



Pre-Concrete Pour Slab Report

Inspection Date: 9 Jul 2021

Property Address: Niddrie area



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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: Niddrie area

Date: 9 Jul 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

Siting of the building: Not Applicable

Gradient: The land is sloping

Site drainage: Not Applicable

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

Weather conditions: Overcast With Mild Rain

Primary method of construction

Main building – floor construction: Slab on ground

Main building – wall construction: Not Applicable

Main building – roof construction: Not Applicable

Other timber building elements: NOT APPLICABLE

Other building elements: Not Applicable

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

Accessibility

Areas Inspected

The inspection covered the Readily Accessible Areas of the property. Please note obstructions and limitations to accessible areas for inspection are to be expected in any inspection.

- The site
- Slab

The inspection does not include areas which are inaccessible due to obstructions, or where access cannot be gained due to unsafe conditions.

Obstructions and Limitations

The following obstructions may conceal defects:

- 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.

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 hazards **Found**

Evidence of non compliant works **Found**

Evidence of substandard workmanship **Not Found**

Evidence of incomplete works **Found**

Additional specialist inspections

The following inspections / reports are recommended

- As identified in the summary and the defect statements in this report.
- Re-Inspection by Master Property Inspections, at the client's discretion.

Significant Items

Safety Hazard

Safety Hazard 1.01

Location: Meter box
Finding: Earthing To Steel Mesh-NOT SECURED TIGHT / LIMITED TIES

The earthing facility installed to the dwellings slab steel as required in AS 3000 has not been SECURED TIGHT / LIMITED TIES to the top of the steel mesh, To maximise the connection.

I refer the builder to AS 3000, clause 5.6.2.5 that states "Any conductive reinforcing within a concrete floor or wall forming part of a shower or bathroom shall be bonded to the earthing system".



Non Compliant

Non Compliant 2.01

Location: All Areas

Finding: Polyethylene (plastic) vapour barrier not installed as per BCA - Part 3.2.2.6

We have added some photos as examples however the vapour barrier is quite compromised and non-compliant throughout the perimeter, including the back separate concrete slab as well.

Defective Vapour Barrier Installation - Damaged/Punctured and/or overlapping Defective.

It was noted at the time of inspection that a vapour barrier had not be installed in accordance with AS2870 and BCA Part 3.2.2.6.

1/ All over laps are not taped as described below.

2/ All the rippes and/or damaged area needs to be taped.

3/ Some areas are not up to future ground and/or finished paving or concrete heights and must be extended with 200mm overlay and taped.

4/ Somes areas whilst listed above are Damaged / Ripped / Not Consistent And Sealed with 200mm Overlay And Taped / Not High Enough / Non Existent must ALL be repaired.

The polyethylene vapour barrier from beneath the concrete floor slab must be turned up the external side faces of its edge beams. Failing to install the vapour barrier correctly will allow moisture ingress via slab edge dampness into the internal timber wall skins and/or the floor coverings if not done.

The polyethylene vapour barrier must properly extended up the external side faces of the edge beams to at least the height of future finished ground level or paving i.e. 75mm below the damp-proof course and bottoms of the weepholes, after which any termite barriers that are in place, if required, will also need to be properly instated.

Without a vapour barrier installed, these areas are non-compliant with Australian Standards and are susceptible to excessive moisture, which may create major secondary defects as the building ages. Rectification works are necessary as soon as possible to ensure all standards are met.

NCC 2016 Building Code of Australia - Volume Two

3.2.2.6 Vapour barriers

A vapour barrier must be installed under slab-on-ground construction for all Class 1 buildings and for Class 10 buildings where the slab is continuous with the slab of a Class 1 building as follows—

(a) Materials

A vapour barrier must be—

(i) 0.2 mm nominal thickness polyethylene film; and

(ii) medium impact resistant, determined in accordance with criteria specified in clause 5.3.3.3 of AS 2870; and

(iii) be branded continuously “AS 2870 Concrete underlay, 0.2 mm Medium impact resistance”.

(b) Installation

A vapour barrier must be installed as follows—

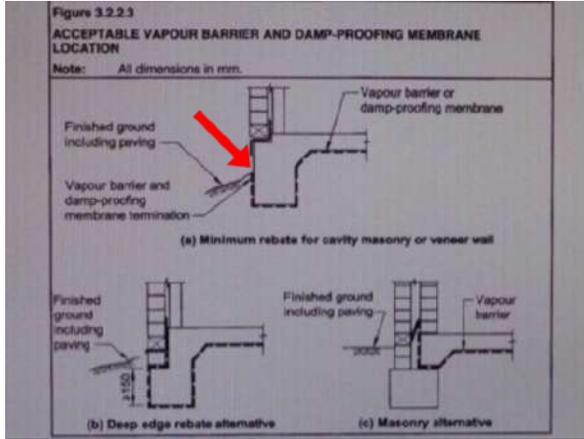
(i) lap not less than 200 mm at all joints; and

(ii) tape or seal with a close fitting sleeve around all service penetrations; and

(iii) fully seal where punctured (unless for service penetrations) with additional polyethylene film and tape.

(c) The vapour barrier must be placed beneath the slab so that the bottom surface of the slab is entirely underlaid and extends under edge beams to finish at ground level in accordance with Figure 3.2.2.3.

All AREAS to the ENTIRE slab should be checked CAREFULLY to identify any further defects that are the same as this defect.



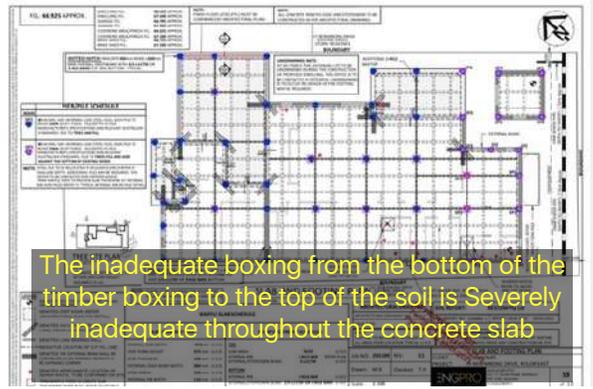
Non Compliant 2.02

Location: All Areas
Finding: Timber Boxing - Missing / Inadequate
Timber Boxing Missing

At the time of the inspection there are areas of timber boxing that is missing and inadequate where there will definitely be slab over pour. Additional timbers are required to secure the concrete in place and allow the vapour barrier not to become compromised and to allow the vapour barrier to come up the side of the concrete, vertically straight at 90 degrees in order to comply with the Australian standards

◆ I highly recommend without compromise that all the timber boxing be completed and become compliant prior to the concrete pour, for the best outcome and to not compromise the vapour barrier system as well, Without complete repairs it will be impossible for the vapour barrier not to be compromised.





Non Compliant 2.03

Location: All Areas
Finding: Mesh Too Close To The Perimeter.

The reinforcement mesh is sitting too close to the perimeter boxing to sections of the dwelling. 40mm to external exposure, to the entire perimeter boxing is required.

This mesh will need to be cut back or repositioned before the slab is poured to provide sufficient concrete cover to the reinforced steel.

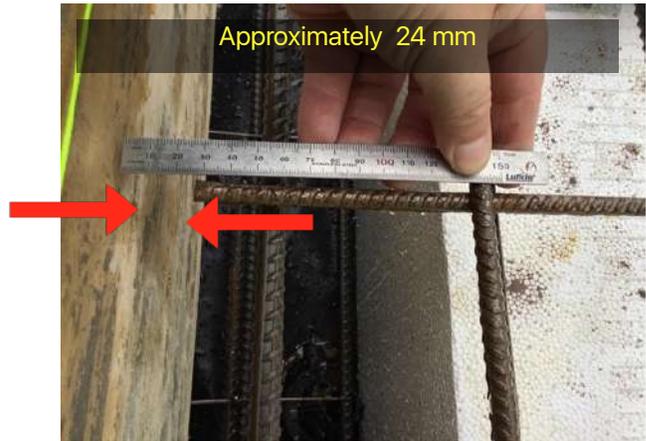
Extract from NCC Volume 2:

(D). Footings and slabs on ground must have concrete cover between the outermost edge of the reinforcement (including ligatures, tie wire Etc.) and the surface of the concrete of not less than :

- (i). 40mm to unprotected ground.
- (ii) 30mm to a membrane in contact with the ground.
- (iii) 20mm to an internal surface.

- (iv) 40mm to external exposure.

All AREAS to the ENTIRE slab should be checked CAREFULLY to identify any further defects that are the same as this defect.





Non Compliant 2.04

Location: All Areas
Finding: Plumbing Pipe Clearance.

At the time of inspection it was found that distance between the plumbing pipes and the Mesh/Reo is NOT at a minimum clearance of 20mm.

It is advised that all the Mesh/Reo that is not 20mm clearance to any plumbing be rectified before the concrete is poured.
Note all repairs required are sprayed with pink paint.

All AREAS to the ENTIRE slab should be checked CAREFULLY to identify any further defects that are the same as this defect.



Non Compliant 2.05

Location: All Areas
 Finding: Steel Sagging - Requires To Be Tied / Secured Into Place

I noted various areas of reinforced steel that has not been secured (tie wire or that alike) in a manner to prevent the reinforcement to move during the concrete pour.
 There are areas of reinforcement mesh sagging below the top 1/3 section of the slab.

Ideally this mesh should be supported with timber diagonally across the boxing and wires to hold it up. At the very least the concretor needs to be vigilant on the day of pour to lift it up into position with a hook.

I strongly suggest the builder supply the owner with photographs that substantiate either before the slab pour or during the slab pour the mesh has been placed at the correct height.

These areas must comply with the NCC Volume 2 section 3.2.3.2 (f), (i) inserted below.

(F) Reinforcement must be placed as follows :

(i) All reinforcement must be firmly fixed in place to prevent it moving during concreting operations .

(ii) reinforcement must be supported off the ground or the forms by bar chairs made from wire, concrete or plastic.

(iii) When using wire chairs the minimum concrete cover (see 3.2.3.2 (d) to the uncoated portion of the chair must be obtained.

(iv) Wire chairs on soft ground or plastic membrane must be placed on flat bases.

(v) Bar chairs must be spaced at not more than 800mm centres for steel fabric.

All AREAS to the ENTIRE slab should be checked CAREFULLY to identify any further defects that are the same as this defect.



Non Compliant 2.06

Location: All Areas
Finding: Pipe penetrations through the vapour barrier.

The pipe penetrations through the vapour barrier have not been fully taped and require further works.
There are also numerous cuts and tears throughout the vapour barrier that have not been taped correctly.
These will need to be taped up and photographed before the pour is started.

I refer the builder to the NCC Volume 2.

3.2.2.6 Vapour Barriers.

(b) Installation.

A vapour barrier must be installed as follows -

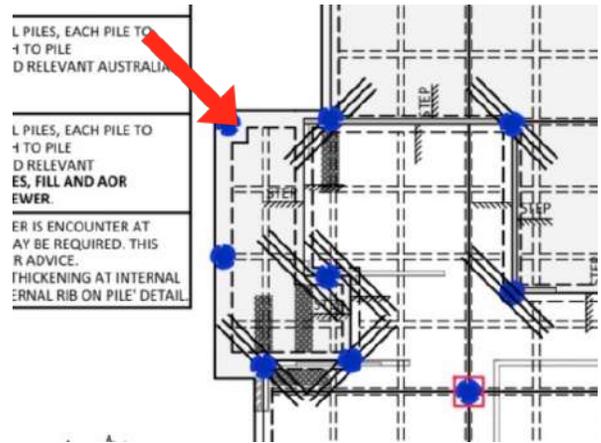
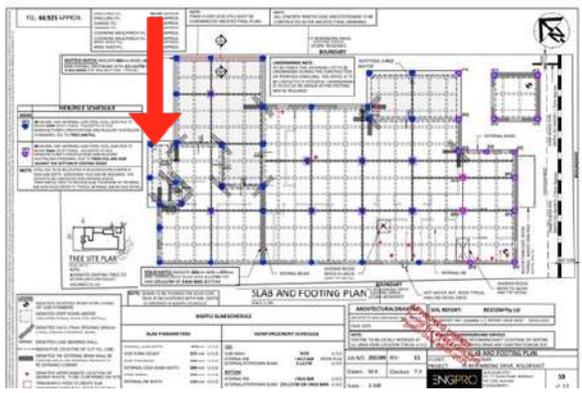
- (i) lap not less then 200 mm at all joins. And
- (ii) tape or seal with a close fitting sleeve around all service penetrations.

All AREAS to the ENTIRE slab should be checked CAREFULLY to identify any further defects that are the same as this defect.



Non Compliant 2.07

Location: All Areas
Finding: Incorrect Boxing - To The Plans
The area identified is not coinciding with the report.



Substandard Workmanship

No evidence was found

Incomplete

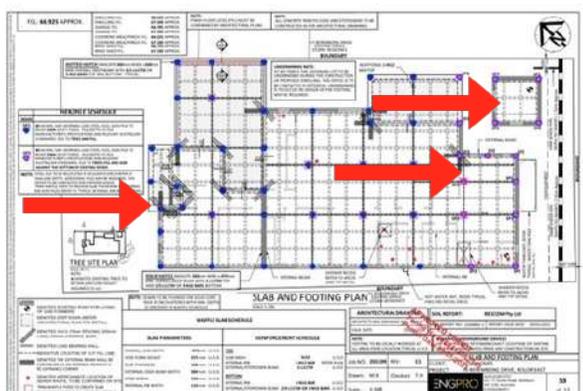
Incomplete 4.01

Location: All Areas

Finding: Double Three Bar Missing & Steel Mesh - Missing

This area/s were missing steel mesh in the trench and not completed as per the plans. Additional steel including bar chairs are required and in addition the additional steel is not to be touching the trench vapour barrier system.

The steel mesh is required to be tied and secured to the existing trench steel where required.



Additional comments

Particulars of Our Inspection and Report

Our Inspection is a visual inspection of the overall finishes and the quality of those finishes presented by the Builder. This Report is a list of items that in our judgement do not reach an acceptable standard of quality, level of building practice, or have not been built in a proper workmanlike manner, in relation to the Building Code of Australia, (BCA's) the Building Regulations, any relevant Australian Standards and the acceptable standards and tolerances as set down by the Building Commission.

1. Purpose

The purpose of our inspection is to identify any defects in the finishes and the quality of those finishes presented by the

builder at the stage of works nominated on the front of this report. This report contains a schedule of building defects that in the writer's judgement do not reach an acceptable standard of quality, level of building practice, or have not been built in a proper workmanlike manner relative to the Building Code of Australia, the relevant Australian Standards or the acceptable standards and tolerances as set down by the Building Control Commission.

2. Scope

Our engagement is confined to that of a Building Consultant and not that of a Building Surveyor as defined in the Building Act, of 1993. We therefore have not checked and make no comment on the structural integrity of the building, nor have we checked the title boundaries, location of any easements, boundary setbacks, room dimensions, height limitations and or datum's, glazing, alpine and bush-fire code compliance, or any other requirements that is the responsibility of the Relevant Building Surveyor, unless otherwise specifically noted within this report.

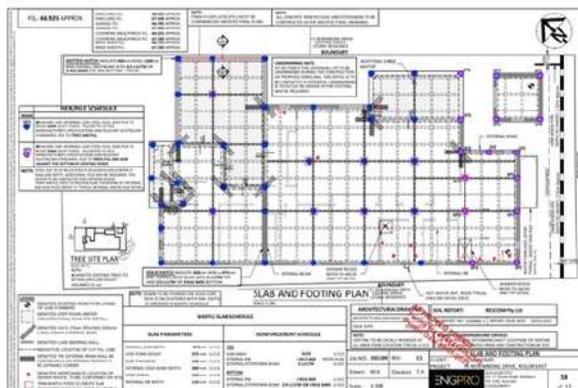
For Your Information

For Your Information 5.01

Location: General Site Photos

Finding: Site Photos.

Additional photos are provided for your general reference.





For Your Information 5.02

Location: For Your Information
 Finding: Concrete Mix Must Comply With :

3.2.3.1 Concrete

Concrete must comply with the following:

- (a) Concrete must be manufactured to comply with AS 3600; and—
 - (i) have a strength at 28 days of not less than 20 MPa (denoted as N20 grade); and
 - (ii) have a 20 mm maximum nominal aggregate size; and
 - (iii) have a nominal 100 mm slump.
- (b) Water must not be added to the mix to increase the slump to a value in excess of that specified.
- (c) Concrete must be placed, compacted and cured in accordance with good building practice.

At 7 days concrete is expected to be at approximately 75% of 28 day strength. Usually light framing can begin at 7 days.

If the materials being set are heavy, such as equipment or large columns, you will want to wait 28 days

You don't want to pull anchor bolts, dyna bolts, etc down tight until the concrete has reached 75% of the design strength, but walls can be framed and braced without tightening these bolts, usually at 7 days.

One issue that would be a concern if you begin to frame very early is the fact that concrete develops strength better when it is properly cured and standing walls on the slab will require exposing it to air. This exposure will allow water loss from the curing concrete through evaporation, so if you want the best possible concrete and still want to begin framing immediately, I would suggest you use a film forming curing compound applied as soon as the concrete is hardened sufficiently for application.

For structural steel erection where heavier loads and dynamic forces will be applied to the concrete, work is usually scheduled to begin no earlier than 7 days after the concrete is placed. Since the anchor bolts, dyna bolts, etc will support (heavy) columns which in turn will support beams, etc., the concrete must be strong enough to resist forces creating by installation of these. Suppose you set a column on the slab and tighten the nuts on the anchor bolts, dyna bolts, etc, and a force acts on the column to cause it to lean. The force of the column, with incredible leverage, can rip the bolt out of concrete that hasn't reached the strength required to resist the force.

I wouldn't load a "non cured slab" either. Stacking large bundles of heavy Timber on an uncured concrete slab could cause it to crack, and concentrated load are more risky than loads distributed over a large area.



For Your Information 5.03

Location: For Your Information

Finding: Site Requirements-Domestic Building Contracts Act

The results of our inspection have been fully detailed in the attached schedule of Building Defects.

Should the reader of this report have any additional queries or questions in relation to the items set out within it and due to the urgency for rectification works prior to the concrete pour please do not hesitate to contact the writer via my phone number of 0411807766.

Entry to site was obtained under the Building Act, 1993, section 240 and the Domestic Building Contracts Act, 1995, part 2, section 17 and 19. We act and make limited representations under the direction of the dwellings owners under these two acts.

For Your Information 5.04

Location: For Your Information

Finding: DO NOT BACK FILL PERIMETER SOIL, CRUSH ROCK OR BARK FOR 3 DAYS

IMPORTANT :

◆ Post Concrete Slab Inspection & Report Required.

◆ DO NOT BACKFILL SOIL FOR 3 DAYS.

The client has advised that they want a post concrete pour slab inspection and report. I highly recommend that the builder does not backfill around the perimeter concrete with any soil, crush rock, bark or the like as it is important that the entire perimeter concrete slab including the vapour barrier be totally exposed in order for Master Property Inspections to complete a accurate report. Particularly since the pre-slab inspection had timber boxing and vapour barrier defect concerns.

Conclusion

Building consultant's summary

◆ My position is not to instruct the builder to continue his process or not to continue his process, that is not my scope of works and it is the builders responsibility to perform the procedures to a tradesman's like finish and a tradesman's like level and I can certainly tell you in this particular case, the boxing and steelwork is not complete and is not complete to a tradesmen's like level and a tradesman like finish. I would suggest a reinspection once the builder has confirmed that all repairs are 100% complete as that is the only way I personally can make comment that all areas in my report are satisfactory and ready for the concrete pour.

◆ 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.

◆ DO NOT BACK FILL PERIMETER SOIL, CRUSH ROCK OR BARK FOR 3 DAYS

◆ Post Concrete Slab Inspection & Report Required.

◆ DO NOT BACKFILL SOIL FOR 3 DAYS.

The client has advised that they want a post concrete pour slab inspection and report. I highly recommend that the builder does not backfill around the perimeter concrete with any soil, crush rock, bark or the like as it is important that the entire perimeter concrete slab including the vapour barrier be totally exposed in order for Master Property Inspections to complete a accurate report. Particularly since the pre-slab inspection has timber boxing and vapour barrier defect concerns.

Vapour Barrier System - Defective

The vapour barrier system was incomplete and defective at the time of the inspection.

Timber Boxing Missing

There is Timber Boxing Missing to MANY MANT AREAS and The severity of the missing timbers is quite bad where massive amount of concrete over Paul will occur.

◆ I highly recommend without compromise that all the timber boxing be completed and become compliant prior to the concrete pour, for the best outcome and to not compromise the vapour barrier system as well. Again as the defect is so severe it's going to take quite some time to complete it to a compliant level.

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 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;

- (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.

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.

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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.