is furnished at the time of the inspection then you must understand that the furnishings and stored goods may be concealing evidence of Timber Pest Activity. This evidence may only be revealed when the property is vacated. A further inspection of the vacant property is strongly recommended in this case.

2. SUBTERRANEAN TERMITES:

- 2.1 **Were active termites (live insects) present at the time of the inspection:**

None found at the time of the inspection.

If the answer was "none found at the time of the inspection" then the following termite description is not applicable. Go to 2.2.

If the answer was "yes" then the termites are believed to be (*not applicable as none found*) at the time of the inspection. The termites have the potential to cause (not applicable as none found) damage to structural and decorative timbers and were located mainly in, but not necessarily limited to, the following areas:

- 2.2A **termite nest was not located in the following location(s):**

- 2.3 **Visible evidence of subterranean termite workings and/or damage was found.** Where workings and/or damage was found, it was in but not necessarily limited to the following areas: Kitchen floorboards.

NOTE: Where evidence of termite activity was found in the grounds then the risk to buildings is very high. A treatment to eradicate the termites and to protect the building(s) should be carried out. Where the evidence of termite workings was found in the grounds or the building(s) then the risk of a further attack is very high.

2.4 Was any evidence of timber damage visible? Yes.

Whilst we claim no expertise in building. Moderate termite damage was visible (Refer to 2.3). The damage appears to be from a long past infestation as the few damaged floorboards have been patched before they were last sanded

VERY IMPORTANT:

2.5 If live termites or any evidence of termite workings or damage was reported above within the building(s) or in the ground and fences then it must be assumed that there may be concealed termite activity and/or timber damage. This concealed activity or damage may only be found when alterations are carried out such as when wall linings, cladding or insulation are removed or if you arrange for an invasive inspection. We claim no expertise in structural engineering or building. We strongly recommend that you have a qualified person such as a Builder, Engineer, Architect or other qualified expert in the building trade determine the full extent of the damage, if any. This may require an invasive inspection. We take no responsibility for the repair of any damage whether disclosed by this report or not. (See Terms & Limitations).

Where visual evidence of termite workings and/or damage is reported above, but no live termites were present at the time of inspection, you must realise that it is possible that termites are still active in the immediate vicinity and the termites may continue to cause further damage. It is not possible, without benefit of further investigation and a number of inspections over a period of time, to ascertain whether any infestation is active or inactive. Active termites may simply have not been present at the time of inspection due to a prior disturbance, climatic conditions, or they may have been utilising an alternative feeding source. Continued, regular, inspections are essential. Unless written evidence of a termite protection program in accord with "Australian Standard 3660" with ongoing inspections is provided, you must arrange for a treatment in accord with "Australian Standard 3660" to be carried out immediately to reduce the risk of further attack.

2.6 General remarks: A more thorough INVASIVE INSPECTION is available. Where any current visible evidence of Timber Pest activity is found it is strongly recommended that a more invasive inspection is performed. Trees on the property have been visually inspected for evidence of termite activity to a height of 2m where access was possible and practical. It is very difficult, and generally impossible to locate termite nests since they are underground and evidence in trees is usually well concealed. We therefore strongly recommend that you arrange to have trees test drilled for evidence of termite nests.

2.7 No signs of a termite treatment were found or evidence of a possible previous termite treatment.

WARNING: If evidence of drill holes in concrete or brickwork or other signs of a possible previous treatment is reported then the treatment was probably carried out because of an active termite attack. Extensive structural damage may exist in concealed areas. You should have an invasive inspection carried out and have a builder determine the full extent of any damage and the estimated cost of repairs as the damage may only be found when wall linings etc are removed.

Normally if a termite treatment has been carried out then a durable notice should be located in the meter box indicating the type of termite shield system, treated zone or combination has been installed.

2.8 Durable Notice (Termite Management Notice) No durable notice was found during the inspection.

This firm can give no assurances with regard to work that may have been previously performed by other firms. You should obtain copies of all paperwork and make your own inquiries as to the quality of the treatment, when it was carried out and warranty information. In most cases you should arrange for a treatment in accord with "Australian Standard 3660" be carried out to reduce the risk of further attack.

3. BORERS OF SEASONED TIMBER

3.1 *Lyctus brunneus* (powder post beetle) is not considered a significant pest of timber. Damage is confined to the sapwood so treatment or timber replacement is not usually required. However, you should have a building expert investigate if any timber replacement is required.

3.2 *Anobium punctatum* (furniture beetle) and *Calymnaderus incisus* (Queensland pine beetle) must always be considered active, unless proof of treatment is provided, because, unless the timber is ground up, one cannot determine conclusively if activity has ceased. Total timber replacement of all susceptible timbers is recommended. A secondary choice is treatment. However, the evidence and damage will remain and the treatment may need to be carried out each year for up to three years.

3.3 Was visible evidence of borers found? Yes, *Anobium punctatum* evidence located.

Extensive damage was found in flooring timbers, both original floors and in recycled timbers

We claim no expertise in building and if any evidence or damage has been reported then you must have a building expert determine the full extent of damage and the estimated cost of repairs or timber replacement (See Terms & Limitations).

- 3.4** Borer activity is usually determined by the presence of exit holes and/or frass. Since a delay exists between the time of initial infestation and the appearance of these signs, it is possible that some borer activity may exist that is not discernible at the time of inspection.
- 3.5 Borer recommendations:** Replacement of all susceptible timbers is always preferred since, in the event of selling the property in the future it is probable that an inspector will report the borers as active (see above). A chemical treatment to control and/or protect against Furniture beetle and/or Queensland pine beetle can be considered as a less effective, lower cost option. Before considering this option you should consult with a builder (See Terms & Limitations) to determine if the timbers are structurally sound. Following the initial treatment a further inspection is essential in twelve months time to determine if further treatment is needed. Treatments over a number of consecutive years may be required.

4. FUNGAL DECAY CAUSED BY WOOD DECAY FUNGI

- 4.1 Was evidence of wood decay fungi (wood rot) found?** Yes. Found in but not necessarily limited to fences and in detail timbers on the front porch
- 4.2** Moderate damage was found in fencing to the western boundary
- We claim no expertise in building and if any evidence of fungal decay or damage is reported you should consult a building expert determine the full extent of damage and the estimated cost of repairs or timber replacement (See Terms & Limitations).

5. CONDITIONS THAT ARE CONDUCTIVE TO TIMBER PESTS

- 5.1 Water leaks:** Water leaks, especially in or into the subfloor or against the external walls, increases the likelihood of termite attack. Leaking showers or leaks from other 'wet areas' also increase the likelihood of concealed termite attack. Hot water overflows should be plumbed away from the building.
- At the time of the inspection no visible leaks were found:
- We claim no expertise in building and if any leaks were reported then you must have a plumber or other building expert determine the full extent of damage and the estimated cost of repairs.
- 5.2 Moisture:** At the time of the inspection moisture readings were normal
- High moisture readings can be caused by any one of the following: poor ventilation, ineffective drainage, leaking pipes, leaking roofs, defective flashing or by concealed termite activity. The areas of high moisture should be investigated by way of an invasive inspection.
- If a high moisture was reported then you must have a building expert investigate the moisture and its cause and determine the full extent of damage and the estimated cost of repairs.
- 5.3 Drainage:** Poor drainage, especially in the subfloor, greatly increases the likelihood of wood decay and termite attack. We claim no expertise in plumbing and drainage, however it appears that drainage is generally adequate.
- Where drainage is considered inadequate a plumber, builder or other building expert must be consulted.
- 5.4 Hot water services and air conditioning units** which release water alongside or near to building walls should be piped to a drain (if not possible then several meters away from the building) as the resulting wet area is highly conducive to termites.
- Is there a need for this work to be carried out? No, no leaks found at time of inspection.
- 5.5 Ventilation:** Ventilation, particularly to the sub-floor region is important in minimising the opportunity for Timber Pests to establish themselves within a property.
- We claim no expertise in building, however, the ventilation appears to be generally adequate. Where ventilation is considered inadequate a builder or other expert should be consulted.
- 5.6 Slab Edge Exposure:** Where external concrete slab edges are not exposed there is a high risk of concealed termite entry. In some buildings built since July 1995 the edge of the slab forms part of the termite shield system. In these buildings an inspection zone of at least 75mm should be maintained to permit detection of termite entry. The concrete edge should not be concealed by render, tiles, cladding, flashings, adjoining structures, paving, soil, turf or landscaping etc. Where this is the case you should arrange to have the slab edge exposed for inspection. Concealed termite entry may already be taking place but could not be detected at the time of the inspection. This may have resulted in concealed timber damage.

Does the slab edge inspection zone fully comply? Not applicable.

Note: A very high proportion of termite attacks are over the edge of both Infill and other concrete slabs types. Covering the edge of a concrete slab makes concealed termite entry easy. Infill slab type construction has an even higher risk of concealed termite ingress as the slab edge is concealed due to the construction design and cannot be exposed.

The type of slab may only be determined by assessment of the construction plans by a qualified person e.g. Builder, Architect. Construction Plans may be obtainable by your conveyancer. Termite activity and or damage may be present in concealed timbers of the building. **We strongly recommend** frequent regular inspections in accordance with AS 3660.2. Where the slab edge is not fully exposed or the slab is an infill slab or the slab type cannot be determined then we strongly recommend inspections every 3 to 6 months in accordance with AS 3660.2.

Infill slab: A slab on the ground cast between walls. Other slabs should be in accordance with AS 2870 - 1996 and AS 3660.1-2000.

5.7 Weep holes in external walls: It is very important that soil, lawn, concrete paths or pavers do not cover the weep holes. Sometimes they have been covered during the rendering of the brick work. They should be clean and free flowing. Covering the weep holes in part or in whole may allow undetected termite entry.

Were the weep holes clear allowing the free flow of air? Yes.

5.8 Termite Shields (Ant Caps) should be in good order and condition so termite workings are exposed and visible. This helps stop termites gaining undetected entry. Joins in the shielding should have been soldered during the installation. Whenever it is observed that the joins in the shielding have not been soldered then the shielding must be reported as inadequate. It may be possible for a builder to repair the shielding. If not, a chemical treated zone may need to be installed to deter termites from gaining concealed access to the building. Missing, damaged or poor shields increase the risk of termite infestation.

We claim no expertise in building. However, in our opinion the termite shields appear to be inadequate

If considered inadequate a builder or other building expert should be consulted.

Other physical shield systems are not visible to inspection and no comment is made on such systems.

5.9 Other areas and/or situations that appear conducive to (may attract) subterranean termite infestation: Stored scrap timber and firewood under the rear sections of the building

5.10 Comments on other Conducive Conditions: Timber needs to be removed from the under floor areas

5.11 Other information:

Refer to Important Maintenance Advice Regarding IPM below.

6. OVERALL ASSESSMENT OF THE PROPERTY:

6.1 Where the evidence of live termites or termite damage or termite workings (mudding) was found in the building(s) then the risk of a further attack is extremely high. Where evidence of live termites or termite damage or termite workings was found in the grounds but not in the buildings then the risk to buildings must be reported as high to extremely high.

6.2 At the time of the inspection the DEGREE OF RISK OF SUBTERRANEAN TERMITE INFESTATION to the overall property was considered to be high.

6.3 SUBTERRANEAN TERMITE TREATMENT RECOMMENDATION: A management program in accord with AS 3660-2000 to protect against subterranean termites is considered to be essential. However a termite monitoring and baiting proposal is NOT attached. Where a treatment is recommended above, you should contact a reputable Pest Management firm to have this work carried out immediately.

6.4 FUTURE INSPECTIONS: AS 3660.2-2000 recommends "regular competent inspections should be carried out at least on an annual basis but more frequent inspections are strongly recommended". It goes on to inform that "regular inspections will not prevent termite attack, but may help in the detection of termite activity. Early detection will allow remedial treatment to be commenced sooner and damage to be minimized".

Due to the degree of risk of subterranean termite infestation noted above and all other findings of this report, we strongly recommend that a full inspection and written report in accord with AS 4349.3 or AS 3660.2-2000 is conducted at this property every 6 months but not more than 12 months.

IMPORTANT MAINTENANCE ADVICE REGARDING INTEGRATED PEST MANAGEMENT (IPM) FOR PROTECTING AGAINST TIMBER PESTS:

Any structure can be attacked by Timber Pests. Periodic maintenance should include measures to minimise possibilities of infestation in and around a property. Factors which may lead to infestation from Timber Pests include situations where the edge of the concrete slab is covered by soil or garden debris, filled areas, areas with less than 400mm clearance, foam insulation at foundations, earth/wood contact, damp areas, leaking pipes, etc; form-work timbers, scrap timber, tree stumps, mulch, tree branches touching the structure, wood rot, etc. Gardens, pathways or turf abutting or concealing the edge of a concrete slab will allow for concealed entry by timber pests. Any timber in contact with soil such as form-work, scrap timbers or stumps must be removed from under and around the buildings and any leaks repaired. You should endeavour to ensure such conditions DO NOT occur around your property.

We further advise that you engage a professional pest control firm to provide a termite management program in accord with AS 3660 to minimise the risk of termite attack. There is no way of preventing termite attack. Even AS 3660 advises that *"the provision of a complete termite barrier will impede and discourage termite entry into a building. It cannot prevent termite attack. Termites can still bridge or breach barriers but they can be detected more readily during routine inspections."*

You should read and understand the following important information. It will help explain what is involved in a timber pest inspection, the difficulties faced by a timber pest inspector and why it is not possible to guarantee that a property is free of timber pests. It also details important information about what you can do to help protect your property from timber pests. This information forms an integral part of the report.

REASONABLE ACCESS

Only areas to which reasonable access is available were inspected. The Australian Standard 4349.3 defines reasonable access as "areas where safe, unobstructed access is provided and the minimum clearances specified in the Table below are available. Reasonable access does not include removing screws and bolts to access covers." Reasonable access does not include the use of destructive or invasive inspection methods. Nor does reasonable access include cutting or making access traps, or moving heavy furniture or stored goods.

Area	Access hole	Crawl space	Height
Roof interior	450 x 400mm	600 x 600mm	Accessible from 2.1m step ladder or 3.6m ladder placed against a wall.
Subfloor	500 x 400mm	Vertical clearance Timber floor: 400mm to bearer, joist or other obstruction. Concrete floor : 500mm	
Roof Exterior			Accessible from a 3.6m ladder.

A MORE INVASIVE PHYSICAL INSPECTION IS AVAILABLE AND RECOMMENDED

As detailed above, there are many limitations to this visual inspection only. With the permission of the owner of the premises we WILL perform a more invasive physical inspection that involves moving or lifting: insulation, stored items, furniture or foliage during the inspection. We WILL physically touch, tap, test and when necessary force/gouge suspected accessible timbers. We WILL gain access to areas, where physically possible and considered practical and necessary, by way of cutting traps and access holes. This style of report is available by ordering with several days notice. Inspection time for this style of report will be greater than for a VISUAL INSPECTION. It involves disruption in the case of an occupied property, and some permanent marking is likely. You must arrange for the written permission of the owner who must acknowledge all the above information and confirm that our firm will not be held liable for any damage caused to the property. A price is available on request.

CONCRETE SLAB HOMES

Homes constructed on concrete slabs pose special problems with respect to termite attack. If the edge of the slab is concealed by concrete paths, patios, pavers, garden beds, lawns, foliage, etc then it is possible for termites to affect concealed entry into the property. They can then cause extensive damage to concealed framing timbers. Even the most experienced inspector may be unable to detect their presence due to concealment by wall linings. Only when the termites attack timbers in the roof void, which may in turn be concealed by insulation, can their presence be detected.

Where termite damage is located in the roof it should be expected that concealed framing timbers will be extensively damaged. With a concrete slab home it is imperative that you expose the edge of the slab and ensure that foliage and garden beds do not cover the slab edge. Weep holes must be kept free of obstructions. It is strongly recommended that you have a termite inspection in accordance with AS 3660.2 carried out as recommended in this report.

SUBTERRANEAN TERMITES

No property is safe from termites! Termites are the cause of the greatest economic losses of timber in service in Australia. Independent data compiled by State Forestry shows 1 in every 5 homes is attacked by termites at some stage in its life. More recent data would indicate that this is now as high as 1 in every 3. Australia's subterranean termite species (white ants) are the most destructive timber pests in the world. In fact it can take "as little as 3 months for a termite colony to severely damage almost all the timber in a home".

How Termites Attack your Home. The most destructive species live in large underground nests containing several million timber destroying insects. The problem arises when a nest matures near your home. Your home provides natural shelter and a food source for the termites. The gallery system of a single colony may exploit food sources over as much as one hectare, with individual galleries extending up to 50 metres to enter your home, where there is a smorgasbord of timber to feast upon. Even concrete slabs do not act as a barrier; they can penetrate through cracks in the slab to gain access to your home. They even build mud tubes to gain access to above ground timbers. In rare cases termites may create their nest in the cavity wall of the property without making ground contact. In these cases it may be impossible to determine their presence until extensive timber damage occurs.

Termite Damage. Once in contact with the timber they excavate it often leaving only a thin veneer on the outside. If left undiscovered the economic species can cause many thousands of dollars damage and cost two to five thousand dollars (or more) to treat.

Subterranean Termite Ecology. These termites are social insects usually living in underground nests. Nests may be in trees or in rare instances they may be in above ground areas within the property. They tunnel underground to enter the building and then remain hidden within the timber making it very difficult to locate them. Where timbers are concealed, as in most modern homes, it makes it even more difficult to locate their presence. Especially if gardens have been built up around the home and termite barriers are either not in place or poorly maintained. Termites form nests in all sorts of locations and they are usually not visible. There may be more than one nest on a property. The diet of termites in the natural environment is the various hardwood and softwood species growing throughout Australia. These same timbers are used in buildings. Worker termites move out from their underground nest into surrounding areas where they obtain food and return to nurture the other casts of termites within the nest. Termites are extremely sensitive to temperature, humidity and light and hence cannot move over ground like most insects. They travel in mud encrusted tunnels to the source of food. Detection of termites is usually by locating these mud tunnels rising from the ground into the affected structure. This takes an expert eye.

Termite barriers protect a building by forcing termites to show themselves. Termites can build mud tunnels around termite barriers to reach the timber above. The presence of termite tracks or leads does not necessarily mean that termites have entered the timber though. A clear view of walls and piers and easy access to the sub-floor means that detection should be fairly easy. However many styles of construction do not lend themselves to ready detection of termites. The design of some properties is such that they make the detection by a pest inspector difficult, if not impossible.

The tapping and probing of walls and internal timbers is an adjunct or additional means of detection of termites but is not as reliable as locating tracks. The use of a moisture meter is a useful aid for determining the presence of termites concealed behind thin wall panels, but it only detects high levels of activity. Older damage that has dried out will not be recorded. It may also provide false readings. Termite tracks may be present in the ceiling space however some roofs of a low pitch and with the presence of sisalation, insulation, air conditioning ductwork and hot water services may prevent a full inspection of the timbers in these areas. Therefore since foolproof and absolute certain detection is not possible the use of protective barriers and regular inspections is a necessary step in protecting timbers from termite attack.

BORERS OF SEASONED TIMBERS

Borers are the larvae of various species of beetles. The adult beetles lay their eggs within the timber. The eggs hatch out into larvae (grubs) which bore through the timber and can cause significant structural damage. The larvae may reside totally concealed within the timber for a period of several years before passing into a dormant pupal stage. Within the pupal case they metamorphose (change) into the adult beetle which cuts a hole in the outer surface of the timber to emerge, mate and lay further eggs to continue the cycle. It is only through the presence of these emergence holes, and the frass formed when the beetles cut the exit holes that their presence can be detected. Where floors are covered by carpets, tiling, or other floor coverings and where no access to the underfloor area is available it is not possible to determine whether borers are present or not. This is particularly the case with the upper floors of a dwelling.

Borers of 'green' unseasoned timber may also be present. However these species will naturally die out as the timbers dry out in service. Whilst some emergence holes may occur in a new property it would be unusual for such a borer to cause structural damage, though the exit holes may be unsightly.

Anobium borer (furniture beetle) and Queensland pine borer. These beetles are responsible for instances of flooring collapse, often triggered by a heavy object being placed on the floor (or a person stepping on the affected area!) Pine timbers are favoured by this beetle and, while the sapwood is preferred, the heartwood is also sometimes attacked. Attack by this beetle is usually observed in timbers that have been in service for 10-20 years or more and mostly involves flooring and timber wall panelling. The *frass* from the flight holes (faeces and chewed wood) is fine and gritty. Wood attacked by these borers is often honeycombed.

Lyctus borer (powder post beetle). These borers only attack the sapwood of certain susceptible species of hardwood timber. Since it is a requirement that structural timbers contain no more than 25% Lyctus susceptible sapwood these borers are not normally associated with structural damage. Replacement of affected timbers is not recommended and treatment is not approved. Where decorative timbers are affected the emergence holes may be considered unsightly in which case timber replacement is the only option. Powder post beetles mostly attack during the first 6-12 months of service life of timber. As only the sapwood is destroyed, larger dimensional timbers (such as rafters, bearers and joists) in a house are seldom weakened significantly to cause collapse. In small dimensional timbers (such as tiling and ceiling battens) the sapwood may be extensive, and its destruction may result in collapse. Replacement of these timbers is the only option available.

TIMBER DECAY FUNGI

The fruiting bodies of wood decay fungi vary in size, shape and colour. The type of fungi encountered by pest controllers usually reside in poorly ventilated subfloors, below wet areas of the home, exterior timbers and in areas that retain water in the soil. The durability and type of timbers are factors along with the temperature and environment. Destruction of affected timbers varies with the symptoms involved. Removal of the moisture source usually alleviates the problem. Fungal decay is attractive to termites and if the problem is not rectified it may well lead to future termite attack.

CONTACT THE INSPECTOR

Please feel free to contact the inspector who carried out this inspection. Often it is very difficult to fully explain situations, problems, access difficulties or timber Pest activity and/or damage in a manner that is readily understandable by the reader. Should you have any difficulty in understanding anything contained within this report then you should immediately contact the inspector and have the matter explained to you. If you have any questions at all or require any clarification then contact the inspector prior to acting on this report.

The Inspection was carried out by: **Robert Whelan**

Inspectors contact phone number: **0413 949 818**

State Licence No: **BC243**

Insurance Accreditation Number: **01254**

Dated this 2ND day of January 2008

SIGNED FOR AND ON BEHALF OF: **Advanced Building Inspections Pty Limited**

Signature: _____