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Report By:



**Site Address:**

**Client Name:**

**Phone #:**

**Email:**

<b>Dwelling type:</b>	Double Storey
<b>Dwelling configuration:</b>	House and Garage
<b>Nature of works:</b>	New Build
<b>Stage of inspection:</b>	Frame
<b>Construction Type:</b>	Hebel
<b>Garage:</b>	Attached
<b>Foundations:</b>	Waffle Slab
<b>Builder:</b>	

## **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.

## **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 unless noted otherwise within the report. The use of ladders is regulated by the OH&S Regulations 2017, we have not visualised any part of the dwelling that can not be seen by the author with their feet no higher than 2 m from FGL.

## **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.

The building process is progressive and items in this report may or may not be covered during the build by materials installed over a documented defect. We recommend that all clients book a reinspection and state that the builder must present all defects rectified prior to moving forward with the build. All items that we are unable to look at from a previous report will not be included in any future reports. We will use all endeavours to ensure rectification, however we are limited to non-destructive method of detection.

## 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 top of the cover page.

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

The inspection was conducted without the 'client' present, and details exterior and interior.

The weather was fine 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 dwelling owners under these two acts.

## **Schedule of Defects:**

### **Defects, observations and other related comments from Frame Inspection on 15/11/2023.**

1.

**AS 1684.2; 6.2.2.2:** - Bottom plates supporting butt joints, concentrated loads, and jamb studs to openings exceeding 1200 mm shall be stiffened as per Fig. 6.7.

This frame does not meet this requirement.

### 6.2.2.2 Bottom plates

Bottom plates may be butt-jointed provided both ends are fixed and supported by floor joists, solid blocking or a concrete slab.

Bottom plates supporting jamb studs to openings exceeding 1 200 mm, or below studs supporting concentrations of load, shall be stiffened as shown in [Figure 6.7](#).

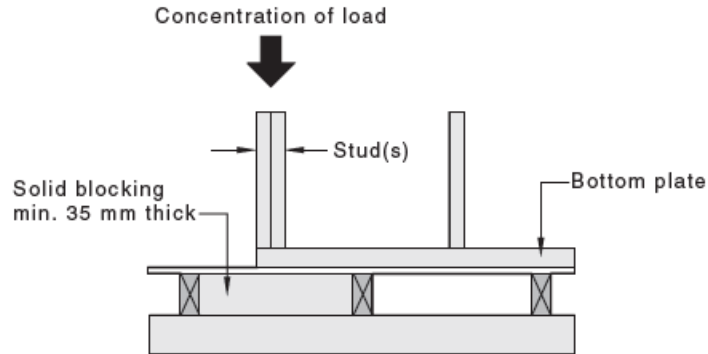


Figure 6.7 — Bottom plate stiffening



2.

**AS 4440; B4:** -As documented below a number of trusses are presenting as bearing over the timber framing at less than the required 70mm. The framing and or truss may require reworking, or confirmation for this installation from the truss engineer.

#### **B4 BEARING WIDTH**

The minimum bearing width for timber trusses should be 70 mm. For bearing widths less than 70 mm, confirmation from the truss engineer should be sought.



### 3.

**The NCC; 3.2.2.6:** - A vapour barrier must be installed to both the Class 1 and Class 10 parts of the slab edge and be turned up the edge of the slab to finished ground level.

The vapour barrier has not met this requirement.

#### **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”.

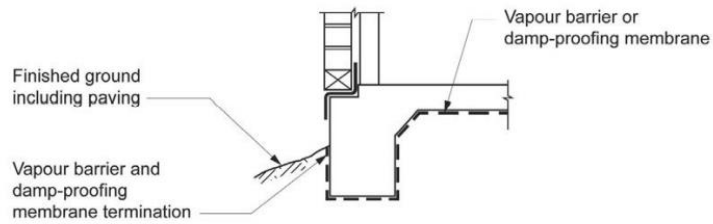
(b) Installation

A vapour barrier must be installed as follows—

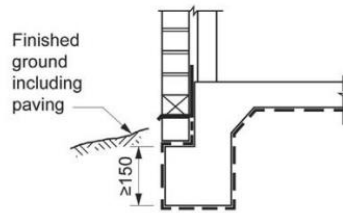
- (i) lap not less than 200 mm at all joints; and
- (ii) tape or seal with a close fitting sleeve around all service penetrations; and
- (iii) fully seal where punctured (unless for service penetrations) with additional polyethylene film and tape.

- (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](#).

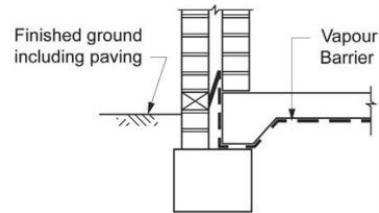
Figure 3.2.2.3 Acceptable vapour barrier and damp-proofing membrane location



(a) Minimum rebate for cavity masonry or veneer wall



(b) Deep edge rebate alternative



(c) Masonry alternative



4.

The Hyne GL13C alfresco beam has been installed upside down. These beams are designed with an upwards camber.

I refer to Hyne glulam beams camber chart. Cambered beams should not be installed with the camber facing downwards.

This dwelling has not met this requirement.

# The camber distances of our GLT products.

## Overview

Hyne Timber Glue-laminated (Glulam) products with a "C" postfix (i.e. Beam 21C), designates a vertical camber radius of 600m. An "S" postfix designates a straight beam profile.

The alignment tolerance of both straight and cambered beams shall be no more than 1mm per metre of beam length. Cambered beams are generally supplied with a marking stamped on the top edge of the beam. Unless specifically requested (such as for large cantilevers), cambered beams should not be installed with the camber arch facing downwards.

BEAM LENGTH (M)	2.4	2.7	3.0	3.3	3.6	3.9	4.2	4.5	4.8	5.1	5.4
CAMBER (MM)	1.2	1.5	1.9	2.3	2.7	3.2	3.7	4.2	4.8	5.4	6.1

BEAM LENGTH (M)	5.7	6.0	6.3	6.6	6.9	7.2	7.5	7.8	8.1	8.4	8.7
CAMBER (MM)	6.8	7.5	8.3	9.1	9.9	10.8	11.7	12.7	13.7	14.7	15.8

BEAM LENGTH (M)	9.0	9.3	9.6	9.9	10.2	10.5	10.8	11.1	11.4	11.7	12.0
CAMBER (MM)	16.9	19.0	19.2	20.4	21.7	23.0	24.3	25.7	27.1	28.5	30.0

BEAM LENGTH (M)	12.3	12.6	12.9	13.2	13.5	13.8	14.1	14.4	14.7	15.0	15.3
CAMBER (MM)	31.5	33.1	34.7	36.3	38.0	39.7	41.4	43.2	45.0	46.9	48.8

BEAM LENGTH (M)	15.6	15.9	16.2	16.5	16.8	17.1	17.4	17.7	18.0	18.3	18.6
CAMBER (MM)	50.7	52.7	54.7	56.7	58.8	60.9	63.1	65.3	67.5	69.8	72.0



### AS/NZS 1328.1:98 Compliant

We craft for durability and our promise is just as strong as our product. Values of integrity, dependability and accountability underpin our business and that's why we've had our products certified by an independent third-party. The 'S' Mark scheme provides rigorous auditing of GLT glue-line bond processes and product documentation. (Licence No:2757)

[hyne.com.au](http://hyne.com.au)

For further product information  
call us now on 1300 304 963.





5.

**Australian Glass and Window Association (AGWA):** - Windows shall be packed plumb and square including under the sill.

The window reveals and door frames around the dwelling have not been installed in accordance with the AGWA installation instructions or the manufacturer's installation instructions.

#### CORRECT INSTALLATION OF FRAMES

1. Fit flashing to window surround as required.
2. Measure the frame opening to ensure that there is sufficient room for the product and additional packing.

#### Stud Opening

Height = O/A reveal size + adequate clearance

Width = O/A reveal size + adequate clearance

Clearance dimensions vary between manufacturer's products. For adequate clearance, refer to instructions.

3. Frame must be packed plumb, square and not twisted between the openings. Ensure the sill is fully supported. Failure to do so may result in sill roll on sliding windows.

Sills on all windows and doors must be straight and level and should be packed and secured.

To ensure the satisfactory long term performance of sliding doors, the sill should be fully supported. Where the sill projects during construction the sill should be fully supported.

Keep sashes closed whilst installing frames.

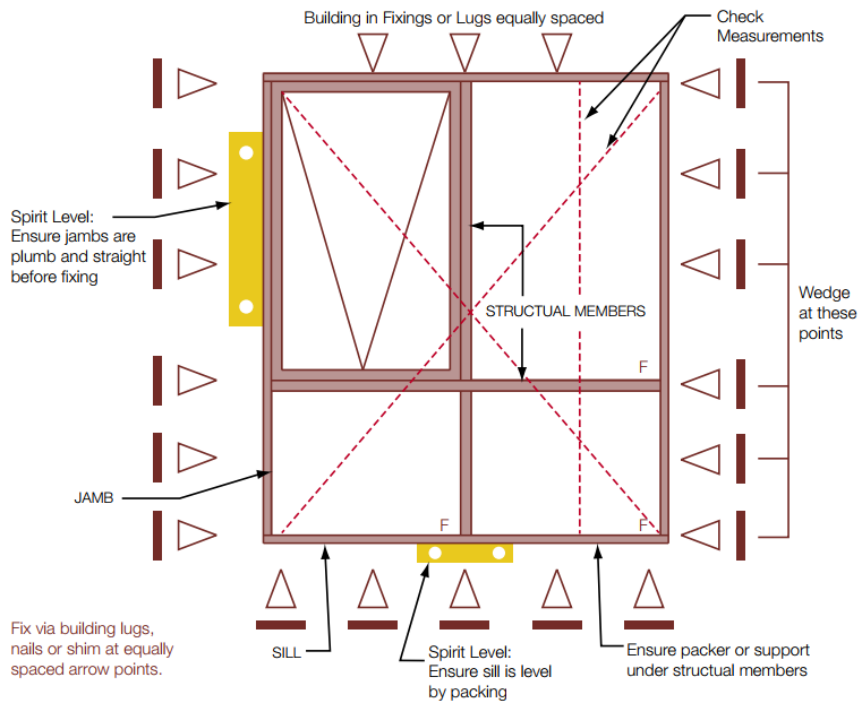
Secure frames with a fixing of a gauge and spacing appropriate for the wind load.

In brick veneer constructions, aluminium frames should be secured by nailing or screwing through reveal into stud work.



# INSTALLATION

Figure 11 Installation Summary



6.

**AS 3660.1; 5.3.6:** The electrical mains cable enters into the dwelling's timber wall frame area through a services conduit. All services passing from the external soil into the dwelling must be closed ensuring termite entry is blocked.

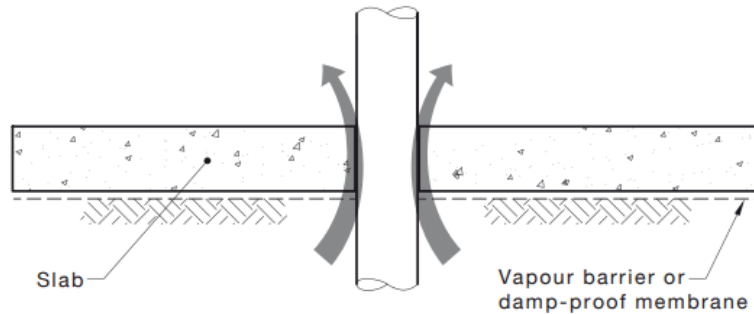
Attachments to a service shall be such that no gap is in excess of 0.4mm. Builder to supply a copy of termite system to my client as per section 26 of the Domestic Building Contracts Act 1995.

Installation of this service currently does not comply with the termite protection requirements.

### 5.3.6 Concrete slab penetrations

Where sheeting is used on a slab-penetrating pipe or service, a collar, consisting of an annular flange of sheet material with a minimum annular width of 15 mm and minimum height against the pipe or service of 20 mm, shall be cast into the concrete slab or, where it is to be concealed beneath a permanent fixture, it shall be sealed to the top surface of the slab with a termite-resistant adhesive tested in accordance with AS 3660.3.

Attachment to the pipe or service shall be such that no gap is in excess of 0.4 mm. Where a flange to be cast into a concrete slab is clamped or tied to retain position on the pipe or service, the clamp or tie shall be above the horizontal annulus.



(c) Penetrations

DIMENSIONS IN MILLIMETRES

FIGURE 2.1 (in part) EXAMPLES OF VULNERABLE POINTS IN BUILDINGS WHERE TERMITES COMMONLY GAIN CONCEALED ACCESS (PATH OF TERMITE ATTACK INDICATED BY ARROW)



7.

**AS 2589; 4.2.2:** - Steel and timber frames and exposed posts are defective if they deviate from vertical by more than 4 mm over a 1.8 m height.

Walls frames have not met this requirement.

#### 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 is in accordance with 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

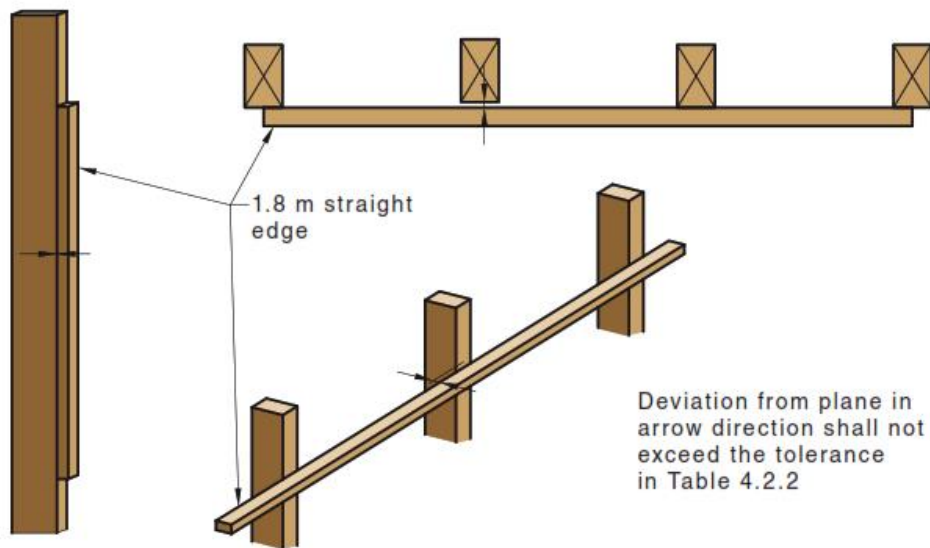


FIGURE 4.2.2(A) ASSESSING FRAMING TOLERANCE



8.

**AS 1684.2; 6.2.3:** - 15mm minimum shall be provided between top of window or door frames and underside of lintel / frame head.

There are openings to this dwelling have not met this requirement.

### 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.



9.

**The Domestic Building Contracts Act 1995, Section 26:** -We noted the sewer pipe in the wrong location. The noted that the slab will need to be altered.

In order to open a slab, a builder must;

- Seek engineering process and design for both the opening and reinstatement of any and all support systems such a steel reinforcing.
- Document same.
- Send the engineering to the site surveyor for approval.
- Have the site surveyor witness the opening and closing of the slab to ensure that the builder has carried out the works in accordance with the process's and rectification statements in the engineering documentation.
- Ensure that termite protection is installed into the opening as required.
- Supply a copy of all to my client as per section 26 of the Domestic Building Contracts Act 1995.

## 26. Builder must supply copies of relevant reports etc.

- (1) A builder must give to a building owner a copy of any report, notice, order or other document that the builder is given in relation to the building work being carried out by the builder for the building owner by any public statutory authority, provider of services such as gas, electricity, telephone, water and sewerage or person registered under the **Building Act 1993**, and must do so as soon as practicable after receiving the report, notice, order or document.

Penalty: 20 penalty units.



10.

**AS 1684; 6.2.1.3:** - Intersecting walls shall be fixed at their junction with blocks or noggings. Double wall frames intersect, and as such need to be connected with blocks at 900mm crs to for one solid wall frame.

### 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.



11.

**AS 1684.2; Table 8.18 (c):** - 2 / 30 x 2.8 mm dia. nails are required at each stud and at top and bottom plates for metal angle braces.

Bracing to this dwelling has not met this requirement.

**Table 8.18(c) — Structural wall bracing (maximum wall height 2.7 m)**

Type of bracing	Bracing capacity, kN/m
<p>(c) <i>Timber and metal angle braces</i> — The maximum depth of a notch or saw-cut shall not exceed 20 mm. Saw-cuts studs shall be designed as notched.</p> <p>2/50 mm x Ø2.8 mm nails for timber brace, or 2/30 mm x Ø2.8 mm nails for metal brace, to each stud and plate</p> <p>(See Detail 1)</p> <p>1 800 mm min. to 2 700 mm max.</p> <p><b>Detail 1:</b> 30 mm x 0.8 mm galv. metal strap looped over plate and fixed to stud with 3/30 mm x Ø2.8 mm galv. flat-head nails (or equivalent) to each end. Alternatively, provide single straps to both sides, with 3 nails per strap end, or equivalent anchors or other fasteners.</p>	<p>1.5</p>



**12.**

**AS 1884; 3.1.1.4, AS 2455.1, 2455.2 & 3958.1; 5.4.6:** - Concrete and timber subfloor to be prepared for finished floor covering. Australian standards: 1884 Floor coverings - Resilient sheet and tiles - Installation practices call a planeness of 4 mm below a straightedge. Installation guides for several timber coverings call for concrete subfloor levels should not exceed 3 mm variation over 1 metre in any direction, using a 1 metre straightedge. As per AS 3958 the finished floor tiling surface should be flat and true to within a tolerance of 4 mm in 2 m from the required plane. Specific recommendations for individual flooring products or as recommended by adhesive manufacturers will apply. Where concrete subfloors are not sufficiently flat, leveling compounds, grinding or other means to level the subfloor need to be undertaken. Timber subfloors, packing of joists and sanding of sheet subfloors may be necessary.

Preparation for finished flooring material has not been met.

**3.1.1.4 Surface quality**

The surface of a concrete subfloor shall be thoroughly checked for the following:

- (a) *Planeness*—When a straightedge 2000 mm long is placed at rest at two points 2000 mm apart on the surface, no part of the surface shall be more than 4 mm below the straightedge.
- (b) *Smoothness*—When a straightedge 150 mm long is placed at any position at rest at two points on the surface, no part of the surface shall be more than 1 mm below the straightedge.
- (c) *Soundness*—The surface shall be without cracks, crazing, dusting, rain damage, spalling, efflorescence or blistering.

	<b>AS 1884:2021</b>	<b>AS 2455.1:2019</b>	<b>AS 2455.2:2019</b>
<b>Planeness</b>	No part of the subfloor shall be more than 4 mm below the 2 m straightedge		
<b>Smoothness</b>	There shall be no more than a 0.5 mm abrupt surface deviation below the 150 mm straightedge	There shall be no gap larger than 1mm under the 150 mm straightedge	

**AS 3958.1; 5.4.6:** -



### 5.4.6 Tile finish and joints

The recommendations for tile finish and joints are as follows:

- (a) When measured with a straightedge, the finished surface of the tiling should be flat and true to within a tolerance of  $\pm 4$  mm in 2 m from the required plane. The lippage between two adjacent tiles should not exceed 2 mm. In the case of tiles where the surface has been ground flat, for example polished tiles, the lippage should not exceed 1.5 mm, and for joint widths of 3.0 mm or less the lippage should not exceed 1.0 mm.



Could not check area



13.

**AS 1684.2; Table 9.4:** - Bottom plates shall be nominally fixed to concrete slabs with 1 x 75mm concrete nails at 1200 mm maximum spacings.

Nails used were found to be less than 75mm and as such, have not met this requirement.

**TABLE 9.4**  
**NOMINAL FIXINGS FOR TIMBER MEMBERS**

Joint	Minimum fixing for each joint
Bottom plates to concrete slab	One 75 mm masonry nail (hand-driven at slab edge), screw or bolt at not more than 1200 mm centres



14.

**AS 1684.2; 9.5:** - The minimum depth of penetration into the final receiving member shall be 10 times the nail diameter when driven into the side grain and 15 times when driven into the end grain.

This requirement has not been met.

#### 9.5 Nominal fixings (minimum fixings)

Unless otherwise specified, the minimum diameter of machine-driven nails shall be 3.05 mm for hardwood and cypress and 3.33 mm for softwood framing. Machine-driven nails shall be plastic polymer (glue) coated or annular or helical deformed shank nails. Where the nail length is not specified in this standard, the minimum depth of penetration into the final receiving member shall be 10 times the nail diameter where driven into side grain or 15 times the nail diameter where driven into end grain. Unless otherwise specified herein, not less than two nails shall be provided at each joint.

Where plain shank hand-driven nails are used in lieu of machine-driven nails, they shall be a minimum diameter of 3.15 mm for hardwood and cypress and 3.75 mm for softwood and other low-density timber.

Nails used in joints that are continuously damp or exposed to the weather shall be hot-dip galvanized, stainless steel or monel metal. The nominal (minimum) fixings for most joints are given in [Table 9.4](#).



15.

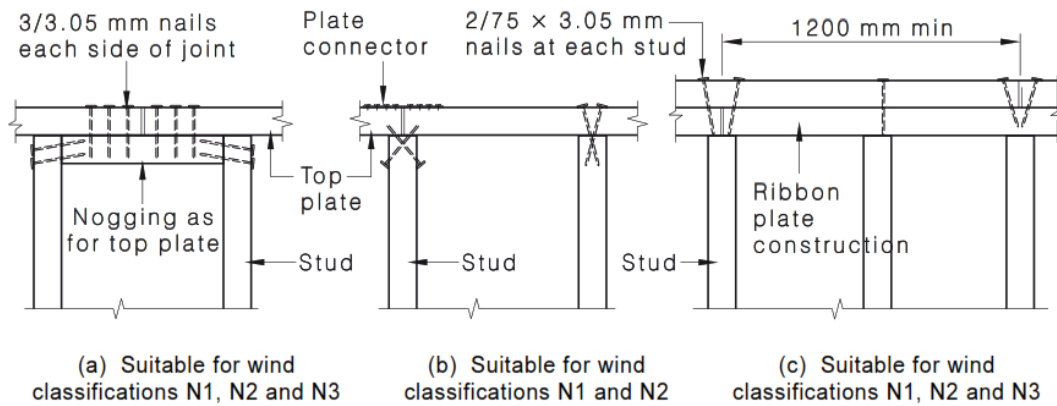
**AS 1684.2; 9.2.8:** - calls for the installation of a plate connector (gang nail plate or equiv.) at the top of all intersecting walls. Where plates interlock, they are not required.

There are gang nails missing to several of the top plates to the wall's connections. These plates play a vital role in securing one wall to another. It also assists with the racking force resistance on a home.

In areas, top plate connections have not met this requirement.

### 9.2.8 Joining of top plates and ring beam

Top plates and ring beam in walls shall be joined by one of the methods shown in Figure 9.2 for the relevant wind classification.



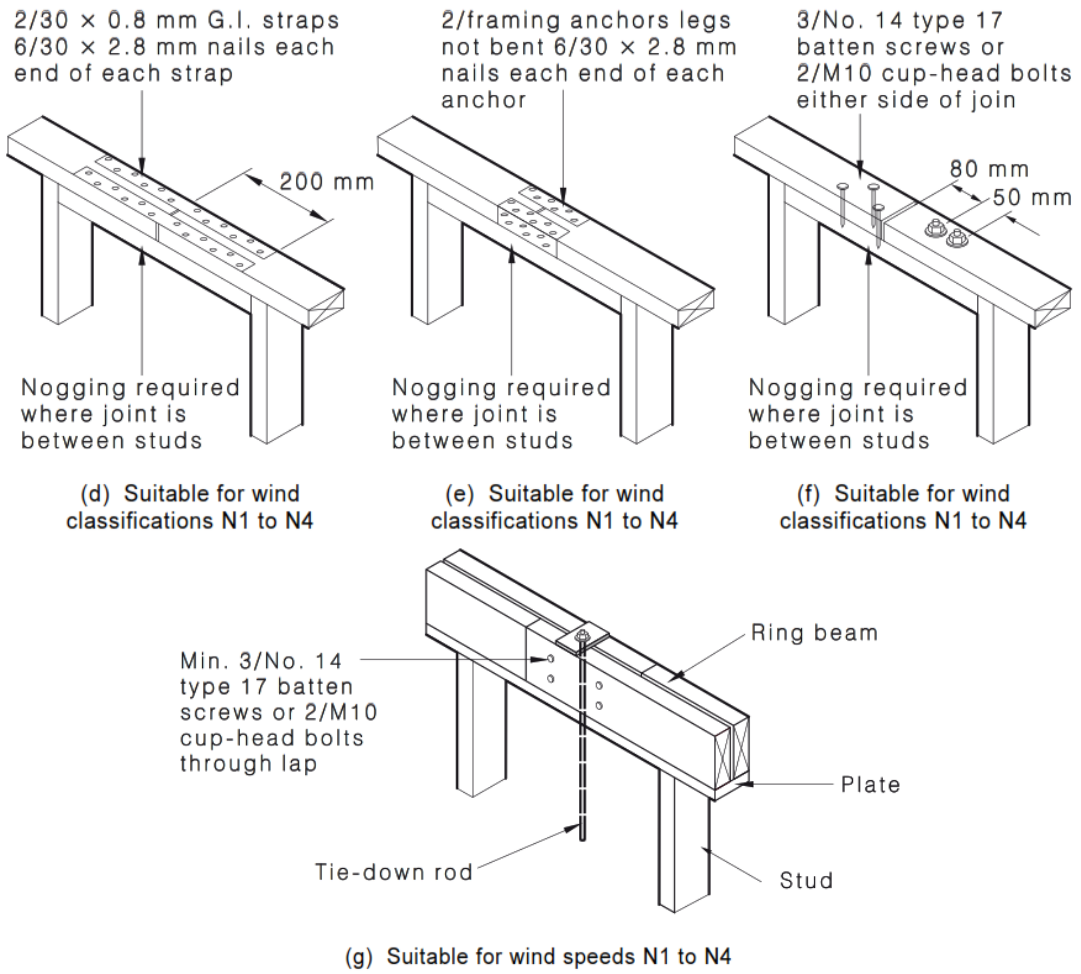


FIGURE 9.2 JOINING OF TOP PLATES AND RING BEAMS





All areas to comply

16.

**AS 1860.2; 10.4:** - Particleboard sheet flooring shall be screwed (not nailed) to I-beam and truss joists.

Fixing of particle board sheet flooring has not met this requirement.

Note: 'Struct-a-floor' sheet flooring may be nailed to Carter Holt Harvey I-beams in accordance with the manufacturer's installation requirements.

#### 10.4 Screws

Selection of screws for use with particleboard flooring sheets shall be in accordance with Table 2.

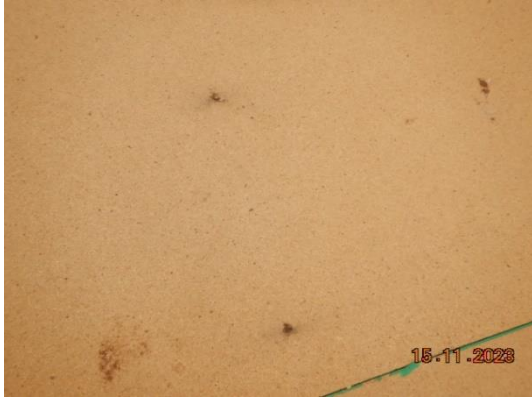
NOTE: If particleboard flooring is fixed to I-beam and truss joists, screws (not nails) should be used. The flanges may be only 35 mm thick and nails will penetrate through and may not have sufficient holding strength.

**TABLE 2**  
**MINIMUM SCREW SIZE/LENGTH COMBINATIONS**

Joist material	Flooring thickness, mm	Screw type and size
Timber	19 and 22	No. 10 × 50 mm twin-thread, self-drilling wood screw
	25	No. 14 × 65 mm twin-thread, self-drilling wood screw
Steel	19, 22, 25	No. 9 ×, or 10 × 45 mm countersunk self-embedding head, self-drilling

#### NOTES:

- Proprietary screws with self-breaking cutter nibs, to provide clearance in timber that is fixed to metal, are available and are preferred for particleboard flooring (see AS 3566.1 and AS 3566.2). Further advice should be obtained from the screw manufacturer.
- Some heavier gauge steel sections may require a No. 12 or No. 14 size screw.
- The screw-driving unit should be adjusted to drive the screw head 2 mm to 3 mm below the panel surface to allow for later sanding. Screws should not be driven more than 3 mm below the panel surface.



17.

**AS 1684.2; Table 9.4:** - Nominal fixing for bottom plates to joists shall be at 2 nails at 600mm max. centres.

Bottom plate fixing has not met this requirement.

**TABLE 9.4  
NOMINAL FIXINGS FOR TIMBER MEMBERS**

	Joint	Minimum fixing for each joint
Bottom plates to joists	Non-loadbearing and non-bracing walls	2/2.8 mm dia. nails at max. 600 mm centres
	Other walls	Plates up to 38 mm thick—2/75 × 3.05 mm nails at max.600 mm centres Plates 38 to 50 mm thick—2/90 × 3.05 mm nails at max.600 mm centres





18.

**AS 1860.2; 10.4:** - Tongue and groove particle board sheet flooring shall be fixed at 150 mm spacings at sheet ends and 300 mm spacings at joist crossings.

Fixing of particle board sheet flooring exceeds these maximums.

**10.5 Fixing spacings for nails or screws**

Nails or screws used in conjunction with adhesive complying with Clause 10.2 shall be spaced as follows:

- (a) *For square-edged panels—*
  - (i) *along edges and ends—*
    - (A) *spacing—*not exceeding 150 mm centres; and
    - (B) *distance—*not closer than 10 mm to any edge; and
  - (ii) *on intermediate joists—*not exceeding 300 mm centres.
- (b) *For tongued and grooved panels—*
  - (i) *along the edges—*
    - (A) *spacing—*at joist crossing, 300 mm centres; and
    - (B) *distance—*not closer than 10 mm nor greater than 25 mm to the base of the groove; and
  - (ii) *along the ends—*not exceeding 150 mm centres and not closer than 10 mm to the edge.



I was able to freely lift the sheet. Builder to ensure flooring is also glued as per manufacturers specs

## 19.

**AS1684.2; Section 8 and manufacturer installation guide:** - Permanent bracing shall be provided to enable the roof, wall, and floor framework to resist horizontal forces (racking forces) applied to the building. Appropriate connection shall also be provided to transfer these forces through the framework structure to the building's foundation. During construction, for various reasons, tradespeople often wish to make penetrations through structural plywood bracing panels. A neat hole (i.e. not over cut) of up to 100mm x 100mm within an envelope of 100mm from the vertical and top edges and 200mm of the bottom edge of the bracing pane will have no significant effect on the bracing capacity. Multiple 100mm x 100mm holes are allowable within the envelope but their centres must be no closer than 600mm. One hole of up to 400mm x 400mm located between the studs and within the envelope defined above, with nogging framing the hole and fixing of the plywood to the framing as per the requirements for the top and bottom plate is acceptable. If holes present as extensive, then the builder should seek engineering and design for reinforcement and/or reinstallation. Supply a copy of all documentation to the client as per section 26 of the Domestic Building Contracts Act 1995.

All sheets failing the guidelines will need to be reworked or replaced accordingly.

### 8.1 GENERAL

Permanent bracing shall be provided to enable the roof, wall and floor framework to resist horizontal forces applied to the building (racking forces). Appropriate connection shall also be provided to transfer these forces through the framework and subfloor structure to the building's foundation.

Where required, bracing within the building, which normally occurs in vertical planes, shall be constructed into walls or subfloor supports and shall be distributed evenly throughout.

Where buildings are more than one storey in height, wall bracing shall be designed for each storey.

## Holes through EGGER OS'Brace<sup>®</sup> bracing

As EGGER OS'Brace<sup>®</sup> possesses similar shear carrying capacity to other sheet bracing materials, allowable holes through EGGER OS'Brace<sup>®</sup> in size and distribution would be similar to these materials. A hole 100 x 100 mm maximum within an envelope of 100 mm from top and vertical edges and 200 mm of

the bottom of the bracing panel will not significantly affect the bracing capacity. Multiple holes of this size are permitted provided the centre lines of the holes are not closer than 600 mm.

### Example only





20.

**AS 1684.2; 6.2.1.5:** - Wall studs shall have continuous rows of noggings at 1350 mm maximum centres.

Breaks in the continuity of the noggling row through either short or missed noggling means that this requirement has not been met.

**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 noggling size shall be the depth of the stud minus 25 mm by 25mm thick, or the noggling 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.

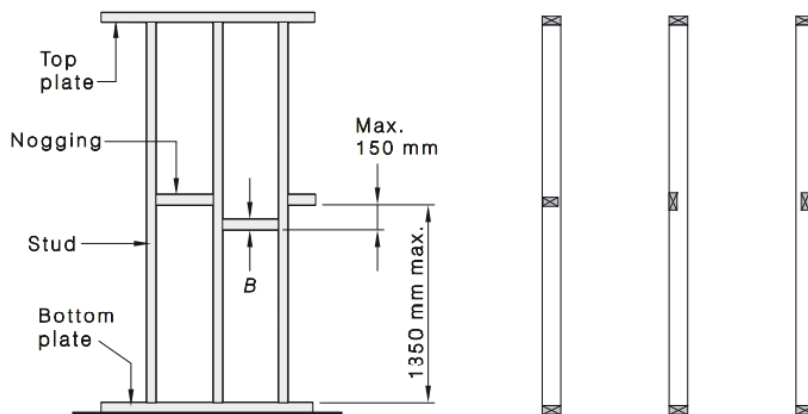
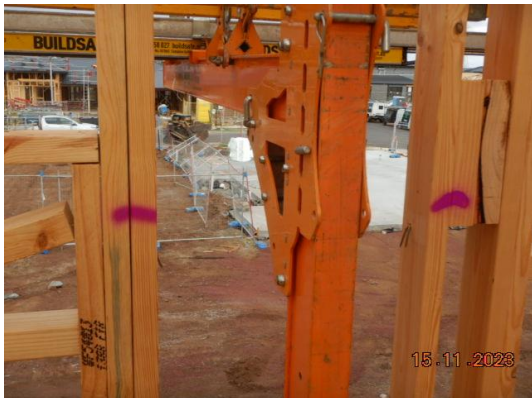


FIGURE 6.6 NOGGING



**21.**

**AS 4440; 3.10:** - If any timber truss is found to be damaged or manufactured in such a way as to impair performance, the truss engineer should be notified in order to provide adequate rectification to the truss.

Damage to this dwellings roof truss/s requires notification to the truss engineer as it is presents as severe enough to warrant attention.

### 3.10 REJECTION CRITERIA

Trusses designed and manufactured for criteria other than those being used on site shall not be used without being approved.

NOTE: Design criteria for trusses should be checked when they are delivered to site to ensure that they are the correct trusses. If any truss has been cut, drilled, damaged, or manufactured in such a way as to impair performance, notification should be given to the truss engineer in order to provide adequate rectification to the truss.

Trusses with severely degraded timbers or nailplates due to poor storage shall not be loaded prior to rectification or replacement.

#### NOTES:

- 1 Manufacturing error or damage deemed severe enough to warrant attention should include but not be limited to the following:
  - (a) Broken or split timbers.
  - (b) Missing nailplates on one or both sides of a joint.
  - (c) Nailplates obviously misplaced, for example, missing a member at a joint or nailplate not properly embedded.
  - (d) Any nailplate showing evidence of flattening of the teeth, or excessive splitting of the timber under the nailplate.
- 2 A truss supported away from the design location may be rejected.
- 3 If a fault is discovered after the truss has been loaded, the load should be supported to alleviate the load on the truss until rectified.



22.

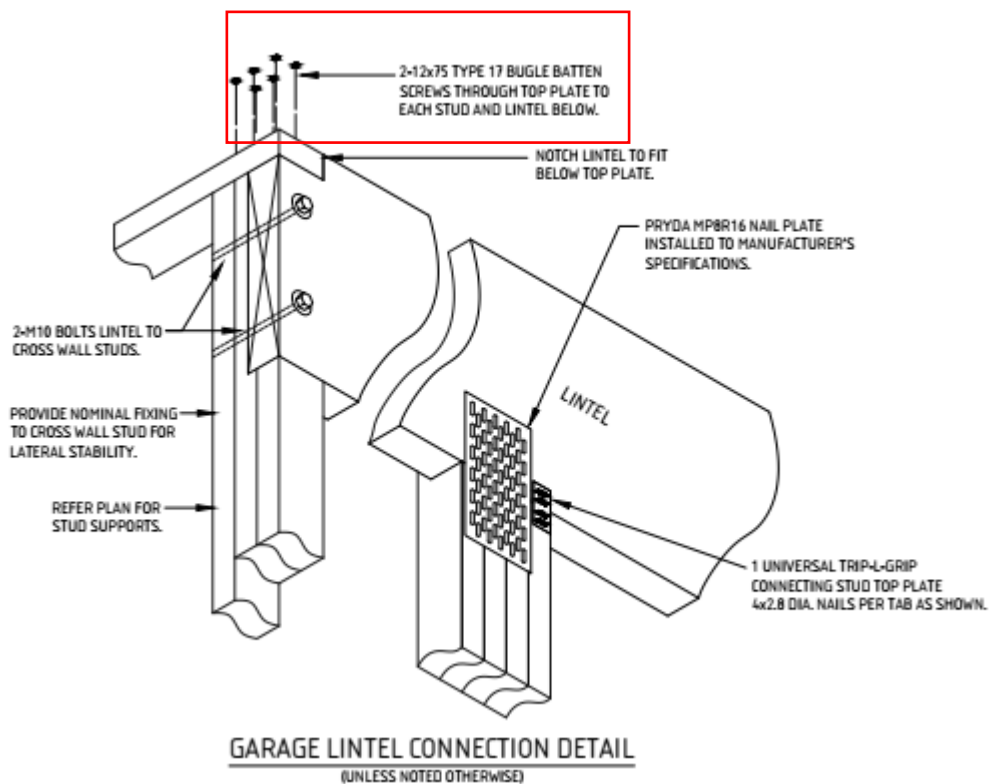
**The Domestic Building Contracts Act 1995; Implied Warranties, sect. 8(a):** - The building contractor warrants that work will be carried out in accordance with the plans and specifications set out in the contract.

**8. Implied warranties concerning all domestic building work**

The following warranties about the work to be carried out under a domestic building contract are part of every domestic building contract—

- (a) the builder warrants that the work will be carried out in a proper and workmanlike manner and in accordance with the plans and specifications set out in the contract;

The garage beam has not been connected as per engineering.





23.

**AS 4100, 14.3.6.1:** -The length of a bolt shall be such that at least one clear thread shows above the nut and at least one thread plus the thread run out is clear beneath the nut after tightening.

This requirement has not been met.

#### 14.3.6 Bolting

##### 14.3.6.1 General

All bolts and associated nuts and washers shall comply with the appropriate bolt material Standard specified in Clause 2.3.1. All material within the grip of the bolt shall be steel and no compressible material shall be permitted in the grip.

→ The length of a bolt shall be such that at least one clear thread shows above the nut and at least one thread plus the thread run out is clear beneath the nut after tightening.

One washer shall be provided under the rotated part.

Where the slope of the surfaces of parts in contact with the bolt head or nut exceeds 1:20 with respect to a plane normal to the bolt axis, a suitably tapered washer shall be provided against the tapered surface and the non-rotating part shall be placed against the tapered washer.

The nuts used in a connection subject to vibration shall be secured to prevent loosening. (See Clause 9.1.6.)



24.

**AS 2589; Clause 4.4.3.1.3:** - Perimeter fasteners shall be installed to plasterboard at internal angles, external corners, and wall and ceiling junctions, at a maximum of 300 mm centres.

**Note:** square set wall ceiling junctions should be installed at 150 mm centres. This includes bulkhead junctions and the like.

Additional members (studs, nogging, trimmers, etc) need to be installed to the areas below in order for the plasterer to meet this requirement.

#### 4.4.3.1.3 *Perimeter fixing*

Fasteners shall be installed at a maximum of 300 mm centres at all internal angles, external corners, wall ceiling junctions with cornices and at openings. For perimeter fastening, fasteners shall be spaced not less than 10 mm or more than 16 mm from the edges and ends of the gypsum plasterboard.

**NOTE:** Ceiling perimeter fasteners for square set wall ceiling junctions should be installed at 150 mm centres.



25.

**AS 4440; part 3.4:** - Timber roof trusses shall be installed straight and plumb to within the maximum tolerances.

**Bow;** Lesser of L/200 and 50mm

**Plumb;** Lesser of height/50 and 50mm (at any point along its length)

Trusses present beyond these maximum allowable tolerances.

### 3.4 INSTALLATION TOLERANCES

#### 3.4.1 General

Trusses shall be installed straight and vertical and in their correct position as specified in Clauses 3.4.2 to 3.4.4.

NOTE: The best method for ensuring correct truss positioning is to mark the locations on the top plate or other supporting elements in accordance with the truss layout prior to truss installation.

#### 3.4.2 Bow

Trusses shall be erected with minimal bow, in the truss and in any chord, with a tolerance not exceeding the lesser of  $L/200$  and 50 mm, where  $L$  is as defined in Figure 3.2(a) or Figure 3.2(b).

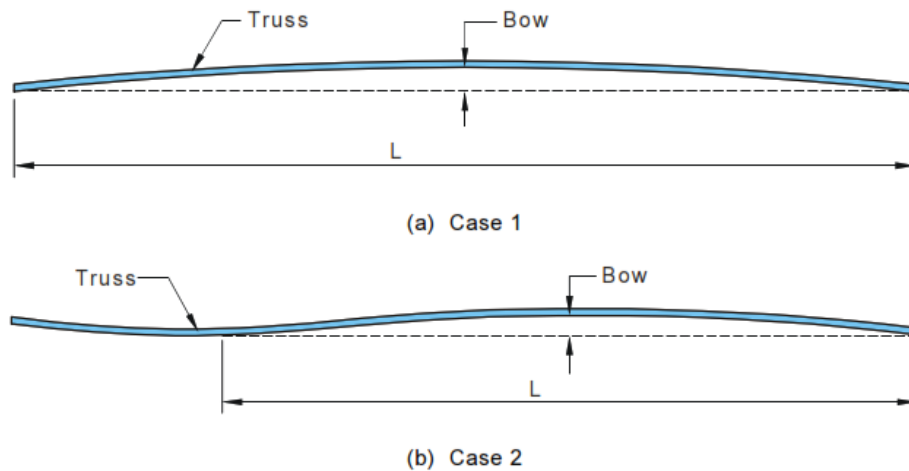


FIGURE 3.2 BOW

#### 3.4.3 Plumb

Trusses shall be so erected that no part of the truss is out of plumb with a tolerance exceeding the lesser of height/50 and 50 mm (see Figure 3.3).

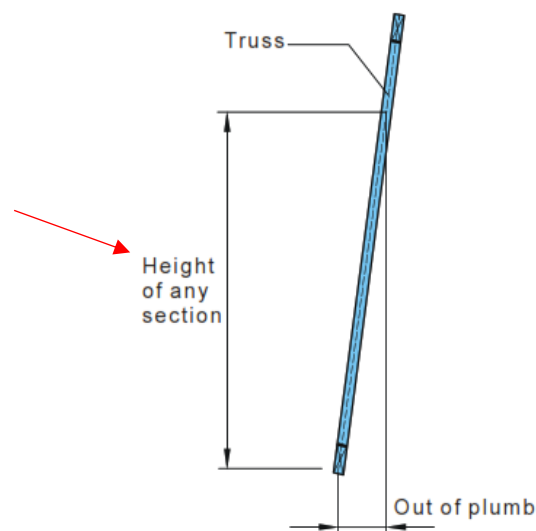


FIGURE 3.3 PLUMB



Garage

26.

**Domestic Building Contracts Act 1995:** - We refer the builder to the implied warranties where the builder agreed to build the dwelling in a **proper and workmanlike manner and with care and skill.**

### **8. Implied warranties concerning all domestic building work**

The following warranties about the work to be carried out under a domestic building contract are part of every domestic building contract—

- (a) the builder warrants that the work will be carried out in a proper and workmanlike manner and in accordance with the plans and specifications set out in the contract;
  
- (d) the builder warrants that the work will be carried out with reasonable care and skill and will be completed by the date (or within the period) specified by the contract;





Rework frame



Ensure all masonry nails are hit home



Trim / out of square



Valley boards throughout have not been securely fixed to trusses





Secure parapet laterally

Ridge support block for valley boards

## **Rectification Required: YES**

### TERMS & CONDITIONS OF Darbecca Pty Ltd 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 Victorian 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 as supplied by Darbecca Pty Ltd ABN 12 115 961 487. 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 Darbecca Pty Ltd or the author of this report for such use and or reliance.

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## **10. Reference**

Any reference contained within this report to the Building Code of Australian, 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. Darbecca Pty Ltd 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 wall/s, 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.
- j) Defects in relation to PVC sewage and storm water pipes are not covered in this inspection. Clients must seek the services of a licenced plumber to check all sewage and storm water pipes.

#### **12. VCAT Suitability**

**Unless specifically noted this report has not been prepared in-line with the requirements of Practice Note VCAT 2. If you wish to have this report converted to a VCAT 2 Practice Note, please contact our office on 03 5366 6900.**