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Report By:



Site Address:

Client Name:

Phone #:

Email:

Dwelling type:	Double Storey
Dwelling configuration:	House and Garage
Nature of works:	New Build
Stage of inspection:	Pre Plaster
Construction Type:	Lightweight Cladding
Garage:	Attached
Foundations:	Waffle Slab
Builder:	

Client Brief

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

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 WH&S Regulations 2011 Subdivision 3, we have not visualised any part of the dwelling that cannot 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 Queensland Building and Construction Commission Act, 1991 - Part 10, Section 109.

Schedule of Defects:

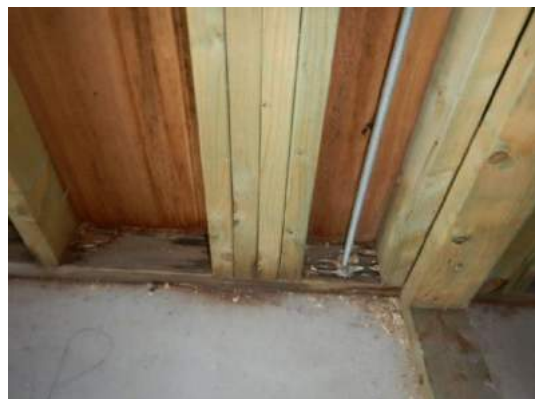
Defects, observations and other related comments from Pre Plaster Inspection on.

Note -

Areas of the frame have been exposed to the weather for a period of time. As I am not a qualified mold expert I can not provide advice in this area, should expert advice be required please engage the contact below.

(07) 5559 0790 or 0406 056 277

Email: info@amcozone.com.au





1.

AS 3500.5; 4.18.1: - The riser pipe is leaning over quite noticeably. The plumbers will normally install these pipes very close to plumb, or at least only square to the 1:60 grade in the pipe. The stormwater drain system is to be protected against damage.

The builder will need to run a camera and/or hydrostatic tests to confirm that the system is intact and compliant

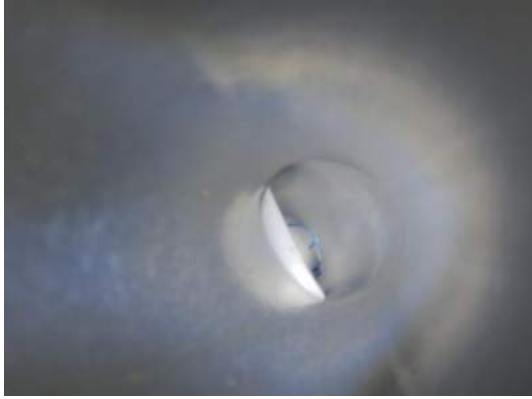
Dwelling to have a clear and functioning drainage system.

4.18 DRAINS

4.18.1 Below ground

Drains below ground shall—

- (a) be laid to an even grade, be straight, and have no lipped joints or internal projections;
- (b) have a minimum number of changes of grade and direction;
- (c) be sized in accordance with the fixture unit loading given in Table 4.9.7;
- (d) be continuously supported under the barrel, other than for cast iron and ductile iron pipes and fittings;
- (e) be protected against damage;
- (f) be watertight;



2.

AS 3500.3 Section 6.3.1.2. Calls for stormwater pipes to be cleaned internally prior to installation and commissioning. Ensuring a functioning stormwater system that is clear from obstruction.

Site stormwater pipes do not meet this requirement

6.3.1.2 *Site stormwater pipes*

Pipes for site stormwater drains shall—

- (a) have joints that comply, where appropriate, with Clauses 2.7 and 4.8;
- (b) where installed below ground, for other than cast iron, ductile iron and galvanized steel, be continuously supported by embedment (see Clause 6.3.5); and
- (c) be cleaned internally prior to installation and commissioning



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.

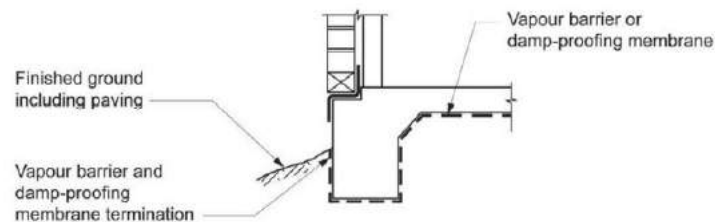
The vapour barrier has not met this requirement.

3.2.2.6 Vapour barriers

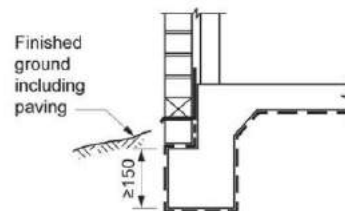
A vapour barrier must be installed under slab-on-ground construction for all Class 1 buildings and for Class 10 buildings where the slab is continuous with the slab of a Class 1 building as follows—

- (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 NCC 2019; Part 2.2 Damp and Weatherproofing: - A building including any associated site work must be constructed in a way that protects people and other property from the adverse effects of redirected surface water.

Temporary downpipes have come away from the gutters and need to be reattached.

Part 2.2 Damp and weatherproofing

Explanatory information:

Objective

O2.2

The Objective is to—

- (a) safeguard occupants from illness or injury and protect the building from damage caused by—
 - (i) *surface water*; and
 - (ii) external moisture entering a building; and
 - (iii) the accumulation of internal moisture in a building; and
 - (iv) discharge of *swimming pool* waste water; and
- (b) protect *other property* from damage caused by—
 - (i) redirected *surface water*; and
 - (ii) the discharge of *swimming pool* waste water.

Functional statements

F2.2.1 Surface water

A building including any associated *sitework* is to be constructed in a way that protects people and *other property* from the adverse effects of redirected *surface water*.



5.

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

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

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

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

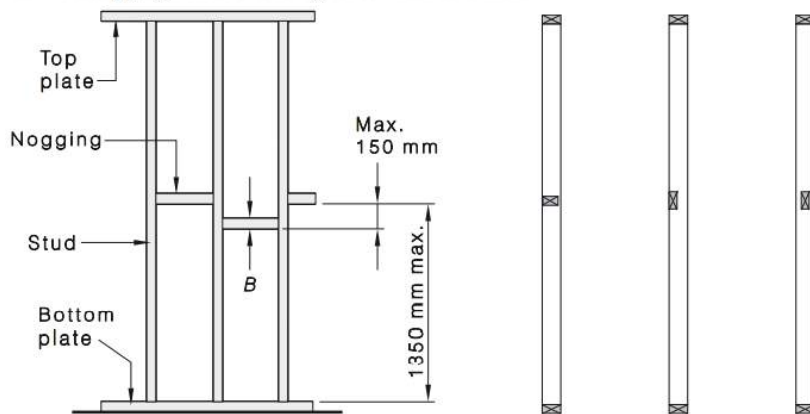


FIGURE 6.6 NOGGING



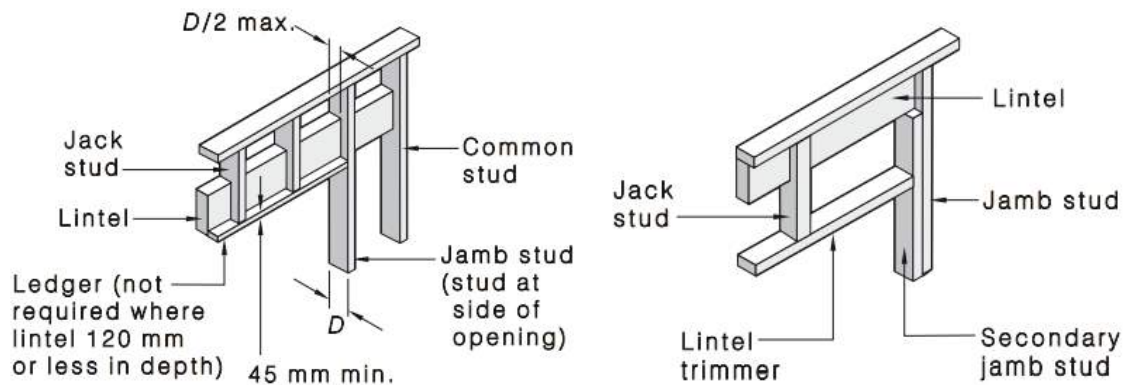
6.

AS 1684.2; 6.2.3: - At openings, a minimum 15 mm clearance gap shall be provided between the underside of framing and the top of windows / door frames.

This requirement has not been met.

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.





7.

AS 3500.1; 5.3.2: - Where electrical wire, consumer gas pipes, sanitary/stormwater drainage or any other service will be installed and maintain a separation at least 25 mm distance.

Installation fails to meet this requirement.

5.3.1 General

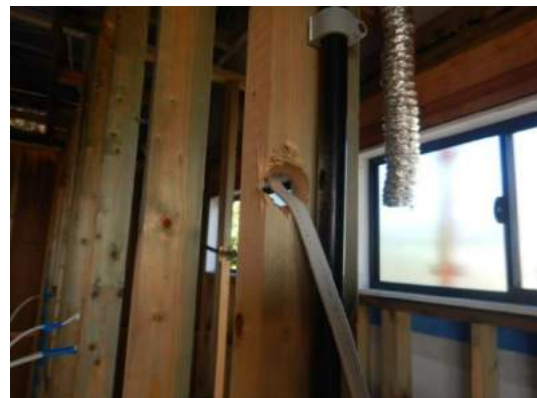
Where electrical conduits, wires, cables or consumer gas pipes, drains and other services are in place, pipes shall be installed in accordance with the requirements of [Clauses 5.3.2](#) to [5.3.5](#).

5.3.2 Above-ground services

Separation of at least 25 mm shall be maintained between any above-ground water service and any of the following services:

- (a) Electrical or telecommunications conduits.
- (b) Electrical or telecommunications wires or cables.
- (c) Consumer gas pipes.
- (d) Sanitary plumbing and drainage.
- (e) Storm water drainage.
- (f) Other above-ground water services.
- (g) Any other services.

Where a pipe is insulated, the measurement shall be from the outer edge of any insulation or wrapped material applied to the pipework.



8.

AS 1684.2; 6.2.1.4: - The maximum stud notching depth is 20 mm.

Note: Only one 20mm notch is permitted every 5th stud unless the notches are for a diagonal speed brace (see note 2).

Notching to studs has not met this requirement.

6.2.1.4 Notching, trenching and holes in studs and plates

The maximum size and spacing of cuts, holes, notches, and similar section-reductions, in studs and plates shall be in accordance with Figure 6.4 and Table 6.1. Holes in studs and plates shall be located within the middle half of the depth and breadth of the member, respectively. A longitudinal groove up to 18 mm wide \times 10 mm deep may be machined into the middle third depth of a stud to accept full-length anchor rods. Where the groove exceeds this dimension, the remaining net breadth and depth of the stud shall be not less than the minimum size required.

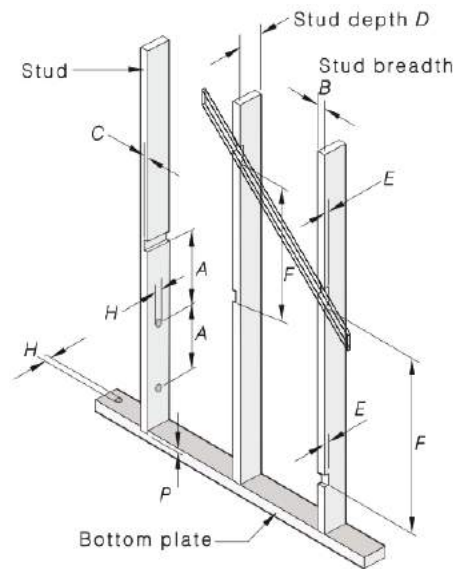


FIGURE 6.4 NOTCHING OF WALL STUDS

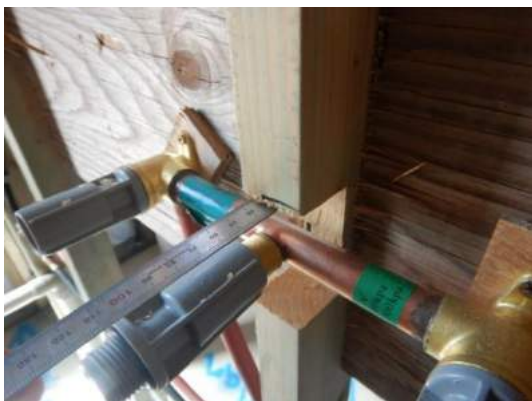
TABLE 6.1

HOLES AND NOTCHES IN STUDS AND PLATES

Symbol	Description	Limits	
		Notched	Not notched
A	Distance between holes and/or notches in stud breadth	Min. 3D	Min. 3D
H	Hole diameter (studs and plates)	Max. 25 mm (wide face only)	Max. 25 mm (wide face only)
C	Notch into stud breadth	Max. 10 mm	Max. 10 mm
E	Notch into stud depth	Max. 20 mm (for diagonal cut in bracing only) (see Notes 1 and 2)	Not permitted (see Note 1)
F	Distance between notches in stud depth	Min. 12B	N/A
P	Trenches in plates	3 mm max.	

NOTES:

- 1 A horizontal line of notches up to 25 mm may be provided for the installation of baths.
- 2 Except as permitted for diagonal cut in bracing, notches up to 20 mm may occur in every fifth individual stud.
- 3 For additional jamb stud requirements, see Figures 6.5 and 6.9.
- 4 Top and bottom plates in internal non-loadbearing and non-bracing walls may be discontinuous up to 60 mm (cut or drilled) to permit installation of services provided that, at the discontinuity, the plates are trimmed or otherwise reinforced either side of the discontinuity to maintain the lateral and longitudinal integrity of the wall.



Multiple locations at mixers

9.

AS 1684.2, Table 6.1: - Top and bottom plates of internal non loadbearing and non bracing walls may be discontinued or drilled up to a maximum of 60 mm to permit services, provided that the plate is stiffened with a trimmer or otherwise reinforced to maintain the longitudinal and lateral integrity of the wall.

The frame has not met this requirement.

Table 6.1 — Holes and notches in studs and plates

Symbol	Description	Limits	
		Notched	Not notched
<i>A</i>	Distance between holes and/or notches in stud breadth	Min. $3D$	Min. $3D$
<i>H</i>	Hole diameter (studs and plates)	Max. 25 mm (wide face only)	Max. 25 mm (wide face only)
<i>C</i>	Notch into stud breadth	Max. 10 mm	Max. 10 mm
<i>E</i>	Notch into stud depth	Max. 20 mm (for diagonal cut in bracing only) (see Notes 1 and 2)	Not permitted (see Note 1)
<i>F</i>	Distance between notches in stud depth	Min. $12B$	N/A
<i>P</i>	Trenches in plates	3 mm max.	

NOTE 1 A horizontal line of notches up to 25 mm may be provided for the installation of baths.

NOTE 2 Except as permitted for diagonal cut in bracing, notches up to 20 mm may occur in every fifth individual stud.

NOTE 3 For additional jamb stud requirements, see [Figures 6.5, 6.9\(A\) and 6.9\(B\)](#).

NOTE 4 Top and bottom plates in internal non-loadbearing and non-bracing walls may be discontinuous up to 60 mm (cut or drilled) to permit installation of services provided that, at the discontinuity, the plates are trimmed or otherwise reinforced either side of the discontinuity to maintain the lateral and longitudinal integrity of the wall.



Stiffening to the plate required

10.

AS 1684.2; 6.2.1.4: -Studs in holes and plates shall be located within the middle third of the of the depth and breadth of the member.

This requirement has not been met.

6.2.1.4 Notching, trenching and holes in studs and plates

The maximum size and spacing of cuts, holes, notches, and similar section-reductions, in studs and plates shall be in accordance with Figure 6.4 and Table 6.1. Holes in studs and plates shall be located within the middle half of the depth and breadth of the member, respectively. A longitudinal groove up to 18 mm wide × 10 mm deep may be machined into the middle third depth of a stud to accept full-length anchor rods. Where the groove exceeds this dimension, the remaining net breadth and depth of the stud shall be not less than the minimum size required.



11.

AS 1684.2; Table 6.2: - Stud spacing shall not exceed 600 mm for internal non-loadbearing walls.

In the areas indicated, this requirement has not been met.

TABLE 6.2

FRAMING SIZES FOR NON-LOADBEARING INTERNAL WALLS

Member	Minimum size, mm	Maximum spacing, mm
Top and bottom plates	35 × 70	—
Common studs of maximum height		
2700 mm	70 × 35	600
3300 mm	90 × 35 or 2/70 × 35	600
3600 mm	90 × 35 or 2/70 × 35	600
4200 mm	90 × 45 or 2/90×35	600
Studs supporting lintels	As for common studs	—



Continuous stud required.

12.

AS 1684.2; Table 6.1: - Holes and / or notches in studs shall be spaced minimum 3 x D apart.

This frame requirement has not been met.

Table 6.1 — Holes and notches in studs and plates

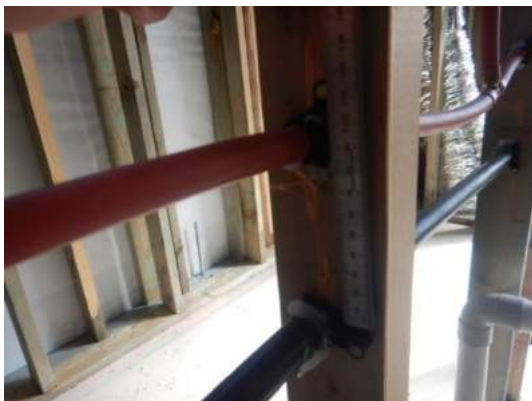
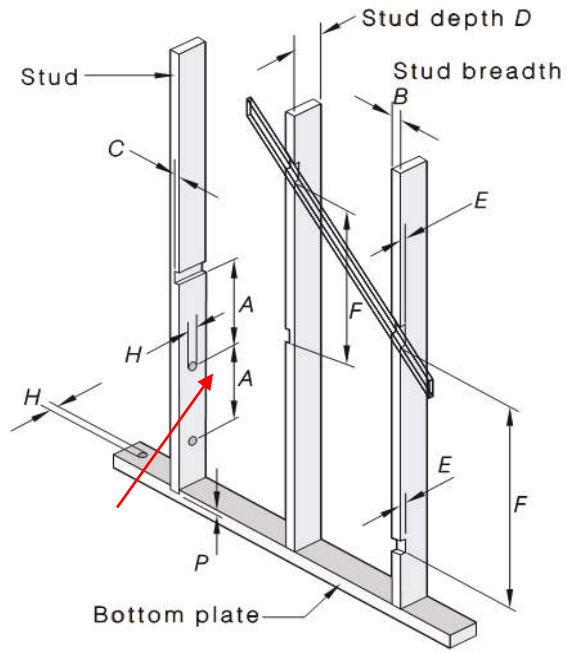
Symbol	Description	Limits	
		Notched	Not notched
→ A	Distance between holes and/or notches in stud breadth	Min. 3D	Min. 3D
H	Hole diameter (studs and plates)	Max. 25 mm (wide face only)	Max. 25 mm (wide face only)
C	Notch into stud breadth	Max. 10 mm	Max. 10 mm
E	Notch into stud depth	Max. 20 mm (for diagonal cut in bracing only) (see Notes 1 and 2)	Not permitted (see Note 1)
F	Distance between notches in stud depth	Min. 12B	N/A
P	Trenches in plates	3 mm max.	

NOTE 1 A horizontal line of notches up to 25 mm may be provided for the installation of baths.

NOTE 2 Except as permitted for diagonal cut in bracing, notches up to 20 mm may occur in every fifth individual stud.

NOTE 3 For additional jamb stud requirements, see [Figures 6.5, 6.9\(A\) and 6.9\(B\)](#).

NOTE 4 Top and bottom plates in internal non-loadbearing and non-bracing walls may be discontinuous up to 60 mm (cut or drilled) to permit installation of services provided that, at the discontinuity, the plates are trimmed or otherwise reinforced either side of the discontinuity to maintain the lateral and longitudinal integrity of the wall.



210mm

13.

AS 3999; NCC 3.12.1.1: - The pre plaster insulation has not been completed as per the following guidelines to date.

AS 3999 5.4.3 Figure 5.4.3.1.2 Narrow gaps have not been filled between nonstandard stud spacings.

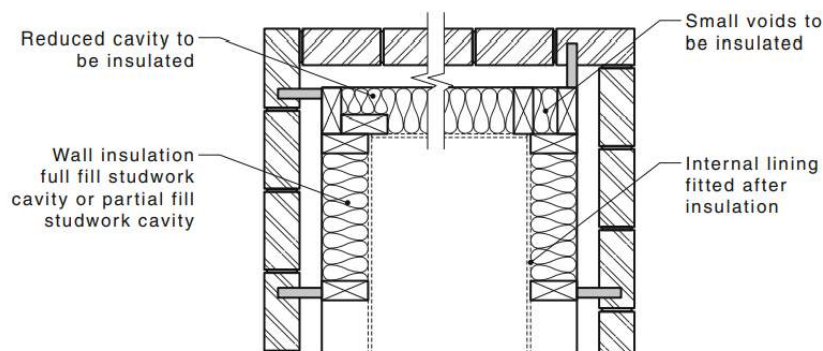
3.2.4 Continuity of insulation

The following requirements shall be met as appropriate:

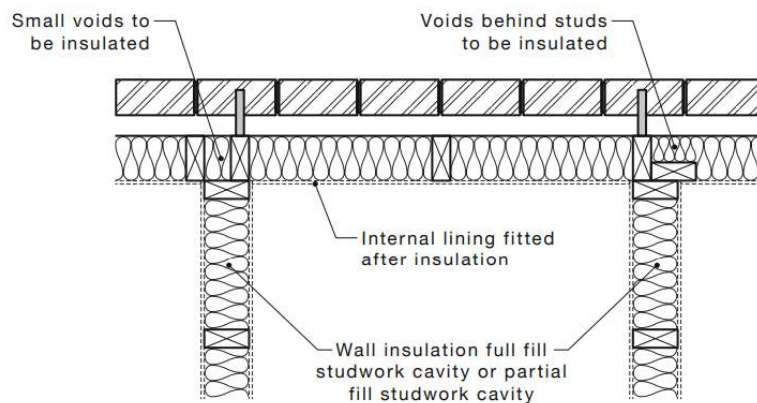
- (a) Bulk insulation shall be installed so that it—
 - (i) abuts or overlaps adjoining insulation other than at structural members such as columns, studs, noggins, joists, furring channels, and the like, where the insulation shall butt against the member;
 - (ii) forms a continuous barrier with ceilings, walls, bulkheads, floors, or the like, that inherently contribute to the thermal envelope (see examples in Figures 3.2.4.1 and 3.2.4.2); and

NOTE: The thermal envelope of a building is the part of a buildings fabric that separates heated or cooled spaces from the exterior of the building or other spaces that are not heated or cooled. A continuous thermal barrier around the envelope is necessary to achieve good performance.

- (iii) does not affect the safe or effective operation of a service or fitting.



(a) At corners



(b) At wall junctions

FIGURE 5.4.3.1.2 INSULATING VOID BETWEEN CLOSELY SPACED STUDS

FIGURE 5.4.3.1.2 INSULATING VOID BETWEEN CLOSELY SPACED STUDS

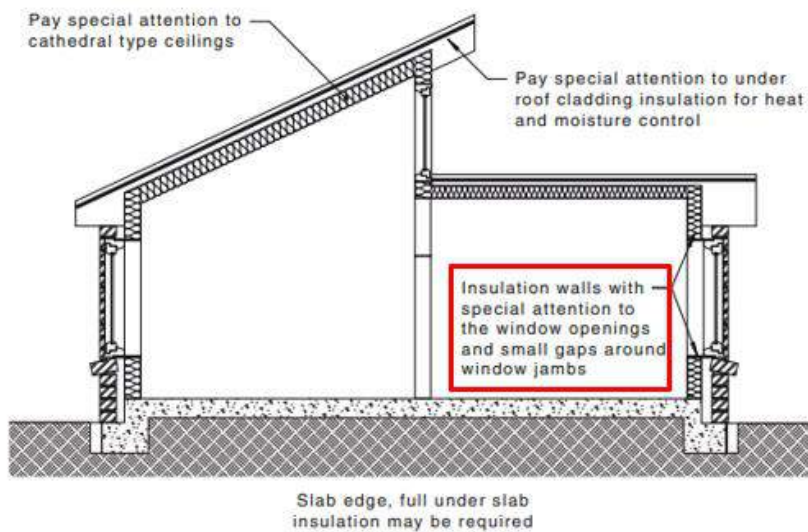


FIGURE 3.2.4.2 EXAMPLE OF THERMAL ENVELOPE WITH SLAB ON GROUND

3.12.1.1 Building fabric thermal insulation

- (a) Where *required*, insulation must comply with AS/NZS 4859.1 and be installed so that it—
- (i) abuts or overlaps adjoining insulation other than at supporting members such as columns, studs, noggings, joists, furring channels and the like where the insulation must butt against the member; and
 - (ii) forms a continuous barrier with ceilings, walls, bulkheads, floors or the like that inherently contribute to the thermal barrier; and

Explanatory information:

1. For example, in a two storey house with the second storey set back, the insulation in the first storey wall, the second storey wall and the roof over the set-back must be continuous. Therefore if the roof over the set-back has insulation on a horizontal ceiling, then insulation is also needed on the vertical in any ceiling space in order to connect the ceiling insulation to the second storey wall.
2. To form a continuous barrier, insulation should be placed in gaps between window and door jambs, heads and sills, and the adjoining wall framing unless a gap is otherwise *required*. This may need to be compressible to allow for movement between members.



Insulation required between double brace



14.

AS 4254.1; 2.5.3 (i): - Flexible ducts shall be installed with a bend radius to duct diameter ratio of 1 to 1, as a minimum.

There are bends to flexible ducts that have not met this requirement.

2.5.3 Hangers, support and load distribution systems

- (i) Flexible ducts shall be installed with a bend radius to duct diameter ratio of 1 to 1, as a minimum, as shown in Figure 2.5.2(D).

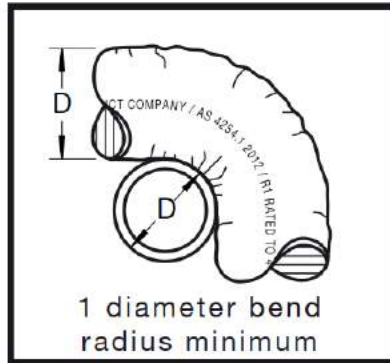
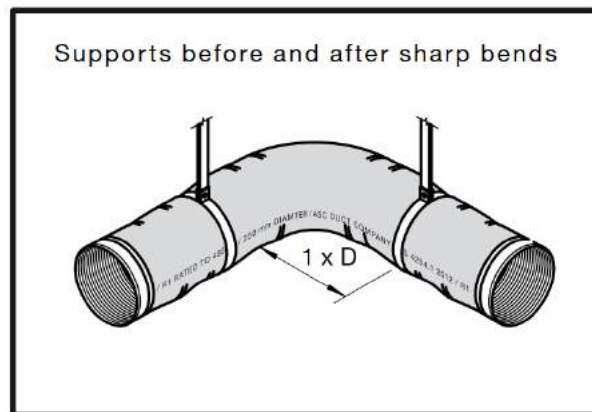


FIGURE 2.5.2(D) FLEXIBLE DUCT INSTALLATION—RADIUS BENDS



(b)

FIGURE 2.5.2(B) FLEXIBLE DUCT INSTALLATION





15.

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.





16.

AS 1684.2; 6.3.6.5: - Openings in non-loadbearing walls (internal and external) greater than 1800mm shall have a lintel as determined by Table 23 for a ceiling load width of 1800mm.

Non-loadbearing openings >1800mm have not met this requirement.

6.3.6.5 Lintels in non-loadbearing walls

The size of lintels in internal walls supporting ceiling joists only, or supporting hanging beams, shall be determined by using the hanging beam Span Table 23 (see Clause 7.3.7) or the counter beam (beams supporting hanging beams) Span Table 24 (see Clause 7.3.8) for these two applications respectively.

For internal walls where ceiling loads are not supported and wall openings are wider than 1800 mm, the size of the lintel shall be determined from Span Table 23 using a ceiling load width of 1800 mm.

Where wall openings wider than 1800 mm occur in non-loadbearing external walls, a lintel shall be provided and the size of the lintel shall be determined from Span Table 23 using a ceiling load width of 1800 mm.

AS 1684.2 N1/N2 SUPP. 4 - 2010

Wind classification N1/N2 – Seasoned softwood – Stress grade MGP 10

TABLE 23 HANGING BEAMS – Supporting ceiling loads

Size DxB (mm)	Ceiling Load Width (mm)							
	1800	2400	3000	3600	4200	4800	5400	6000
	Maximum Beam Span (mm)							
90x35	1400	1300	1300	1200	1200	1100	1100	1000
90x45	1900	1700	1600	1500	1400	1400	1300	1200
120x35	2600	2200	2000	1900	1800	1700	1600	1600
120x45	3000	2700	2400	2200	2100	2000	1800	1800
140x35	3200	2900	2600	2400	2200	2100	1900	1800
140x45	3500	3100	2800	2600	2400	2300	2200	2100
170x35	3900	3500	3200	2900	2700	2500	2300	2200
170x45	4200	3800	3400	3200	3000	2800	2600	2500
190x35	4300	3900	3500	3200	3000	2700	2600	2400
190x45	4700	4200	3800	3500	3300	3100	2900	2700
240x35	5400	4900	4300	3900	3600	3300	3100	2900
240x45	5800	5200	4800	4400	4100	3800	3500	3300
290x35	6500	5600	5000	4500	4200	3900	3600	3400
290x45	6900	6300	5600	5100	4700	4400	4100	3800

NOTES:

- i) Maximum spans are based on the support of a maximum ceiling mass of 12 kg/m². For guidance on roof and ceiling mass refer to Appendix A.
- ii) Beam ends may be chamfered to a minimum depth of 100 mm or 1/3 of the beam depth, whichever is greater.
- iv) Where ceiling joist spans are not the same each side of the beam, the average of the spans may be used.
- v) Roof loads shall not be strutted onto hanging beams.
- vi) Minimum bearing length = 70 mm at end supports.
- vi) Where the depth to breadth ratio exceeds 7:1, G.I. strapping or similar restraint shall be provided to the top edge of the beam at support points. Refer to Clause 7.2.26.
- vii) For design parameters refer to Figure 7.20.



17.

AS 2047; 7.2.1: -A number of the bottom reveals are presenting with significant fall back towards the window. Window assemblies shall be fixed into the building using recognized building practise. Fixing shall not deform the window assembly.

Many window manufactures require a 7 mm cement sheet or pine board strip placed in the cavity to support the heavy glazed section; this was not present at the time of inspection.

The dwellings installation has not met these requirements.

7.2 INSTALLATION

7.2.1 General

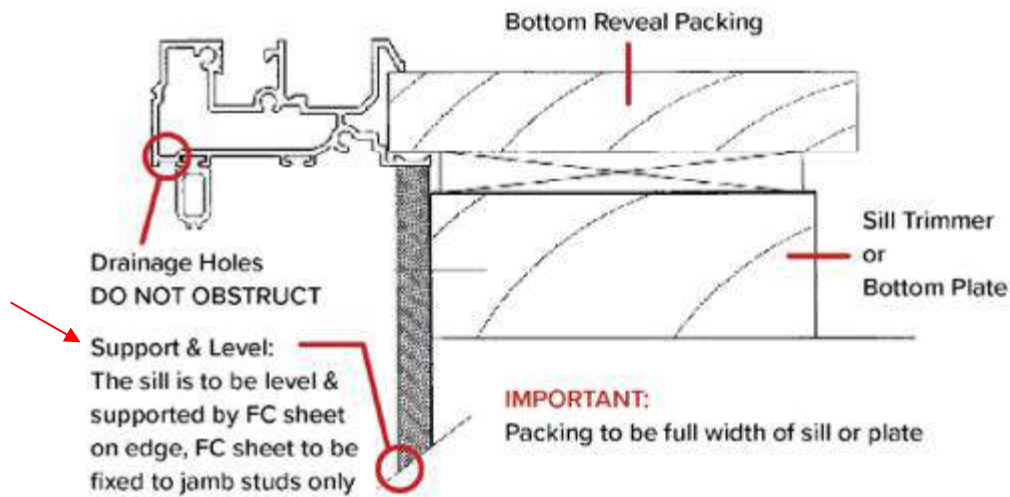
Openings in buildings into which windows are to be installed shall be of sufficient size to allow the window frame to be installed level and plumb.

Windows shall only be installed in locations for which they are designed in accordance with this Standard.

Window assemblies shall be fixed into the building using recognized building practices. Fixing shall not deform the window assembly. Non-loadbearing window assemblies shall not carry building loads.

Installed windows assemblies shall prevent water penetration and excessive air infiltration.

NOTE: Window manufacturers' installation procedures may need to be followed for particular installations.



A&L: Example only



18.

AS 1684.2 section 6.2.1.1: - Straightening of common studs (crippling) may be done so in accordance with the following.

The crippling method used to this frame on this frame has not met this requirement.

6.2 BUILDING PRACTICE

6.2.1 Studs

6.2.1.1 *Straightening of studs (crippling)*

Common studs may be straightened by 'crippling' with saw cuts and cleats (see Figure 6.2). Up to 20% of common studs, including those in bracing walls, may be crippled.

Studs at the sides of openings and studs supporting concentration of load shall not be crippled.

NOTE: Studs may be planed provided the minimum size remaining is not less than the minimum design size required; for example, a stud of 90 mm depth may be planed down to 70 mm depth if the minimum design depth required is 70 mm.

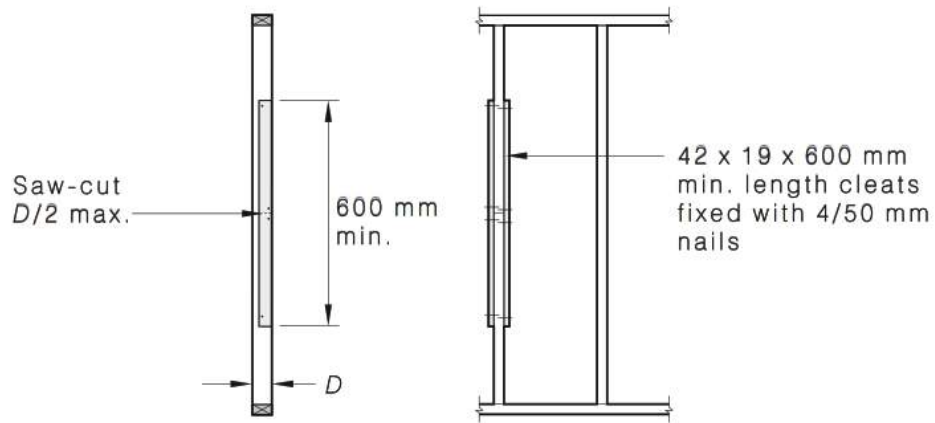
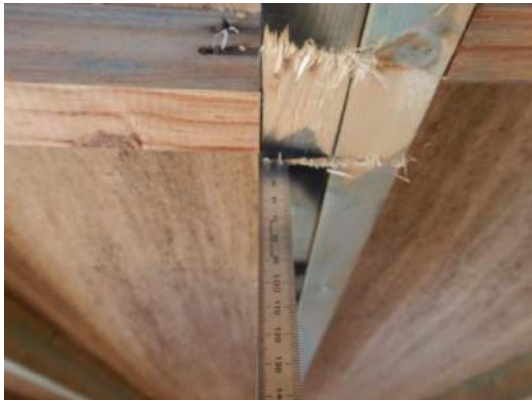


FIGURE 6.2 STUD CRIPPLING



19.

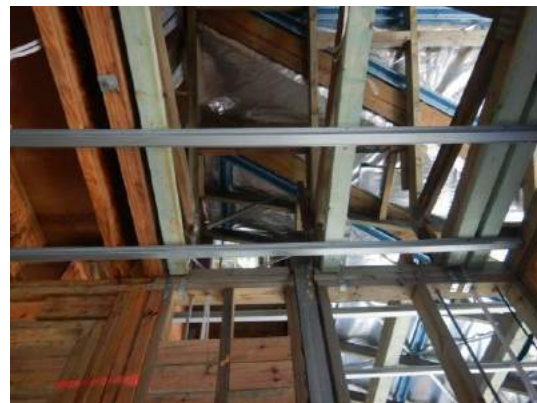
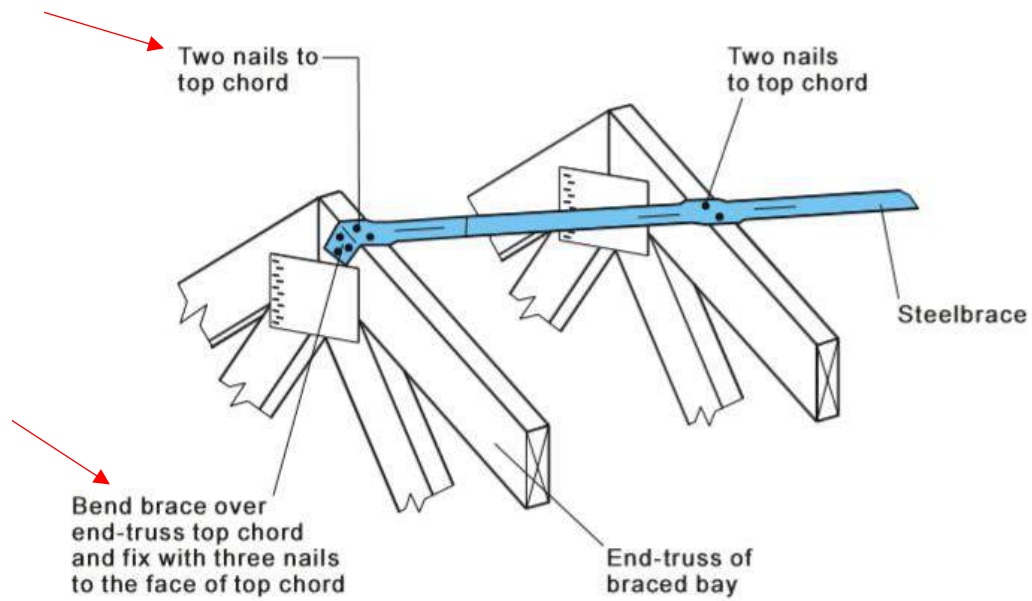
AS 4440; clause 4.3.8(b): - Diagonal steel roof braces (speed brace) shall be fixed to the apex of the top chord with two nails through the top and three nails into the side.

The roof frame speed bracing has not met this requirement.

4.3.8 Fixing

The steelbrace shall be arranged in a V-shape or X-shape configuration over the top of the top chords as specified in the bracing layouts in Clauses 4.3.3 to 4.3.6. Steelbrace shall be fixed to each truss in the brace section and to the supports, using a minimum of $\text{Ø}2.8 \text{ mm} \times 30 \text{ mm}$ reinforced-head nails in accordance with the following details:

(b) *End fixing details (at apex)* See Figure 4.21.

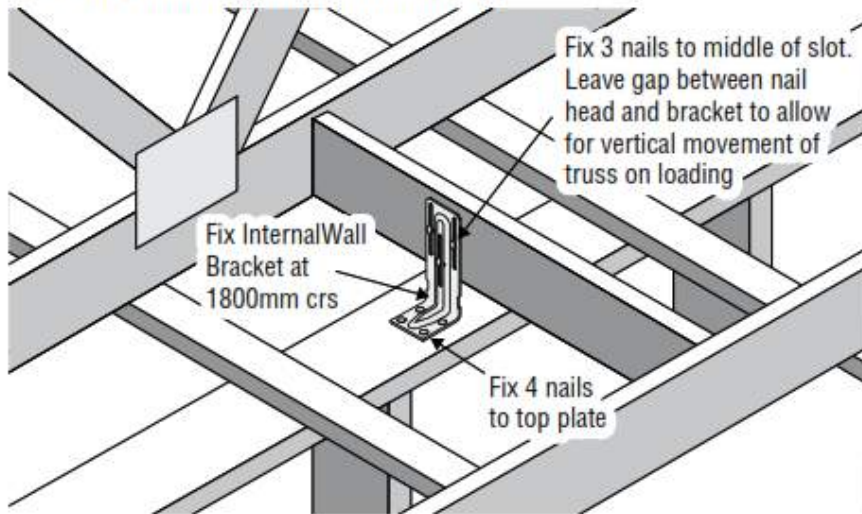


20.

Mitek Installation Guide: - Internal wall brackets shall be fixed with 7 / 30 x 2.8 galvanised clouts. Three (3) into the bottom chord and four (4) into the top plate.

Mitek internal wall brackets were found to have insufficient nails.

Trusses parallel to non-bracing wall



3 nails most locations

21.

Mitek joist hanger installation guide: - A number of the floor joist hanger brackets have not been nailed as per the manufacturer's guidelines. All defective joist hanger brackets must be reworked in order to comply with the manufacturer's minimum requirements.

Identified defects are as follows:

- Insufficient nails

- Wrong nail size
- Wrong nail type
- Girder truss supporting beam is of multiple ply construction, fastening bottom chords of the girder truss of the supporting beams with M12 bolt has not been completed.

FIXING WITH NAILS

General Installation

1. The JoistHanger should be fixed to the supporting member using the number of nails specified in Table 4.
2. Place the member to be supported in the JoistHanger so that it is firmly against the supporting member.
3. Drive the number of nails into the supported member as specified in Table 4.
4. Where the girder truss \ supporting beam is of multiple ply construction, fasten the bottom chords of the girder truss or the supporting beams with one M12 bolt located within 100mm of each side of the JoistHanger.

Alternatively, use two sufficiently long No. 14 screws in place of one M12 bolt.

Product Code	Size	Dimensions (mm)		
		A	B	C
JH3590	35 x 90	36	84	31
JH35120	35 x 120	36	117	31
JH4090	40 x 90	41	82	31
JH40120	40 x 120	41	115	31
JH40190	40 x 190	41	180	31
JH4590	45 x 90	46	79	31
JH45120	45 x 120	46	112	31
JH45140	45 x 140	46	139	31
JH45190	45 x 190	46	177	31
JH45220	45 x 220	46	214	31
JH5090	50 x 90	51	77	31
JH50120	50 x 120	51	110	31
JH50190	50 x 190	51	175	31
JH65165	65 x 165	65	167	31
JH70160	70 x 160	70	165	31
JH95150	95 x 150	95	152	31

Nails	MiTek 30 x 2.8mm hot dipped galvanised reinforced head.
Screws (alternative fixing with JoistHanger JH70160 and JH95150)	MSA1430 – MiTek No.14 x 30mm anti-split self-drilling HD galvanised screws with Ruspert® coating for fixing into single supporting beam
	MSA1465 – MiTek No.14 x 65mm anti-split self-drilling HD galvanised screws with Ruspert® coating for fixing into double 35mm or 45mm wide supporting beam

NAILING REQUIREMENTS

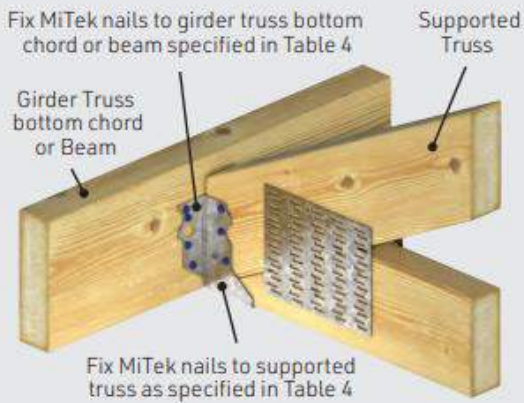
JoistHanger Size (mm)	Fixing to	
	Supporting Member	Supported Member
90	8	6
120 to 140	12	8
150 to 190	20	12
220	28	16

Table 4

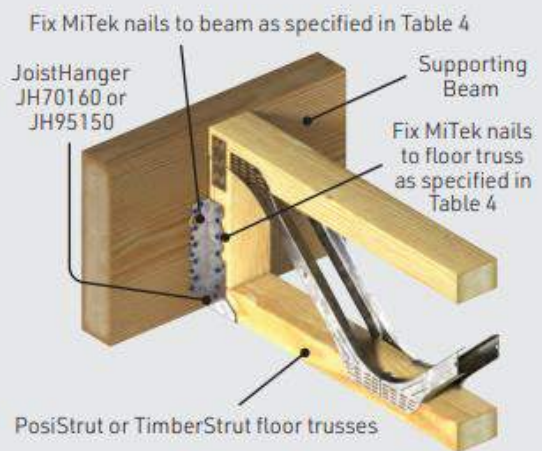
FIXING FLOOR JOIST TO BEAM



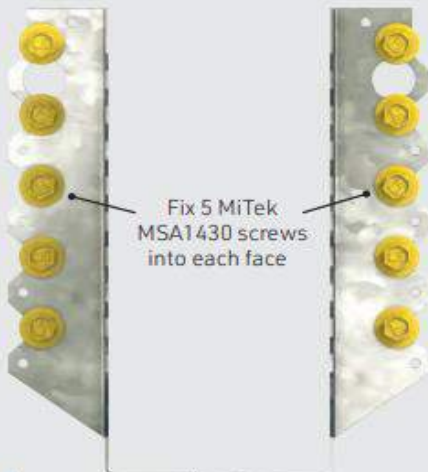
FIXING STANDARD TRUSS TO GIRDER TRUSS OR BEAM



FIXING FLOOR TRUSS TO BEAM

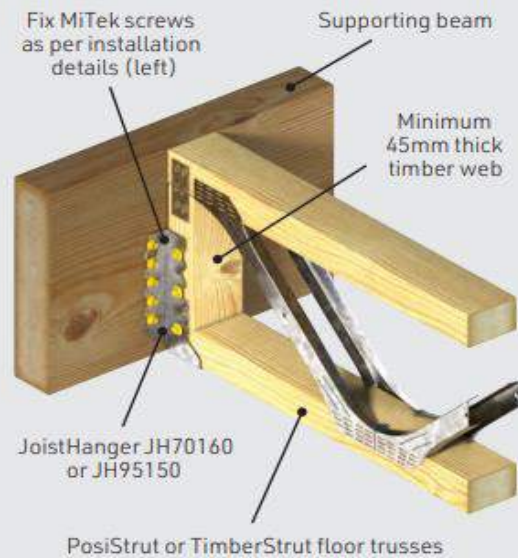


Screw fixing locations to supporting beam



Note

MiTek's patented screws are designed to tap their way through the smaller holes in the steel flanges and nailplates.





Missing joist hanger

22.

QBCC Guide to Standards and Tolerances; Section 5 & AS 2589; 4.2.2: -There are a number of areas in the home that exceed the deviation allowance of 4 mm tolerance over 2 m. The following acronyms apply.

- bowed walls or studs (B)
- out of plumb walls (OOP)

The following do not meet deviation requirements.

5.3 Straightness of timber frame surfaces

Within the first 12 months from completion of the work, frames are defective if they deviate from plane (horizontal or vertical bow) by more than 4mm in any 2m length of wall. Refer to Figure 1.3 A and B in this Guide for method of measurement.

FIGURE 1.3A HORIZONTAL SURFACE TOLERANCES

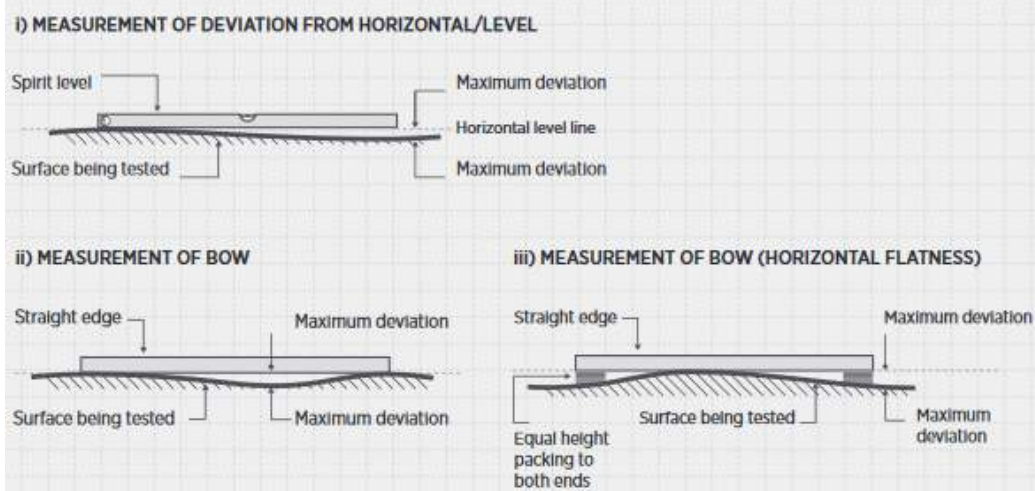
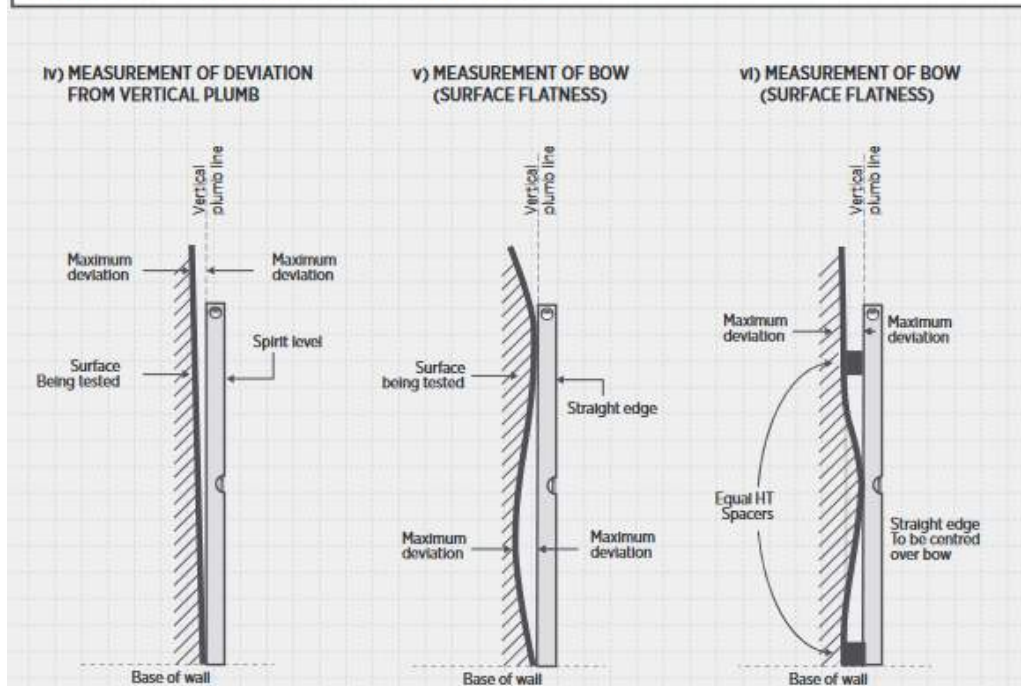


FIGURE 1.3B VERTICAL SURFACE TOLERANCES



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



23.

AS 2047; 7.2 & AGWA, Installation guide: - Openings in buildings into which windows are to be installed shall be of sufficient size to allow the window frame to be allowed level and plumb. manufacturer's installation instructions will be the predominant procedure for the installation of proprietary windows. Installers shall ensure that manufacturer's instructions are adopted.

These installation requirements have not been met.

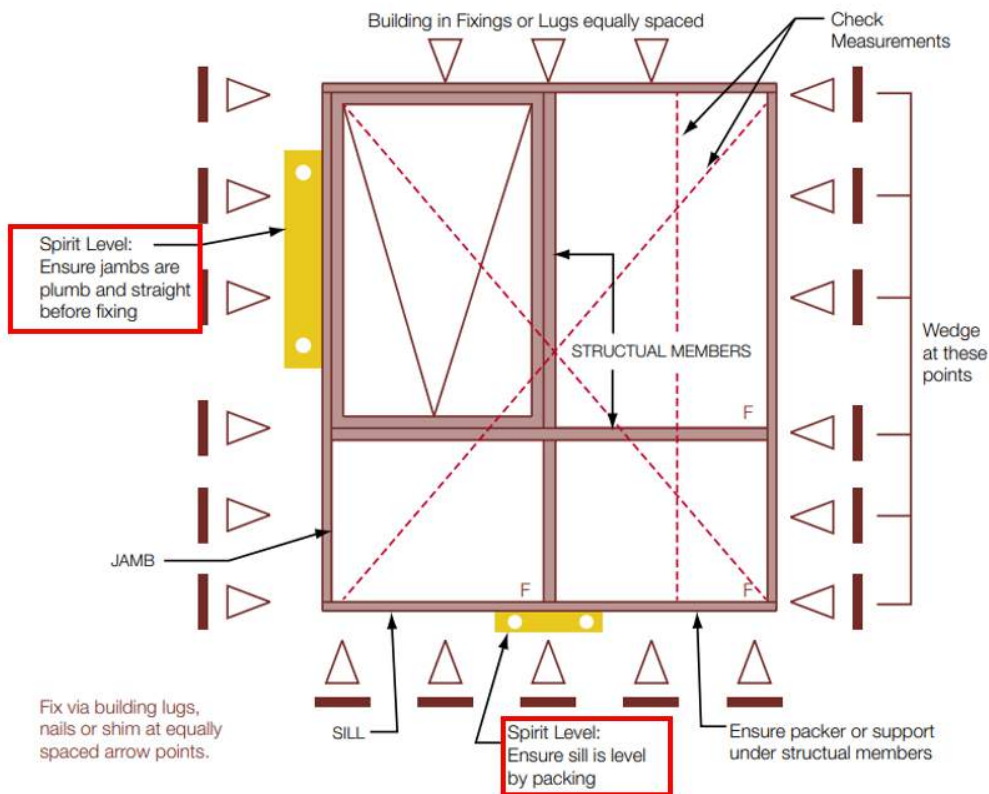
7.2 INSTALLATION Openings in buildings into which windows are to be installed shall be of sufficient size to allow the window frame to be installed level and plumb.

Windows shall only be installed in locations for which they are designed in accordance with this Standard.

Window assemblies shall be fixed into the building using recognized building practices. Fixing shall not deform the window assembly. Non-load-bearing window assemblies shall not carry building loads.

Installed windows assemblies shall prevent water penetration and excessive air infiltration.

NOTE: Window manufacturers' installation procedures may need to be followed for particular installations.



24.

QBCC Act, Schedule 1B: - The building contractor warrants the subject work will be carried out in an appropriate and skilful way, and with reasonable care and skill.

Areas of the dwelling are deemed to have not satisfied these requirements.

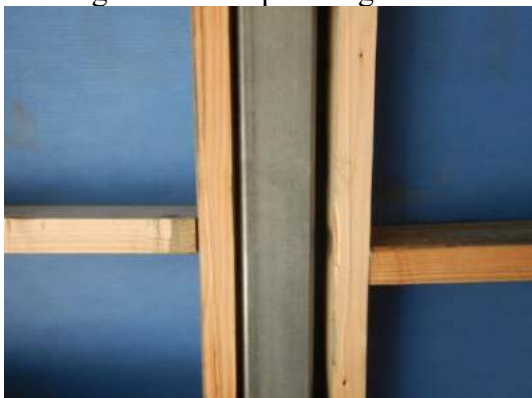
22 Standard of work and exercise of care and skill

The building contractor warrants the subject work will be carried out—

- (a) in an appropriate and skilful way; and
- (b) with reasonable care and skill.



Missing screws to Split hanger



Fix stud to column



Wire protruding wall



fix packing at 300 centres

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 Certifier as defined in the Queensland Building Act, of 1975. 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 Certifier, 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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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. QCAT Suitability

Unless specifically noted this report has not been prepared in-line with the requirements of QCAT.