

Pre-Plaster Inspection Report

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Site Address:

Client Name:

Phone #:

Email:

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Dwelling type:	House and Garage.
Dwelling configuration:	Single Storey.
Nature of works:	New Building.
Stage of inspection:	Frame
Construction Type:	Brick Veneer.
Garage:	Attached.
Foundations:	Slab.
Builder:	

Client Brief

I was instructed to inspect the client's new home to write a report as to the overall installation of all items required to construct a new home to completion stage. Our role is to assist the clients in outlining any issues that may be identified as being within the scope of the builder to ensure that all construction items are correctly constructed and completed in a workman like manner and meet with all relevant codes and industry practises. As such the client has engaged our services to assist with this report.

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.

Access

Access was gained to all required areas of the residence.

Report Conditions

The terms and conditions that our site inspection and this report are carried out and supplied under are listed on the last page of this report.

Summary

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, please do not hesitate to contact the writer via any of the methods detailed at the bottom of this page.

Please note: **A fee of \$225.00 per hour**, or part thereof, plus GST will be charged for any clarification required by the builder, or any of the builders' employees, and a purchase order for same will be required prior to any contact between XXXXXXXX P/L and the builder.

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An inspection was conducted at the above address on 26/08/2013 for the purpose of a general home inspection, requested by the 'client'.

The inspection was conducted with the 'client' present, and details exterior and interior.

The weather was fine and mild at the time of the inspection.

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.

Schedule of Defects:

Defects, observations and other related comments:

1. The tie down between the trusses/top plate & roof beams/wall studs/bottom plate is not continuous down to the floor slab.

Clause 9.6 Specific Tie-Down Fixing of AS 1684 Residential Timber-Framed Construction, states that 'Continuity of tie-down shall be provided from the roof sheeting to the foundation'.

All of these framing members will need to be properly strapped and tied to each other so that the sheet roof can resist the expected uplift from wind loads.

9.6.1 General

This Clause provides details for structural connections to resist uplift and shear forces (lateral loads) in floor framing, wall framing and roof framing. Where specific tie-down fixings provide equal or better resistance to gravity or shear loads, then nominal nailing is not required in addition to the specific tie-down fixing.

Continuity of tie-down shall be provided from the roof sheeting to the foundations. Where appropriate, due allowance for the counterbalancing effects of gravity loads may be considered. Where the gravity loads equal or exceed the uplift loads, nominal (minimum) fixings only shall be required unless otherwise noted for shear or racking loads.

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2. The roof beams over the portico and alfresco area has not been tied or bolted to the post supporting them.

I refer the builder to AS 1684.2, clause 9.5, and Table 9.4 under the heading of nominal fixings. It states; *Verandah beams and roof beams shall be joined to post with 1/M12 or 2/M10 bolts*. Nails and hooping iron are not noted on the Intrax engineering or the Australian Standard. To substitute hooping iron at the front or rear will require an engineering compliance assessment.

Please note that the alfresco has no bolt or hooping iron holding down the whole of the alfresco roof. Framing nails installed are clearly inadequate.

TABLE 9.4
NOMINAL FIXINGS FOR TIMBER MEMBERS

Joint	Minimum fixing for each joint
Posts to bearers or joists	1/M12 or 2/M10 bolts (unless otherwise specified)



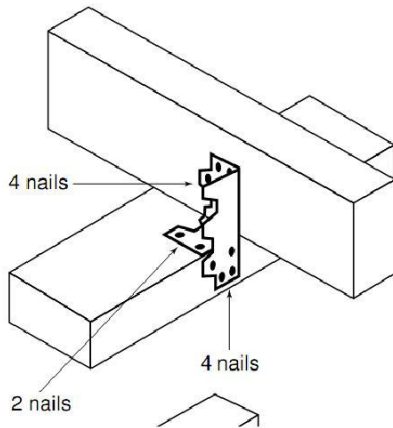
3. The gang nails universal brackets must be nailed with:
 - a. Four nails into the truss.
 - b. Two nails into the top of the top plate.

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- c. Four nails into the side of the top plate.

As per the inserted pictures, I randomly checked several areas around the dwelling and found that the framer has not installed these essential brackets correctly and the trusses are not secured to the top plate of the dwelling in a manner that complies with the truss plan, supplier installation instructions and should not have passed the frame stage inspection.

This defect needs to be addressed prior to further works.



4. The sisalation to the dwelling has been damaged. It would appear that the sisalation has let go from the frame during a strong wind. As such the sisalation has delaminated the foil coating.

The sisalation is therefore damaged and cannot be made as new. The damaged sections will need to be replaced with new prior to proceeding with the build. I refer the builder to section 11 of the contract and section 37.2.

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5. The framing of the ceiling in the bedroom 1 and study to hallway connection has been constructed from what appears to be Merch Pine. That is pine that is non-structural rated and cannot be installed into a dwelling for this purpose.

AS 1684.2 calls for structural wood to be used in all framing applications other than noggings.

The use of any material that has been marked up at some point as being non-structural is of a major concern. This material installed has “Non Structural” clearly printed on same.

It is my recommendation that my clients seek to have the material removed from site and replaced with material that is clearly marked as being fit for purpose.

I further recommend that any supplication to leave the existing material in place is rejected and that no supporting documentation would comply with the requirements of the Australian Standard.

I refer the builder and my client to AS 1684.2, clause 1.8 and 1.11.

1.11 STRESS GRADES

All structural timber used in conjunction with this Standard shall be stress-graded in accordance with the relevant Australian Standard.

All structural timber to be used in conjunction with this Standard shall be identified in respect of stress grade.

NOTE: The timber stress grade is usually designated alphanumerically (e.g., F17, MGP12). Stress grades covered by Span Tables in the Supplements to this Standard are given in Table 1.2.

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6. The LVL to the study opening has a bow in the installation that was noted at approx 10 mm over 2 m. The allowance in AS 2589, clause 4.2 and table 4.2.2 is 4 mm over 2 m.

The beam will need to be made straight to the tolerance or replaced.



7. There are several noggings that need to be installed or in parts reinstalled.

I noted that the ensuite noggings have been installed at greater than 1350 mm separation.

I refer the builder to AS 1684.2, clause 6.2.1.5 which calls for all noggings to be installed at no greater than 1350 mm from top or bottom plate and no greater than 1350 centres.

The missing noggings will need to be installed as marked up on site prior to lockup completion.

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6.2.1.5 Nogging

Where required, wall studs shall have continuous rows of noggings, located on flat or on edge, at 1350 mm maximum centres (see Figure 6.6).

Noggings are not required to be stress-graded.

Unless otherwise specified, the minimum nogging size shall be the depth of the stud minus 25 mm by 25mm thick, or the nogging shall have a minimum cross-section of 50 mm × 38 mm for unseasoned timber and 42 mm × 35 mm for seasoned timber, and shall be suitable, where required, for the proper fixing of cladding, linings, and bracing.

Where required to provide fixing or support to cladding or lining or for joining bracing sheets at horizontal joints, noggings shall be installed flush with one face of the stud.

Where required to permit joining bracing sheets at horizontal joints, noggings shall be the same size as the top or bottom plate required for that bracing wall.

In other cases, noggings may be installed anywhere in the depth of the stud. Stagger in the row of noggings shall be not greater than 150 mm.

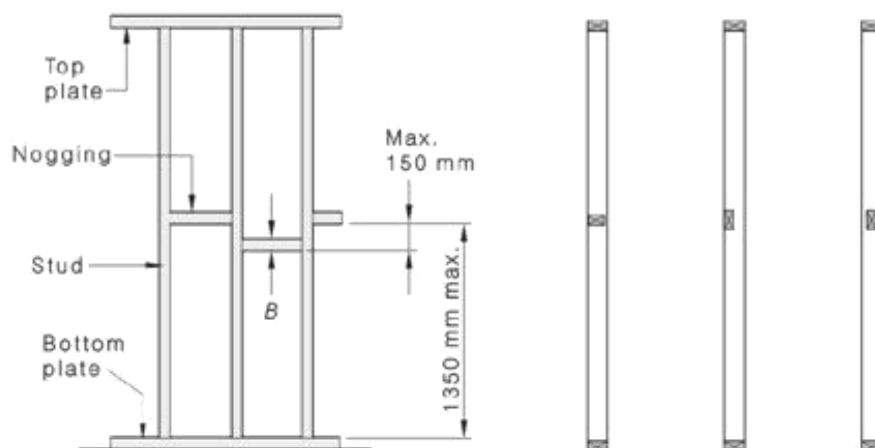


FIGURE 6.6 NOGGING



8. The frame overhang to both shower recesses needs to be supported in a manner that complies with As 1684.2, clause 6.3.3, and the BCA. I would suggest that a 100 MPA non-shrink grout is installed.

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9. As per section 9 of the Southern Star window installation manual, the head clearance should be 13 mm for timber windows and 6 mm to both sides.

I noted that the installed windows to several locations do not meet this minimum allowance for gapping. The frames to these windows will need to be reworked to ensure that my client's windows are installed as per supplier instructions.

The inserted below is straight from the suppliers manual.

Frame head clearance minimum 13mm. Plaster head and stile clearance minimum 6mm.



10. The conflict between the bracing and the venting pipe in the bathroom will need to be reworked. Please note that cutting the bracing will need to be supported with additional engineering.

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11. The stud to the bathroom wall has been cut at the junction removing approx 200 mm under the stud.

This has resulted in an opening between the studs greater than 600 mm. I measured approx 650 mm. An additional stud will need to be installed to the other side of the pipe for the minimum of 600 mm to be maintained.



12. The jack studs under the lintels must be installed hard under the lintel or an additional section of timber installed so that the brick layer has a connection point for the brick ties. We refer the builder to AS 1684.2, clause 6.2.3 which calls for all jack studs to be the same orientation as the standard studs, however does not make same compulsory.

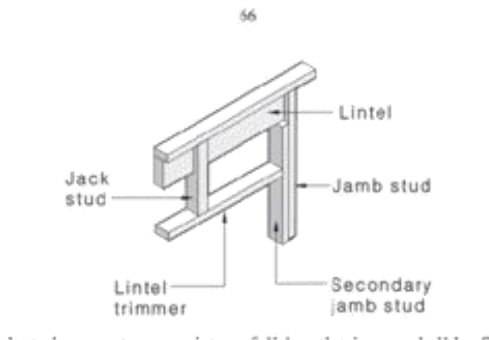
However, given the requirement for the brick ties to be doubled up around windows and doorways, the only way to comply with this mandated requirement is to install additional material to the jack studs or rework the manner in which they are installed.

Failure to install or rework this item will result in a later defect on the brick tie requirements above all openings.

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6.2.3 Openings

Openings shall be framed with jamb studs and lintels (heads) or ring beams as shown in Figure 6.9. Where required, jack studs shall be the same size, spacing, and orientation as the common studs, as shown in Figure 6.9. Alternatively, jack studs may be made up by horizontal nail lamination. A minimum clearance of 15 mm shall be provided between the underside of the lintel, ring beams, or lintel/ring-beam trimmer and the top of the window frame or door frame.



13. It appears none of the external walls on the dwelling have been nailed off. Section 9.5 and table 9.4 of AS1684.2, and section 6.2.1.3 of the same document states all connecting walls must be secured and nailed in accordance with both clauses.

The frame pass should not have been approved without this element being installed.

The builder may claim that this will occur at lockup stage. However this procedure fails to take into account, what holds the dwelling up in the time between now and lockup stage completion?

As a minimum the builder must nail off the external walls to ensure that the dwelling can resist the racking forces that AS 1684.2 mandates. The internal walls can then be finished off at lockup stage.

6.2.1.3 Wall junctions

Studs at wall junctions and intersections shall be in accordance with one of the details shown in Figure 6.3. Studs shall be not less in size than common studs. All junctions shall have sufficient studs, which shall be located so as to allow adequate fixing of linings.

All intersecting walls shall be fixed at their junction with blocks or noggings fixed to each wall with 2/75 mm nails. Blocks or noggings shall be installed at 900 mm max. centres.

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14. The sarking to the dining / rumpus roof area has been damaged and is missing the foil coating. The sarking needs to be made as new or replaced. It is impossible to make new this item and it is my opinion that it is replaced.

I refer the builder to section 11 of the contract. All materials will be new. I also noted that the dwelling has a BAL of 12.5 and this item make up part of that installation. It must be reworked.



15. The sarking to the study is missing to a small section. The sarking to this area must be installed. I noted that the dwelling has a BAL of 12.5 and this item make up part of that installation. It must be reworked.

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16. The installation of a door cavity unit to the pantry that has been installed beside the void and in front of the drop ceiling in the kitchen will result in external and internal air leakage due to the configuration of the installation.

Note that air can pass via the void opening and hence the energy rating on the dwelling has been compromised.

The cavity must be sealed prior to closing off the walls with plaster. I refer all to the BCA part 3.12.3.5.

3.12.3.5 Construction of roofs, walls and floors

- (a) Roofs, *external walls*, external floors and any opening such as a *window* frame, door frame, *roof light* frame or the like must be constructed to minimise air leakage in accordance with (b) when forming part of the external *fabric* of—
- (i) a *conditioned space*; or
 - (ii) a *habitable room* in *climate zones* 4, 5, 6, 7 and 8.
- (b) Construction *required* by (a) must be—
- (i) enclosed by internal lining systems that are close fitting at ceiling, wall and floor junctions; or
 - (ii) sealed by caulking, skirting, architraves, cornices or the like.

17. I was able to detect a small number of walls on the dwelling that exceeded the allowance of 4 mm tolerance over 2 m. These walls have been marked up with paint and OOP (out of plumb) painted on the floor.

As stated, the acceptable allowance is 4 mm over 2 m. The walls will need to be reworked to ensure that the builder complies with this requirement.

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4.03 Straightness of steel and timber frame surfaces

Frames are defective if they deviate from plane (horizontal or vertical bow) by more than 4 mm in any 2 m length of wall. Refer to diagram E on page 11.

We also refer the builder to AS 2589, clause 4.2.2.

4.2.2 Finished framing deviations and tolerances

The deviation in the position of the bearing surface of the finished framing immediately prior to installation of lining from a 1.8 m straight edge shall not exceed the values given in Table 4.2.2 when measured over a 1.8 m span at any point (see Figure 4.2.2(A)).

Where the dimensional tolerances of the fixing surface plane fall outside these tolerances, a suitable levelling system shall be used (see Figure 4.2.2(B)).

For wall and ceiling framing that meets the dimensional tolerances of this Clause, gypsum linings may be fixed directly to the framing with an appropriate fastening system in accordance with Clause 4.4.3.

TABLE 4.2.2
DEVIATION IN THE POSITION OF THE BEARING SURFACE
OF THE FINISHED FRAMING

Substrate type	Levels 3 and 4		Level 5	
	Deviation of 90% of area mm	Deviation of remaining area mm	Deviation of 90% of area mm	Deviation of remaining area mm
Steel and timber framing, and battened masonry	4	5	3	4

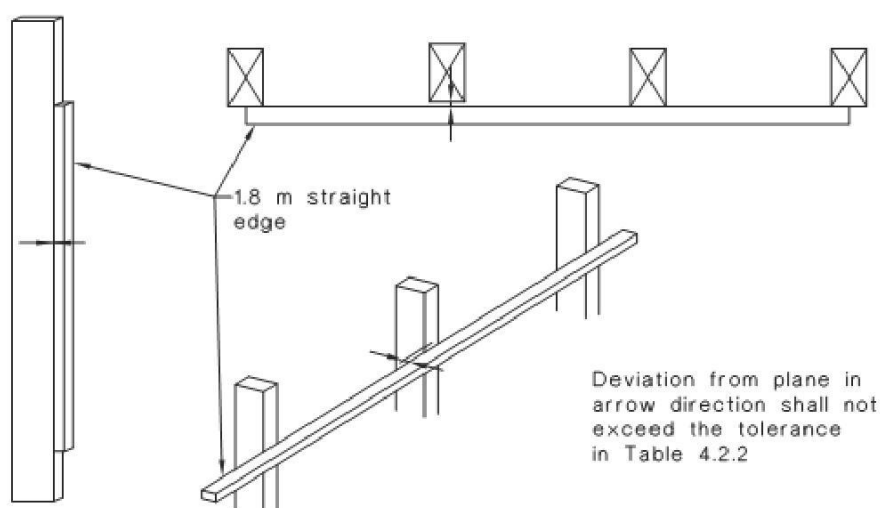


FIGURE 4.2.2(A) ASSESSING FRAMING TOLERANCE

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18. I intersecting wall block is missing from the wall connection at the rear hallway to dining room connection. It must be installed prior to plaster.



19. The bedroom 4 window timber sill plate has been damaged and will need to be secured prior to plaster.



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Rectification Required YES

TERMS & CONDITIONS OF SITE INSPECTION AND REPORT

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.

3. Assumed Finishes

Our inspection was carried out on the quality of the fixtures and finishes as installed, and no investigation of any documentation or statutory requirements was carried out to verify their correctness.

4. Documentation

Unless otherwise noted any contractual documentation made available to us during our inspection is only viewed on an informal basis and we make no certification that the building has been constructed in accordance with them.

5. Non-Destructive Inspection

Unless otherwise noted our inspection was carried out on a non-destructive basis and exclude anything that would have require the removal of any fixtures, fittings, cladding, insulation, sisalation, roofing, lining materials, excavated of any soil or the removal of any part of the plastic membrane.

6. Measurements/Levels

Unless otherwise noted all measurements have been taken with a standard ruler, and levels with either a 900 or 2100mm long spirit level.

7. Services, Appliances, Plants and Equipment

Unless otherwise noted, we did not test or check for appropriateness, capacity, correct installation or certification of any service, appliances, plant and equipment, i.e. heaters, hot water units, air conditioners, ovens, hotplates, dishwashers, range hoods, spa pump, electrical wiring, gas lines, electricity and water supply, sewer, stormwater and agricultural drains.

8. Client Use

This report has been prepared for the exclusive use of the client/s whose name/s appear/s on the front of this report. Any other person who uses or relies on this report without the authors written consent does so at his or her own risk and no responsibility is accepted by XXXXXXXXX P/L or the author of this report for such use and or reliance.

9. Report Reproduction

This report cannot be reproduced in part; it must only be done so in full.

10. Reference

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Any reference contained within this report to the Building Code of Australia, an Australian Standard, a manufacturers technical data sheet or installation instruction is neither exhaustive nor a substitute for the original document and are provided as a guidance only. XXXXXXXX P/L or the author of this report for the use or reliance upon of the part references contained within this report will accept no responsibility.

11. Report Exclusions

- a) Defects in inaccessible parts of the building including, but not limited to, the roof space and or the sub-floor area unless otherwise noted,
- b) Defects not apparent by visual inspection, or only apparent in different weather or environmental conditions as to those prevailing at the time of the inspection,
- c) Defects that we did not consider significant enough to warrant any rectification work at the time of our inspection,
- d) Defects outside the scope of the client brief
- e) Check measure of rooms, walls and the overall building, for size, parallel and squareness unless otherwise noted,
- f) Landscaping, retaining walls, or any structures outside the roofline of the main building unless otherwise noted,
- g) Enquiries of Council or any other Authorities,
- h) Investigation for asbestos and or soil contamination,
- i) Investigation for the presence of any termites or borers and for the correct installation of any termite barriers and or other risk management procedures or devices.

12. VCAT Suitability

Unless specifically noted this report has not been prepared inline with the requirements of Practice Note VCAT 2.