

TOPNOTCH BUILDING INSPECTIONS

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FRAME STAGE INSPECTION

1234 Main St. Preston Victoria 3072

Buyer Name

25/07/2020 9:00AM



Inspector

Colin Hamilton

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The purpose of the inspection

The purpose of the inspection is to provide advice to you (the client and/or your nominated party acting on your behalf), regarding the condition of the property at the date and time of inspection.

The inspection shall comprise visual assessment of the property to identify major defects and to form an opinion regarding the general condition of the "Frame Stage" at the time of inspection.

An estimate of the cost of rectification of defects is not required in an inspection report.

In addition, we strongly recommend that upon receipt of your report, that you read carefully and heed all recommendations made by the Inspector. We also recommend you call the Inspector to clarify anything that you do not understand.

Please be aware that a *Building Report* is NOT a Timber Pest Report, Electrical Report, Plumbing Report, Pool Report, Cost Estimate Report, Compliance Certificate or a Guarantee against future problems from developing. The report does not include identification of unauthorised building works or works not in compliant with building regulations, local laws or bylaws.

Conditions of Inspection

A report may be conditional on the following:

Information provided by the person, the employees or agents of the person requesting the report.

Apparent concealment of possible defects.

Prevailing weather conditions.

Debris or stored belongings.

Any other factor limiting the preparation of the report.

Areas for inspection

The inspection shall cover all accessible areas.

The client shall arrange right of entry, facilitate physical entry to the property and supply necessary information to enable the inspector to undertake the inspection and prepare a report. The inspector is not responsible for arranging entry to property or parts of property. Areas where reasonable entry is denied to the inspector, or where reasonable access is not available, are excluded from, and do not form part of, the inspection.

Safe and reasonable access

The extent of accessible areas shall be determined by the inspector at the time of inspection, based on the conditions encountered at the time of inspection. The

inspector shall also determine whether sufficient space is available to allow safe access. The inspection shall include only accessible areas and areas that are within the inspector's line of sight and close enough to enable reasonable appraisal.

Reasonable access is described below in accordance with AS4349.1

The inspector shall inspect an elevated area only where— (a) it is at a height at which safe reasonable access is available, or where safe and reasonable access is otherwise available; or

(b) an unobstructed line of sight is present from safe use of a 3.6 m ladder and the building elements present are close enough to allow appraisal.

NOTE: 'Elevated area' includes the roof, roof space, crawl space, landing feature, and the like, generally elevated above the ground and not intended for normal use by occupants.

Roof exterior: accessible from a 3.6m ladder placed on the ground.

Roof interior: 400mm x 500mm access hole, 600mm x 600mm crawl space.

Sub Floor: 400mm x 500mm access hole with a 400mm x 500mm crawl space.

Reasonable access *does not* include the cutting of access holes or the removal of screws and bolts or any other fastenings or sealants to access covers.

Sub floor areas sprayed with chemicals should not be inspected unless it is safe to do so.

Access limitations may include

Legal right of entry, denied entry, locked doors / gates, locked windows, locked cupboards, pets, security systems, furniture, rugs, stored items, duct work or other obstructions. Other limitations may include physical access such as but not limited to, thick vegetation, narrow areas that cannot be entered, tight roof and crawl spaces, inaccessible spaces, or adverse weather conditions. The report shall identify any area or item within the scope of an inspection that was not inspected and the factor that prevented inspection.

What is reported on

The inspection includes subjective appraisal by an inspector competent to assess the condition of residential buildings. It involves a subjective assessment so different inspectors or even the same inspector on a different occasion may reach different conclusions.

The inspection comprises a visual assessment of the "Frame" to identify major defects and to form an opinion regarding the general condition of the framing at the time of inspection.

The following areas shall be inspected where applicable:

The floor(s), walls and roof frame of the building: Ground Floor frame, Ground Floor Walls Frames, First Floor Floor Frame, First Floor Wall Frames, Roof / Truss Framing, Deck Framing and Balcony Framing where applicable.

SUMMARY

- 3.1.1 Site - Grading and Drainage: Building Under Construction
- 4.1.1 Wall Framing - Wall Framing: Noggings Removed
- 4.1.2 Wall Framing - Wall Framing: Nail Lamination
- 4.1.3 Wall Framing - Wall Framing: Blocking at Wall Intersections
- 4.1.4 Wall Framing - Wall Framing: Poorly fixed noggings
- 4.1.5 Wall Framing - Wall Framing: Stud Centres
- 4.1.6 Wall Framing - Wall Framing: Hoop Iron Bracing Loose
- 4.1.7 Wall Framing - Wall Framing: Br5 Ply Bracing, Fixings
- 4.1.8 Wall Framing - Wall Framing: BR4 Bracing
- 4.1.9 Wall Framing - Wall Framing: Wall Not Plumb
- 4.1.10 Wall Framing - Wall Framing: Poor Workmanship
- 4.1.11 Wall Framing - Wall Framing: BR2 Hoop Iron Bracing
- 4.1.12 Wall Framing - Wall Framing: 2BR2 Mini Angle
- 4.1.13 Wall Framing - Wall Framing: Wall Junctions Not Fixed
- 4.1.14 Wall Framing - Wall Framing: Steel Beam / Timber Top Plate Packing and Fixing
- 5.1.1 Floor Framing - Floor Frame: Bracing Wall Not Tied to Floor Frame
- 5.1.2 Floor Framing - Floor Frame: Missing Bolt in Steel
- 6.1.1 Roof Framing - Roof Trusses: Truss Tie-Downs (Truss Grips)
- 6.1.2 Roof Framing - Roof Trusses: Universal Trip-L-Grip (Mitek)
- 6.1.3 Roof Framing - Roof Trusses: Truss In appropriately Blocked

1: INSPECTION DETAILS

Information

General: In Attendance

No-One

General: Weather Conditions

Fine & Dry

General: Documentation

Architectural Drawings,
Engineering Drawings,
Specifications

General: Building Type

Residential, Double Storey

General: Direction House Faces

East

General: Construction Type

Brick Veneer, Rendered
Polystyrene

General: Footing Type

Waffle Pod Slab

General: Utilities: Mains Water

Connected, Not Tested

General: Utilities: Sewer

Not Tested

General: Utilities: Gas

Not Tested

General: Areas Inspected

Wall and Roof Framing

General: Areas Not Inspected

Underground Stormwater Pipes,
Underground Sewer Pipes, Agi-
Drains

General: Areas Restricted To**Inspection**

N/A

General: General Information

The CSIRO have put out a Home Owners Guide to Foundation Maintenance and Footing Performance which can be found [here](#)

Inspection Categories: Inspection Categories

Explanation of Ratings (How to Read Report)

This report divides deficiencies into three categories; **Major Defects (in red)**, **Minor Defects (in orange)**, and **Maintenance Items / FYI (coloured in blue)**. Safety Hazards or Concerns will be listed in the Red or Orange categories depending on their perceived danger but should always be addressed ASAP.

I = **Inspected and Serviceable**. The inspector has viewed the subject area, system or component and no major defect, minor defect or repair recommendations are found and the condition is comparable to properties, components or systems of similar age. Unless otherwise noted, the system or component was found to be functioning properly, or in acceptable condition at the time of the inspection. No further comment is necessary, but whenever possible additional information about materials used in the construction and how to care for or maintain the home are included.

D = **Minor Defect**. A defect other than a major defect. A fault or deviation from the intended performance of a building element or system.

M = **Major Defect**. A defect of sufficient magnitude where rectification has to be carried out in order to avoid unsafe conditions, loss of utility or further deterioration of the property. A fault or deviation from the intended structural performance of a building element.

F = **General Advice / Maintenance / FYI**. The inspector may choose to comment on the item, system or component where it doesn't fall into the above categories with General Advice and further information for the clients knowledge.

U = **Unable to inspect due to access**. An area, system or component where there is unsafe, insufficient or unreasonable access.

NA = **Not Applicable**. This indicates that a system or component was not present at the time of inspection. If the system or component should have been present, a comment will follow.

GENERAL ADVICE / MAINTENANCE ITEMS / FYI

General advice, maintenance items, FYI items, or recommended upgrades will fall into this category. Some of these concerns may lead to Prioritised Observations or Immediate Concerns if left neglected for extended periods of time. These items are generally more straightforward to remedy and some can be done as a DIY item.

MINOR DEFECT

A Minor defect is described as "A defect, other than a major defect". A functional component or system that is not operating as intended or defective.

MAJOR DEFECT / SAFETY HAZARD

A Major Defect is one of sufficient magnitude where rectification has to be carried out in order to avoid unsafe conditions, loss of utility or further deterioration of the property. Items that inevitably lead to, or directly cause (if not addressed in a timely manner) adverse impact or deterioration of the home, or unreasonable risk (unsafe) to people or property are also considered to be a Major Defect. These items typically require further evaluation and are often imminent and may be very difficult or expensive to remedy.

These categorisations are in my professional judgement and based on what I observed at the time of inspection. This categorisation should not be construed as to mean that items designated as "Minor Defects" or "Maintenance Items" do not need repairs or replacement. The recommendations in each comment is more important than its categorisation. Due to your perception, opinions, or personal experience you may feel defects belong in a different category, and you should feel free to consider the importance you believe they hold during your purchasing decision. Once again, it is the "Recommendations" in the text of the comment pertaining to each defect that is paramount, not its categorical placement.

Limitations

General

OVERVIEW

Topnotch Building Inspections strives to perform all inspections in substantial compliance with the Australian Standards for Building Inspections and in compliance with good building practices, at the time of the inspection. As such we inspect the readily, accessible, visually observable, systems and components within the staged building inspection as described in the inspection agreement and scope. Where systems or components as described in the Agreement were not inspected, the reason(s), limitations of why the item was not inspected will be stated. The inspection is neither technically exhaustive nor quantitative.

There may be comments made in this report that exceed the required reporting of the Agreement, these comments (if present) were made as a courtesy to give you as much information as possible about the staged inspection. Exceeding the Agreement or Standards of Practice will only happen when I feel I have the experience, knowledge, or evidence to do so. There should be no expectation that the Agreement or Standards of Practice will be exceeded throughout the inspection, and any comments made that do exceed the agreement or standards will be followed by a recommendation for further evaluation and repairs by applicable tradespeople.

This report contains observations of those systems and components that, in my professional judgement, were not functioning properly, significantly deficient, or unsafe. **All items in this report that were designated for repair, rectification, modification, replacement, maintenance, or further evaluation should be investigated and undertaken by qualified tradespeople prior to commencement of the next stage relevant to that observation or defect.**

This inspection will not reveal every concern or issue that may be present, but only those significant defects that were accessible and visible at the time of inspection. This inspection can not predict future conditions, or determine if latent or concealed defects are present. The statements made in this report reflect the conditions as existing at the time of inspection only, and expire at the completion of the inspection, as conditions can change. Weather conditions and other changes in conditions may reveal problems that were not present at the time of inspection. Refer to Australian Standard 4349.0-2007 and the Base Stage Inspection agreement regarding the scope and limitations of this inspection.

The inspection shall comprise of a **visual assessment** of the building stage to identify major defects and to form an opinion regarding the general condition of the Base Stage Inspection at the time of inspection.

Areas for inspection

The inspection shall cover all **accessible areas and items covered in a base stage inspection**. The client shall arrange right of entry, facilitate physical entry to the property and supply necessary information to enable the inspector to undertake the inspection and prepare a report. The inspector is **not responsible** for arranging entry to property or parts of property.

Areas where reasonable entry is denied to the inspector, or where reasonable access is not available, **are excluded from**, and do not form part of, the inspection.

NOTE: Those areas may be the subject of an additional inspection following the provision of reasonable entry and access.

Inspection Process

The inspection shall comprise of a **visual appraisal** and limited assessment of systems, components and serviceability.

Limitations

Limitations that are reasonably expected to be present or that reasonably may occur shall be identified.

Extent of reporting

Significant items to be reported are as follows:

(a) **Major** Defects.

NOTE: A Major defect is any element, component or system that is **not in compliance** with the **Structural Drawings** or **Architectural Drawings** and is one of sufficient magnitude where rectification has to be carried out in order to avoid unsafe conditions, loss of utility or further deterioration of the element, component, system or property. ***These defects will need to be rectified before further works are undertaken*** and require a professional trades person or qualified person to rectify. Where a major defect has been observed, the inspector may advise to seek further evaluation and advice by a qualified professional.

(b) **Minor** Defects.

NOTE: A Minor defect is described as "A defect, other than a major defect". For example, poorly spaced trench mesh or fabric supports, footings not cleaned of debris, minor holes in the vapour barrier etc.

Most of these defects are easily rectified. These defects must be rectified before further construction works are undertaken and require a professional trades person or qualified person to rectify.

(c) [Maintenance](#) Items / FYI

NOTE: A Maintenance Item and similarly an FYI is generally for your information. FYI's may include handy tips, additional information and websites or a professional opinion on an item that doesn't fall into the defects categories.

Acceptance criteria

The Base Stage Inspection shall be compared with the Structural and Architectural Drawings to ensure the building is constructed in accordance with these documents and generally accepted building practices at the time of construction.

This inspection is **NOT** intended to be considered as a **GUARANTEE OR WARRANTY, EXPRESSED OR IMPLIED, regarding the operation, function, or future reliability of the structure of the home and it's components AND IT SHOULD NOT BE RELIED ON AS SUCH.** This report is to help you to gain a better understanding of the condition of the Base Stage at the time of the inspection and should be used alongside the Relevant Building Surveyors Inspection Report.

General

NOTICE TO THIRD PARTIES

Notice to Third Parties: This report is the property of Topnotch Building Inspections and is **Copyrighted as of 2020.** The Client(s) named herein have been named as licensee(s) of this document. This document is non-transferable, in whole or in part, to any and all third-parties, including; subsequent buyers, sellers, and listing agents. Copying and pasting deficiencies to prepare a repair request is permitted. THE INFORMATION IN THIS REPORT SHALL NOT BE RELIED UPON BY ANY ONE OTHER THAN THE CLIENT NAMED HEREIN. This report is governed by an Inspection agreement that contained the scope of the inspection, including limitations, exclusions, and conditions of the copyright.

2: INSPECTORS COMMENTS

		IN	NI	NP	O
2.1	General	X			

IN = Inspected NI = Not Inspected NP = Not Present O = Observations

Information

General: Inspectors Comments

General Framing Comments

Frame Inspection Notes.

1. Defects with nail lamination of studs at the sides of openings or concentrated loads were observed. AS1684.2-2010 Section 2.4 requires stud laminations at a **maximum of 600mm centres**. I recommend all laminated studs be checked and rectified as to comply with AS1684.2 It should be noted that not all stud lamination defects may be detailed in the body of this report and the builder is advised to ensure compliance.
2. Defects with the fixing requirements of BR4 and BR5 bracing units were observed as outlined in the report. I recommend all bracing units are rectified and comply with the requirements of the Engineering Drawings.
3. Deficiencies were observed with fixing quantities (and orientation of brackets) in some Universal Trip-L-Grips as noted in the report.
4. First floor bracing walls were observed not to be tied into the floor structure as required, see information noted in report.
5. Wall blocking at intersecting wall were found not to be in compliance with AS1684.2 - 2010 and the supplied Engineers drawings in locations as noted in the report. Furthermore it must be noted that not all intersections were photographed and I recommend the builder ensure all wall intersections are completed in compliance with the Standard and Engineering Drawings.
6. Note: The supplied Truss drawings did not include the Alfresco roof area.
7. Note: The supplied Truss drawings show only 4 no. T1-Heater Trusses, extra t1-Heater Trusses have been installed. I recommend confirming the tie down details are in compliance with the truss makers recommendations.
8. The installation of windows at the property was a limitation to my inspection as I was unable to fully access these areas.

Should you have any questions or require further information, please feel free to contact me on 0417870087 to discuss

3: SITE

		IN	NI	NP	O
3.1	Grading and Drainage	X			X
3.2	Slab Edge Detail	X			X

IN = Inspected NI = Not Inspected NP = Not Present O = Observations

Information

Rubbish Containment

Cage

Site Fencing

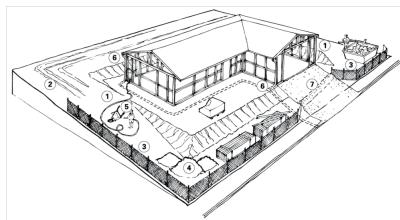
Fenced

The site was adequately fenced at the time of the inspection unless noted otherwise in this report.

Sediment Control

Not Present

Sediment control techniques are used on building sites to prevent sand, soil, cement and other building materials from reaching waterways. Even a small amount of pollution from a site can cause significant environmental damage by killing aquatic life, silting up streams and blocking stormwater pipes.



Erosion and sediment control measures:

1 minimise disturbance,

2 diversion devices,

3 sediment barriers,

4 secure stockpiles,

5 other containments,

6 early stormwater connection,

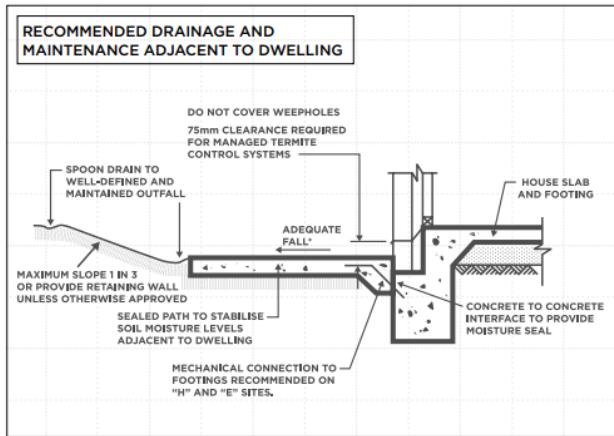
7 controlled access point.

Grading and Drainage: GRADING AND DRAINAGE

Grading and drainage is a common problem facing many homeowners. It's particularly important to ensure your property is adequately drained of surface water to prevent damage to your dwelling, landscaping and plants. A poorly drained property is a haven for mosquitoes and other pests including termites which can wreck havoc on your house and go undetected for some time.

If in doubt, consult an engineer for further advice.

See here for DIY ideas of how to [Install Drainage in The Garden](#) with more ideas [here](#).



Grading and Drainage: DESIGN FOR SITE CONDITIONS

Design for site conditions, location of retaining walls, paths, swimming pools, future structures or proposed extensions etc. should all be considered when preparing the site for correct surface water flow.

If the ground slopes towards the house, paths with spoon drains should be provided.

It is also important to place drains uphill of the footings so as to direct water around the house and away from the footings. A stormwater and roof water drainage management plan should be considered and take into account water flowing from adjoining properties.

Seek the advice of an engineer and professional landscape designer or landscaper for more information.

Grading and Drainage: MAINTAINING YOUR HOME

When carrying out work around your home and garden, you need to make sure you don't change the moisture conditions of the foundation. It is also important that the foundation that supports the edges of your footing is not exposed to excess moisture, such as water ponding against footings or walls.

Below are some useful tips to help you protect your home from damage caused by excessive movement of the footings.

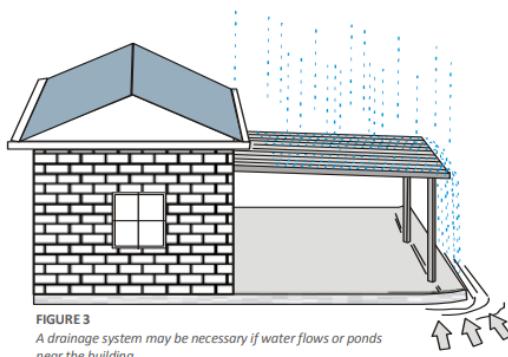
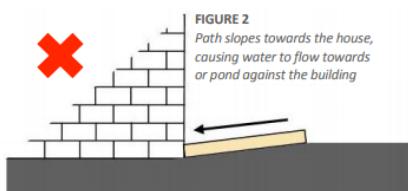
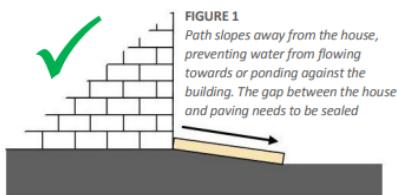
DO

- **Prevent water flowing towards your home's foundations** by sloping the soil, paths and garden beds away from the building (Figure1). As a rule, the more reactive the soil, the steeper the slope needs to be.
- If it is not possible for the surfaces surrounding your home to drain away from the building, you will need to **install garden drainage systems** or drains against your external walls to remove excess moisture to your storm water system. You should seek professional advice about any drainage work.
- Ensure you **properly maintain** any drainage installed by your builder.
- Make sure the roof of any garden shed adjacent to your home has **gutters draining to your storm water system**.
- Ensure there is a minimum slope of 70mm for the first metre away from the house in very reactive soils.

DON'T

- Install sheds or outdoor roofed areas **without connecting** the roof drainage to storm water systems.
- Lay paving around the building **without sufficient slope away from the building** (Figure2). In large paved areas a drain and storm water collection pit may be necessary.
- Run machinery over shallow drainpipes. This may **break or squash the pipes**, which can cause leaks and subsequent movement of the foundation.
- **Excavate close to building footings**, where possible. If you do need to carry out excavations next to your house, make sure you **don't excavate deeper than the base of the footing**. You should ensure you don't undermine the footing.
- Place garden beds alongside the house, where possible. If garden beds must be next to the house, make sure not to over water them. Footings constructed in reactive soil during dry conditions may experience damage if the perimeter of the house is watered unevenly or excessively.

[More information can be found here.](#)



Slab Edge Detail: Informational

Slab Edge Details

Slab edge details are observed at the frame inspection stage to ensure best building practices are maintained to future slab edge dampness problems and defects.

No deficiencies were found unless noted in the body of the report.

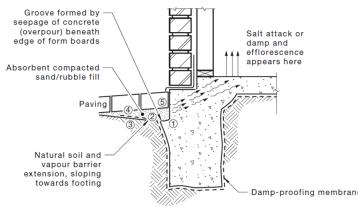


FIGURE C5.6 SLAB EDGE DAMPNESS MECHANISM

From Figure C5.6 it can be seen how the construction process can exacerbate the potential for future slab edge dampness:

- Irregular excavation edges or trench collapsing contribution to formation of concrete overpour under formwork at the edge.
- Damage to remaining plastic membrane during house building.
- Site-cut ground surface may slope towards house.
- Granular fill used for paving may allow subsurface ponding of water
- Damp-proof membrane may not be placed against side of footing or properly lapped with under-footing damp-proof membrane prior to placing paving fill.

Observations

3.1.1 Grading and Drainage

BUILDING UNDER CONSTRUCTION

The site drainage was not assessed as the dwelling is under construction and external paving / landscaping works are yet to be undertaken.



Maintenance / FYI Item

4: WALL FRAMING

		IN	NI	NP	O
4.1	Wall Framing	X			X

IN = Inspected NI = Not Inspected NP = Not Present O = Observations

Information

Informational

General Information

Wall framing is assessed for general compliance with Australian Standard 1684 - 2010, NCC 2019, The Guide to Tolerances and Standards 2015 (Victoria) and the owner supplied Architectural and Engineering drawings.

Observations

4.1.1 Wall Framing

NOGGINGS REMOVED



Major Defect / Safety Hazard

It was observed that some required noggings have been removed.

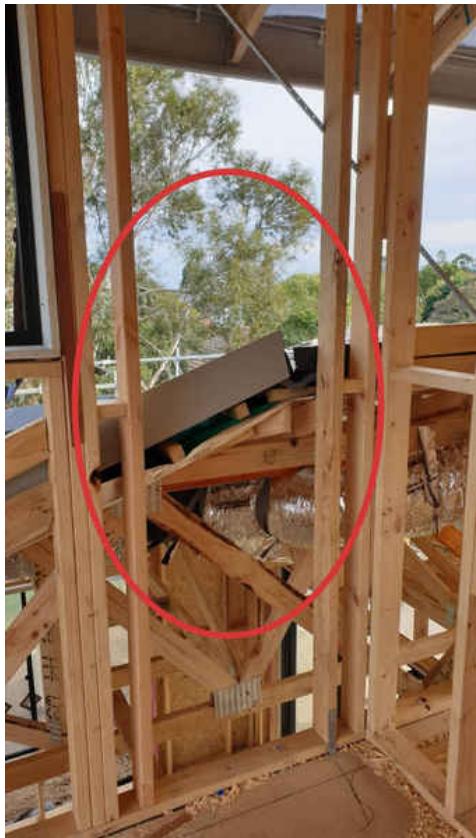
Australian Standard 1684.2 - 2010 Part 6.2.1.5

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

All noggings require reinstatement to ensure compliance with this standard.

Recommendation

Contact your builder.



Bedroom 3 West



Bedroom 4 West



Bedroom 4 West



Bedroom 3 West

4.1.2 Wall Framing **NAIL LAMINATION**

 Major Defect / Safety Hazard

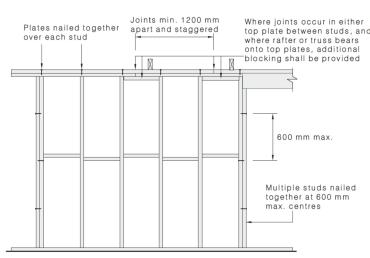
It was observed that some of the wall framing studs have not been laminated with the minimum required fixings / nails as required by Australian Standard 1684.2 - 2010

2.4 STUD LAMINATION

In the case of studs at sides of openings and studs supporting concentrations of load, the required size may be built up by using two or more laminations of the same timber type, stress grade and moisture content condition, provided the achieved width is at least that of the nominated size. Studs up to 38 mm thick shall be nailed together with one 75 mm nail at **maximum 600 mm centres**. Studs over 38 mm but not exceeding 50 mm thick shall be nailed with one 90 mm nail at maximum 600 mm centres (see Figure 2.9).

Where screws are used in lieu of nails, they shall be minimum No. 10 screws. They may be at the same spacing and pattern, provided they penetrate a minimum of 75% into the thickness of the final receiving member.

Posts shall not be nail-laminated.



NOTE: Refer to Section 9 for other nominal fixing requirements including plates to studs.

FIGURE 2.9 STUD/PLATE LAMINATION

Recommendation
Contact your builder.



South

External, South, Pantry

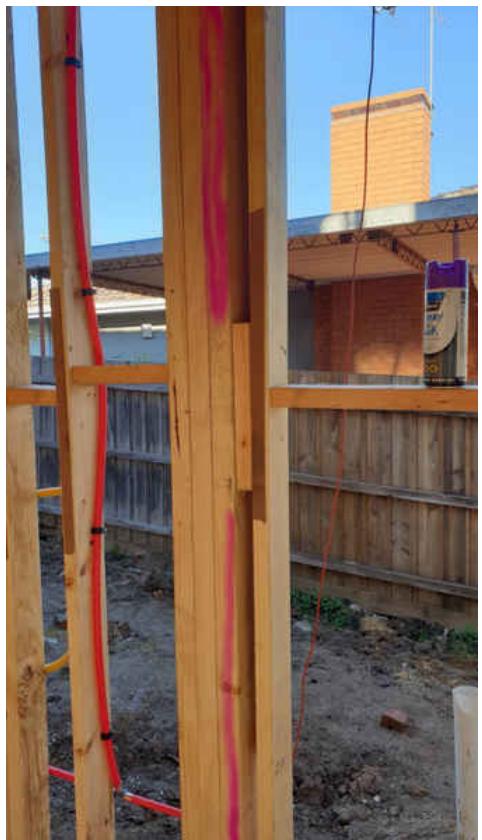
External, South, Kitchen



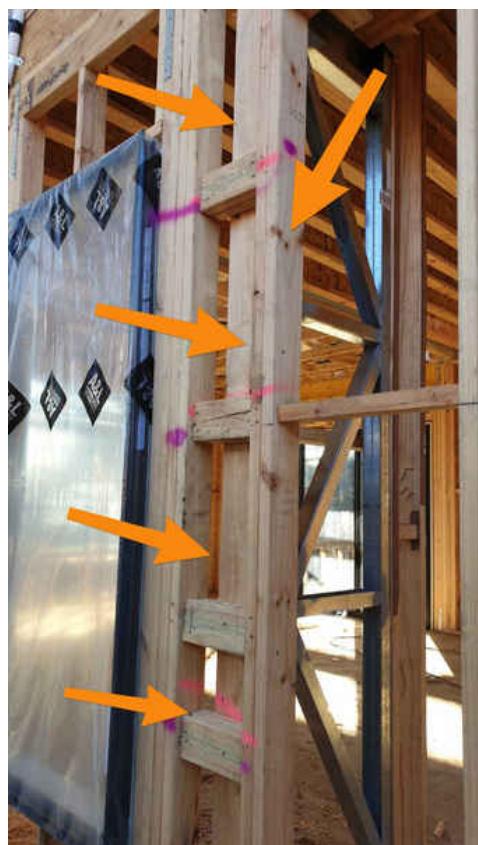
External, South, Kitchen



Exterior, South, Kitchen



Exterior South Kitchen



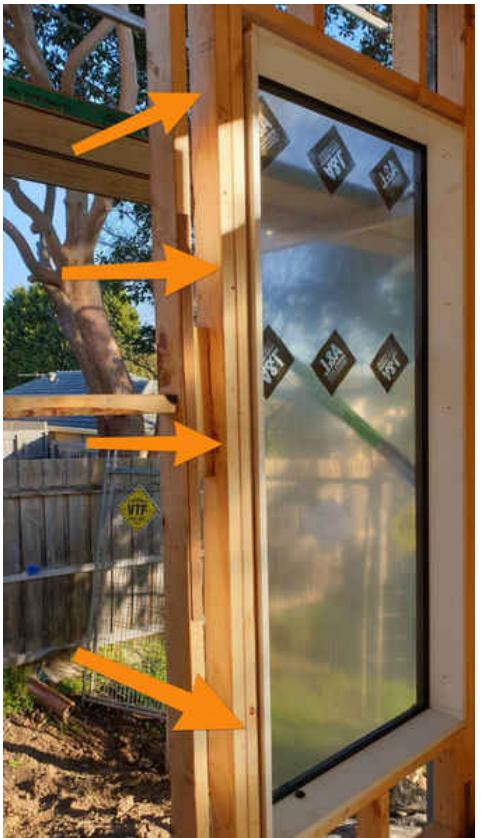
Exterior South Kitchen



Exterior South Living Room



Exterior South Living Room



Exterior South Living Room

Exterior South Living Room

Exterior South Living Room



Meals Living Room Wall Junction



North Living Room



North Living Room



West Living Room



West Living Room



West Living Room



East Study



Study



Study



Study



Study



Study



Study



Entry / Garage



Hall / Theatre



Hall / Theatre



Stairwell



Kitchen / WIL1



Meals



Bedroom 3 West

4.1.3 Wall Framing

BLOCKING AT WALL INTERSECTIONS

Major Defect / Safety Hazard

Blocking at intersecting walls - Insufficient / non-existent wall blocking was observed at intersecting walls in the nominated locations throughout the Structure.

AS 1684.2 -2010 states that blocks are required at intersecting walls (minimum length 200mm) at spacings not exceeding 900mm and each stud must be fixed to the block with 2/75mm nails. See below for more detail.

Australian Standard 1684.2 - 2010 Section 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.

AS1684.2 - 2010 also notes that all walls must be installed with noggings at a spacing not exceeding 1350mm and wall intersections don't negate this requirement.

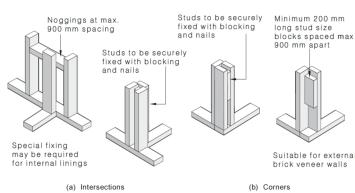
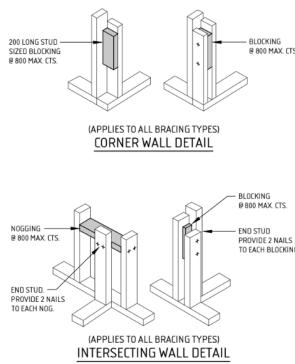


FIGURE 6.3 TYPICAL WALL JUNCTIONS

It is noted, Engineering Drawings by Structerre Consulting, Project Number 116578, sheet Number S-600 requires blocking to be provided at a maximum 800mm centres as detailed on Engineering Drawings.

See below for details.



I recommend all wall intersections are fixed as per AS1684.2 - 2010

Recommendation

Contact your builder.



Master Bedroom / WIR



Master Bedroom / WIR



Master Ensuite /WIR



Activity / Master Bedroom



Video

(click here to view on web)



Video

(click here to view on web)



Bedroom 3 / WIR



Bedroom 3 / WIR



Bedroom 3 West



Bedroom 3 WIR



Bedroom 3 WIR



Bedroom 3 WIR



Bedroom 3 WIR



Butlers Pantry



Butlers Pantry / WC

4.1.4 Wall Framing **POORLY FIXED NOGGINGS**

Minor Defect

Noggings in one or more locations were observed to have been poorly fixed or installed.

I recommend installing noggings in compliance with AS1684.2 - 2010

See below for location(s)

Recommendation

Contact your builder.



South Garage, Noggings are required to be fixed with 2 fixings each end

4.1.5 Wall Framing

STUD CENTRES

 Major Defect / Safety Hazard

Stud space to greater than 600mm centres.

I recommend installing another stud to reduce the stud spacings.

See photograph(s) for locations.

Recommendation

Contact your builder.



Garage, South East Corner

4.1.6 Wall Framing

HOOP IRON BRACING LOOSE**A Major Defect / Safety Hazard**

I observed loose metal strap bracing in one or more locations.

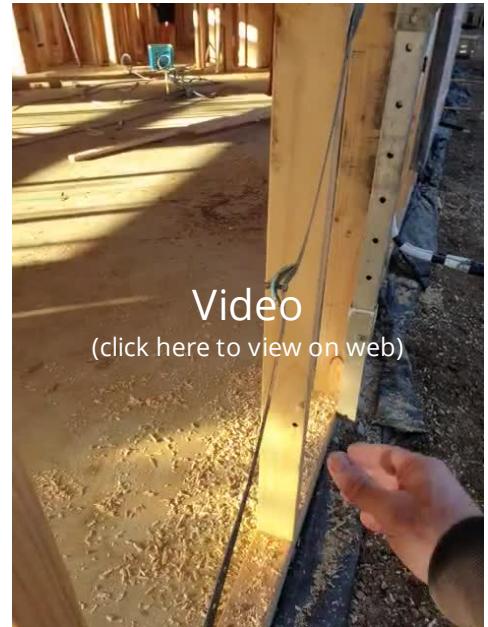
AS1684.2 - 2010 requires all metal straps used in bracing units to be in tension.

I recommend the builder ensures all metal bracing straps are in tension as required by the standard and the Engineering drawings.

See below for example and location

Recommendation

Contact your builder.

**Video**

(click here to view on web)

4.1.7 Wall Framing

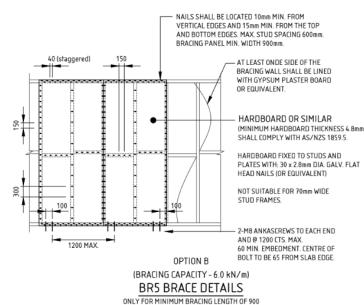
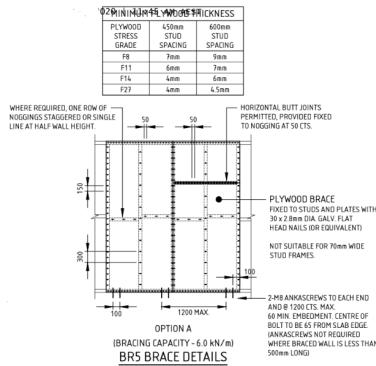
BR5 PLY BRACING, FIXINGS**A Major Defect / Safety Hazard**

Insufficient fixings / defects were observed in the BR5 Bracing units required by Structerre Consulting, Sheet No. S-500 and S-602.

Refer to photographs for examples and locations.

Note: Not all defects in BR5 Bracing Units were photographed.

I recommend the builder rectifies all defects and ensures the BR5 bracing units are in compliance with the Engineering Drawings with particular attention to fixing spacings, fixings to noggings and ensure the bracing is fixed to **all studs** within the bracing unit.



Recommendation
Contact your builder.



Exterior West Living Room



Exterior West Living Room



Exterior West Living Room



Exterior North West Living Room



Exterior North West Living Room

4.1.8 Wall Framing

BR4 BRACING



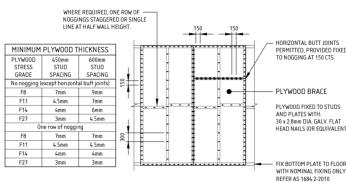
Insufficient fixings / defects were observed in the BR4 Bracing units required by Structerre Consulting, Sheet No. S-500, S-501 and S-602.

Refer to photographs for examples and locations.

Note: Not all defects in BR4 Bracing Units were photographed.

I recommend the builder rectifies all defects and ensures the BR4 bracing units are in compliance with the Engineering Drawings with particular attention to fixing spacings, fixings to noggings and ensure the bracing is fixed to **all studs** within the bracing unit.

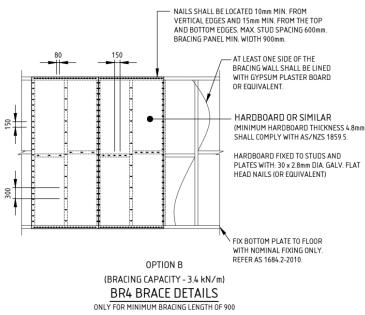
BR4 Brace Details Option A



BR4 Brace Details Option B

Recommendation

Contact your builder.



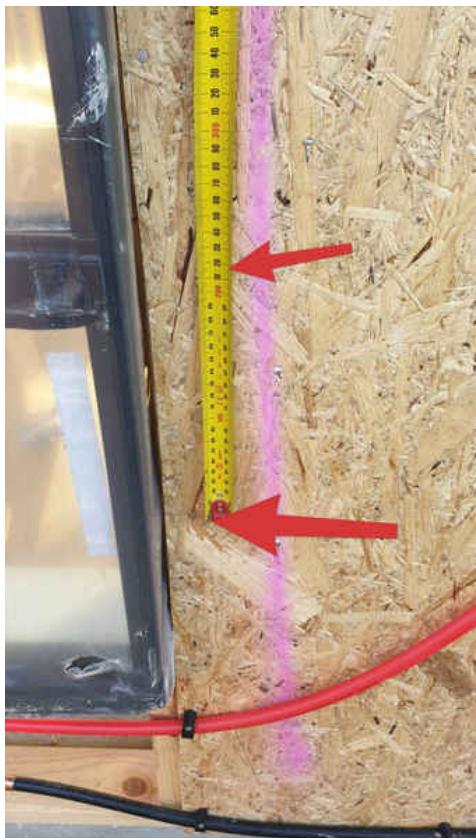
Exterior North Alfresco



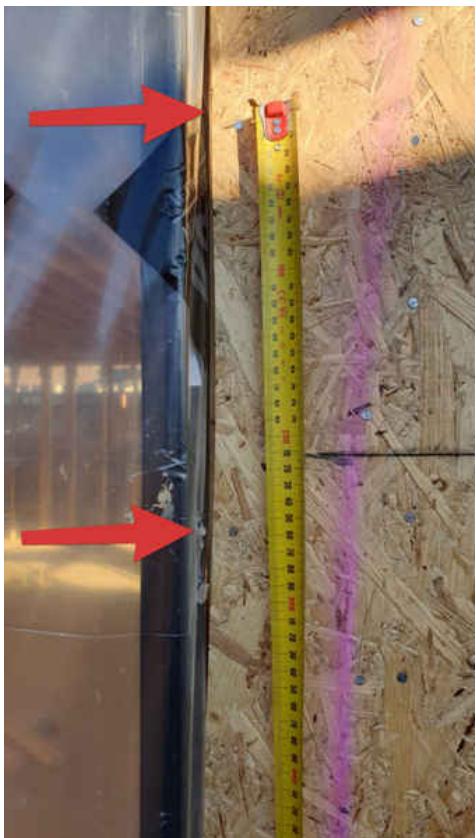
Exterior West Alfresco



Exterior West Alfresco



Exterior North Meals



Exterior North Meals



Exterior North Meals



External North Theatre check all



Exterior North Theatre



Exterior North Study Bottom of Ply not fixed



Exterior North Study, Nails driven under.

Exterior East Study, Fixings in excess of required spacing of 150mm



Exterior East Entry



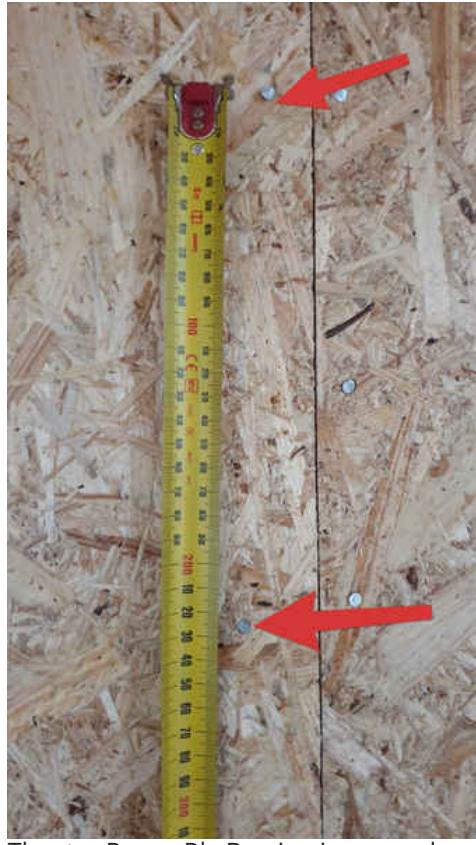
East Study BR4 Bracing Nails



East Study BR4 Bracing Nails



Video
(click here to view on web)



Theatre East

Theatre Room Ply Bracing in general,
check all to ensure it complies. Note
Fixings required at 150 mm centres



Theatre West



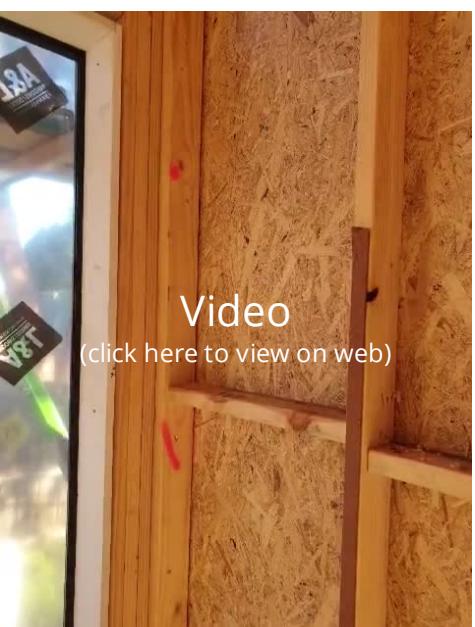
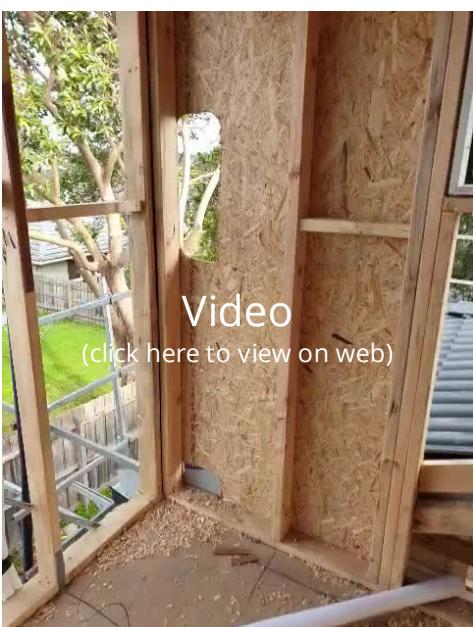
Theatre Wall, Fixings not into Stud



Internal Column



North Meal



Bedroom 3 West



Bedroom 4 West



Bedroom 4 West



Ground floor Powder Room, BR4
Bracing not nailed at 150mm centres in
some locations, check Fixings



Powder room BR4 Bracing cut out not
blocked and fixed.

4.1.9 Wall Framing

WALL NOT PLUMB

I observed the Meals / Living Room wall to be approximately 10mm off of plumb.

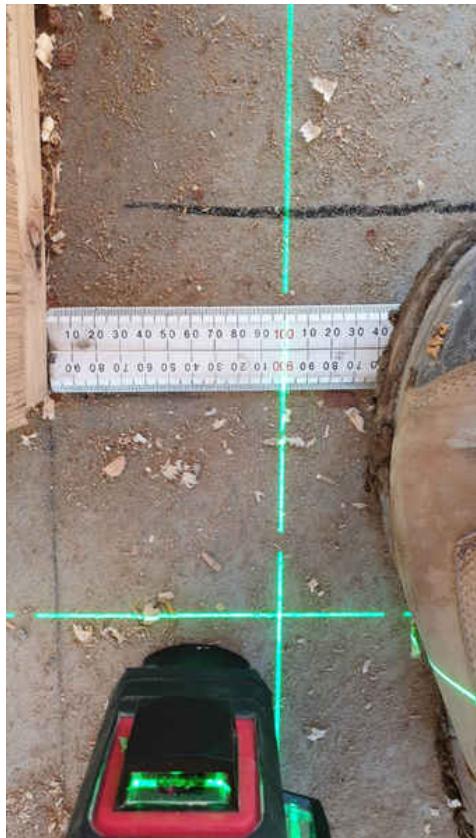
I recommend adjusting the wall back to plumb.

See below.

Recommendation

Contact your builder.

- Minor Defect



Meals Living Room Wall Bottom



Meals Living Room Wall Top

4.1.10 Wall Framing

POOR WORKMANSHIP

I observed one or more locations of poor workmanship.

I recommend these items are rectified and comply with AS1684.2 - 2010



Minor Defect

Recommendation

Contact your builder.



South Garage



South Garage



Dining Area

Bedroom 3 / WIR

1st Floor Bathroom / Hallway

4.1.11 Wall Framing
BR2 HOOP IRON BRACING

Minor Defect

As per Engineers Drawings, BR2 Bracing is required to be fixed to the Top & Bottom plate with 3/30 x2.8mm DIA GALV flat head nails.

I recommend installing Galvanised nails in accordance with the Engineers detail on S-601

Recommendation

Contact your builder.



North Study Top of BR2

4.1.12 Wall Framing

2BR2 MINI ANGLE



Major Defect / Safety Hazard

As per Engineers Drawings, BR2 Option 2 Bracing is required to be fixed to the Top & Bottom plate with 3/30 x2.8mm Dia Galv flat head nails, and 30 x 0.8mm Galv metal strap looped over plate and fixed to stud with 3 x 2.8mm Dia Galv flat head nails to each end. (Top and Bottom Plates as per BR2 Option B Brace Detail)

I recommend installing metal strapping and nails in accordance with the Engineers detail BR2 Option B on S-601

Recommendation

Contact your builder.



Master Bedroom WIR South, Missing Tie Down



Bedroom 2

4.1.13 Wall Framing

WALL JUNCTIONS NOT FIXED



Major Defect / Safety Hazard

Wall Intersections - not fixed, wall intersections were not fixed off at the nominated locations throughout the Structure.

AS 1684.2 -2010 states that wall intersections are fixed with blocks (minimum length 200mm) at spacings not exceeding 900mm and each stud must be fixed to the block with 2/75mm nails. See below for more detail.

Australian Standard 1684.2 - 2010 Section 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.

AS1684.2 - 2010 also notes that all walls must be installed with noggings at a spacing not exceeding 1350mm and wall intersections don't negate this requirement.

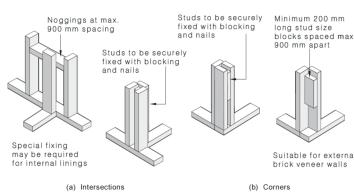
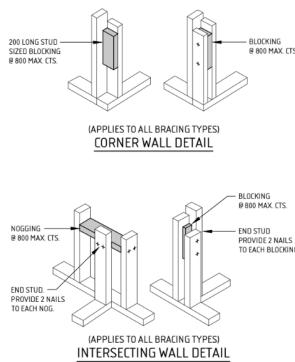


FIGURE 6.3 TYPICAL WALL JUNCTIONS

It is noted, Engineering Drawings by Structerre Consulting, Project Number 116578, sheet Number S-600 requires blocking to be provided at a maximum 800mm centres as detailed on Engineering Drawings.

See below for details.



I recommend all wall intersections are fixed as per AS1684.2 - 2010
Note not all locations were photographed.

Recommendation

Contact your builder.



Video
(click here to view on web)



Entry / Study



Master Bedroom / WIR



South Garage



1st Floor, Entrance to Bed 3 and Bed 4



South Garage



Video
(click here to view on web)



Fridge Area, Walls not yet fixed



Butlers Pantry



Butlers Pantry

4.1.14 Wall Framing
STEEL BEAM / TIMBER TOP PLATE PACKING AND FIXING

 Major Defect / Safety Hazard

Typical steel beam / timber packing and fixing detail documents were provided by Carlisle Homes.

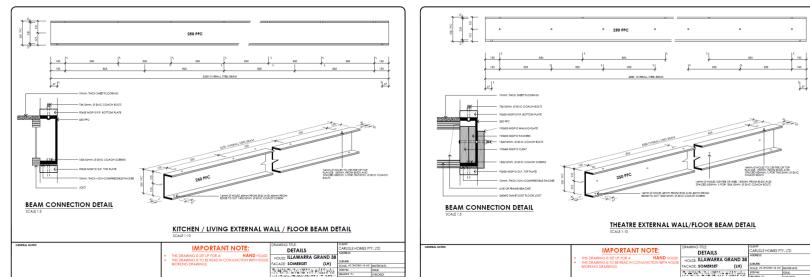
These typical details require 10mm thick non-compressible packing to be used.

During my inspection, I observed Macsim Window Horse Shoe packers were installed as packing. These packers provide little in the way of bearing capacity to support the concentrated loads. Solid plastic shims are available and recommended for use in these situations.

I recommend the builder confirms with the relevant engineer as to the adequacy of the installed window horseshoe packers or replace the packers with solid shims.

See pictures below.

Note not all hold down / fixing details were able to be fully inspected due to the construction and this was a limitation to my inspection.



Recommendation

Contact a qualified structural engineer.







5: FLOOR FRAMING

		IN	NI	NP	O
5.1	Floor Frame	X			X

IN = Inspected

NI = Not Inspected

NP = Not Present

O = Observations

Observations

5.1.1 Floor Frame

BRACING WALL NOT TIED TO FLOOR FRAME



Major Defect / Safety Hazard

Internal bracing walls not tied to / through floor structure in one or more places.

AS1684.2 - 2010 J5

J5.1 Bracing details for I-joints and internal walls

Where bracing is provided in internal walls, the lateral forces should be transferred in a similar manner to that shown in Table 8.22, Item (b), which is reproduced in Figure J19.

For internal walls supporting I-joints, an equivalent detail using Z-clips is shown in Figure J20. The fixings of the nogging to the top plate and the Z-clips to the I-joints should have equivalent lateral load capacity to those fixings given in Figure J19.

J6 FIXINGS AND TIE-DOWN DESIGN

In general, tie-down details for solid timber joists may be used with I-beams and should be in accordance with the requirements given in Section 9; however, bolting through the depth of I-beams used as joists should not occur.

In some cases, it will be necessary to provide a tie-down that is not continuous between the roof and the foundations. An example of a suitable detail for transferring tie-down forces through an I-joint floor is shown in Figure J21.

Furthermore, see Dindas, hyJOIST Options Range Installation Guide Oct 2013 (Detail F9 attached below)

Link to Dindas Installation Guide [click here](#)

I recommend further advice from a Structural Engineer or Dindas Engineer.

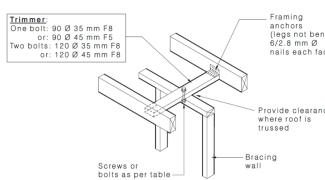


FIGURE J19 BRACING DETAIL FOR I-JOIST TO INTERNAL WALL

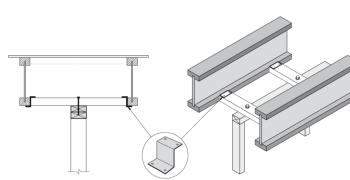
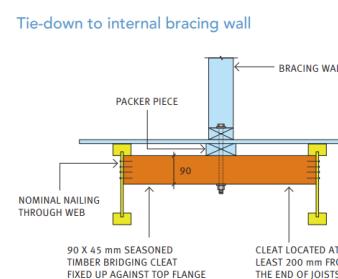


FIGURE J20 EQUIVALENT Z-CLIP DETAIL TO TRANSFER BRACING FORCES THROUGH INTERNAL WALLS



DETAIL F9

Recommendation

Contact your builder.



1st Floor, Floor Frame, Bracing Wall Not Tied to Floor structure. (Bathroom Wall)



1st Floor, Master Ensuite Bracing wall not tied to Floor Frame



1st Floor, Master Bed WIR / Ensuite BR4 Bracing wall not tied to Floor Structure

5.1.2 Floor Frame

MISSING BOLT IN STEEL

– Minor Defect

A bolt was observed not to have been installed or removed in the garage steel beam that supports the WIR and Ensuite (Southern) First floor Wall.

I recommend installing new bolt as required.

Recommendation

Contact your builder.



6: ROOF FRAMING

		IN	NI	NP	O
6.1	Roof Trusses	X			X

IN = Inspected NI = Not Inspected NP = Not Present O = Observations

Observations

6.1.1 Roof Trusses

TRUSS TIE-DOWNS (TRUSS GRIPS)



Truss tie downs were not installed as per the truss manufacturers plans and specifications.

Some truss tie downs were observed to have been not installed or removed.

I recommend installing truss tie downs as per the truss makers recommendations.

See pictures for locations.

Recommendation

Contact your builder.



South Master Ensuite



South Bedroom 2 Tie Down removed



North Activities Room, Tie Down Removed

6.1.2 Roof Trusses

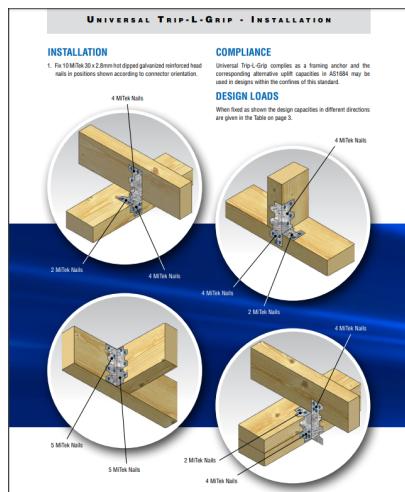
UNIVERSAL TRIP-L-GRIP (MITEK)



Major Defect / Safety Hazard

Universal Trip-L-Grips require 5 / 30 x 2.8mm Mitek nails to each face or receiving member as detailed by Mitek see [link here](#).

Furthermore, check the orientation of the brackets. Note some brackets have been installed upside down. I recommend installing additional fixings and re-orientating / replace brackets as required.



Recommendation
Contact your builder.



Master Bedroom

Master Bedroom

Master Bedroom



Master Bedroom



North Bedroom 4 Truncated Truss



Bracket required in this location, check truss makers drawings for more information.



Master Bedroom

6.1.3 Roof Trusses

**TRUSS IN APPROPRIATELY BLOCKED**

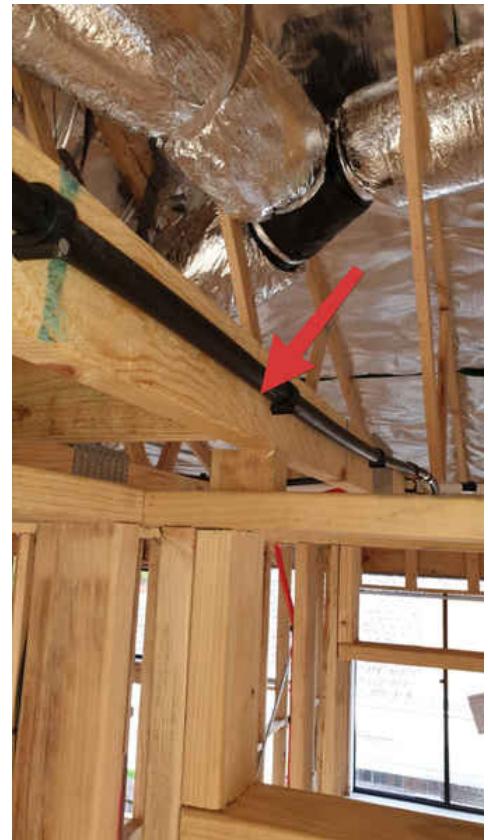
One roof truss was found to have been blocked to an internal wall, this truss is not designed to be load bearing mid span.

I recommend consulting the truss manufacturer for advice.

See picture for location.

Recommendation

Contact your builder.



1st Floor, WC