Building Inspection Report

Provided By



Fangs Building Inspections

Suite 2, 27 Market St, Box Hill, VIC, 3128, Australia P 0424022292 admin@fangsbuildinginspections.com.au www.fangsbuildinginspections.com.au

Inspection Address John St , Mernda, VIC, 3754



Report Information

Client Information

Client Name John Citizen

Inspection Information

Report/Agreement # 19121909195270

Inspection Date: 10 Aug 2018

Inspection Time: 09:19 am

Building Inspection

We have been requested by the client to attend their property and carry out a building inspection on the quality of work produced to date by their builder, and thereafter to prepare an inspection report identifying any defects that exist in the finishes and the quality of those finishes, for which rectification can reasonably be expected to be the responsibility of the builder.

Access

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

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- 1. SITE
- 2. MEMBER SCHEDULE CHECKLIST
- 3. BUILDING DEFECTS

Summary Of Major Defects And Safety Hazards

Below Is A Summary Of Significant Items Requiring Immediate Action.

Section	Location	Name	Comment
MEMBER SCHEDULE CHECKLIST	Beam Schedule	Installation NOT fully consistent with drawings	Wrong-sized / grade beam(s) installed, please refer to below location(s) and rectify as per AS1684.2 and engineering drawings before plastering
MEMBER SCHEDULE CHECKLIST	Studs Schedule	Installation NOT fully consistent with drawings	3S showing on the drawings not installed, please check whether drawing is correct or studs should have been installed
MEMBER SCHEDULE CHECKLIST	Studs Schedule	Installation NOT fully consistent with drawings	One stud missing noted
MEMBER SCHEDULE CHECKLIST	Post Schedule	Installation NOT fully consistent with drawings	Wrong-sized / grade post(s) installed, please refer to below location(s) and rectify as per AS1684.2 and engineering drawings before plastering
MEMBER SCHEDULE CHECKLIST	Post Schedule	Installation NOT fully consistent with drawings	Extend hoop iron, make sure take down 12min brick course
BUILDING DEFECTS	Building Defects	Wall Bottom Plate Overhang Exceeded 10mm	Wall bottom plate overhang exceeded 10mm, the floor slab has been boxed and poured short at the referred area which has left the bottom plate overhanging the edge of the floor slab more than the allowable tolerance.
BUILDING DEFECTS	Building Defects	Unsupported Joint	It is a requirement of Australian Standard, A.S 1684 Residential Timber-Framed Construction, clause 2.4 Stud/Plate Lamination, that 'where joints occur in either top plate between studs, and where rafters or trusses bears onto top plates, additional blocking shall be provided.' Please refer to below location(s) and rectify the issue as per AS1684.2 Figure 2.9 and engineering drawings before plastering

Summary Of Minor Defects

Below Is A Summary Of Defects Other Than Major Defects.

Section	Location	Name	Comment
BUILDING DEFECTS	Building Defects	Timber Cracking and Damage	Please refer to below location(s) and replace cracked and damaged timber per AS1684.2 Table 6.1 and engineering drawings before plastering.
BUILDING DEFECTS	Building Defects	Out of Plumbing Exceeded 5 mm over a 1.8 m height	Posts and wall frames are defective if they deviate from vertical by more than 5 mm over a 1.8 m height. Please refer to below location(s) and rectify the issue(s) as per Standards and Tolerance 2015 and engineering drawings before plastering.
BUILDING DEFECTS	Building Defects	Shear Block to Non-Load Bearing Braced Wall Not Installed	Install Shear Block to Non-Load Bearing Braced Wall Non-bracing wall: for an internal non-loadbearing wall designated as a bracing unit, stability of the wall shall be required to resist normal applied force. The top plate of the wall shall be stabilized at maximum 1800mm centres. Where trusses are parallel to the wall, noggin shall be used in between the bottom chords and fixed to the bracket. Please refer to below location(s) and rectify the issue(s) as per AS4440 2.2.3 and AS1684.2 6.2.5.2 and engineering drawings before plastering.
BUILDING DEFECTS	Building Defects	Nogging(s) Missing - Distance In Between Exceeded 1350mm	Where required, wall studs shall have continuous rows of noggings, located on flat or on edge, at 1350 mm maximum centres. Please refer to below location(s) and rectify the issue(s) as per AS1684.2 6.2.1.5 and engineering drawings before plastering.

BUILDING DEFECTS	Building Defects	Site Surface Drainage Inadequate - soil graded away for a min. of 50mm over 1m	Site Surface Drainage Inadequate The dwellings slab is currently exposed to ponding against the slab due to the lay of the land and the builder's lack of site soil fall control The BCA is very clear in its requirements to have the soil graded from the start away from the dwelling as a minimum of 50 mm over 1 m. This has not been done. I refer all to the BCA, part 3.1.2.3 Please refer to below location(s) and rectify the issue(s) as per BCA, part 3.1.2.3.
BUILDING DEFECTS	Building Defects	Nail(s) missing on bottom plate to concrete (75mm nail, max 1200mm centres)	Nail(s) missing or not affixed properly, please refer to below location(s) and rectify as per AS1684.2 and engineering drawings before plastering One 75mm masonry nail (hand-driven at slab edge), screw or bolt at no more than 1200mm centres
BUILDING DEFECTS	Building Defects	Nail(s) missing on blocks to studs (2/75x3.05m m nail)	Nail(s) missing or not affixed properly although the property, please rectify as per AS1684.2 and engineering drawings before plastering 2/75 x 3.05 mm dia. nail skewed or through nailed
BUILDING DEFECTS	Building Defects	Nail(s) missing on timber braces to studs or plates / ring beams (2/50x2.8mm nail each joint)	Nail(s) missing or not affixed properly, please refer to below location(s) and rectify as per AS1684.2 and engineering drawings before plastering 2/50 × 2.8 mm dia. nails at each joint
BUILDING DEFECTS	Building Defects	Nail(s) missing on lintel to jamb studs (2/75×3.05m m nails each joint)	Nail(s) missing or not affixed properly, please refer to below location(s) and rectify as per AS1684.2 and engineering drawings before plastering 2/75 × 3.05 mm dia. nails at each joint

SITE

Property Information

Building Type

The dwelling is a Residential House.

Construction Type

The wall cladding is Brick. With Gypsum internal wall lining. (Brick Veneer)

Footings Type

Slab On Ground Footing Construction.

Storeys

Two storey home

Builder

Builder Name

Boutique homes

Weather at Inspection Area

Weather Conditions

MEMBER SCHEDULE CHECKLIST

Beam Schedule

Installation NOT fully consistent with drawings

Wrong-sized / grade beam(s) installed, please refer to below location(s) and rectify as per AS1684.2 and engineering drawings before plastering

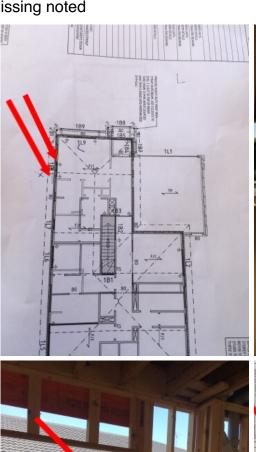


Studs Schedule

Installation NOT fully consistent with drawings

3S showing on the drawings not installed, please check whether drawing is correct or studs should have been installed

One stud missing noted









Post Schedule

Installation NOT fully consistent with drawings

Wrong-sized / grade post(s) installed, please refer to below location(s) and rectify as per AS1684.2 and engineering drawings before plastering

Extend hoop iron, make sure take down 12min brick course



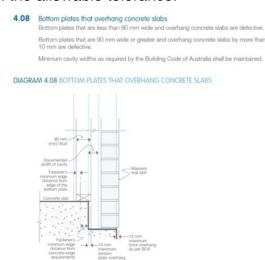


BUILDING DEFECTS

Building Defects

Wall Bottom Plate Overhang Exceeded 10mm

Wall bottom plate overhang exceeded 10mm, the floor slab has been boxed and poured short at the referred area which has left the bottom plate overhanging the edge of the floor slab more than the allowable tolerance.







Timber Cracking and Damage

Please refer to below location(s) and replace cracked and damaged timber per AS1684.2 Table 6.1 and engineering drawings before plastering.

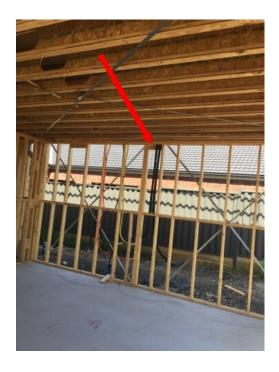
TABLE 6.1 HOLES AND NOTCHES IN STUDS AND PLATES

	Provided in	Limits		
Symbol	Description	Notched	Not notched	
A	Distance between holes and/or notches in stud breadth	Min. 3D	Min. 3D	
н	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. 128	N/A	
P	Trenches in plates	3 mm r	nax.	





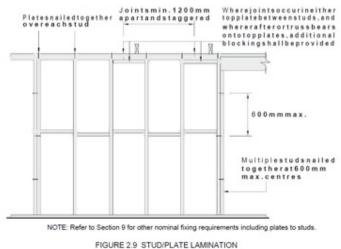




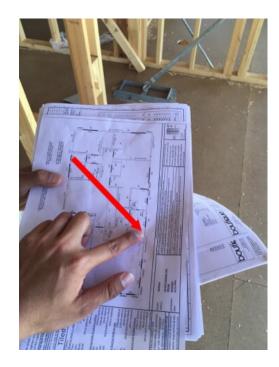
Unsupported Joint

It is a requirement of Australian Standard, A.S 1684 Residential Timber-Framed Construction, clause 2.4 Stud/Plate Lamination, that 'where joints occur in either top plate between studs, and where rafters or trusses bears onto top plates, additional blocking shall be provided.'

Please refer to below location(s) and rectify the issue as per AS1684.2 Figure 2.9 and engineering drawings before plastering







Out of Plumbing Exceeded 5 mm over a 1.8 m height

Posts and wall frames are defective if they deviate from vertical by more than 5 mm over a 1.8 m height.

Please refer to below location(s) and rectify the issue(s) as per Standards and Tolerance 2015 and engineering drawings before plastering.

TABLE 4.2.2

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

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

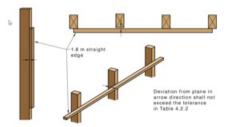


FIGURE 4.2.2(A) ASSESSING FRAMING TOLERANCE

1.2.1 General

Substrates shall be installed in accordance with the requirements of Clause 3.5 thus providing a plaster ready background for installation of gypsum linings.

Where the dimensional tolerances of the fixing surface plane fall outside the tolerances in Table 4.2.2, a suitable levelling system shall be used.

NOTES:

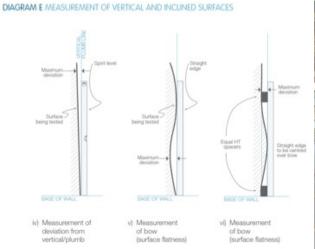
- 1 Common causes of uneven substrates that should be rectified to ensure a plaster ready background are listed in Appendix E.
- 2 Potential effects of structural movement and truss settlement can be found in Paragraphs D5 and D6 of Appendix D.

4.2.2 Finished framing deviations and tolerances

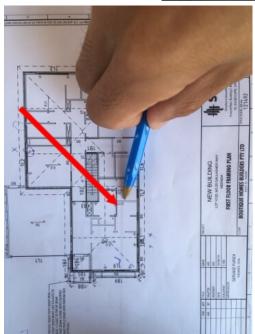
The deviation in the position of the bearing surface of the finished framing immediately prior to installation of lining from a 1.8 m straight edge shall not exceed the values given in Table 4.2.2 when measured over a 1.8 m span at any point [see Figure 4.2.2(A)].

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.







Shear Block to Non-Load Bearing Braced Wall Not Installed

Install Shear Block to Non-Load Bearing Braced Wall

Non-bracing wall: for an internal non-loadbearing wall designated as a bracing unit, stability of the wall shall be required to resist normal applied force. The top plate of the wall shall be stabilized at maximum 1800mm centres. Where trusses are parallel to the wall, noggin shall be used in between the bottom chords and fixed to the bracket.

Please refer to below location(s) and rectify the issue(s) as per AS4440 2.2.3 and AS1684.2 6.2.5.2 and engineering drawings before plastering.

The requirements for fixing of timber trusses to the top plates of non-loadbe shall be in accordance with the following wall designations:

- (a) Non-broating wolf. Where a non-loadbearing wall is stable in its own right, no stabilizing fixing is required.
 (b) Bracing wolf. Where a freestanding non-loadbearing wall is designated as a bracing unit in accordance with AS 1684.2 or AS 1684.3, the timber trusses shall be fixed to the top plate of the wall in such a way that the bottom chord of the truss is restrained horizontally but allows for deflection when the truss is loaded. Figure 2.2 gives an example of the fixing details.

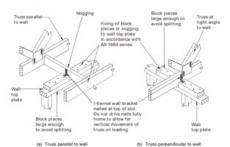


FIGURE 2.2 FIXING OF TRUSSES TO FREESTANDING NON-LOADBEARING WALL THAT IS A BRACING WALL

(c) Non-bracing wall. For an internal non-loadbearing wall not designated as a bracing unit, stability of the wall shall be required to resist normal applied force, e.g., when closing doors. The top plate of the wall shall be stabilized at maximum 1800 mecentres. Where trusses are parallel to the wall, nogging shall be used in between the bottom chords and fixed to the bracket. Figure 2.3 gives an example of fixing details.

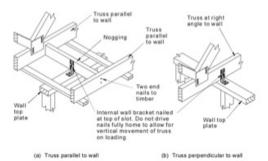
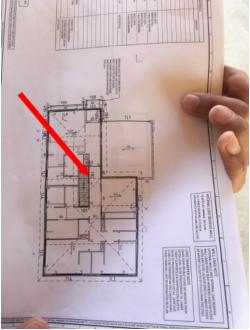


FIGURE 2.3 FIXING OF TRUSSES TO FREESTANDING NON-LOADBEARING WALL THAT IS NOT A BRACING WALL







Nogging(s) Missing - Distance In Between Exceeded 1350mm

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

Please refer to below location(s) and rectify the issue(s) as per AS1684.2 6.2.1.5 and engineering drawings before plastering.

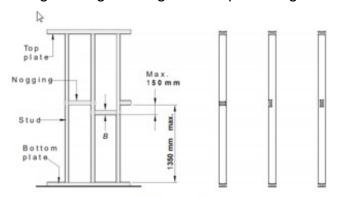


FIGURE 6.6 NOGGING

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.





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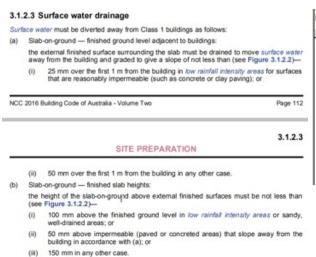
Site Surface Drainage Inadequate - soil graded away for a min. of 50mm over 1m

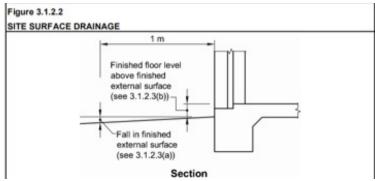
Site Surface Drainage Inadequate

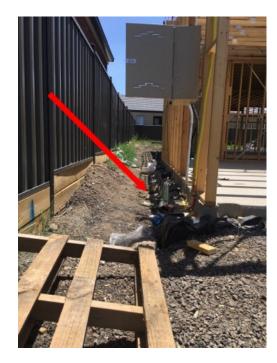
The dwellings slab is currently exposed to ponding against the slab due to the lay of the land and the builder's lack of site soil fall control

The BCA is very clear in its requirements to have the soil graded from the start away from the dwelling as a minimum of 50 mm over 1 m. This has not been done. I refer all to the BCA, part 3.1.2.3

Please refer to below location(s) and rectify the issue(s) as per BCA, part 3.1.2.3.







Nail(s) missing on bottom plate to concrete (75mm nail, max 1200mm centres)

Nail(s) missing or not affixed properly, please refer to below location(s) and rectify as per AS1684.2 and engineering drawings before plastering

One 75mm masonry nail (hand-driven at slab edge), screw or bolt at no more than 1200mm centres

	NOMINAL F	XINGS FOR TIMBER MEMBERS	
Joint.		Minimum fixing for each joint	
Floor framing			
Bearer to timber	stump/post	475 - 3.31 mm or 575 - 3.05 mm machine-driven naits plus 1300 - 8.8 mm of 1.500 - 8.0 mm of 1.500 - 8.0 mm of 1.500 - 8.0 mm of 1.500 - 8.00 mm of 1.500 - 8.000 - 8.00 mm of 1.500 - 8.00 mm of 1.500 - 8.00 mm of 1.500 - 8.	
Bearer to mason (excluding maso	ry column/wall/pier nry veneer construction)	1/M10 boit or 1/50 - 4 mm mild steel bar fixed to bearer with M10 bolt and cast into masonry (to footing)	
Bearer to supports (masonry veneer construction)		No requirement	
Bearer to concrete stump/post		1/6 mm dia. rod cast into stump, vertically through bearer and bent over	
Bearers to steel post		1/M10 coach screw or bolt	
Floor joist to bearer		2/75 - 3.05 mm dia. nails	
Wall framing			
Plates to studs and plates to ring beams at 600mm max, centres		Plates up to 38 mm thick—2/75 · 3.05 mm nails through plate; Plates 38 to 50 mm thick—2/90 · 3.05 mm nails through plate; OR 2/75 · 3.05 mm nails skewed through stud into plate	
Noggings to stud:		2/75 - 3.05 mm nail skewed or through nailed	
Timber braces to	studs or plates/ring beams	2/50 × 2.8 mm dia. naits at each joint	
Lintel to jamb stu	ed	2/75 × 3.05 mm dia. nails at each joint	
Bottom plates to	Non-loadbearing and non-bracing walls	2/2.8 mm dia. nails at max. 600 mm centres	
joists	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	
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.	
Ribbon plate to t	op plate	Refer to Clause 2.5 and Clause 9.2.8	
Multiple studs		1/75 - 3.05 mm nail at 600 centres max.	
Posts to bearers or joists		1/M12 or 2/M10 bolts (unless otherwise specified)	

See Clause 1.12; OR One framing anchor with three nails to each leg; OR 1/30 - 0.8 mm G.1. strap over truss with strap ends fixed to plate with 1/2.8 mm dia. nails plus 2/75 mm skew nails 1 accordance with Clause 9.6.4 1/275 mm skew nails plus, where adjoining a ceiling joist of—
One framing anchor with three nails to each leg; CR, 1/30 - 0.8 mm G.1. strap over truss with strap ends fixed to plate with 1/2.8 mm dia. nails plus 2/75 mm skew nails n accordance with Clause 9.6.4 recordance 9.6.4 reco
775 mm skew naits plus, where adjoining a ceiling joist of-
38 mm thick—2/75 mm nails; OR 50 mm thick—2/90 mm nails, fixing joist to rafter
75 mm skew nails
275 mm skew nails
275 mm skew naits
n coupled roof construction, 1/75 hand-driven naif, OR 2/75 - 3.05 mm machine-driven naifs
/M10 bolt for ties over 4.2 m or 3/75 mm nails for ties up to 4.2 m long
/M12 or 2/M10 bolts (unless otherwise specified for tie-down)

- Nails that are smaller than the nominated size, or other than those described, may be used providing their performance, as determined by testing, indicates they are not inferior to the nail sizes given above. The nominal connections for roof trusses to top plates given in this Table are based on the minimum connection details recommended by truss plate manufacturers.





Nail(s) missing on blocks to studs (2/75x3.05mm nail)

Nail(s) missing or not affixed properly although the property, please rectify as per AS1684.2 and engineering drawings before plastering

2/75 x 3.05 mm dia. nail skewed or through nailed

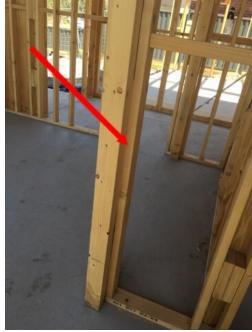
Joint		Minimum fixing for each joint	
Floor framing			
Bearer to timber	stumpipost	475 - 3.31 mm or 5/75 - 3.05 mm machine-driven neits plus 100 - 0.8 mm G.1 step over beaver and facel both ends to stump with 42.2 mm dis each end, 14.2 mm dis each end, 14.1 mm dis each end between the end to the end end end end end end end end end en	
Bearer to mason (excluding masor	ry column/wall/pier nry veneer construction)	1/M10 boit or 1/50 - 4 mm mild steel bar fixed to bearer with M10 boit and cast into mesonry (to footing)	
Bearer to suppor construction)	ts (masonry veneer	No requirement	
Bearer to concre	te stump/post	1/6 mm dia. rod cast into stump, vertically through bearer and bent over	
Bearers to steel post		1/M10 coach screw or bolt	
Floor joist to bearer		2/75 - 3.05 mm dia. nails	
Wall framing			
Plates to studs and plates to ring beams at 600mm max, centres		Plates up to 38 mm thick—2/75 · 3.05 mm nails through plate; Plates 38 to 50 mm thick—2/90 · 3.05 mm nails through plate; OR 2/75 · 3.05 mm nails skewed through stud into plate	
Noggings to studs		2/75 - 3.05 mm nail skewed or through nailed	
Timber braces to	studs or plates/ring beams	2/50 × 2.8 mm dia. naits at each joint	
Lintel to jamb stu	id	2/75 × 3.05 mm dia. nails at 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	
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.	
Ribbon plate to t	op plate	Refer to Clause 2.5 and Clause 9.2.8	
Multiple studs		1/75 - 3.05 mm nail at 600 centres max.	
Posts to bearers or joists		1/M12 or 2/M10 bolts (unless otherwise specified)	

Joint Roof framing		Minimum fixing for each joint	
	Girder trusses	In accordance with Clause 9.6.4	
Rafters to top plates/ring beams	Coupled roofs	2/75 mm skew nails plus, where adjoining a ceiling joist of— 38 mm thick—2/75 mm nails; OR 50 mm thick—2/90 mm nails, foing joist to rafter	
	Non-coupled roofs	2/75 mm skew nails	
Rafter to ridge		2/75 mm skew nails	
Ceiling joists to t	op plates	2/75 mm skew nails	
Ceiling joists to rafters		In coupled roof construction, 1/75 hand-driven nail; OR 2/75 - 3.05 mm machine-driven nails	
Collar ties to rafters		1/M10 bolt for ties over 4.2 m or 3/75 mm nails for ties up to 4.2 m long	
Verandah beams and roof beams to post		1/M12 or 2/M10 bolts (unless otherwise specified for tie-down)	

Nails that are smaller than the nominated size, or other than those described, may be used providing their performance, as determined by testing, indicates they are not inferior to the nail sizes given above.

The nominal connections for roof trusses to top plates given in this Table are based on the minimum connection details recommended by truss plate manufacturers.







Nail(s) missing on timber braces to studs or plates / ring beams (2/50x2.8mm nail each joint)

Nail(s) missing or not affixed properly, please refer to below location(s) and rectify as per AS1684.2 and engineering drawings before plastering

 $2/50 \times 2.8$ mm dia. nails at each joint

(ii) Timber and metal angle braces. The maximum depth of a notich or saw-out shall not exceed 20. (a) Two diagonally opposed timber or metal angle braces. mm. Saw-out shall be designed as notiched.

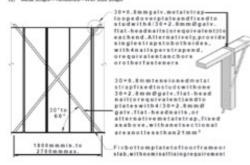
2/50*2.8mm@nailsfortimberbrace, Min.75*15mmf8braceor or2/30*2.8mm@nailsformetalbrace, metalasgiormic.somical toeachstudandplate, section20*18*1.2mm (SeeDetailf) -45×19mmor70×19mmhardwoodtimber bracedfixedtoeachstudandplatewith 1/50×2.8mmØgalv.flat-headnail Galv.metalangle (18×16×1.2mm) bracefixedtostuds with1/20×2.8mm0 nailandtoplatewith 2/20×2.8mm0 galv.flat-headnails

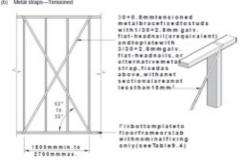
Fixbottomplatetofloorframe orslabwithnominalfixingonly (seeTable9.4)

(b) Metal straps—Tensioned

1800mmmin.to 2700mmmax.

Metal straps—Tensioned—With stud straps





NOMINAL FIXINGS FOR TIMBER MEMBERS

	Joint	Minimum fixing for each joint	
Floor framing			
Bearer to timber	stump/post	475 - 3.31 mm or 5/25 - 3.05 mm machin-driven nais plus 1300 - 0.8 mm Gl. 18tep over bearer and fixed both ends to stump with 42.8 mm dia. each end; OR 15.01 both through bearer halved to stump. 15.01 both through bearer halved to stump. OR 15.01 both through bearer and bothed to stump plus 475 - 3.33 mm or 5/25 - 3.05 mm machine-driven nais.	
	ry column/wall/pier nry veneer construction)	1/M10 bolt or 1/50 - 4 mm mild steel bar fixed to bearer with M10 bolt and cast into masonry (to footing)	
Bearer to suppor construction)	ts (masonry veneer	No requirement	
Bearer to concre	te stump/post	1/6 mm dia. rod cast into stump, vertically through bearer and bent over	
Bearers to steel	post	1/M10 coach screw or bolt	
Floor joist to bearer		2/75 - 3.05 mm dia. nails	
Wall framing			
Plates to studs and plates to ring beams at 600mm max, centres		Plates up to 38 mm thick—2/75 · 3.05 mm nails through plate; Plates 38 to 50 mm thick—2/90 · 3.05 mm nails through plate; OR 2/75 · 3.05 mm nails skewed through stud into plate	
Noggings to studs		2/75 - 3.05 mm nail skewed or through nailed	
Timber braces to	studs or plates/ring beams	2/50 × 2.8 mm dia. nails at each joint	
Lintel to jamb stu	ed	2/75 × 3.05 mm dia. nails at each joint	
Bottom plates to	Non-loadbearing and non-bracing walls.	2/2.8 mm dia. nails at max. 600 mm centres	
joists	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	
Bottom plates to concrete slab		One 75 mm masonry nail (hand-driven at slab edge), screw or bolt at no more than 1200 mm centres.	
Ribbon plate to t	op plate	Refer to Clause 2.5 and Clause 9.2.8	
Multiple studs		1/75 - 3.05 mm nail at 600 centres max.	
Posts to bearers or joists		1/M12 or 2/M10 bolts (unless otherwise specified)	

Joint		Minimum fixing for each joint	
Roof framing			
Roof trusses to top plates/ring beams	Standard trusses	See Clause 1.12; OR One framing anchor with three nails to each leg; OR 1/30 - 0.8 mm G.I. strap over truss with strap ends fixed to plate with 3/2.8 mm dia, nails plus 2/75 mm skew nails	
	Girder trusses	In accordance with Clause 9.6.4	
Rafters to top plates ring beams	Coupled roofs	2/75 mm skew naits plus, where adjoining a ceiling joist of— 38 mm thick—2/75 mm naits; OR 50 mm thick—2/90 mm naits, foing joist to rafter	
	Non-coupled roofs	2/75 mm skew nails	
Rafter to ridge		2/75 mm skew nails	
Ceiling joists to	top plates	2/75 mm skew nails	
Ceiling joists to rafters		In coupled roof construction, 1/75 hand-driven nail; OR 2/75 - 3.05 mm machine-driven nails	
Collar ties to rafters		1/M10 bolt for ties over 4.2 m or 3/75 mm nails for ties up to 4.2 m long	
Verandah beams and roof beams to post		1/M12 or 2/M10 bolts (unless otherwise specified for tie-down)	

- 1 Nails that are smaller than the nominated size, or other than those described, may be used providing their performance, as determined by testing, indicates they are not inferior to the nail sizes given above.
- 2 The nominal connections for roof trusses to top plates given in this Table are based on the minimum connection details recommended by truss plate manufacturers.





Nail(s) missing on lintel to jamb studs (2/75×3.05mm nails each joint)

Nail(s) missing or not affixed properly, please refer to below location(s) and rectify as per AS1684.2 and engineering drawings before plastering

2/75 × 3.05 mm dia. nails at each joint

	NOMINAL F	IXINGS FOR TIMBER MEMBERS		
Joint		Minimum fixing for each joint		
Floor framing				
Bearer to timber	stump/post	475 - 3.31 mm or 5/25 - 3.05 mm machini-driven nails plus 130 - 0.8 mm of, 1.9tep over bearer and fixed both ends to stump with 42.8 mm dia. each end; OR 1.81 for the substitution of substits of substitution of substitution of substitution of substitutio		
	ry column/wall/pier nry veneer construction)	1fM10 bolt or 1/50 - 4 mm mild steel bar fixed to bearer with M10 bolt and cast into masonry (to footing)		
Bearer to supports (masonry veneer construction)		No requirement		
Bearer to concrete stump/post		1/6 mm dia. rod cast into stump, vertically through bearer and bent over		
Bearers to steel post		1/M10 coach screw or bolt		
Floor joist to bearer		2/75 - 3.05 mm dia. nails		
Wall framing				
Plates to studs and plates to ring beams at 600mm max. centres		Plates up to 38 mm thick—2/75 - 3.05 mm nails through plate; Plates 38 to 50 mm thick—2/90 - 3.05 mm nails through plate; OR 2/75 - 3.05 mm nails skewed through stud into plate		
Noggings to stud:		2/75 - 3.05 mm nail skewed or through nailed		
Timber braces to	studs or plates/ring beams	2/50 × 2.8 mm dia. nails at each joint		
Lintel to jamb st.	ed	2/75 × 3.05 mm dia. nails at 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		
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		
Ribbon plate to t	op plate	Refer to Clause 2.5 and Clause 9.2.8		
Multiple studs		1/75 - 3.05 mm nail at 600 centres max.		
Posts to bearers or joists		18812 or 2/8/10 holts (unless otherwise specified)		

	Joint	Minimum fixing for each joint
Roof framing		
Roof trusses to top plates/ring beams	Standard trusses	See Clause 1.12; OR One framing anchor with three nails to each leg; OR 1/30 - 0.8 mm G.I. strap over truss with strap ends fixed to plate with 3/2.8 mm dia, nails plus 2/75 mm skew nails
	Girder trusses	In accordance with Clause 9.6.4
Rafters to top plates/ring beams	Coupled roofs	2/75 mm skew naits plus, where adjoining a ceiling joist of— 38 mm thick—2/75 mm naits; OR 50 mm thick—2/90 mm naits, foing joist to rafter
	Non-coupled roofs	2/75 mm skew nails
Rafter to ridge		2/75 mm skew nails
Ceiling joists to top plates		2/75 mm skew nails
Ceiling joists to rafters		In coupled roof construction, 1/75 hand-driven nail; OR 2/75 - 3.05 mm machine-driven nails
Collar ties to rafters		1/M10 bolt for ties over 4.2 m or 3/75 mm nails for ties up to 4.2 m long
Verandah beams and roof beams to post		1/M12 or 2/M10 bolts (unless otherwise specified for tie-down)

- Nails that are smaller than the nominated size, or other than those described, may be used providing their performance, as determined by testing, indicates they are not inferior to the nail sizes given above.
- 2 The nominal connections for roof trusses to top plates given in this Table are based on the minimum connection details recommended by truss plate manufacturers.





TERMS AND CONDITIONS

The purpose of the inspection is to identify the major defects and safety hazards associated with the property at the time of the inspection. The inspection and reporting is limited to a visual assessment of the building members in accord with relevant Australian Standards and BCA. This is a general appraisal only and cannot be relied on its own, further inspections by specialist trades is strongly recommended.

DEFINITIONS AND TERMINOLOGY

CP: Compliant with approved plans and specifications

NC: Not Compliant with BCA and Standard Requirements or approved plans and specifications

FIR: Further Inspection Required

N/A: Not Applicable

STRATA - In the case of strata and company title properties, the inspection is limited to the interior and immediate exterior of the particular unit being inspected. This report does NOT include review of body corporate or similar records.

HIGH: The frequency and/or magnitude of defects are beyond the inspector's expectations when compared to similar buildings of approximately the same age that have been reasonably well maintained.

TYPICAL: The frequency and/or magnitude of defects are consistent with the inspector's expectations when compared to similar buildings of approximately the same age which have been reasonably well maintained.

LOW: The frequency and/or magnitude of defects are lower than the inspector's expectations when compared to similar buildings of approximately the same age that have been reasonably well maintained.

ABOVE AVERAGE: The overall condition is above that consistent with dwellings of approximately the same age and construction. Most items and areas are well maintained and show a reasonable standard of workmanship when compared with buildings of similar age and construction.

AVERAGE: The overall condition is consistent with dwellings of approximately the same age and construction. There will be areas or items requiring some repair or maintenance.

BELOW AVERAGE: The building and its parts show some significant defects and/or very poor non- tradesman like workmanship and/or long term neglect and/or defects requiring major repairs or reconstruction of major building.

SIGNIFICANT ITEMS: An item that must be reported in accordance with the scope of the inspection.

MAJOR DEFECT: A defect of sufficient magnitude requiring building works to avoid unsafe conditions, loss of function or further worsening of the defective item.

MINOR DEFECT: Any defect other than what is described as a Significant Item or major defect.

SAFETY HAZARD: A defect that presents unsafe conditions and must be reported as a Major defect.

ACCESSIBLE AREA: Is any area of the property and structures allowing the inspector safe and reasonable access within the scope of the inspection.

Important advice.

LIMITATION: A factor that prevents full or proper inspection of the building.

IMPORTANT INFORMATION

Important information regarding the scope and limitations of the inspection and this report. Any person who relies upon the contents of this report does so acknowledging that the following clauses which define the scope and limitations of the inspection, form an integral part of the report.

The inspection comprised a visual assessment of the property to identify major

defects and to form an opinion regarding the general condition of the property at the time and date of the visual inspection. An estimate of the cost of rectification of defects is outside the scope of Australian Standards and does not form part of this report. If the property inspected is part of a Strata or Company Title, then the inspection is limited to the interior and the immediate exterior of that particular residential dwelling. The inspection does not cover common property. We strongly advise that any cracking reported in this report should be referred to a structuralengineer for further assessment and advice.

Acceptance Criteria:

The building shall be compared with a building that was constructed in accordance with the generally accepted practice at the time of construction and which has been maintained such that there has been no significant loss of strength and serviceability.

Limitations: This report is limited to a visual inspection of areas where safe and reasonable access is available and access permitted on the date and at the time of inspection. The Inspection will be carried out in accordance with Relevant Australian Standards. The purpose of the inspection is to provide advice to the property owner regarding the condition of the construction stage at the date and time of inspection. Areas for Inspection shall cover all safe and accessible areas. It does not purport to be geological as to foundation integrity or soil conditions, engineering as to structural, nor does it cover the condition of electrical, plumbing, gas or motorised appliances. This report is limited to (unless otherwise noted) the main structure on the site and any other building.

Safe and Reasonable Access: Only areas to which safe and reasonable access is available were inspected as per OHS policy. The Australian Standards defines reasonable access as "areas where safe, unobstructed access " is provided and the minimum clearances specified below are available, or where these clearances are not available, areas within the inspector's unobstructed line of sight and within arm's length. Reasonable access does not include removing screws and bolts to access covers. Reasonable access does not include the use of destructive or invasive inspection methods and does not include cutting or making access traps or moving heavy furniture, floor coverings or stored goods.

Roof Interior- Access opening = $400 \times 500 \text{ mm}$ - Crawl Space = $600 \times 600 \text{mm}$ - Height accessible from a 3.6m ladder.

Roof Exterior- Must be accessible from a 3.6m ladder placed on the ground.

- 1) NOT A CERTIFICATE OF COMPLIANCE: This report is not an all encompassing report dealing with the building from every aspect. It is a reasonable attempt to identify any obvious or significant defects apparent at the time of the inspection. Whether or not, a defect is considered significant or not depends too a large extent, upon the age and type of the building inspected. This report is not a certificate of compliance with the requirements of any act, regulation, ordinance or by-law. It is not a structural report. Should you require any advice of a structural nature you should contact a structural engineer.
- 2)VISUAL INSPECTION: This is a visual inspection only limited to those areas and sections of the property fully accessible and visible to the inspector on the date of inspection.

2A)Please refer to each individual area re sections that were incapable or being inspected. Please acknowledge the following.

Where a complete inspection of some areas listed through the report may not have been physically possible (due to but not limited to - storage, furniture, beds, personal belongings in cupboards and/or wardrobes, the 2nd storey roofing, gutters, fascia, flashings and the like, low clearance in sub floor or roof void areas, ducts and deep insulation restricting access in roof voids, sub floor restrictions including plumbing, ducts, low clearance, no access doors or access doors too small and the like) then it follows that defects, timber pest activity and/or damage may exist in these areas. To adequately inspect these restricted areas, ducts and floor boards may need to be removed, furniture moved, cupboards and wardrobes emptied which will be difficult to carry out. This will obviously be difficult to carry out due to time restrictions and permission would need to be obtained from the property owner.

This Firm DOES NOT GUARANTEE IN ANY WAY that there ARE OR ARE NOT any defects, termite damage or live termites in any areas NOT ABLE to be inspected. To obtain a full understanding of the report findings, it is essential you read the entire inspection report, including the information sections at the end of this report and I encourage you to call me if you have any queries at all before purchasing the inspected dwelling.

2B) Entering attics or roof voids that are heavily insulated can cause damage to the insulation and attic framing. Attics with deep insulation cannot be safely inspected due to limited visibility of the framing members upon which the inspector must walk. In such cases, the attic is only partially accessed, thereby limiting the review of the attic area from the hatch area only. Inspectors will not crawl the attic area when they believe it is a danger to them or that they might damage the attic insulation or framing. There is a limited review of the attic area viewed from the hatch only in these circumstances.

2C)The roof covering will not be walked upon if in the opinion of the inspector it is not safe to do so. Generally issues that prevent roof access include, access height over 3 metres, steep pitch, wet/slippery surfaces, deteriorated covering. Not being able to walk a roof significantly limits our inspection which can result in hidden defects going undetected. The overall condition of the roofing and its components is an opinion of the general quality and condition of the roofing material. The inspector cannot and does not offer an opinion or warranty as to whether the roof leaks or may be subject to future leakage. This report is issued in consideration of the foregoing disclaimer. The only way to determine whether a roof is absolutely water tight is to observe it during a prolonged rainfall. Many times, this situation is not present during the inspection. We offer no guarantee that the roof cladding or roof components such as flashing will not leak in the future.

2D)Limitations of the exterior inspection.

This is a visual inspection limited in scope by (but not restricted to) the following conditions: A representative sample of exterior components was inspected rather than every occurrence of components. The inspection does not include an assessment of geological, geotechnical, or hydrological conditions, or environmental hazards. Screening, shutters, awnings, or similar seasonal accessories, fences, recreational facilities, outbuildings, seawalls, break-walls, docks, erosion control and earth stabilization measures are not inspected unless specifically agreed-upon and documented in this report. Please note - If any wall cracking/cracks/openings are found at this dwelling, we cannot offer any guarantee that any visible wall cracks will not widen or lengthen over time or in the future as this is impossible to predict. We strongly recommend you contact a practicing structural engineer for further advice.

- 2E) Timber framed windows can bind or stick. This can be seasonal due to the fluctuation in moisture content in timber. If binding or sticking continues minor adjustments may be required by a carpenter. Binding windows is not normally a major defect, however in some circumstances binding windows and doors can be directly related to some differential footings settlement. If any timber fungal decay on frames or deteriorated putty seals is noted, the consultant will not attempt to operate windows due to potential damage. Windows that are sticking, binding or paint stuck will also not be forced open. Water leaks to Windows and surrounds can not be be determined in the absence of rain.
- 2F) Internal Inspections. Inspection to the upper-side of flooring of the internal inspection is normally restricted by carpets and or other floor coverings, cupboards/cabinets, joinery, finishes and fittings. Defects or timber pest damage may be present and not detected in areas where inspection was limited, obstructed or access was not gained. The condition of walls behind wall coverings, paneling and furnishings cannot be inspected or reported on. Only the general condition of visible areas is included in this inspection.

Where fitted. Wood burning and other forms of fireboxes are outside the scope of this inspection. We recommend you have these tested prior to purchase for peace of mind.

- 2G) Important note: Where any elevated structure (deck, balcony, veranda etc) is present, and this elevated structure is designed to accommodate people, you must have this structure checked by an engineer or other suitably qualified person. You should also arrange annual inspections of the structure by an engineer or other suitably qualified person to ensure any maintenance that may become necessary is identified. Care must be taken not to overload the structure. Nothing contained in this inspection should be taken as an indicator that we have assessed any elevated structure as suitable for any specific number of people or purpose. This can only be done by a qualified engineer. For the purpose of this report, the structure includes elevated decks, verandas, pergolas, balconies, handrails, stairs and children's play areas. Where any structural component of such a structure is concealed by lining materials or other obstructions, these linings or obstructions must be removed to enable an evaluation to be carried out by an appropriately qualified person.
- 3) CONCEALED DEFECTS: This report does not and cannot make comment upon: Defects that may have been concealed the assessment or detection of defects (including rising damp and leaks) which may be subject to the prevailing weather conditions whether or not services have been used for some time prior to the inspection and whether this will affect the detection of leaks or other defects (eg. In the case of shower enclosures and bath tubs, the absence of any leaks or dampness at the time of the inspection does not necessarily mean that the enclosure will not leak after use) the presence or absence of timber pests; gasfittings; common property areas; environmental concerns; the proximity of the property to flight paths, railways, or busy traffic; noise levels; health and safety issues; heritage concerns; security concerns; fire protection; site drainage (apart from surface water drainage); swimming pools and spas (non-structural); detection and identification of illegal building work; detection and identification of illegal plumbing work; durability of exposed finishes; neighborhood problems; document analysis; electrical installation; any matters that are solely regulated by statute; any area(s) or item(s) that could not be inspected by the consultant.
- 4) NO GUARANTEE: Accordingly this report is not a guarantee that defects and/or damage does not exist in any inaccessible or partly inaccessible areas or sections of the property. Such matters may upon request be covered under the terms of a special purpose property report.
- 5) SWIMMING POOLS: Swimming pools/spas are not part of the standard building report under as4349.1-2007 And are not covered by this report. We strongly recommend a pool expert should be consulted to examine the pool and the pool equipment and plumbing as well as the requirements to meet the standard for pool fencing. Failure to conduct this inspection and put into place the necessary recommendations could result in finds for non compliance under the legislation.

- 6) SURFACE WATER AND DRAINAGE: The retention of water from surface run off could have an effect on the foundation material which in turn could affect the footings to the house. Best practice is to monitor the flow of surface water and storm water run off and have the water directed away from the house or to storm water pipes by a licensed drainage plumber. The general adequacy of site drainage is not included in the standard property inspection report. Comments on surface water drainage are limited as where there has been either little or no rainfall for a period of time, surface water drainage may appear to be adequate but then during periods of heavy rain, may be found to be inadequate. Any comments made in this report are relevant only to the conditions present at the time of inspection. It is recommended that a smoke test be obtained to determine any illegal connections, blocked or broken drains.
- 7) SHOWER RECESSES: Tests may be made on shower recesses to detect leaks (if water is connected). The tests may not reveal leaks or show incorrect waterproofing if silicone liquid or masonry sealant has been applied prior to the inspection. Such application is a temporary waterproofing measure and may last for some months before breaking down. The tests on the shower recesses are limited to running water within the recesses and visually checking for leaks As showers are only checked for a short period of time, prolonged use may reveal leaks that were not detected at the time of inspection. No evidence of a current leak during inspection does not necessarily mean that the shower does not leak.
- 8) GLASS CAUTION: Glazing in older houses (built before 1978) may not necessarily comply with current glass safety standards AS1288. In the interests of safety, glass panes in doors and windows especially in traffic-able areas should be replaced with safety glass or have shatterproof film installed unless they already comply with the current standard.
- 9) STAIRS AND BALUSTRADES: Specifications have been laid down by the Australian Building Code Section 3.9 covering stairs, landings, balustrades to ensure the safety of all occupants and visitors in a building. Many balustrades and stairs built before 1996 may not comply with the current standard. You must upgrade all such items to the current standard to improve safety.
- 10) RETAINING WALLS: Where retaining walls are more than 700mm high these wall/s should have been installed with engineering design and supervision. Walls found on the site were not assessed and the performance of these walls is not the subject of a standard property report and should be further investigated with regard to the following items, adequate drainage systems, adequate load bearing, correct component sizing and batter.

- 11) ROOMS BELOW GROUND LEVEL: If there are any rooms under the house or below ground level (whether they be habitable or non-habitable rooms), these may be subject to dampness and water penetration. Drains are not always installed correctly or could be blocked. It is common to have damp problems and water entry into these types of rooms, especially during periods of heavy rainfall and this may not be evident upon initial inspection. These rooms may not have council approval. The purchaser should make their own enquiries with the Council to ascertain if approval was given.
- 12) ASBESTOS DISCLAIMER: No inspection for asbestos was carried out at the property and no report on the presence or absence of asbestos is provided.
- 13) MOULD (mildew and non-wood decay fungi) disclaimer: Mildew and non wood decay fungi is commonly known as mould. However, mould and their spores may cause health problems or allergic reactions such as asthma and dermatitis in some people. No inspection for mould was carried out at the property and no report on the presence or absence of mould is provided.
- 14) MAGNESITE DISCLAIMER: No inspection for magnesite flooring was carried out at the property and no report on the presence or absence of magnesite flooring is provided. You should ask the owner whether magnesite flooring is present and/or seek advice from a structural engineer.
- 15) ESTIMATING DISCLAIMER: No estimate is provided in this report. We strongly recommend you obtain quotes for repairs from licensed tradesman prior to a decision to purchase.
- 16) DISCLAIMER OF LIABILITY: No liability shall be accepted on an account of failure of the report to notify any problems in the area(s) or section(s) of the subject property physically inaccessible for inspection, or to which access for inspection is denied by or to the inspector (including but not limited to or any area(s) or section(s) so specified by the report) Compensation will only be payable for losses arising in contract or tort sustained by the client named on the front of this report. Compensation is limited to the price of the report initially paid by the claimant named in the report as the "CLIENT"
- 17) DISCLAIMER OF LIABILITY TO THIRD PARTIES: Compensation will only be payable for losses arising in contract or tort sustained by the Client named on the front of this report. Any third party acting or relying on this Report, in whole or in part, does so entirely at their own risk.

18) COMPLAINTS PROCEDURE: In the event of any dispute or claim arising out of, or relating to the Inspection or the Report, or any alleged negligent act or omission on Our part or on the part of the individual conducting the Inspection, either party may give written Notice of the dispute or claim to the other party. If the dispute is not resolved within twenty one (21) days from the service of the written Notice then either party may refer the dispute or claim to a mediator nominated by Us. The cost shall be met equally by both parties or as agreed as part of the mediated settlement. Should the dispute or claim not be resolved by mediation then one or other of the parties may refer the dispute or claim to the Institute of Arbitrators and Mediators of Australia who will appoint an Arbitrator who will resolve the dispute by arbitration. The Arbitrator will also determine what costs each of the parties are to pay.

OTHER RECOMMENDED INSPECTIONS

Electrical installation: All electrical wiring, meter-box and appliances need to be checked by a qualified electrician. The inspection of any electrical item is outside the scope of this report.

Plumbing: All plumbing needs to be inspected and reported on by a plumber.

Hot water service: All hot water services need to be inspected and reported on by a plumber and/or electrician.

Gas: All gas services need to be inspected and reported on by a gas plumber.

Phone: All phones, phone lines and outlets need to be inspected and reported on by a telecommunications technician.

Smoke Alarm: Australian standard AS3786 advises that smoke alarms are required for all buildings where people sleep. It is recommended that an electrician be consulted to give advice on those installed or to install smoke alarms.

The septic tanks: Should be inspected by a licensed plumber.

Trees: Where trees are too close to the house this could affect the performance of the footing as the moisture levels change in the ground.

Contact the inspector

Please feel free to contact the inspector who carried out this inspection. Often it is very difficult to fully explain situations, problems, access difficulties, building faults or their importance in a manner that is readily understandable by the reader. Should you have any difficulty in understanding anything contained within this report then you should immediately contact the inspector and have the matter explained to you. If you have any questions at all or require any clarification then contact the inspector prior to acting on this report.

The Inspection and Report was carried out by: Michael Fang

State License Number: DB-U 60065; L010936

Contact the Inspector on:

For and on Behalf of: Fangs Building Inspections