



Structural report related to concrete slab movement.

Inspection Date: 10 Mar 2021

Property Address: Werribee Area, Victoria.



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If you have any queries with this report or require further information, please do not hesitate to contact the person who carried out the inspection.

Inspection Details

Property Address: Werribee Area, Victoria.

Date: 10 Mar 2021

Client

Name: Private

Email Address: Private

Phone Number: Private

Consultant

Name: Les Camilleri

Email Address: les@masterpropertyinspections.com.au

Licence / Registration Number: A25361

Company Name: Master Property Inspections

Company Address: Essendon Victoria 3040

Company Phone Number: 03 93373884

General description of property

Building Type: Detached house

Storeys: Single storey

Smoke detectors: Not Applicable
IMPORTANT NOTE - The adequacy and testing of smoke detectors is outside the scope of this standard inspection and report. Accordingly, it is strongly recommended that a further inspection be undertaken by a suitably qualified person.

Siting of the building: Not Applicable

Gradient: Not Applicable

Site drainage: Inadequately drained in some areas

Access: Not Applicable

Occupancy status: Occupied

Furnished: Fully furnished

Strata or company title properties: No

Orientation of the property: The facade of the building faces south
Note. For the purpose of this report the façade of the building contains the main entrance door.

Weather conditions: Dry

Primary method of construction

Main building – floor construction: Slab on ground

Main building – wall construction: Timber framed, Brick veneer

Main building – roof construction: Timber framed, Pitched roof, Finished with roofing tiles

Other timber building elements: Not Applicable

Other building elements: Garage

Overall standard of construction: Above average for the age of the building.

Overall quality of workmanship and materials: Acceptable

Level of maintenance: Reasonably maintained

Special conditions or instructions

Special requirements, requests or instructions given by the client or the client's representative -

There are no special conditions or instructions

Inspection Agreement

AS 4349.1 - 2007 requires that an inspection agreement be entered into between the inspector & the client prior to the conduct of the inspection. This agreement sets out specific limitations on the scope of the inspection and on limits that apply in carrying it out. Where specific State or Territory requirements apply in addition to the scope of work in this agreement, or where the inspector and client agree to additional matters being covered, that additional scope is listed at the end of this agreement. It is assumed that the existing use of the building will continue.

AS 4349.1 - 2007 requires that the basis for comparison is a building of similar age and similar type to the subject building and which is in reasonable condition, having been adequately maintained over the life of the building. This means that building being inspected may not comply with Australian Standards, building regulations or specific state or territory requirements applicable at the time of the inspection.

Inspection agreement supplied: No

Terminology

The definitions below apply to the types of defects associated with individual items / parts or inspection areas -

Damage	The building material or item has deteriorated or is not fit for its designed purpose
Distortion, warping, twisting	The item has moved out of shape or moved from its position
Water penetration, Dampness	Moisture has gained access to unplanned and / or unacceptable areas
Material Deterioration	The item is subject to one or more of the following defects; rusting, rotting, corrosion, decay
Operational	The item or part does not function as expected
Installation	The installation of an item is unacceptable, has failed or is absent

Scope of inspection

This is a visual Building Inspection Report carried out in accordance with AS4349.1 -2007. The purpose of this inspection is to provide advice to the Client regarding the condition of the Building & Site at the time of inspection. The report covers only safety hazards, major defects, and a general impression regarding the extent of minor defects. The building was compared with a building that was constructed in accordance with the generally accepted practice at the time of construction and which has been maintained such that there has been no significant loss of strength and serviceability.

Accessibility

Areas Inspected

The inspection covered the Readily Accessible Areas of the property.

- Building interior
- Building exterior

Areas not inspected

The inspection did not include areas, which were inaccessible, not readily accessible or obstructed at the time of inspection. The Consultant did not move or remove any obstructions which may be concealing evidence of defects. Areas, which are not normally accessible, were not inspected. Evidence of defects in obstructed or concealed areas may only be revealed when the items are moved or removed or access has been provided.

Obstructions and Limitations

The following obstructions may conceal defects:

- Wardrobes
- as general clothing
- boxing or similar
- obscured inspection to these areas
- Cupboard areas
- such as sink areas
- bathroom cupboards and similar
- Ceiling cavity inspection was obstructed by approximately 50% due to obstructions like insulation
- ducting and poor clearance or access restrictions.
- Not Applicable

Obstructions increase the risk of undetected defects, please see the overall risk rating for undetected defects.

Inaccessible Areas

The following areas were inaccessible:

- Not Applicable

Any areas which are inaccessible at the time of inspection present a high risk for undetected building defects. The client is strongly advised to make arrangements to access inaccessible areas urgently.

Undetected defect risk assessment

Due to the level of accessibility for inspection including the presence of obstructions, the overall degree of risk of

undetected structural damage and conditions conducive to structural damage was considered:

MODERATE

A further inspection is strongly recommended of those areas that were not readily accessible and of inaccessible or obstructed areas once access has been provided or the obstruction removed. This will involve a separate visit to the site, permission from the owner of the property and additional cost.

Unless stated otherwise, any recommendation or advice given in this Report should be implemented as a matter of urgency.

Summary

SUMMARY INFORMATION: The summary below is used to give a brief overview of observations made in each inspection area. The items listed in the summary are noted in detail under the applicable sub headings within the body of the report. The summary is NEVER to be relied upon as a comprehensive report and the client MUST read the entire report and not rely solely on 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. (See definitions & information below the summary to help understand the report)

Evidence of Safety Hazard

Not Found

Evidence of Major Defect

Found

Evidence of Minor Defect

Not Found

Additional specialist inspections

It is Strongly Recommended that the following Inspections and Reports be obtained prior to any decision to purchase the Property and/or before settlement. Obtaining these reports will better equip the purchaser to make an informed decision.

- As identified in the summary and the defect statements in this report.

Significant Items

The following items and matters were reported on in accordance with the Scope of Inspection. For building elements not identified in this Condition Report, monitoring and normal maintenance must be carried out.

Safety Hazard

No evidence was found

Major Defect

Major Defect 2.01

Location: Concrete Slab & Building

Finding:  Concrete Slab - Uneven Levels, Subsidence &  Concrete - Slab Heave & Foundation Subsidence

 LIQUID DIGITAL ELECTRONIC FLOOR LEVELLING ASSESSMENT.

NOTE :

THE PHOTOS WITH THE BLUE ARROWS INDICATE THE REFERENCE POINTS, WHICH DETERMINES IN MILLIMETRES IF THE OTHER LOCATIONS WITH RED ARROWS ARE HIGHER OR LOWER THEN THE REFERANCE POINT WITH THE BLUE ARROWS. THERE SHOULD NOT BE MORE THEN 10mm DIFFERENCE IN HEIGHT IN ANY ONE ROOM OR NOT MORE THEN 20mm ACROSS THE ENTIRE HOME AS PER Australian Standard® Inspection of buildings, Part 1: Pre-purchase inspections— Residential buildings AS4349.1-2007.

THIS PROPERTY INDICATES THAT THE FLOORING IS OUT OF LEVEL AS PER THE AUSTRALIAN STANDARDS - Australian Standard® Inspection of buildings, Part 1: Pre-purchase inspections— Residential buildings AS4349.1-2007.

The internal flooring (concrete slab) is out of level and uneven.

It appears that the subfloor structure (concrete slab) has been affected by movement of the foundations, often referred to as sinking or subsidence, now a degree of movement is expected in subfloors over time, but generally not with concrete slabs of a home and not to this degree, where the brickwork in areas, the floors and the walls are all consistent with signs of serious movement.

General subsidence is usually initiated by changes in soil moisture content clauses by various reasons. The most critical factor is identifying the specific causes, and identifying if this is a recurring or ongoing problem, or one that has been resolved by previous works in the past.

This significant type of movement in a concrete slab that shifts the floors, walls and brickwork may be caused by an under engineered concrete slab, soil moisture changes, broken water pipes and others forms of causes.

Subsidence can have complex and varying causes, which will influence the required remedial works. It is advised to begin by consulting a structural engineer , geotechnical engineer to determine the required scope of works. This generally includes some form of underpinning, in part or full, that is if the concrete slab can be repaired and/or even saved ??

A geotechnical engineer will be necessary where changes to soil moisture content is apparent caused by large trees or tree may be in the area or inadequate drainage, fall of the land, damaged plumbing above ground or below ground.

I HIGHLY RECOMMEND URGENT ATTENTION to this matter and engaging a structural and geotechnical engineer would be the first step to the process. In addition engaging a qualified plumber and a registered builder to assist in determining the cause and/or the source is imperative

Addition Information Below :

Footings and foundations aren't necessarily the first aspects of a house that you think will have issues. It's usually, the more cosmetic areas that are obvious such as wear and tear inside the property.

But when it comes to potential problems with a house, they don't get much worse than sinking foundations, especially if not identified quickly or treated correctly.

Foundation subsidence problems are created by weak ground that cannot support the weight of structures or floors above it. This is when they start to subside and cause major property hazards.

What does foundation subsidence mean?

Subsidence, which is the gradual downward movement or sinking of an area of land results in

What does foundation subsidence mean?

Subsidence, which is the gradual downward movement or sinking of an area of land results in your home moving, sinking in one area, or across the entire foundation footprint. Sinking floors, cracks in walls, paths and driveways and jammed or loose windows & doors can all be the first signs of foundation subsidence.

What are the likely causes of structural subsidence?

Some homes are at a greater risk than others when it comes to ground sinking. There are also many geological, man-made and seasonal impacts that can make your home more likely to need foundation repair methods.

Some include:

- * Clay soil can shrink, crack and shift during hot weather, and then expand during wetter seasons.
- * After a drought, sandy or fine gravel soil is much drier, causing it to move which can impact building footings
- * Trees and shrub roots can also be a factor, particularly if they're close to property foundations.
- * Leaking drains and water mains can wash away or soften soil, causing it to compact under foundation weight.
- * Flood water causing the ground to saturate house foundations and in turn cause ground movement.
- * Older properties may have shallower footings or foundations.

It is unknown if the ground has stabilised and slab heave and/or foundation subsidence has stopped, slowed down and/or is continuing as an ongoing concern.

AND

Concrete - Slab Heave & Foundation Subsidence

Slab heave is uneven movement of a house footing and slab.

Slab heave causes damage to internal walls and ceilings. It can cause cracks in floor tiles.

"Doming slab heave" is when the slab is higher in the middle than around the edge.

"Dishing slab heave" is when the edges are higher than the middle of the slab.

Slab Heave Is:

- * Uneven movement: Different parts of the house moving up and down; caused by
- * Uneven changes in ground moisture: The amount of water in the soil; resulting in
- * Swelling of Reactive clays: Clay soils swell (or increase in volume) when they become wet (or absorb moisture) and shrink when they dry out.

What Causes Slab Heave

Slab heave is caused by clay soils expanding when they absorb moisture. The source of moisture can be rainwater, broken sewer pipes, ground water, poor surface drainage and garden irrigation.

The amount of water in the ground is often uneven and so the movement in the house is uneven.

Slab heave can also be caused by the ground drying out. Causes of the ground drying out include tree roots, long dry seasons, terminating irrigation and uneven shading of the ground.

Slab Heave Affects Houses


Think about the day or week or month that your house was built.

Right up to the minute your concrete slab was poured, the ground moisture conditions in your allotment were pretty much consistent.

Now consider what happens when a concrete house slab is poured on your allotment. The slab covers some of the ground and stops it from getting wetter or drier. Around the edge of the slab the ground still gets wet and dry.

This variation in soil moisture under a house is what causes slab heave. If you could somehow keep all the ground wet or all the ground dry you could minimise the effects of slab heave.

It is unknown if the ground has stabilised and slab heave and/or foundation subsidence has stopped, slowed down and/or is continuing as an ongoing concern.

 The subsidence/sinking of the property has been detailed in this report and there are various reasons for subsidence/sinking.

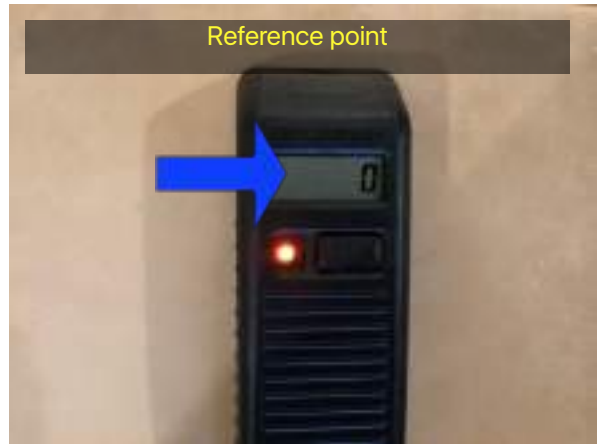
◆ The subsidence/sinking of the property has been detailed in this report and there are various reasons for subsidence/sinking.

In addition to the detailed information in this report, another suggestion may be to perform further invasive inspections on the underground stormwater/sewage/drain pipes, as the possibility of excessive water/moisture in the ground maybe due to damaged underground stormwater/sewage/drain pipes.

We highly recommend engaging, perhaps a plumber, or other professional type companies who inspect underground plumbing/drains, who have the camera/video systems to inspect all the underground stormwater/sewage/drain pipes.

Once the stormwater/sewage/drain pipe invasive inspection has been performed, the next step would be to engage A geotechnical engineer and/or a structural engineer to make their further assessments, however it would be the preferred order that all the camera detection be completed to the underground pipes first.

The geotechnical engineer and structural engineer will then make further assessments and determine the scope and procedure of works that will be required.











Major Defect 2.02

Location: Brickwork
 Finding: Brickwork - Major / Structural Movement.

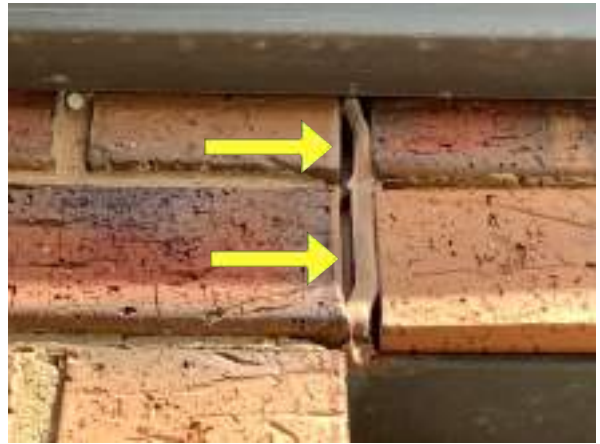
There are areas of noticeable major cracks to the property. These cracks usually coincide with openings (windows and doors) however they can present in other areas also. Cracks of this type are likely to have been caused by minor expected movement of building elements, but may also have a structural cause that is more significant.

Structural issues are generally the underlying cause of such cracking. It is suspected that this damage has been created due to movement of key structural elements or general subsidence of associated footings.

A structural engineer and bricklayer should be appointed immediately to inspect the structural integrity of the affected brickwork and to assess the safety of the associated structures. The engineer can also nominate a scope of works required for rectification. I believe that the building warrants a structural engineer to determine the structural integrity of the foundations.

Major cracking is evident to the brickwork in this area. When managing this degree of cracking, major extensive repair work is generally required. Such work is likely to involve replacement of sections of affected brickwork.

Always contact a building inspector or engineer should cracks widen lengthen or become more numerous, even after repair works have been completed.



Major Defect 2.03

Location: Various Plaster Cracking

Finding: Various Plaster Cracking - Related To Concrete Slab Movement

Extensive repair work is generally required when managing cracking of this degree. This may involve breaking out and replacing wall sections, especially over doors and windows. Doorframes and window frames are often distorted, causing windows and doors to jam and stick. The property may already be affected by leaning or bulging walls, and loss of some load bearing in the beams. This may also result if the source of the cracking is unmanaged. Service pipes may already be disrupted or could become disrupted in the future.

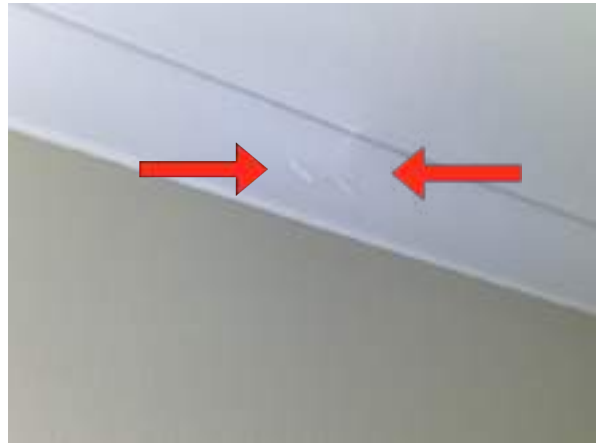
The cause and effect of cracking of this degree is almost always structural and related to movement of key structural elements and in this particular case, as per the concrete slab levels, it has been proven that there is severe slab movement as detailed in this report

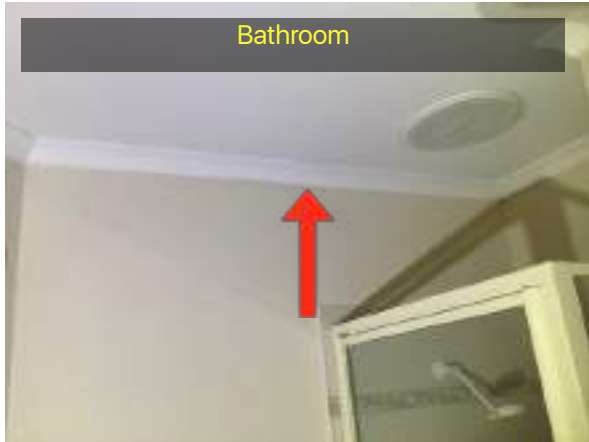
A structural engineer and geotechnical engineer should be appointed immediately to inspect the structural integrity of the affected areas and to assess the safety of the associated structures.

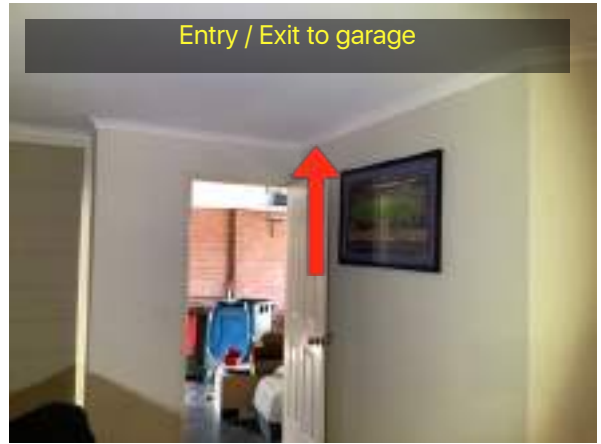
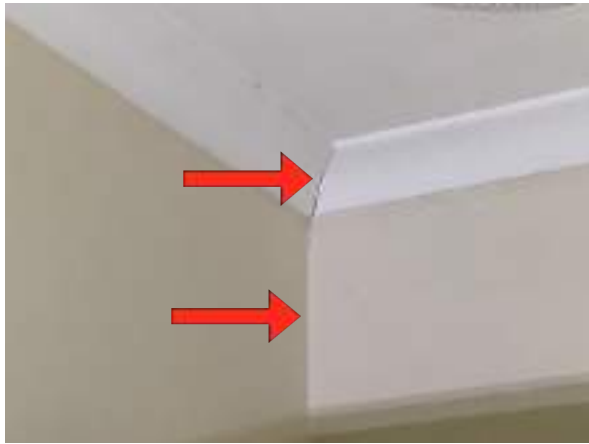
The engineer can also nominate a scope of works required for rectification.

Always contact a building inspector or engineer should cracks widen, lengthen or become more numerous, even after reparation works.









Minor Defect

No evidence was found

Additional comments

There are no additional comments

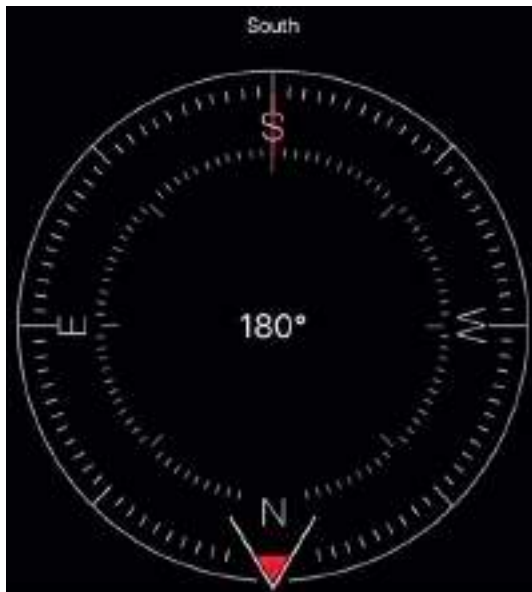
Observation

Observation 4.01

Location: For Your Information

Finding: General Site Photos

General site photos and other areas of interest are provided for your general reference.



Observation 4.02

Location: Plumbing To Be Investigated
 Finding: RECOMMEND FURTHER UNDERGROUND INSPECTIONS
 Recommend further stormwater/sewage/drain pipe invasive inspection

The subsidence/sinking of the property has been detailed in this report and there are various reasons for subsidence/sinking.

In addition to the detailed information in this report, another suggestion may be to perform further invasive inspections on the underground stormwater/sewage/drain pipes, as the possibility of excessive water/moisture in the ground maybe due to damaged underground stormwater/sewage/drain pipes.

We highly recommend engaging, perhaps a plumber, or other professional type companies who inspect underground plumbing/drains, who have the camera/video systems to inspect all the underground stormwater/sewage/drain pipes.

Once the stormwater/sewage/drain pipe invasive inspection has been performed, the next step would be to engage A geotechnical engineer and/or a structural engineer to make their further assessments, however it would be the preferred order that all the camera detection be completed to the underground pipes first.

The geotechnical engineer and structural engineer will then make further assessments and determine the scope and procedure of works that will be required.



Observation 4.03

Location: Garage

Finding: Concrete - Efflorescence

Efflorescence appears to be affecting the in this area. Efflorescence typically occurs when excess salts within the concrete is leached to the surface due to water transfer. It is typically seen as white salt deposits on the surfaces of concrete pavement. While detracting from the overall appearance of the affected area, efflorescence is not likely to develop into secondary damage if left unmanaged. Generally, soluble salt deposits can be removed by dry brushing with a stiff-bristled brush. Repeated dry brushing is an ideal treatment for eliminating this forming of efflorescence.

A cleaning contractor or general handy person may be appointed to perform these works at the discretion of the client.





Observation 4.04

Location: Concrete Perimeter To Building

Finding: Concrete Movement - Separating From Building.

It has been found that the concrete around the perimeter of the building has separated from the brickwork approximately 20 to 40 mm in various areas.

It just appears that the concrete has moved over time due to subsidence and /or shrinkage of the soil from the dry periods and perhaps even excessive moisture in the ground.

It appears that the concrete has settled as the vendors told me that it has been like this since she's been in the house.

It is not recommended to fill the gap with a solid type material such as concrete or another product of the same type of nature, it is important to allow the concrete to expand and contract when it needs to so the right type of filler would be an expansion type foam and a suitable type UV rated sealant.

It is highly recommended that you engage in a professional contractor that understands this process such as a professional caulker or a registered builder.







Observation 4.05

Location: Roof Areas & Stormwater

Finding: Stormwater drain - Not connected , Partially connected and/or Damaged.

It would appear that this is further evidence of the building and soil movement of the property as the underground storm water has pulled away from the downpipes and this intern is creating or has the potential to create further damage

The roof plumbing is NOT adequately connected to stormwater drainage on the site. This disconnection negatively impacts the functional capacity of the roof plumbing.

Where roof plumbing doesn't drain adequately, the area at the base perimeter can become excessively damp, potentially creating an environment that is susceptible to rust and corrosion of surrounding building elements, as well as attracting termites and other pests.

This has the potential for foundation subsidence and/or secondary damages such as structural defects such as brick movement / cracking.

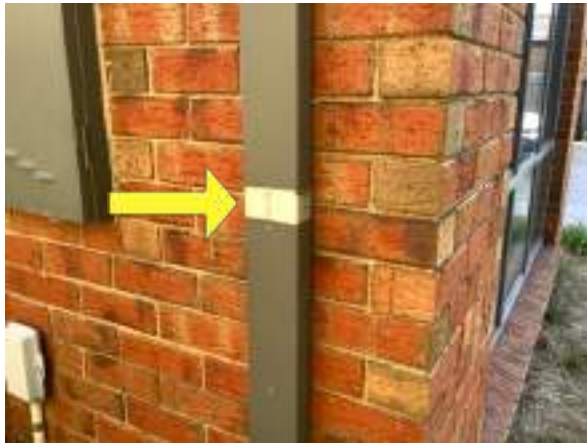
It is highly recommended that a plumber be appointed to further inspect the area and to install / repair adequate drainage equipment where necessary.

If secondary damages have accrued we highly recommend that you engage a structural engineer and/or a registered builder for remedial works.

ALL AREAS should be checked carefully for this defect and attached are a few PHOTO EXAMPLES as a GUIDE.







Observation 4.06

Location: Garage

Finding: Brickwork / Masonary - Step cracking and minor cracking

There are several cracks and/or step cracking evident throughout the exterior of the property . These cracks are commonly less than 5mm in width.

Although fine cracks are quite noticeable, they are often only considered to be an appearance defect and usually do not indicate any structural damage most of the time.

Generally, the cause of a fine crack is indicative of a separation between brickwork and mortar throughout the structure, but single bricks may also show cracks of this nature.

Step cracking, which is similar to other forms of cracking, has a variety of possible causes. However, the most common is the subsidence of adjacent footings.

Step cracking is a relatively common defect, and is most likely to occur adjacent to windows, doors and other openings. Mortar failure in the gaps between affected bricks indicates the stresses and tensions affecting the wall.

Cracking of this nature can generally be repaired with minor filling and should be conducted by a qualified bricklayer and/or registered builder.

Where step cracking is extensive or severe, the client is advised to consult a structural engineer. Minor step cracking can be used as a warning sign to address factors causing stress to the wall, which can include the effect of surrounding trees, water leaks, soil erosion, or even the presence of reactive soils in the surrounding area.

Always contact a building inspector should cracks widen lengthen or become more numerous.

ALL AREAS should be checked carefully for this defect and attached are a few PHOTO EXAMPLES as a GUIDE.



Observation 4.07

Location: Perimeter Of Building - Exterior
 Finding: HWS Overflow - Not Connected

The Hot Water System (HWS) overflow was found to be disconnected from storm water draining and is creating excessive moisture in the surrounding area.

These damp conditions can lead to secondary defects such as rot, rust or corrosion of associated building elements, the formation of fungal decay, or even the creation of potential slip hazards. When coupled with poor site drainage, pooling of water may also attract termite activity to this area.

It is highly recommended that a licensed plumber be appointed to connect the HWS overflow in order to prevent such an environment from being created. These minor works should be carried out as soon as possible.





Technical Solution Sheet 6.09 6: Hot Water Plumbing

Temperature Pressure Relief (TPR) Valve Drain Lines

NOTE: The aim of the technical solution is to clarify some of the requirements relating to the installation of drain lines from Temperature Pressure Relief (TPR) valves. Substandard installation of drain lines to common fault and potential safety hazards can therefore add to the cost of installation requirements.

NOTE: This technical solution should be used in conjunction with the TPR valve, governing and control and related power controls and other technical solutions.

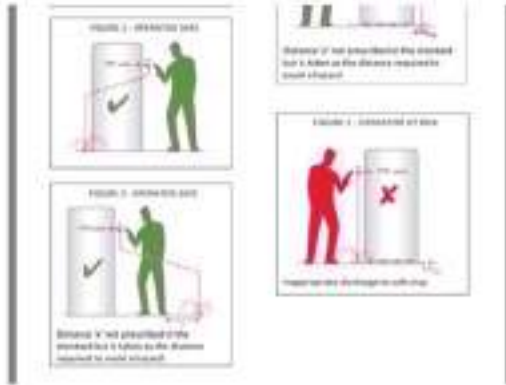
PLUMBING REGULATIONS 2001

2. Length
a. Must comply with Table 1.

3. Open
If these heights cannot be met, a device must be provided in a position where the height can be met.

4. Test
a. Must be continuously tested by automatic vent.

Maximum height above ground	Maximum number of bends (45°)
1m	2
2m	3
3m	4



Observation 4.08

Location: Perimeter Of Building - Exterior

Finding: Water Leaking & Water Ingress - External Areas

Water leaks were found to be present to the exterior sides, tops and or bottoms of the windows and/or doors and other areas as per the photos attached, such as brick expansion joints and timber and cement sheet junctions above windows , eaves and other areas.

Leaks are generally caused by deterioration of silicon or rubber seals or sometimes just defective workmanship when no caulking as ever been used .

With gaps like these that can be only a few millimeters to be exposed to weather conditions, can cause wood rott internally to the walls create a conducive environment for termites or possibly cause secondary defects the have the potential for structural damage the can be seen or in the walls internally.

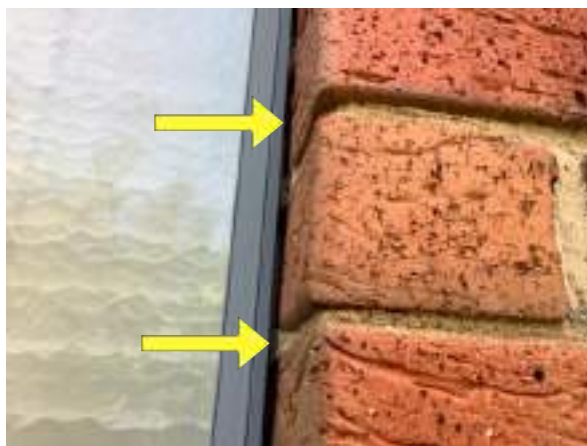
Such leaking creates damp conditions in the affected area, causing potential for water pooling and subsequent water damage if left unattended. These conditions may also attract termite attack as already mentioned above, particularly if the area is subject to minimal levels of sun throughout daylight hours.

It is highly advised that a licensed plumber, handyman, builder be appointed to rectify any water leaks that may be present.

These type of areas require a suitable long lasting exterior silicon or caulking to all areas that are exposed.

It is important to note once caulking these areas if water damage is noticeable to windows, timbers, etc, such as wood rott, it is imperative to engage the appropriate trades for replacement or repairs.

ALL AREAS should be checked carefully for this defect and attached are a few PHOTO EXAMPLES as a GUIDE.



Observation 4.09

Location: Ensuite

Finding: Water Rott / Water Staining - Timber Skirting & Door Frames

Water Rott / Water Staining was evident in this area or areas at the time of inspection.

Water staining indicates that surfaces have been exposed to excessive moisture / water over time. The minerals and other elements in the water lead to staining, which may graduate to corrosion and deterioration if left unmanaged.

It would appear that water has come particularly from the shower area, generally from damaged silicon, damaged shower screens and /or defective designs.

Sometimes water just comes from carelessness, meaning that people may just walk out of the shower and allow water to run all over the floor area.

Sometimes it may be a combination of defective items. Particularly silicon should be repaired as soon as possible to stop or reduce further water damage to the building materials, particularly if the floors are timber or the tiles are damaged allowing water to ingress into the floor areas through the damaged tiles and/or tile grout.

Water staining or water rot can be indicative of more serious defects, such as plaster damage that has become detached from its fixings and become dangerous not just cosmetic, wood rot, mould, conducive environment for termites and damage to other types of building materials that are concealed or not concealed by other building elements.

Water staining can cause minor damages such as paint staining, timber discolouration, etc or water staining can lead to more serious major structural defects.

It is important to identify the cause of water staining and STOP FURTHER DETERIORATION by the appropriate tradesperson.

Replacement of any broken or damaged structures is advised in particular if the damage has caused secondary defects that have compromised the building structure.

It is important to identify the correct professional to perform these works, pending on each situation on how minor or major the damage has become.





Observation 4.10

Location: Doors - All Areas

Finding: Door - Binding / Jamming / Out Of Level

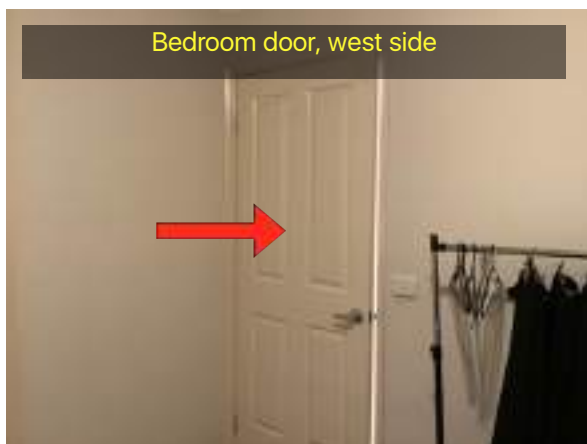
Binding, Jamming and/or Out Of Level Doors is evident during standard operation.

This defect inhibits the functionality of the affected door as well as creating potential for secondary defects to associated building elements, such as damage to the floor covering.

A door that binds to flooring or to the associated door frame may have several causes, ranging from minor defects, such as poor installation of the door or deteriorated hinges, through to major structural issues, such as damage and/or subsidence (sinking) to subfloor structures or concrete slabs.

Where door binding/jamming/out of level appears to indicate major structural issues, a registered builder specialising in re-stumping, a re-stumping company or concrete slab subsidence expert should be appointed to provide an estimate on the cost of rectification. In extreme cases a structural engineer or geotechnical engineer will need to be engaged as well.

For minor causes, a qualified carpenter or general handyperson should be appointed to perform minor rectification works at the clients discretion.



Observation 4.11

Location: Plaster-Various Area's
Finding: Plaster & Timber Cracking - Damage Category 2 - Noticeable (up to 5mm)

Whilst we may have a photo of damaged paint, or a minor plaster cracking, etc, there may be many more paint/plaster defects and plaster cracking in other areas throughout the property.

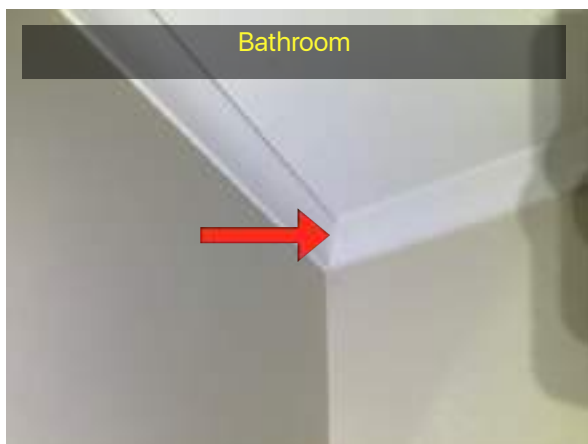
Noticeable cracks are a common occurrence as a result of many primary defects. Such causes may include age, general wear and tear, expected building movement, general expansion/contraction of building materials in different weather conditions, and/or minor failings in the installation or application of building materials.

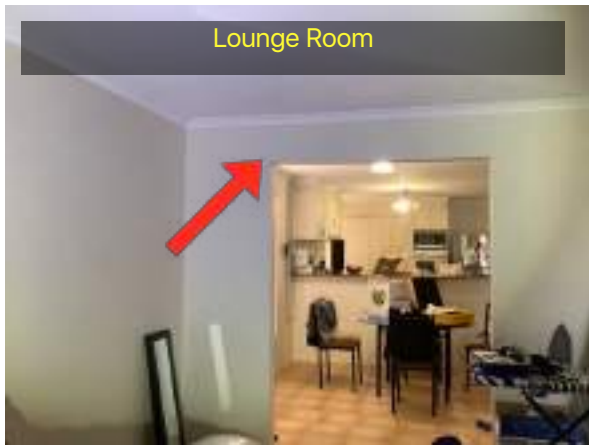
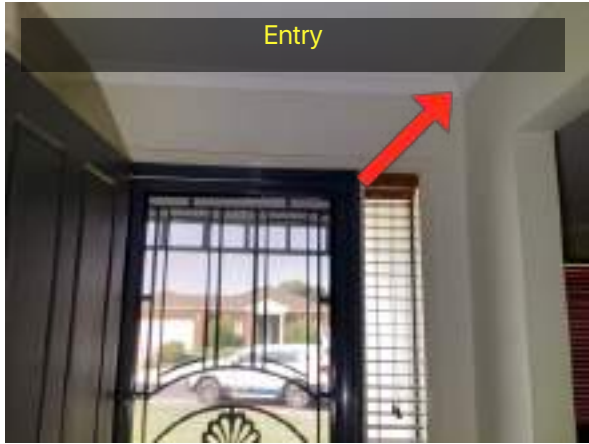
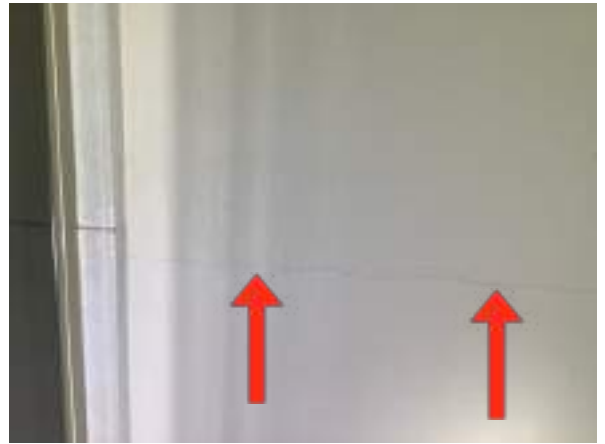
Noticeable cracks may result in minor sticking or jamming of associated doors and windows, which require easement. However, noticeable cracks are easily filled and repaired. A plasterer can be consulted to install an expansion joint at this point to allow for this movement during different weather conditions.

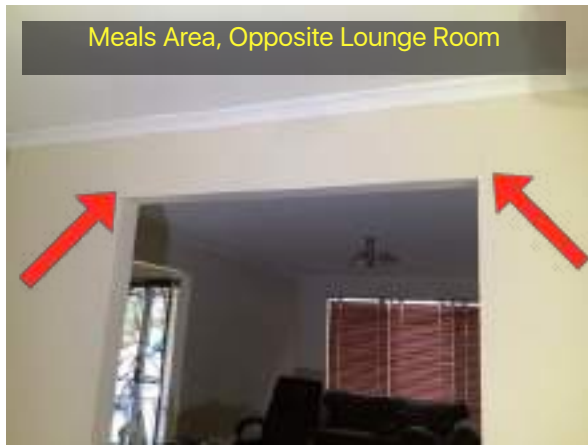
Monitoring of all cracking should be conducted frequently. Always contact a building inspector should cracks widen, lengthen, or become more numerous. Additionally, your building inspector should also be contacted if associated building elements such as doors and windows become more difficult to operate over time.

Relevant tradespeople, such as carpenters, painters and plasterers, should be appointed to perform remedial works, as deemed necessary.

ALL AREAS should be checked carefully for this defect and attached are a few PHOTO EXAMPLES as a GUIDE.







Observation 4.12

Location: The Site
Finding: Obstructions and Limitations

These photographs are an indication of the obstructions and limitations which impeded full inspection of the property at the time of inspection. These obstructions can hide an array of defects such as minor defects , major defects , safety hazards , termite activity and conducive environments for termites but not limited to.

Whilst we have taken many photos of the home and surroundings of the obstructions and limitations, there may be some areas not photographed for reasons of difficulty and/or hard to reach areas.

These photos in the report are for you to understand the type of obstructions and limitations on site, that restricted our inspection process.

Once the property is emptied, a re-inspection is at the client's discretion.





Observation 4.13

Location: Perimeter Of Building - Exterior
 Finding: Drainage - Inadequate and/or Perimeter Building Ground Fall Defective.

Water pooling near foundations and footings is a serious concern with the potential to adversely impact on the longevity of the dwelling. The Building Code of Australia (BCA) outlines that the soil or concrete must be graded away from the dwelling at a minimum of 50mm over 1m (1:50 fall).

The site drainage in this report was found to be inadequate at the time of inspection, creating potential for subsequent water damage to associated building elements, such as foundation subsidence, brickwork cracking, windows and doors moving, concrete paths cracking, etc.

It is important that water does not lie against the base of walls; surrounding paths and ground levels should be sloped to drain water away from walls of the building. Downpipes should not discharge stormwater onto lower walls or plinths. Stormwater should be carried away by large, regularly cleaned drains.

Ground levels may need to be lowered, re-levelled and/or falls in various directions with drains installed, which can be achieved with concrete or ground soils, etc.

Where site drainage is inadequate, another option can be installation of an Agricultural (Aggie) Drain may be required or more serious remedial works.

These drainage concerns in this report can have grave potential for foundation subsidence and/or secondary damages such as structural defects such as brick movement / cracking as already mentioned above.

It is highly recommended that a plumber and/or builder and then pending on the outcome, other forms of professionals be appointed to further inspect the area and to install / repair adequate drainage equipment where necessary. If secondary damages have ALREADY accrued we highly recommend that you engage a structural engineer, geotechnical engineer to start with then engage a registered builder, qualified plumber to further inspect the property and perform any remedial works as necessary. Note, this is only if there is any building damages that have occurred.

ALL AREAS should be checked carefully for drainage concerns and attached are a few PHOTO EXAMPLES as a GUIDE.

INFORMATION BELOW AS A GUIDE.

Surface water drainage

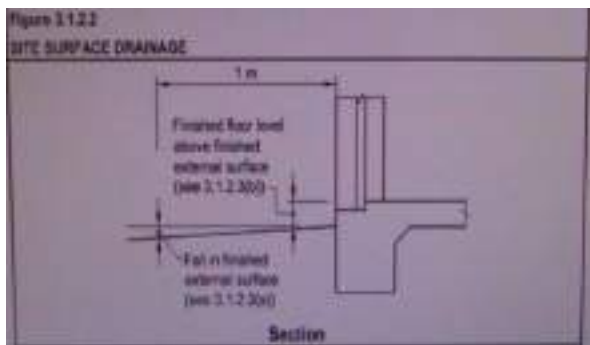
Surface water must be diverted away from Class 1 buildings as follows:

- (a) Slab-on-ground — finished ground level adjacent to buildings: the external finished surface surrounding the slab must be drained to move surface water away from the building and graded to give a slope of not less than
 - (i) 25 mm over the first 1 m from the building in low rainfall intensity areas for surfaces that are reasonably impermeable (such as concrete or clay paving) or
 - (ii) 50 mm over the first 1 m from the building in any other case.
- (b) Slab-on-ground — finished slab heights: the height of the slab-on-ground above external finished surfaces must be not less than
 - (i) 100 mm above the finished ground level in low rainfall intensity areas or sandy, well-drained areas; or
 - (ii) 50 mm above impermeable (paved or concreted areas) that slope away from the building in accordance with (a); or
 - (iii) 150 mm in any other case.

In relation to termites, Defective drainage and falls create high water and moisture which creates a very high risk for termites as the environments to the property are very conducive with many

In relation to termites, Defective drainage and falls create high water and moisture which creates a very high risk for termites as the environments to the property are very conducive with many susceptible areas.

Please read the report carefully and Maintenance to all susceptible and conducive areas is a MUST to minimise the risk of termite and timber pest existence and timber damage.



Observation 4.14

Location: Garden Areas - All Areas

Finding: Garden trees and vegetation / Yakka Trees - Subsidence - Close To Buildings

PLEASE NOTICE THE ATTACHMENT PICTURES TO THIS DEFECT STATEMENT;

H = the height of the tree at its full potential height, not its height today.

D = the distance from the tree to the building at the trees full potential height.

D = varies pending on one tree to 4 trees or more.

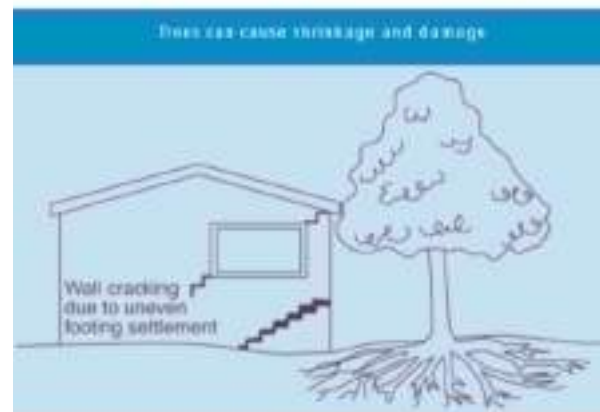
Trees and other vegetation can have a significant local effect on drying of soils. Over a number of years, especially during drought conditions, adjacent trees and vegetation may draw excessive moisture from the soils. The opposite may also occur, where swelling of the soil results when the trees decline or are removed.

As the cumulative moisture deficient is reversed, the surface level around the tree (and adjoining subfloor or concrete slab) will rise and expand laterally. This is often damaging to buildings unless the foundations have been strengthened or designed to cope with the effect.

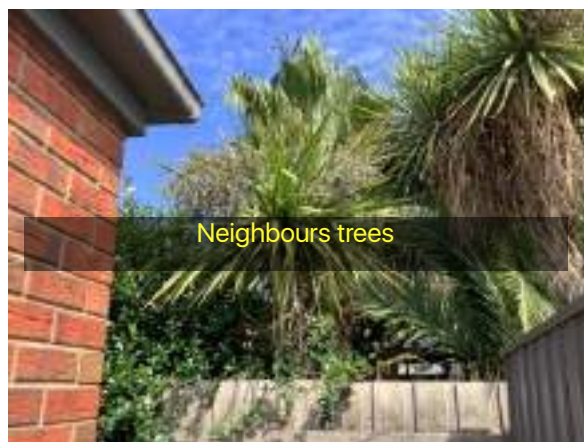
Subsidence can have complex and varying causes, which will influence the required remedial works. It is advised to begin by consulting a structural engineer to determine the required scope of works. This generally includes some form of underpinning, as well as addressing the underlying cause. Consultation with a geotechnical engineer may also be necessary.

A registered builder specialising in re-stumping / structural damage such as major brick cracking would then generally carry out works as advised by an Engineer and/or Geotechnical Engineer.

$d = 1.0h$ (single tree)
 $d = 1.5h$ (group of trees)
 $d = 2.0h$ (row of 4 or more trees)



GENERAL DEFINITIONS OF DEFECTS	
Class	Description
1	Minor defects which are not likely to be of great concern to the owner or occupier.
2	Defects which are not likely to be of great concern to the owner or occupier.
3	Defects which are likely to be of concern to the owner or occupier.
4	Defects which are likely to be of concern to the owner or occupier.
5	Defects which are likely to be of concern to the owner or occupier.
6	Defects which are likely to be of concern to the owner or occupier.
7	Defects which are likely to be of concern to the owner or occupier.
8	Defects which are likely to be of concern to the owner or occupier.
9	Defects which are likely to be of concern to the owner or occupier.
10	Defects which are likely to be of concern to the owner or occupier.



Conclusion

Your attention is drawn to the advice contained in the Terms and Conditions of this Report including any special conditions or instructions that need to be considered in relation to this Report.

In the opinion of this Consultant:

The incidence of Major Defects in this property in comparison to the average condition of similar buildings of approximately the same age that have been reasonably well maintained was considered:

Above average

The incidence of Minor Defects in this property in comparison to the average condition of similar buildings of approximately the same age that have been reasonably well maintained was considered:

Not Applicable

In conclusion, following the inspection of surface work in the readily accessible areas of the property, the overall condition of the building relative to the average condition of similar buildings of approximately the same age that have been reasonably well maintained was considered:

Appears Structurally Compromised

Building consultant's summary

◆ **This inspection and report is specifically and only related to any major defects and/or any major structural defects.**

Master Property Inspections, whilst engaged by the client, is not an advocate for the client and all statements and information in this report are completely of an unbiased professional opinion on all matters in this report.

◆ **RECOMMEND FURTHER UNDERGROUND INSPECTIONS**

Recommend further stormwater/sewage/drain pipe invasive inspection

The subsidence/sinking of the property has been detailed in this report and there are various reasons for subsidence/sinking.

In addition to the detailed information in this report, another suggestion may be to perform further invasive

In addition to the detailed information in this report, another suggestion may be to perform further invasive inspections on the underground stormwater/sewage/drain pipes, as the possibility of excessive water/moisture in the ground maybe due to damaged underground stormwater/sewage/drain pipes. We highly recommend engaging, perhaps a plumber, or other professional type companies who inspect underground plumbing/drains, who have the camera/video systems to inspect all the underground stormwater/sewage/drain pipes.

Once the stormwater/sewage/drain pipe invasive inspection has been performed, the next step would be to engage A geotechnical engineer and/or a structural engineer to make their further assessments, however it would be the preferred order that all the camera detection be completed to the underground pipes first.

The geotechnical engineer and structural engineer will then make further assessments and determine the scope and procedure of works that will be required.

Definitions to help you better understand this report

“Client” The person or persons, for whom the Inspection Report was carried out or their Principal (i.e. the person or persons for whom the report is being obtained).

“Building Consultant” A person, business or company who is qualified and experienced to undertake a pre-purchase inspection in accordance with Australian Standard AS 4349.1-2007 ‘Inspection of Buildings. Part 1: Pre-Purchase Inspections – Residential Buildings’. The consultant must also meet any Government licensing requirement, where applicable.

“Building and Site” The inspection of the nominated residence together with relevant features including any car accommodation, detached laundry, ablution facilities and garden sheds, retaining walls more than 700 mm high, paths and driveways, steps, fencing, earth, embankments, surface water drainage and stormwater run-off within 30 m of the building, but within the property boundaries.

“Readily Accessible Areas” 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 or accessible from a 3.6 metre ladder, 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. Or where these clearances are not available, areas within the consultant’s unobstructed line of sight and within arm’s length.

“Structure” The loadbearing part of the building, comprising the Primary Elements.

“Primary Elements” Those parts of the building providing the basic loadbearing capacity to the Structure, such as foundations, footings, floor framing, loadbearing walls, beams or columns. The term ‘Primary Elements’ also includes other structural building elements including: those that provide a level of personal protection such as handrails; floor-to-floor access such as stairways; and the structural flooring of the building such as floorboards.

“Structural Damage” A significant impairment to the integrity of the whole or part of the Structure falling into one or more of the following categories:

(a) Structural Cracking and Movement – major (full depth) cracking forming in Primary Elements resulting from differential movement between or within the elements of construction, such as foundations, footings, floors, walls and roofs.

(b) Deformation – an abnormal change of shape of Primary Elements resulting from the application of load(s).

(c) Dampness – the presence of moisture within the building, which is causing consequential damage to Primary Elements.

(d) Structural Timber Pest Damage – structural failure, i.e. an obvious weak spot, deformation or even collapse of timber Primary Elements resulting from attack by one or more of the following wood destroying agents: chemical delignification; fungal decay; wood borers; and termites.

“Conditions Conducive to Structural Damage” Noticeable building deficiencies or environmental factors that may contribute to the occurrence of Structural Damage.

“Secondary Elements” Those parts of the building not providing loadbearing capacity to the Structure, or those non-essential elements which, in the main, perform a completion role around openings in Primary Elements and the building in general such as non-loadbearing walls, partitions, wall linings, ceilings, chimneys, flashings, windows, glazing or doors.

“Finishing Elements” The fixtures, fittings and finishes applied or affixed to Primary Elements and Secondary Elements such as baths, water closets, vanity basins, kitchen cupboards, door furniture, window hardware, render, floor and wall tiles, trim or paint. The term ‘Finishing Elements’ does not include furniture or soft floor coverings such as carpet and lino.

“Major Defect” A defect of significant magnitude where rectification has to be carried out in order to avoid unsafe conditions, loss of utility or further deterioration of the property.

“Minor Defect” A defect other than a Major Defect.

“Serious Safety Hazard” Any item that may constitute an immediate or imminent risk to life, health or property. Occupational, health and safety or any other consequence of these hazards has not been assessed.

“Tests” Where appropriate the carrying out of tests using the following procedures and instruments:

(a) Dampness 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 damp problems. Instrument testing using electronic moisture detecting meter of those areas and other visible accessible elements of construction showing evidence of dampness was performed.

(b) Physical Tests means the following physical actions undertaken by the consultant: opening and shutting of doors, windows and draws; operation of taps; water testing of shower recesses; and the tapping of tiles and wall plaster.”

Terms on which this report was prepared

Service

1. This agreement is between the building consultant (“Inspector”) and you (“Client”). You have requested the Inspector to carry out an inspection of your property for the purpose of preparing a Standard Property Report (“Report”) to you outlining their findings and recommendation from the inspection.
2. The purpose of the inspection is to provide the Client with an overview of the Inspector’s findings at the time of the inspection and advice as to the nature and extent of their findings.
3. This Report has been prepared at the direction of and exclusively for the Client. Details contained within this Report are tailored to the Pre-Inspection Agreement between the Inspector and the Client at the time of the Inspection and no other party can rely on the Report nor is the Report intended for any other party.

Scope of the Report

4. This Report is limited to the findings of the of the Inspector at the time of the inspection and any condition of the property which is not within the scope as set out herein or which occurs after the inspection is expressly excluded from this Report.
5. This Report expressly addresses only the following discernible to the Inspector at the time of inspection:
 - (a) Major Defects in the condition of Primary Elements including Structural Damage and Conditions Conducive to Structural Damage;
 - (b) any Major Defect in the condition of Secondary Elements and Finishing Elements and collective (but not individual) Minor Defects; and
 - (c) any Serious Safety Hazard.
6. This Report is limited to the observations and conclusions of the Inspector that were readily observable at the building or site and given the state of property at the time of the Inspection.

7. This Report does not include the inspection and assessment of items or matters that are beyond the Inspectors direct expertise.

Inspection Limitations

8. The Inspection is limited to Readily Accessible Areas of the Building & Site based on the Inspector’s visual examination of surface work (excluding furniture and stored items) and the carrying out of Tests.
9. Where the Inspection is carried out on a strata or company title property, the Inspection is limited to the interior and the immediate exterior of the residence inspected. The Inspection does not extend to common property areas and the

the immediate exterior of the residence inspected. The Inspection does not extend to common property areas and the Inspector will not inspect common property areas.

10. The Inspector's findings do not extend to matters where the Inspector was restricted or prevented from assessing the building or site as a result of:

- (a) possible concealment of defects, including but not limited to, defects concealed by lack of accessibility, obstructions such as furniture, wall linings and floor coverings, or by applied finishes such as render and paint;
- (b) undetectable or latent defects, including but not limited to, defects that may not be apparent at the time of inspection due to seasonal changes, recent or prevailing weather conditions, and whether or not services have been used some time prior to the inspection being carried out; and
- (c) areas of the building or site that were obstructed at the time of the inspection or not Readily Accessible Areas of the Building Site. An obstruction may include a 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, builder's debris, vegetation, pavements or earth.

Exclusions

11. This Report does not consider or deal with the following:

- (a) any individual Minor Defect;
- (b) solving or providing costs for any rectification or repair work;
- (c) the structural design or adequacy of any element of construction;
- (d) detection of wood destroying insects such as termites and wood borers;
- (e) the operation of fireplaces and chimneys;
- (f) any services including building, engineering (electronic), fire and smoke detection or mechanical;
- (g) lighting or energy efficiency;
- (h) any swimming pools and associated pool equipment or spa baths and spa equipment or the like;
- (i) any appliances or white goods including dishwashers, refrigerators, ovens, stoves and ducted vacuum systems;
- (j) a review of occupational, health or safety issues such as asbestos content, the provision of safety glass or the use of lead based paints;
- (k) a review of environmental or health or biological risks such as toxic mould;
- (l) whether the building complies with the provisions of any building Act, code, regulation(s) or by-laws;
- (m) whether the ground on which the building rests has been filled, is liable to subside, swell or shrink, is subject to landslip or tidal inundation, or if it is flood prone; and
- (n) in the case of strata and company title properties, the inspection of common property areas or strata/company records.

12. Should the Client seek information from the Inspector related to one of exclusions above, that information is to be provided by way of a Special-Purpose Inspection Report which is adequately specified and must be undertaken by an appropriately qualified inspector. Additional information requested by the Client is not included in this Report.

Workplace Safety

13. The Client warrants to the Inspector (including the Inspector's, agents, employees and other personnel) that the Building Site is, to the Client's reasonable knowledge, safe and free of hazardous materials and that no party of the Building site constitutes a dangerous environment or work place safety concern.

Acceptance Criteria

14. The Inspector may compare the building being inspected with a similar building, unless specified otherwise in the Special Conditions or Instructions. The similar building which the Inspector may compare the current building to was, to the best of the Inspector's knowledge, constructed in accordance with ordinary building construction and maintenance practices at the time of construction and as such has not encountered significant loss or of strength or serviceability.

15. The Inspector assumes in their Report that the existing use of the building or site will continue unless specified otherwise in the Special Conditions or Instructions.

Acknowledgments

16. The Client Acknowledges that contents of the Report is subject to the Scope of the Report, Inspection Limitations, Exclusions and Acceptance Criteria. This Report does not include recommendations or advice about matters outside the scope of the requested inspection.

Exclusions and Acceptance Criteria. This Report does not include recommendations or advice about matters outside the scope of the requested inspection.

17. Should the Client have any queries or concerns about the purposes, scope or acceptance criteria on which this Report was prepared, all enquiries or concerns are to be discussed with the Inspector within a reasonable time upon receipt of this report.

18. The Client acknowledges that they will take all reasonable steps to implement any recommendation or advice provided by the Inspector in their Report as a matter of urgency specified otherwise.

19. Any further discussions the Inspector following the production of this Report addressing concerns will not be reflected in this Report and as such the Report may not contain all advice or information related to the building or site provided by the Inspector.

20. The Client acknowledges that a visual only inspection restricts the Inspectors capacity to inspect the building or site thoroughly and is not recommended by the Inspector unless an inspection of the Readily Accessible Areas and appropriate tests are also carried out.

21. The Client Acknowledges that in accordance with the Australian Standard AS4349.0 2007 Inspection of Buildings, this Report does not warrant or give insurance that the building or site from developing issues following the date of inspection.

22. The Client acknowledges that the Inspector is not affiliated with Hello Inspections Pty Ltd ACN 620 518 238 ("Hello Inspections") nor is Hello Inspections liable for the content of the Report prepared by the Inspector or any other third party and the Client hereby indemnifies Hello Inspections from all claims, losses and damage arising, either directly or indirectly, from the Report and the Client accepts this document can be presented to a court as a complete bar to any proceedings by the client or its agents or related parties against Hello Inspections. The Client further acknowledges the Inspector is the agent for Hello Inspections solely for the purposes of this clause.

23. The Client acknowledges that Hello Inspections may reproduce the content within this Report for any commercial purpose, including sale of the Report in whole or in part to third parties, provided personal details or information of the Client contained therein are excluded.