



TIMBER PEST INSPECTION REPORT

In accordance with AS 4349.3

BOO-27468-Z0F6B9
Report Number

45 Bellevue Drive, Little Mountain, QLD 4551
Inspection Address

Client's Name

5/12/2018
Date of Inspection

Peter Kraaykamp
Inspector

(Bellara Holdings Pty Ltd)
QBCC Licence No. 1057602



☎ 1300 337 447

<http://www.inspectmyhome.com.au>

This Report is produced for the Clients use only. The Company and the consultant are not liable for any reliance placed on the report by any third party.

TIMBER PEST INSPECTION REPORT

This Standard Timber Pest Inspection Report (hereinafter called "the Report") is issued subject to the Scope, Limitations, Exclusions and Definitions of Inspection and Report set out in Clause A.1 of this document.

PLEASE READ THE TERMS AND CONDITIONS IN CLAUSE A.1 OF THIS DOCUMENT

SERVICE REQUESTED As agreed with Client (see also Clause A.1 – Scope, Limitations & Exclusions).

STANDARD INSPECTION REPORT - Tests were carried out.

SPECIAL CONDITIONS OR INSTRUCTIONS: **No**

SUMMARY OF FINDINGS

IMPORTANT NOTE: The Client acknowledges that, unless stated otherwise, the Client as a matter of urgency should implement any recommendation or advice given in this Report. The Summary is not the Report. The following Report must be read in full in conjunction with this Summary. If there is a discrepancy between the information provided in this Summary and that contained within the body of the Report, the information in the body of the Report shall override this Summary.

Active (live) Termites

Were live Termites found? **No**

(See also Item 3.1 for further details)

Termite Workings and/or Damage

Was evidence of Termite activity (including workings) and/or damage found? **No**

(See also Item 3.2 for further details)

Subterranean Termite Management Proposal

In addition to this inspection report is a written proposal to treat a known infestation and/or help manage the risk of future subterranean termite access to buildings and structures recommended? **No**

(See also Item 3.3 for further details)

Previous Termite Management Program

Was evidence of a possible previous termite management program noted? **Yes**

(See also Item 3.4 for further details)

Frequency of Future Inspections

The next inspection to help detect any future Termite attack is recommended in **6 Months**

(See also Item 3.5 for further details)

Chemical Delignification

Was evidence of Chemical Delignification damage found? **No**

(See also Item 5.0 for further details)

Fungal Decay

Was evidence of Fungal Decay activity and/or damage found? **Yes**

(See also Item 6.0 for further details)

Wood Borers

Was evidence of Wood Borer activity and/or damage found? **No**

(See also Item 7.0 for further details)

Conditions Conducive to Timber Pest Attack

Was evidence of Conditions Conducive to Timber Pest Attack found? **Yes**

(See also Item 8.0 for further details)

1.0 ACCESSIBILITY (See also Clause A.2)

The Consultant has endeavoured to access and inspect all areas of the property on the day of inspection, however areas to which reasonable access for the full visual inspection were not available or were obstructed or restricted are outlined below:-

Roof Void because:

Visual inspection to some timbers in the roof void were obstructed due to the design of the roof which restricted bodily access.

Restricted visibility to soffits/eaves.

Insulation batts obstruct visual inspection.



Sub-Floor because:

No access to subfloor where slab on ground / solid fill construction.

Interior because:

Window furnishings, floor coverings, furniture and stored goods.

No access to voids beneath built in cupboards and bath tubs.

Accessibility (See also Item 4.0 for further details)

Due to the level of accessibility for inspection including the presence of obstructions, the overall degree of risk of undetected Timber Pest Attack and Conditions Conducive to Timber Pest Attack was considered:

- **The risk of undetected Timber Pest attack and conditions conducive to Timber Pest attack is considered to be moderate-high.**

2.0 **GENERAL**

2.1 **Brief description of the building and other structures on the property:**

Type: **Domestic**
Height: **Single Storey**
Building: **Brick Veneer,Cladding**
Piers: **Brick,Timber**
Floor: **Concrete Slab**
Roof: **Tile**

2.2 **Was the property furnished at the time of inspection? Yes**

IMPORTANT: THE PREMISES WOULD NEED TO BE VACANT AND CONTAINING NO STORED GOODS OR FURNISHINGS TO ENABLE A THOROUGH VISUAL INSPECTION AS PER AUSTRALIAN STANDARDS 4349.3

2.3 **Was the inspection limited to assessing the interior and immediate exterior of a particular unit? Yes**

NOTE: NO INSPECTION TO COMMON PROPERTY AS PER AUSTRALIAN STANDARDS. MATTERS IN RELATION TO COMMON PROPERTY REQUIRE FURTHER INVESTIGATION THROUGH BODY CORPORATE. STRONGLY RECOMMEND CLIENTS SOLICITOR MAKE THE NECESSARY ENQUIRIES RELATING TO THE TYPE OF BODY CORPORATE TITLE WHICH PERTAINS TO THIS PROPERTY AS THIS WILL HAVE A BEARING ON REPAIRS/ MAINTENANCE RESPONSIBILITIES, BEFORE CONTRACT BECOMING BINDING.

3.0 TERMITES See also Clause A.3 and Clause A.8.

IMPORTANT NOTE. As a delay may exist between the time of an attack and the appearance of tell-tale signs Associated with the attack, it is possible that termite activity and damage exists though not discernible at the time of inspection.

Due to the unpredictable nature of termite behaviour, the fact that if no active termites were located despite the best endeavours of the consultant at the time of the inspection, this should not be taken as a guarantee that no termites were present. Termites may be present but undetectable or may have temporarily vacated a location at the time of inspection.

Termites are capable of extensive activity and damage over a short period where the conditions are conducive to such activity. The client should be aware that significant damage and activity can occur in a period as short as a few weeks. The client is encouraged therefore to implement recommendations in this report as a matter of urgency to reduce the risk of such activity.

General Description of Attack

Timber hollowed beneath; some cracking at the surface of timber; earthen channels present; or pale faecal spots present.

Treatment

After discovery of an active infestation, it is imperative that the species of termite is accurately identified before costly (and sometimes unnecessary or inappropriate) methods of treatment are initiated.

Only economically important species which are known to attack timber structures should be treated.

In the case of economically important species, it is important that the termite workings are not further disturbed until the proposed method of control has been determined by a licensed pest control operator. Premature attempts to repair or replace infested timber may cause the termites to withdraw from the area temporarily, thereby hindering effective treatment. Any repair or replacement of infested timber should be carried out after the appropriate treatment has been completed.

Where evidence of active termites is detected within a building or within 30 metres of any building, it must always be assumed that the termites may also be active in areas of the property not inspected. Accordingly, where the termites are known to be of economic significance, a further (more invasive) inspection is strongly recommended of areas which were inaccessible, not readily accessible or obstructed at the time of inspection.

Termite Workings and Damage

Where evidence of damage to building timbers exists, competent advice (e.g. from a licensed or registered building contractor) should be obtained to determine the extent of any structural damage and as to the need or otherwise for rectification or repair work.

Where evidence of inactive termites is located within the building, it is possible that termites are still active in areas of the property not inspected and they may continue to cause damage. A further more invasive inspection is strongly recommended of areas which were inaccessible, not readily accessible or obstructed at the time of inspection.

Where evidence of an inactive termite infestation exists, it is not possible, without benefit of further investigation and inspections over a period of time, to ascertain whether any infestation is active or inactive. Continued, regular, inspections are essential.

Where evidence of termite attack exists to any trees or tree stumps a more conclusive search should be undertaken. This may require the tree or stump to be drilled to determine the existence of a termite nest. In addition, the soundness and stability of any standing trees identified as being affected by termite attack should be confirmed. Always seek further advice from the Consultant.

Previous Treatments

Where evidence of a possible termite treatment was located, the Client should obtain and keep on file all relevant documents pertaining to the extent of the treatment, any service warranties and advice in regard to the building owners' obligation to maintain the treatment and/or barrier. If evidence of a previous treatment of termite infestation is noted, and appropriate documentation is not available, the Client must assume that the termite infestation may still be active in areas of the property not inspected. Accordingly, a re-treatment may be required. Always seek further advice from the Consultant.

Frequency of Future Inspections

Australian Standard AS 3660 recognises 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 minimised.

Inspections at intervals not exceeding twelve (12) months are recommended. Where the termite risk is high or the building type susceptible to termite attack, more frequent inspections (3-6 months) should be undertaken.

The genus or species of drywood or subterranean termites listed below have the potential to cause significant structural damage. See also Clause A.1 - Limitations No 4 & No 6.

3.1 Active (live) Termites

Were live termites found? **No**

Was a termite nest found? **No**

3.2 Termite Workings and/or Damage

Was evidence of termite workings or damage found? **No**

3.3 Subterranean Termite Management Proposal

A proposal in accordance with Australian Standard AS 3660.2 to treat a known infestation and/or help manage the risk of concealed subterranean termite access to buildings and structures.

Is a Subterranean Termite Management Proposal recommended? **No**

Is this Consultant engaged to provide a management proposal? **No**

NOTE: If this Consultant is not providing a management proposal, but a proposal is recommended above, then the Client should contact a licensed pest control operator in respect to obtaining a proposal without delay.

3.4 Previous Termite Management Program

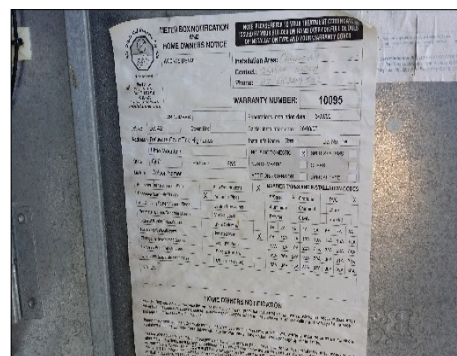
Was evidence of a possible previous termite management program noted?

Yes

NOTE: If Yes provide details and the location of the possible previous termite management program below (including the location of any 'Termite Treatment Notice' affixed at the entrance to a crawl space or some other place where it was protected from damage, e.g. in the case of a slab-on-ground construction, in an external electrical meter box).

NOTE: See also Clause A.3 and Clause A.8.

Termite treatment notice in meter box. Strongly recommend obtaining all documentation pertaining to the termite management system in place, any warranties given and if the warranties are intact and transferable prior to the contract becoming binding.



3.5 Frequency of Future Inspections

Australian Standard AS 3660 recognises 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 minimised.

The next inspection to help detect termite attack is recommended in 6 Months

The inspection frequency noted in this report is determined in the risk assessment at the time of inspection. The client should consider that any material changes, alterations and or institution of report recommendations may alter the frequency of future inspections.

4.0 **UNDETECTED TIMBER PEST RISK ASSESSMENT**

Due to the level of accessibility for inspection including the presence of obstructions, the overall degree of risk of **undetected** Timber Pest Attack and Conditions Conducive to Timber Pest Attack was considered:

- **The risk of undetected Timber Pest attack and conditions conducive to Timber Pest attack is considered to be moderate-high.**

RECOMMENDATION: Where the risk is considered "Moderate" or "Moderate-High" or "High" or "Very High", a further inspection is strongly recommended of areas that were not readily accessible, and of inaccessible or obstructed areas once access has been provided or the obstruction removed. This may require the moving, lifting or removal of obstructions such as floor coverings, furniture, decking, stored items foliage and insulation. In some instances, it may also require the removal of ceiling and wall linings, and the cutting of traps and access holes. Seek further advice from your Consultant.

5.0 **CHEMICAL DELIGNIFICATION** *See also Clause A.4.*

Was evidence of Chemical Delignification found? **No**

6.0 **FUNGAL DECAY** *See also Clause A.5 and Clause A.8.*

Was evidence of Fungal Decay found? **Yes**
The extent of any visible damage appears: **Undetermined**

Untreated or decaying timber fences, retaining walls, loose logs and stumps are always at risk of termite attack / infestation and future activity is likely. Remove where necessary and / or replace with a non-susceptible exterior product.

7.0 **WOOD BORERS** *See also Clause A.6 and Clause A.8.*

Was evidence of Wood Borers found? **No**

8.0 CONDITIONS CONDUCTIVE TO TIMBER PEST ATTACK (See also Clause A.7 and Clause A.8.)

The Consultant sought evidence of noticeable building deficiencies or environmental factors that may contribute to the presence of timber pests.

8.1 Lack of Adequate Subfloor Ventilation

Was evidence of a lack of adequate ventilation found? **No**

8.2 The Presence of Excessive Moisture

Prevailing weather conditions at the time of inspection: **Fine**

Was evidence of the presence of excessive moisture found? **No**

Were high moisture readings obtained using a moisture meter? **No**

Was evidence of mould growth found? **No**

8.3 Bridging or Breaching of Termite Barriers and Inspection Zones

'Bridging' is the spanning of a termite barrier or inspection zone so that subterranean termites are provided with passage over or around that barrier. 'Breaching' is the making of a hole or gap in a termite barrier so that termites are provided with a passage through that barrier.

Was the finished ground or paving level above the adjacent internal floor level or damp-proof-course or obstructing any weephole or vent face on external walls? **No**

Was evidence of bridging or breaching including the condition insufficient slab edge exposure found? **No**

8.4 Untreated or Non-Durable Timber Used in a Hazardous Environment

This condition may include, but is not limited to, earth-wood or damp masonry-wood contact.

Was evidence of untreated or non-durable timber used in a hazardous environment found? **No**

8.5 Other Conditions Conducive to Timber Pest Attack

For example: evidence of non-existent or defective termite shields installed to isolate piers; storage of timber and stored goods under/adjacent to the building; tree stumps and vegetation in subfloor spaces; cracks in concrete slabs or foundations; defective flashings, downpipes and guttering; etc.

Was evidence of any other conditions conducive to timber pest attack found? **Yes**

Any side connecting structures, gate/fence supports or any timbers which are attached to the dwelling and in contact with the ground may conceal termite entry points. A 75mm clearance from the ground or reconstruction is recommended.

Various fence timbers are in direct ground contact which is always a termite risk and promotes wood rot.

9.0 RECOMMENDATIONS REPORT

This inspection was carried out with the aid of a thermal imaging camera. On the day of this Inspection the camera did not register any abnormal temperature variances within the dwelling that may indicate the presence of a large active termite infestation.

The building owner should ensure that regular inspections of the building are carried out by a person competent in Unit 8 of the National Pest Management Competency Standards or equivalent, as in accordance with section three of the 'Australian Standards' AS4349.3 - 2010. The building owners should keep a record of these inspections. Failure to conduct regular competent inspections may void some building insurance and/or warranties (Australian Standards 4349.3 - 2010). Contact pest control company and builder in regards to warranties and obligations.

10.0 ADDITIONAL RECOMMENDATIONS

It is **strongly recommended** that a full Inspection and Report be carried out every **6 Months**. Regular inspections DO NOT stop timber pests, but are designed to limit the amount of damage that may occur by detecting problems early.

It is highly recommended that this report be read in full thoroughly. All risk areas be rectified and treatment recommendations be strictly adhered to as a matter of urgency.

11.0 ADDITIONAL PHOTOS

Please see below for additional photos taken from this Inspection (if any).

12.0 CERTIFICATION

This document certifies that the property described in this Report has been inspected by the Building Consultant in accordance with the level of service requested by the Client and the Terms and Conditions set out in Clause A.1 of this Report, and in strict accordance with the Australian Standards.

COMPANY NAME CONSULTANT	Bellara Holdings Pty Ltd Peter Kraaykamp
POSTAL ADDRESS	PO Box 118 Helensvale Plaza QLD 4212
PHONE	1300 337 447
AUTHORISED SIGNATORY DATE OF ISSUE	Don Jury 06/12/2018

A.1 TERMS AND CONDITIONS

SCOPE

Unless specified in writing, this Standard Timber Pest Detection Report ("the Report") deals only with the detection, or non-detection of *Timber Pest Attack* and *Conditions Conducive to Timber Pest Attack* discernible at the time of inspection.

As requested by the *Client*, the assessment was based solely on the following site inspection carried out by a *Timber Pest Detection Consultant* ('the Consultant') of the *Readily Accessible Areas* of the *Building and Site*:

- Option 1** A visual examination of timber and other visible accessible and unobstructed materials/areas (but excluding furniture and stored items) susceptible to attack by *Timber Pests*, and the carrying out of *Tests* (see Limitation No 1 below).
- Option 2** An inspection report which may include Option 1 as well as the particular requirements of the Client which are specified and attached to this document, where applicable.
- Option 3** In addition to Option 1, a Subterranean Termite Management Proposal in accordance with Australian Standard AS 3660.2 to treat a known infestation and/or manage the risk of future subterranean termite access to buildings and structures.

If the Client has any doubt about the Scope of this Report please discuss your concerns with the Consultant on receipt of the Report.

The Client acknowledges that, unless stated otherwise, the Client as a matter of urgency should implement any recommendation or advice given in this Report.

LIMITATIONS

The Client acknowledges:

1. This Report does not include the inspection and assessment of matters outside the scope of the requested inspection and report.
2. The inspection only covered the Readily Accessible Areas of the Building and Site. The inspection did not include areas which were inaccessible, not readily accessible or obstructed at the time of inspection. Obstructions are defined as any condition or physical limitation which inhibits or prevents inspection and may include – but are not limited to – roofing, fixed ceilings, wall linings, floor coverings, fixtures, fittings, furniture, clothes, stored articles/materials, thermal insulation, sarking, pipe/duct work, builders debris, vegetation, pavements or earth.
3. The detection of drywood termites may be extremely difficult due to the small size of the colonies. No warranty of absence of these termites is given.
4. European House Borer (*Hylotrupes bajulus*) attack is seldom detected as the galleries of boring larvae rarely break through the affected timber surface. No warranty of absence of these borers is given. Regular inspections including the carrying out of appropriate tests are required to help monitor susceptible timbers.
5. This is not a structural damage report. Neither is this a warranty as to the absence of Timber Pest Attack.
6. If the inspection was limited to any particular type(s) of timber pest (e.g. subterranean termites), then this would be the subject of a Special-Purpose Inspection Report, which is adequately specified.
7. This Report does not cover or deal with environmental risk assessment or biological risks not associated with Timber Pests (e.g. toxic mould) or occupational, health or safety issues. Such advice may be the subject of a Special-Purpose Inspection Report which is adequately specified and must be undertaken by an appropriately qualified inspector. The choice of such inspector is a matter for the Client.
8. This Report has been produced for the use of the Client. The Consultant or their firm or company are not liable for any reliance placed on this report by any third party.

EXCLUSIONS

The Client acknowledges:

1. This Report does not deal with any timber pest preventative or treatment measures, or provide costs for the control, rectification or prevention of attack by timber pests. However, this additional information or advice may be the subject of a timber pest management proposal which is adequately specified.

DISPUTE RESOLUTION

In engaging our services, the client hereby agrees and accepts to abide by our dispute resolution process.

If the client becomes aware of any concern regarding this Report, the client must notify our office immediately. Upon receipt of the client's complaint, we will endeavour to resolve the matter with the client in a telephone conversation. An onsite visit with the client may be required in an effort to address and resolve the matter.

If we are unable to resolve the matter onsite, we will respond to the client's complaint in writing within 14 days.

If the client is not satisfied with our response, the client may choose to contact the relevant local authority.

DEFINITIONS

Timber Pest Attack means Timber Pest Activity and/or Timber Pest Damage.

Timber Pest Activity means tell-tale signs associated with 'active' (live) and/or 'inactive' (absence of live) Timber Pests at the time of inspection.

Timber Pest Damage means noticeable impairments to the integrity of timber and other susceptible materials resulting from attack by Timber Pests.

Major Safety Hazard means any item that may constitute an immediate or imminent risk to life, health or property resulting directly from Timber Pest Attack. Occupational, health and safety or any other consequence of these hazards has not been assessed.

Conditions Conducive to Timber Pest Attack means noticeable building deficiencies or environmental factors that may contribute to the presence of Timber Pests.

Readily Accessible Areas means areas which can be easily and safely inspected without injury to person or property, are up to 3.6 metres above ground or floor levels, in roof spaces where the minimum area of accessibility is not less than 600 mm high by 600 mm wide and subfloor spaces where the minimum area of accessibility is not less than 400 mm high by 600 mm wide, providing the spaces or areas permit entry. The term 'readily accessible' also includes:

- (a) accessible subfloor areas on a sloping site where the minimum clearance is not less than 150 mm high, provided that the areas is not more than 2 metres from a point with conforming clearance (i.e. 400 mm high by 600 mm wide); and
- (b) areas at the eaves of accessible roof spaces, that are within the consultant's unobstructed line of sight and within arm's length from a point with conforming clearance (i.e. 600 mm high by 600 mm wide).

Client means the person or persons for whom the Timber Pest Detection Report was carried out or their Principal (i.e. the person or persons for whom the report was being obtained).

Timber Pest Detection Consultant means a person who meets the minimum skills requirement set out in the current Australian Standard AS 4349.3 Inspections of Buildings. Part 3: Timber Pest Inspection Reports or state/territory legislation requirements beyond this Standard, where possible.

Building and Site means the main building (or main buildings in the case of a building complex) and all timber structures (such as outbuildings, landscaping, retaining walls, fences, bridges, trees and stumps with a diameter greater than 100mm and timber embedded in soil) and the land within the property boundaries up to a distance of 30 metres from the main building(s).

Timber Pests means one or more of the following wood destroying agents which attack timber in service and affect its structural properties:

- (a) *Chemical Delignification* - the breakdown of timber through chemical action.
- (b) *Fungal Decay* - the microbiological degradation of timber caused by soft rot fungi and decay fungi, but does not include mould, which is a type of fungus that does not structurally damage wood.
- (c) *Wood Borers* - wood destroying insects belonging to the order 'Coleoptera' which commonly attack seasoned timber.
- (d) *Termites* - wood destroying insects belonging to the order 'Isoptera' which commonly attack seasoned timber.

Tests means additional attention to the visual examination was given to those accessible areas which the consultant's experience has shown to be particularly susceptible to attack by Timber Pests. Instrument testing of those areas and other visible accessible timbers/materials/areas showing evidence of attack was performed.

Instrument Testing means where appropriate the carrying out of Tests using the following techniques and instruments:

- (a) *electronic moisture detecting meter* - an instrument used for assessing the moisture content of building elements;
- (b) *stethoscope* - an instrument used to hear sounds made by termites within building elements;
- (c) *probing* - a technique where timber and other materials/areas are penetrated with a sharp instrument (e.g. bradawl or pocket knife), but does not include probing of decorative timbers or finishes, or the drilling of timber and trees; and
- (d) *sounding* - a technique where timber is tapped with a solid object.

A.2 ACCESSIBILITY

Unless specified in writing, the inspection only covered the Readily Accessible Areas of the Building and Site.

The inspection did not include areas which were inaccessible, not readily accessible or obstructed at the time of inspection. Areas which are not normally accessible were not inspected and include - but not limited to – inside walls, the interior of a flat roof or beneath a suspended floor filled with earth.

Building Interior:

The Consultant did not move or remove any ceilings, wall coverings, flooring, floor coverings (including carpeting), furnishing, equipment, appliances, pictures or other household goods. In an occupied property, furnishings or household items may be concealing evidence of timber pest attack which may only be revealed when the items are moved or removed.
NOTE. In the case of strata and company title properties or other Class 2 buildings or equivalent, if the inspection was limited to assessing the interior of a particular unit or lot, the Client may have additional liability for timber pest activity and damage in the common property. This additional liability can only be addressed through the undertaking of a special-purpose inspection report which is adequately specified.

Building Exterior, Roof Exterior and Site:

The Consultant did not move or remove any obstructions such as wall cladding, awnings, trellis, earth, plants, bushes, foliage, stored materials, debris or rubbish. Due to the 'secretive' nature of timber pests, it is possible that hidden damage may exist in concealed areas, e.g. wall framing. Damage may only be found when the obstruction is removed. In the case of buildings constructed on concrete slabs, if the edge of the slab or any weephole or vent at the base of external walls is concealed by pavements, gardens, lawns or landscaping then it is possible for termites to gain undetected entry into the building. The building of gardens or planting of shrubs close to the perimeter of the building can promote and conceal termite entry points. The storage of cellulose materials such as building materials and firewood in close proximity to the ground or building may encourage termite activity.

Roof Space:

Obstructions such as roofing, stored articles, thermal insulation, sarking and pipe/duct work may be concealing evidence of timber pest attack which may only be revealed when the obstructions are moved or removed. Also, bodily access should be provided to the interior of all accessible roof spaces. In accordance with Australian Standard As 4349 the minimum requirement is a 400 mm by 500 mm access manhole.

Subfloor Space:

Subfloor areas should be kept free from all vegetation (including tree stumps) and other cellulose material which may encourage timber pest activity. Also, storage of materials in subfloor areas is not recommended as it reduces ventilation and makes inspection difficult. Obstructions may be concealing evidence of timber pest attack which may only be revealed when the obstructions are moved or removed. Bodily access should be provided to all accessible subfloor areas with the minimum requirement being a 500mm x 400mm access manhole. In the case of suspended floors, if the clearance between the ground and structural components is less than 400 mm, then the ground should be excavated to provide the required clearance, subject to maintaining adequate drainage and support to footings. If the subfloor has been sprayed for subterranean termites or if the area is susceptible to mould growth, appropriate health precautions must be followed before entering the area. Also, special care should be taken not to disturb the treated soil. Always seek further advice from the Consultant.

A.3 TERMITES

General Description of Attack

Timber hollowed beneath; some cracking at the surface of timber; earthen channels present; or pale faecal spots present.

IMPORTANT NOTE. As a delay may exist between the time of an attack and the appearance of telltale signs associated with the attack, it is possible that termite activity and damage exists though not discernible at the time of inspection.

Treatment

After discovery of an active infestation, it is imperative that the species of termite is accurately identified before costly (and sometimes unnecessary or inappropriate) methods of treatment are initiated. Only economically important species which are known to attack timber structures should be treated.

In the case of economically important species, it is important that the termite workings are not further disturbed until the proposed method of control has been determined by a licensed pest control operator. Premature attempts to repair or replace infested timber may cause the termites to withdraw from the area temporarily, thereby hindering effective treatment. Any repair or replacement of infested timber should be carried out after the appropriate treatment has been completed.

Where evidence of active termites is detected within a building or within 20 metres of any building, it must always be assumed that the termites may also be active in areas of the property not inspected. Accordingly, where the termites are known to be of economic significance, a further (more invasive) inspection is strongly recommended of areas which were inaccessible, not readily accessible or obstructed at the time of inspection.

Termite Workings and Damage

Where evidence of damage to building timbers exists, competent advice (e.g. from a licensed or registered building contractor) should be obtained to determine the extent of any structural damage and as to the need or otherwise for rectification or repair work.

Where evidence of inactive termites is located within the building, it is possible that termites are still active in areas of the property not inspected and they may continue to cause damage. A further more invasive inspection is strongly recommended of areas which were inaccessible, not readily accessible or obstructed at the time of inspection.

Where evidence of an inactive termite infestation exists, it is not possible, without benefit of further investigation and inspections over a period of time, to ascertain whether any infestation is active or inactive. Continued, regular, inspections are essential.

Where evidence of termite attack exists to any trees or tree stumps a more conclusive search should be undertaken. This may require the tree or stump to be drilled to determine the existence of a termite nest. In addition, the soundness and stability of any standing trees identified as being affected by termite attack should be confirmed. Always seek further advice from the Consultant.

Previous Treatments

Where evidence of a possible termite treatment was located, the Client should obtain and keep on file all relevant documents pertaining to the extent of the treatment, any service warranties and advice in regard to the building owners obligation to maintain the treatment and/or barrier. If evidence of a previous treatment of termite infestation is noted, and appropriate documentation is not available, the Client must assume that the termite infestation may still be active in areas of the property not inspected. Accordingly, a re-treatment may be required. Always seek further advice from the Consultant.

Frequency of Future Inspections

Australian Standard AS 3660 recognises 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 minimised.

Inspections at intervals not exceeding twelve (12) months are recommended. Where the termite risk is high or the building type susceptible to termite attack, more frequent inspections (3-6 months) should be undertaken.

A.4 CHEMICAL DELIGNIFICATION

General Description of Attack

Surface of timber appears very hairy; and wood and 'hairs' separate.

Economic Significance

Chemical Delignification of wood in service is only rarely encountered and then only in certain areas. Small dimensional timber members such as roof tiling battens may collapse when the wood becomes defibrated. However, in large dimensional timber members such as rafters, bearers and joists, delignification takes many years to affect the strength of timber to the point of collapse.

Where evidence of Chemical Delignification exists, competent advice (e.g. from a licensed or registered building contractor) should be sought to determine the extent of any structural damage, and as to the need or otherwise for rectification or repair work.

A.5 FUNGAL DECAY

General Description of Attack

Decaying wood contains sufficient moisture to retain its original shape and may have sufficient strength to withstand normal loads. In contrast *decayed* wood is reduced both in moisture content and size as indicated by cracking either along or across the grain or fibres coming apart in a stringy manner. *Decayed* wood will have undergone considerable strength reduction.

Economic Significance

Fungal decay can cause at one extreme, structural failure of the affected timber, and at the other purely superficial surface damage. The most critical determination is that of which timber is affected and *decaying*, because decay will most likely spread (unless sources of moisture are quickly removed). Affected and *decayed* timber may warrant timber replacement, but the rot should not spread unless a new moisture source becomes available in that area.

Where evidence of *decayed* timber exists, competent advice (e.g. from a licensed or registered building contractor) should be sought to determine the extent of any structural damage, and as to the need or otherwise for rectification or repair work. It is important to correct any condition conducive to attack prior to replacing *decayed* wood.

Where evidence of *decaying* timber exists, competent advice (e.g. from a licensed or registered building contractor) should be sought to remove the condition(s) conducive to attack, and to determine the extent of any structural damage, and as to the need or otherwise for rectification or repair work.

Where the full extent of damage or the overall condition of the timber is *undetermined* a further inspection is strongly recommended by a competent person (e.g. from a licensed or registered building contractor). This may require monitoring of the timber over a period of time and include the assessment of conditions conducive to attack in different weather conditions (e.g. to determine the adequacy of existing drainage).

Management Program

Remove any conditions conducive to attack (e.g. lack of ventilation or the presence of excessive moisture). Regular inspections are recommended at intervals not exceeding 12 months. Always seek further advice from the Consultant.

A.6 WOOD BORERS

General Description of Attack

As the attack proceeds, borer larvae eat through the wood leaving a dust called 'frass'. Ejection of the frass occurs through the adult beetles' flight (exit) holes, and it is usually present beneath any timber that has been attacked. The presence of frass however, does not indicate whether the attack is active or not. Borer larvae cannot be sighted unless the susceptible timber is broken open.

IMPORTANT NOTE: As a delay may exist between the time of an attack and the appearance of telltale signs associated with the attack, it is possible that borer activity and damage exists though not discernible at the time of inspection.

Economic Significance

Evidence of borer activity is rarely cause for alarm, but rather for careful consideration of three main points, namely the identification of the particular borer responsible, whether the infestation is still active, and the extent of the damage. Full consideration should be given to each of these items before any action is taken.

The following wood borers cause damage most frequently encountered by building owners.

The Lyctid Borer

The most common lyctid borer in Australia is *Lyctus brunneus* (powder post beetle). Attack usually takes place during the first six to twelve months of the service life of timber. However, the powder post beetle is not considered a significant pest of timber and treatment of infestation is not usually required. As only the sapwood of certain hardwoods is destroyed, larger-dimensional timbers (such as rafters, bearers and joists) in a building 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 cause collapse. This may require the support or replacement of the affected battens. Competent advice (e.g. from a licenses or registered building contractor) should be sought to determine the extent of any structural damage, and as to the need or otherwise for rectification or repair work.

The Anobiid Borer

There are many different species of Anobiid borer, the most frequently encountered being *Anobium punctatum* (furniture beetle) and *Calymmaderus incisus* (Queensland pine beetle). Attack mainly occurs to softwoods especially pine timbers such as floorboards that have been in service for at least ten years. Should any structural timbers be attacked by Anobiid borers it is often difficult to determine what extent the borer damage has weakened such timbers and replacement is often the only way of ensuring safety from collapse.

In the case of **Anobiid borers**, once an attack is initiated it is unlikely to cease or die out of its own accord without some sort of eradication treatment. Therefore, unless proof of treatment is provided, evidence of an attack must always be considered active. Although a chemical treatment is an option, replacement of infested timbers with non-susceptible, or treated timber, is the most effective method of treatment. Before any option is considered, competent advice (e.g. from a licensed building contractor) should be sought to determine the extent of any structural damage, and as to the need or otherwise for rectification or repair work.

Other Borers

A further (more invasive) investigation is strongly recommended to determine whether infestation is still active and to positively identify the borer species responsible for the attack. Always seek further advice from the Consultant.

Management Program

Wherever practical, remove any conditions conducive to attack (e.g. Anobium borer thrive in badly ventilated subfloor areas). Regular inspections are recommended at intervals not exceeding 12 months. Always seek further advice from the Consultant.

A.7 CONDITIONS CONDUCTIVE TO TIMBER PEST ATTACK

Lack of Adequate Subfloor Ventilation

Inadequate ventilation provides a condition suitable for timber pest infestation. For example, subterranean termites thrive in damp humid conditions typical of those provided in a poorly ventilated subfloor space. Where evidence of a lack of adequate ventilation has been identified in the report, the Client should seek competent advice (e.g. from a licensed or registered building contractor) in regard to upgrading ventilation.

The Presence of Excessive Moisture

Ground levels around the building should be maintained in such a way to minimise water entering under the building. Also the ground surface in subfloor areas should be kept graded to ensure that moisture does not pond or accumulate in any area. Where necessary, sub-surface drains should be installed and maintained to assist with drainage around and under the building. Likewise, the presence of excessive moisture can often be directly related to ventilation limitations and the resultant high humidity.

Also, plumbing oversights and defects such as a leaking drain or tap will provide a microclimate conducive to timber pest attack.

Where necessary, the Client should seek competent advice (e.g. from a licensed or registered plumbing contractor) to determine the adequacy of existing drainage and remove any conditions conducive to the presence of excessive moisture.

The building may need to be monitored over a period of time to detect or confirm a damp problem. The presence of dampness (including moisture) is not always consistent as the prevailing and recent weather conditions at the time an inspection is carried out may affect the detection of damp problems. Importantly, precipitation at or near the time of inspection does not necessarily

guarantee that a damp problem will automatically be evident due to such circumstances as prevailing wind conditions or intensity of rainfall. The absence of any dampness at the time of inspection does not necessarily mean the building will not experience some damp problems in other weather conditions. Likewise whether or not services have been used for some time prior to an inspection being carried out will affect the detection of dampness.

Bridging or Breaching of Termite Barriers and Inspection Zones

Physical and/or chemical barrier systems are installed to impede concealed subterranean termite entry into buildings. However, termites may easily enter the building if the barrier is bridged or breached.

With a concrete slab building it is essential that the edge of the slab be permanently exposed. An inspection zone of at least 75 mm should be maintained so that termites are forced into the open where they can be detected more readily during regular inspections. In the case of physical sheet material barriers, a minimum inspection zone of 75 mm should be maintained from the sheet material to the finished ground. Importantly, the edge of the slab or sheet material should not be rendered, tiled, clad or concealed by flashings, adjoining structures, paving, soil, turf or landscaping.

Where perimeter termite barriers have been installed, the building owner should ensure that the integrity of the barrier remains intact and that the inspection of possible termite entry points is not impaired. This is especially important where an exposed slab edge is used as an inspection zone around the building (if the edge of the slab or any weepholes at the base of external walls are concealed by pavements, gardens, lawns or landscaping then it is possible for termites to gain undetected entry).

Also, bridging often occurs when items such as attachments to buildings allow termites to gain access to the building over or around a termite barrier. Where attachments to buildings such as steps are not provided with a termite barrier or cannot be easily inspected, they should be separated by a clear gap of at least 25 mm from the main structure. Where it is not possible to separate attachments from the main building, regular inspections of these areas should be undertaken.

In addition, termite barriers are often breached by the installation of services. Any disturbance of the barrier should be promptly repaired.

Where evidence of bridging or breaching exists, to minimise risk of infestation seek further advice from the Consultant.

Untreated or Non-Durable Timber Used in a Hazardous Environment

To reduce the risk of timber pest attack, it is essential that timber used in a hazardous environment (e.g. in direct contact with the ground or damp masonry) is of sufficient durability and/or is adequately preservative treated. Where evidence of this condition exists, the Client should seek competent advice (e.g. from a licensed or registered building contractor) in regard to the need or otherwise for rectification or repair work.

Other Conditions Conducive to Timber Pest Attack

If the cause or solution to a problem is not obvious, the Client should seek competent advice (e.g. from a licensed or registered building contractor) in regard to removing any conducive condition.

A.8 RISK MANAGEMENT OPTIONS

To help protect against financial loss, it is essential that the building owner immediately control or rectify any evidence of destructive timber pest activity or damage identified in this inspection report. The Client should further investigate any high risk area where access was not gained. It is strongly advised that appropriate steps be taken to remove, rectify or monitor any evidence of conditions conducive to timber pest attack.

To help minimise the risk of any future loss, the Client should consider whether the following options to further protect their investment against timber pest infestation are appropriate for their circumstances:

Undertake thorough regular inspections at intervals not exceeding twelve months or more frequent inspections where the risk of timber pest attack is high or the building type is susceptible to attack. To further reduce the risk of subterranean termite attack implement a management program in accordance with Australian Standard AS 3660. This may include the installation of a monitoring and/or baiting system, or chemical and/or physical barrier. However, AS 3660 stresses that subterranean termites can bridge or breach barrier systems and inspection zones and that thorough regular inspections of the building are necessary.

If the Client has any queries or concerns regarding this Report, or the Client requires further information on a risk management program, please do not hesitate to contact the person who carried out this Report.