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Site Address:

**Client Name:** 

Phone #:

Email:

Dwelling type: Dwelling configuration: Nature of works: Stage of inspection: Construction Type: Garage: Foundations: Builder: Double Storey House and Garage New Build Final Hebel Attached Footings

## **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 22/4/2024 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 Final Inspection on.

1.

**QBCC Act, Schedule 1B, Implied Warranties, QBCC Standard and Tolerances:** - The builder warrants that the subject work shall be carried out with reasonable diligence.

Therefore, the building site, inside and out, shall be presented to the homeowner clean, with waste and debris from the building process removed. This has not been met.

All due care must be taken by the builder in cleaning the dwelling of builders' waste, any damage caused during the cleaning process must be made good by the builder.

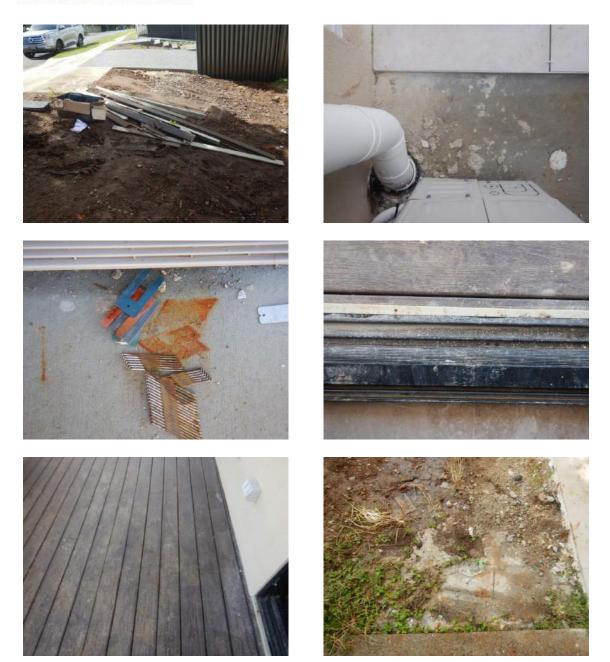
## 25 Carrying out work with reasonable diligence

The building contractor warrants the subject work will be carried out with reasonable diligence.

# 1.5 Responsibility to rectify

Contractors do not have to rectify damage caused by the owner's actions or inactions or those of other people engaged by the owner.

Contractors will be liable to repair any consequential damage caused by, or as a consequence of carrying out building work on a residential building site or to a residential building on an adjacent site.





**QBCC Act, Schedule 1B; Implied Warranties sect. 23:** - The building contractor warrants the subject work will be carried out in accordance with the plans and specifications.

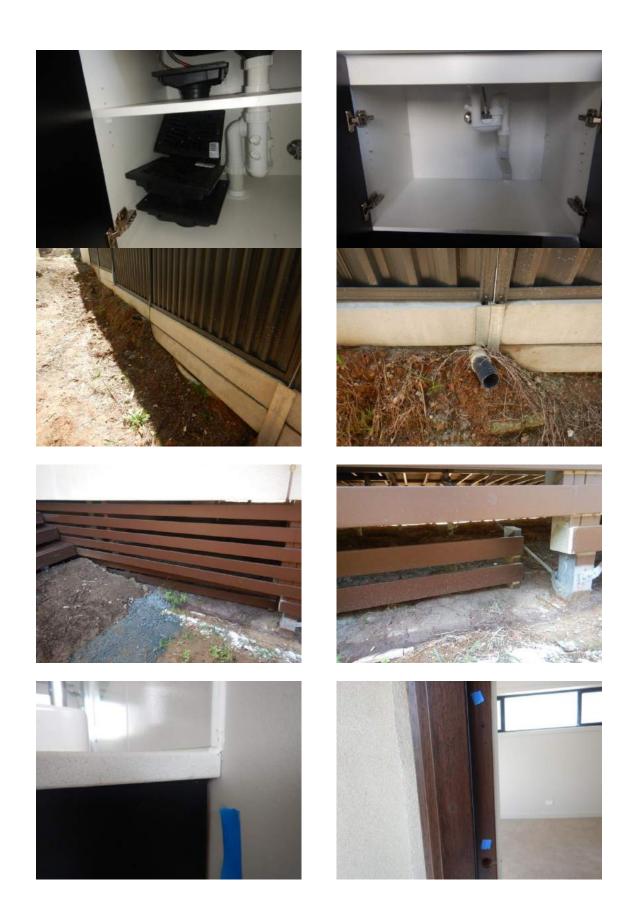
Areas of the dwelling are deemed to have not satisfied these requirements.

#### 23 Adherence to plans and specifications

- (1) This section applies to a regulated contract if plans and specifications form part of the contract.
- (2) The building contractor warrants the subject work will be carried out in accordance with the plans and specifications.



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NCC; 3.2.3.2: -There are areas of open concrete voids to the slab edge. These areas are now showing the exposed reinforcement bars.

Steel was not installed with the minimum concrete coverage area as per the mandated requirements of the NCC. I refer all to part 3.2.3.2.

The builder must:

- Seek engineering process and design for rectification of this defect.
- Document same.
- Send the engineering to the site surveyor for approval.
- Have the site surveyor witness the repair of the slab to ensure that the builder has carried out the works in accordance with the process's and rectification statements in the engineering documentation.
- Satisfy the defect has not been hidden by placing soil over the edge beam of the slab.

This must be completed prior to proceeding with the build.

# 3.2.3.2 Steel reinforcement

- (d) Footings and slabs-on-ground must have concrete cover between the outermost edge of the reinforcement (including ligatures, tie wire etc.) and the surface of the concrete of not less than the following:
  - (i) 40 mm to unprotected ground.
  - (ii) 30 mm to a membrane in contact with the ground.
  - (iii) 20 mm to an internal surface.
  - (iv) 40 mm to external exposure.









**NCC, part 3.1.3.5:** - It was noted the storm water system is presenting with less than the required coverage to the areas as documented in the photographs below. All areas must meet the minimum standards set out in the NCC.

### 3.1.3.5 Stormwater drainage

Where a stormwater drainage system is installed, it must comply with the following:

- (a) The position and manner of discharge of the stormwater drainage system must be to the satisfaction of the appropriate authority.
- (b) The stormwater drainage system must be designed so that any overflow during heavy rain periods is prevented from flowing back into the building.

#### Explanatory information:

The manner of discharge of stormwater drainage systems includes consideration of discharge points. Some examples of discharge points which may be acceptable to the *appropriate authority* are:

- (a) A legal discharge point at the allotment boundary.
- (b) On-site catchment systems, such as stormwater tanks.
- (c) On-site soil drainage systems, such as soaker wells.
- (c) Cover to stormwater drains:

the cover to 90 mm Class 6 UPVC stormwater drains installed underground must be not less than-

- (i) under soil 100 mm; or
- (ii) under paved or concrete areas 50 mm; or
- (iii) under areas subject to light vehicle traffic-
  - (A) reinforced concrete 75 mm; or
  - (B) paved 100 mm.

#### **Explanatory information:**

Different depths of soil cover (or no cover at all) can be achieved using other types of pipes. The cover specified is

measured from the top of the pipe to either the finished ground level or, in the case of paved or concreted areas, to the underside of the paving or concrete.





**AS 3500.1; Table 5.10:** - The water pipe supplying the dwelling must be installed below ground at a depth designed under AS 3500.1

The installation has not met this requirement.

### 5.10 Depth of cover

Where water services are installed below ground, the minimum cover shall be as specified in <u>Table 5.10</u>, measured from the proposed finished surface levels.

Loading conditions	Minimum cover mm
Under slabs and footings (concrete)	75
Not subject to vehicular loading (excluding fire services)	300
Fire services not subject to vehicular loading	600
Subject to vehicular loading:	
(a) no carriageway	450
(b) sealed carriageway	600
(c) unsealed carriageway	750
Pipes in embankments or subject to construction equipment loads 750	
NOTE See <u>Clause 5.20</u> for minimum cover in bushfire areas.	

Table 5.10 — Minimum	depth of cover	for buried pipes
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#### 5.11 Bedding and backfill

The water services shall be surrounded with not less than 75 mm of compacted sand, or fine-grained soil, with no hard-edged object in contact with or resting against any pipe or fitting.

NOTE 1 See Figure 5.11 for a typical installation.

Material used for final backfill shall be free from rock, hard matter or organic material and be broken up to contain no soil lumps larger than 75 mm.

Unless specified to the contrary, copper and stainless-steel pipelines may be installed in soil excavated from the trench in which they are to be installed, provided the soil is compatible with copper and stainless steel and free from rock and rubble.

NOTE 2 See <u>Clause 5.10</u> for minimum cover.



<sup>6.</sup> 

The slab has been installed with what is known as overpour. On this particular home, the overpour will affect the home owner's ability to install paving and other landscaping.

The overpour will need to be removed, this will require:

• Engineering process and design for rectification of this defect.

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- Have the engineer inspect the repair of the slab to ensure that the builder has carried out the works in accordance with the process's and rectification statements in the engineering documentation.
- Provide a Form 16 certificate
- Supply a copy of all to the Building Certifier and the home owner as per the QBCC Act, Schedule 1B, Section 17

## 17 Copies of certificate of inspection

- (1) This section applies if the building contractor under a regulated contract is responsible for engaging a building certifier for the subject work under regulated contract (whether personally or as agent for the building owner).
- (2) The building contractor must give the building owner a copy of each certificate of inspection issued by the building certifier for the subject work as soon as practicable after receiving the certificate.







**NCC 2019; 3.3.5.8: -**The external painting has not been completed to 75mm below the DPC. As is, bare areas will be visible above future concrete paths.

The NCC 2019 states:

## 3.3.5.8 Damp-proof courses and flashings — installation

(b) The location of a damp-proof course or flashing serving as a damp-proof course, must be not less than-

(i) 150 mm above the adjacent ground level; or

- (ii) 75 mm above the finished surface level of adjacent paved, concreted or landscaped areas that slope away from the wall; or
- (iii) 50 mm above finished paved, concreted or landscaped areas complying with 3.1.3.3(b)(ii) and protected from the direct effects of the weather by a carport, verandah or the like; or





AS 3500.3; 4.5.6:- Downpipes shall be located at least 100 mm clear of any electrical cable or gas pipe.

These requirements have not been met.

#### 4.5.6 Downpipes

The following applies to the installation of downpipes:

(a) Locations — Downpipes shall be located —

- so that they do not interfere with the normal operation of any door, window, access opening or occupancy of a building;
- (ii) where they do not cause a nuisance or lead to injury of a person;
- (iii) as close as practicable to the supporting structure;
- (iv) so that they are protected from mechanical damage;
- (v) at least 100 mm clear of any electrical cable or gas pipe; and
- (vi) at least 50 mm from any other pipework or service.





9.

**AS 2311, clause 2.2.3:** - Design should make provision for the protection of all end grain of external timber. To retard the ingress of moisture, exposed timber cladding should be coated all round before being attached to the building framework.

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This includes cuts, notches, checkouts, bolt holes, etc.

Timbers installed to this dwelling have not met this requirement.

#### 2.2.3 Painting end-grain

During wetting or drying the rate of water movement along the grain of timber is extremely rapid compared with the rate of water movement across the grain. This explains why cracking often begins at the unsealed cut ends of butt and mitre joints and at the bottom edge of vertical boards.

Design should make provision for the protection of all end-grain of external timber. To retard the ingress of moisture, exposed timber cladding should be coated all round before being attached to the building framework.

#### Timber Queensland Technical Data sheet 24: -

# SUPPLEMENTARY TREATMENT, PAINTING & INSTALLATION

H3 LOSP treated products are available in both a pre-primed form or un-primed.

Irrespective, it is recommended by most manufacturers that all H3 LOSP treated products be primed all round with a quality alkyd (oil) based primer and finished with a high quality top coat.

#### **PRIOR TO INSTALLATION**

Treat all cut ends, notches, check-outs, bolt holes, etc with a site applied supplementary timber preservative and prime all these areas as above. Supplementary preservatives include products such as copper and zinc based (usually with a wax or water repellent additive etc.) products in white spirit or similar. Examples of these products include:- Osmose Protim Solignum "XJ Clear" and Tanalized "Ecoseal" and "Enseal Clear".

Supplementary treatments containing water repellents and/or waxes may affect water based primers.

Fill any knot or nail holes etc. with wood putty and spot prime. Sand lightly to an even finish once dry.

Apply two topcoats of either quality acrylic or solvent based paint to the prepared product. In harsher environments high gloss paints are recommended.







**QBCC Act:** - There are gaps to the cladding and/or flashing. Installation needs to be done in manner that prevents water ingress and exposure to unprotected materials not intended for external exposure such as insulation, framework, plasterboard, and the like. Gaps should also be sealed to provide consistent finish free of cosmetic defects.

The building contractor warrants the subject work will be carried out in an appropriate and skilful way, and with reasonable care and skill. This has not been met.

Note: Any water damaged materials will require full replacement.

# 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.

# AS 2047

**1.4.6 Flashing**—an impervious membrane installed in such a manner as to prevent ingress of water into the building.





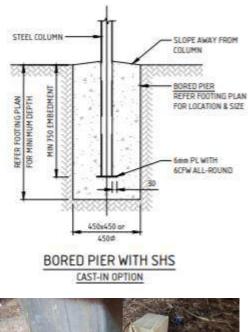




Throughout the subfloor level Steel columns to Footings have not been constructed as per the approved engineering design. It is further noted the alternative design of bolting posts to footings appears to have been improperly installed with a large number of missing bolts.

Builder to complete all works in accordance with approved engineering design.

## **Engineers comments required.**





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In a number of locations to the subfloor it appears fixings are missing. Builder to ensure all fixings are provided in accordance with manufacturer design.



Brace to post one tech screw



Beam to post missing tech screws







Appears missing Brace section

**AS 3660.1; 3.3.4:** - Isolated piers, posts, and stumps shall be provided with a minimum vertical inspection zone of 75mm in accordance with the following.

The timber posts to this dwelling have not met this requirement.

### 3.3.4 Isolated piers, posts and stumps

Access for inspection shall be available to all isolated piers, posts and stumps, which shall be covered with termite sheet material complying with Section 5. Termite sheet material requirements shall not apply where posts, piers and stumps comply with the following criteria:

- (a) A vertical inspection zone of at least 75 mm is provided, and-
  - (i) where concrete stumps or drawn or welded metal tubular piers are used, provided the piers are free from perforations, they are sealed at the top and access for inspection of the full perimeter of the pier or stump is available;
  - (ii) where prefabricated metal piers are tightly fitted to any flange that complies with Clause 5.2 such that no gap exceeds 0.4 mm or, where any gap exceeds 0.4 mm, they are joined as specified in Clause 5.3.11 and access for inspection of the full perimeter of the pier or stump is available; or NOTE: For details, see Figure 3.1(C).
  - (iii) where timber posts are installed without ground contact, metal stirrups that have a continuous base are used to prevent termites passing through the base of the stirrup.

NOTE: For details, see Figure 3.1(D).





#### 14.

**AS 4100, 15.2.2:** - Members, components and fasteners shall be handled and stacked in such a way that damage in not caused to them. Means shall be provided to minimize damage to the corrosion protection on the steel work.

Surface rust and corrosion protection damage has been noted on this site.

#### 15.2.2 Delivery, storage and handling

Members, components and fasteners shall be handled and stacked in such a way that damage is not caused to them. Means shall be provided to minimize damage to the corrosion protection on the steelwork.

All work shall be protected from damage in transit. Particular care shall be taken to stiffen free ends, prevent permanent distortion, and adequately protect all surfaces prepared for full contact splices. All bolts, nuts, washers, screws, small plates and articles generally shall be suitably packed and identified.

# C5 PROTECTION DURING TRANSPORT AND HANDLING AFTER CORROSION PROTECTION

Structural members should be adequately protected during handling and transport to prevent damage to the corrosion protection. Units which are transported in nested bundles should be separable without damage to the units or their coatings. Care should be taken when handling long units or bundles. Consideration should be given to the use of lifting beams with appropriately spaced lifting points and slings, or to lifting with properly spaced fork-lift tines.

#### C6 REPAIRS TO CORROSION PROTECTION

Corrosion protection which has been damaged by welding or other causes should be restored before the structure is put into service. The damaged area should be dry and clean, free from dirt, grease, loose or heavy scale or rust before the corrosion protection is applied. The corrosion protection should be applied as soon as practicable and before noticeable oxidation of cleaned surfaces occurs. Damaged zinc coating should be restored by a suitable zinc paint.





### 15.

NCC 2019; A5.0: - A building must be constructed using materials and products fit for the intended purposes.

Hot dip Galvanised bolts, used on the exterior of the dwelling, have been ground off to expose bare, unprotected metal. These bolts will rust and therefore require replacement with fully galvanised bolts of a suitable length.

The current installation has not met this requirement.

#### A5.0 Suitability

is-

- (1) A building and *plumbing* or *drainage* installation must be constructed using materials, products, *plumbing products*, forms of construction and designs fit for their intended purpose to achieve the relevant requirements of the NCC.
- (2) For the purposes of (1), a material, product, plumbing product, form of construction or design is fit for purpose if it
  - (a) supported by evidence of suitability in accordance with-
    - (i) A5.1; and
    - (ii) A5.2 or A5.3 as appropriate; and
  - (b) constructed or installed in an appropriate manner.

#### Explanatory information:

A5.0 relates to the quality of work and materials needed to construct a building to meet NCC requirements. This means that—

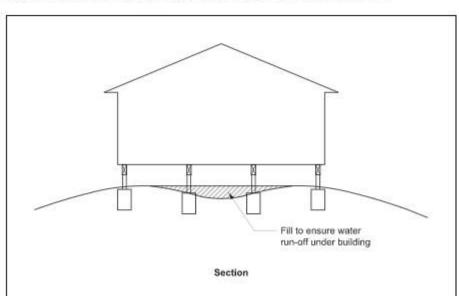
- all people involved with construction must work skillfully in accordance with good trade practice; and
- all materials must be of a quality to fulfil their function/s within the building.

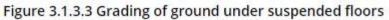


## 16.

There is evidence of past water pooling in the subfloor as documented in the photographs below. We refer the builder to the NCC, part 3.1.3.3 (c) that calls for sub floor areas to be graded in a way that does not allow water to pool.

(c) The ground beneath suspended floors must be graded so that the area beneath the building is above the adjacent external finished ground level and *surface water* is prevented from ponding under the building (see Figure 3.1.3.3).







The BlueScope Colorbond roofing products to the dwelling have been damaged during construction.

**BlueScope Technical Bulletin-38**: - BlueScope <u>do not</u> support the use of touch-up paints on 'Colorbond' steel, and that their use will invalidate the BlueScope Warranty.

Damaged areas greater than 2mm in width will need to be replaced.

# **Technical Bulletin 38**

May 2019. Revision 1.

# REPAIR OF MINOR SCRATCHES AND BLEMISHES

BlueScope does not recommend the use of touch-up paint to repair damage or scratches to the painted surface. As explained above, airdrying paints have different weathering characteristics to COLORBOND® steel, which leads to variations in appearance over time where touch-up paint has been used. BlueScope does not have a recommended method for the removal of touch-up paint. Minor scratches (< 2mm in width) should be left alone as the available metallic coating will continue to protect against corrosion providing the scratches are superficial and the metallic coating is not damaged. If scratches are more noticeable on new material, it is the recommendation of BlueScope to replace the affected product.

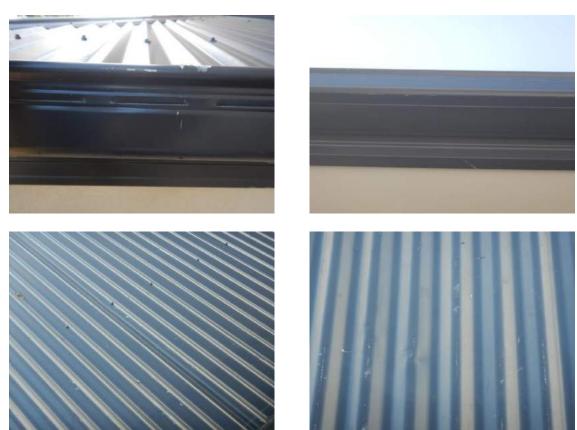
BlueScope does not recommend or support the use of touch-up paint on COLORBOND<sup>®</sup> steel. The application of post paint treatments or systems to the material will invalidate the BlueScope Warranty\*.











Visible from upper level window

18.

SA HB 39; 5.7.7: - Spreaders to be installed with a half cap end.

This requirement has not been met.

#### 5.7.7 Spreaders

Spreaders may be used to drain rainwater from a higher roof surface with a catchment area not exceeding 15 m<sup>2</sup> provided the following conditions are satisfied (see Figure 5.7.7):

- (a) When discharging onto a tiled roof, the lower section is sarked a minimum width of 1800 mm, either side of the point of discharge extending down to the eaves gutter.
- (b) When discharging onto a corrugated roof, a minimum width of 1800 mm on either side of the point of discharge is sealed for the full length of the side laps.
- (c) The increased roof water volume from the upper roof is not to enter any seam of the roof coverings of the lower roof.
- (d) No spreader is to discharge roof water onto or over ridge tiles, mortar jointed tiles, flashings, timber fascia or a roof sheet side lap.
- (e) No spreader is to have its discharge entering any part of any building.
- (f) Spreaders are to discharge all roof water onto roof coverings in the direction of flow, avoiding discharging onto laps on lower roof sheets and tiles.

When discharging an upper roof catchment onto a lower roof, the total roof area including the additional upper roof catchment area is to be considered for inclusion when sizing the lower roofing, gutters and downpipes.

(g) Spreaders do not discharge on sheets or tiles discharging to valleys.

NOTE: The spreader catchment area indicated above is based on a standard corrugated roofing profile and may only exceed 15 m<sup>2</sup> provided the additional upper roof discharge does not exceed the lower roof profile manufacturer's design-carrying capacity.

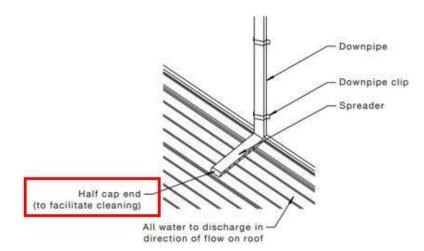


FIGURE 5.7.7 SPREADERS





**Standards Australia HB 39:** - The gutters and roof sheeting must be fully cleaned of metal particles, roof screws, pop rivets, mortar, paint, and the like.

The roof and gutter installation to this dwelling has not met this requirement.

## 3.6 CLEANING UP

Normal installation practices such as drilling and cutting usually leave offcuts and metallic swarf on or around the roof area. These materials and all other debris, including blind rivet shanks, nails and screws are to be cleaned from the roof area and gutter regularly during the installation process as unsightly staining of the surface due to oxidation of the metal particles will result, leading to corrosion and possible failure of the roofing material or guttering. Where practicable, the entire installation should be cleaned down with a blower vac, swept or, alternatively, if a water supply is available, hosed down at the completion of the work.





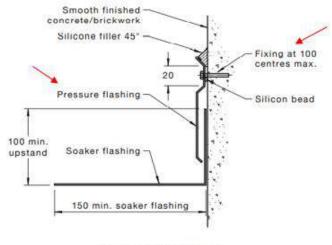




**HB 39, part 8.4, section (c), (v):** - Where used, pressure flashings shall be secured at 100mm maximum spacings.

Fixings exceed 100 mm. The current installation has not met this requirement.

- (c) Pressure flashings may be used in lieu of cutting grooves into walls, provided they are used only with smooth surface finished walls, e.g. smooth finished concrete or smooth finished brickwork with flush pointed mortar courses, provided [see Figure 8.4(C)]—
  - the pressure flashings are purpose-made machine folded with a safety/stiffening fold at the upper edge or alternatively constructed with a safety/stiffening fold at 45° from vertical to allow for the placement of a silicone filler;
  - (ii) the sealant is applied in a sandwiched seal of approximately 20 mm wide;
  - (iii) the fixing of the flashing will ensure a durable seal is maintained;
  - (iv) the seal is protected from excessive movement due to expansion and contraction;
  - (v) the fixing centres are at no more than 100 mm spacings; and
  - (vi) the fixing devices are fit for purpose and compatible with the flashing material.



DIMENSIONS IN MILLIMETRES

FIGURE 8.4(C) PRESSURE FLASHING





Missing Flashing /

**AS 1562.1; 4.4.2:** - Fasteners in valleys or crests (of sheeting) shall be tightened to compress flexible seals <u>without</u> deforming the cladding or damaging any washers. Care should be exercised to prevent the entrapment of swarf between the seal and the cladding.

These requirements have not been fully met.

<u>Note:</u> Due to WH&S restrictions I am unable to climb on roofs. Nor am I able to view any parts of upper level roofs of two storey homes. The builder is responsible for ensuring all areas are compliant.

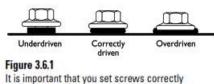
### 4.4.2 Pierced-fastened cladding

Fasteners in valleys or crests shall be tightened to compress flexible seals without deforming the cladding or damaging any washers.

Where nails are used, any local distortion shall not extend beyond the area covered by the washer and seal.

NOTES:

- 1 Compressed washers should be used to minimize water leakage and provide cladding performance as per design documentation (see Clause 3.5).
- 2 Care is to be exercised to prevent the entrapment of swarf between the seal and the cladding for both crest and valley fasteners.



# 3.6 Setting of screws

Fasteners with sealing washers should be tightened only until the washer is gripped firmly enough to provide a weathertight seal. The fasteners should not be over-tightened because this may split the sealing washer or deform the sheet, either of which could lead to water penetration. Take particular care when valley fixing because there is no flexibility with the sheet hard against its support. Take particular care to ensure the fastener is driven perpendicular to the sheeting to avoid deformation of the washer.







**AS 3500.3; 4.5.1 & 4.5.3:** - The minimum allowable gradient is 1:500 to achieve an effective gradient with no permanent ponding.

Areas of the eaves gutter installation to this dwelling have not met this requirement.

#### 4.5.1 Installation

Installation of each new or altered section of the roof drainage system shall conform with the following:

- (a) There shall be no restrictions to the free flow of stormwater due to-
  - (i) protrusions or other obstructions; or
  - (ii) debris (e.g. cement, mortar, clippings and similar debris).
- (b) All accessories shall be effectively fixed and securely anchored.

#### 4.5.3 Eaves gutters

Eaves gutters shall be installed as follows:

(a) Gradients Deviations from nominal gradients shall be smooth and not cause permanent ponding.

NOTES:

- 1 Where a building is likely to move due to reactive soils, gradients should not be flatter than-
  - (a) 1:250 to achieve an effective gradient not flatter than 1:500; or
  - (b) 1:500 to achieve an effective gradient with no permanent ponding.
- 2 Light condensation does not generally cause permanent ponding, whereas heavy condensation, particularly in conjunction with retained silt, can reduce the design lifetime of the product.





23.

**Unitex Installation Guide:** - It was noted the Unitex cladding has not been completed with movement joints in accordance with the manufacture specifications. As this product is not covered by an Australian Standards the following requirements must be met. Please note the movement joins must not be bridged.

The expansion joints to the dwelling do not meet these installation requirements.

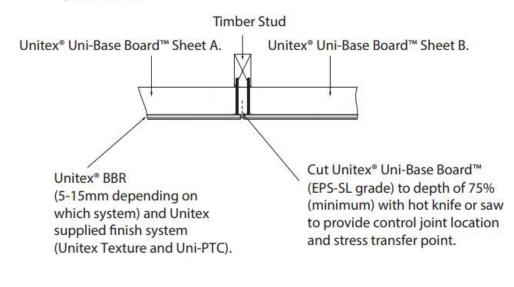
Unitex<sup>®</sup> Uni-Base Board<sup>™</sup>: Guide for Control/Expansion Joints – Front elevation (use same principles for other elevations)



NOTES:

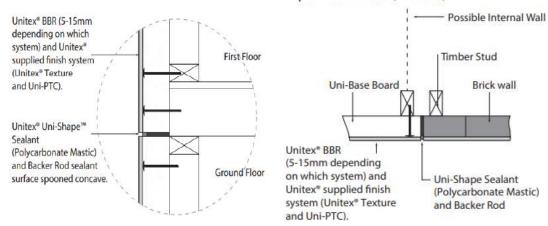
- 1. Use this drawing if no other information available.
- 2. Expansion/Control Joints are required for every elevation and between floor levels
- 3. At all dissimilar substrate material junctions expansion/control joints must be installed eg brick to Uni-Base Board, block to Uni-Base Board (refer to Detail 7).
- 4. Vertical expansion joints are recommended every 6-8m minimum (refer Builder).

Unitex<sup>®</sup> Uni-Base Board<sup>™</sup>: Control Joints (vertical) – plan view



Unitex<sup>®</sup> Uni-Base Board<sup>™</sup>: Control Joints (horizontal)

Unitex<sup>®</sup> Uni-Base Board<sup>™</sup>: Dissimilar substrates Expansion Joints (vertical)



# **Expansion and Control Joints**

Unitex<sup>®</sup> Uni-Base Board<sup>™</sup> is either direct fix or cavity fix to an existing frame or surface. Expansion and control joints are essential in all Unitex<sup>®</sup> Uni-Base Board<sup>™</sup> Systems and are recommended at a maximum every 6-8m and between floor levels. After internal fit-out extra movement joints may be required.

13. Apply Unitex<sup>®</sup> surface Applied Texture Finish in a tradesman like manner (Unitex<sup>®</sup> Uni-Trowell Décor) to all rendered Unitex<sup>®</sup> Uni-Base Board<sup>™</sup> surfaces (not over sealant). There are various grades and colours available from fine sand to coarse scratch (graffiato) finishes. When texture coats are dry, apply as needed (or a minimum 2 coats) of Unitex<sup>®</sup> Uni-PTC Protective Top Coat over all Unitex<sup>®</sup> Uni-Base Board<sup>™</sup> surfaces including sealant joints. Unitex<sup>®</sup> Uni-PTC is a slightly flexible, matte topcoat which creates ease of cleaning and protection against salty and polluted atmospheres and certain climatic conditions.

Cracks noted in a number of areas







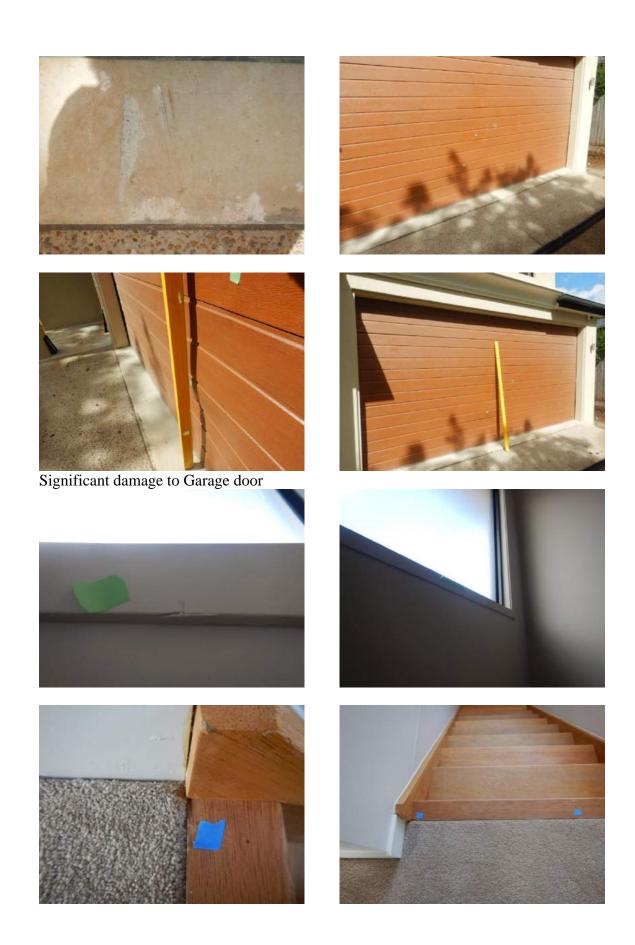


**QBCC Act; Schedule 1B, s.20:** - Materials shall be suitable for the purpose for which they are used, and unless stated in the contract shall be new.

Material present with damage.

# 20 Suitability of materials

- (1) The building contractor warrants that all materials to be supplied for use in the subject work—
  - (a) will be good and, having regard to the relevant criteria, suitable for the purpose for which they are used; and
  - (b) unless otherwise stated in the contract, will be new.



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AS 3500.3: 4.5.1: -All down pipes shall be effectively fixed and securely anchored.

This requirement has not been met.

# 4.5 INSTALLATION AND TESTING

## 4.5.1 Installation

Installation of each new or altered section of the roof drainage system shall comply with the following:

- (a) There shall be no restrictions to the free flow of stormwater due to-
  - (i) protrusions or other obstructions; or
  - (ii) debris (e.g. cement, mortar, clippings and similar debris).
- (b) All accessories shall be effectively fixed and securely anchored.



26.

AS 2311, C4 (a) (iv) & (b): - Surrounding areas shall be clean, tidy, and undamaged. The painting to this dwelling has not met these requirements.

#### **C4** FINAL INSPECTION

The final inspection should ensure the following where appropriate:

- (a) The painted surface shows—
  - (i) uniformity of gloss, colour and opacity;
  - (ii) correct range of dry film thickness of paint;
  - (iii) freedom from painting defects such as-
    - (A) tackiness and paint application defects; and
    - (B) brush marks, roller coater marks, spray application defects and those irregularities in texture, which are inconsistent with good trade practice.

NOTE: Differences in appearance will occur; however, where such differences are not clearly discernible from a distance of typically 1.5 to 2 m when viewed under normal lighting conditions the finish is usually considered acceptable. Joinery should be also inspected for the presence of light surface grit or coarse particles which may only be identified by touching the surface.

(iv) General cleanliness and absence of disfigurement, related to paint application.

NOTE: Surfaces, fixtures and fittings should be checked to ensure that they have been masked or removed, and that all paint spills or stains have been removed as set out in the specifications.

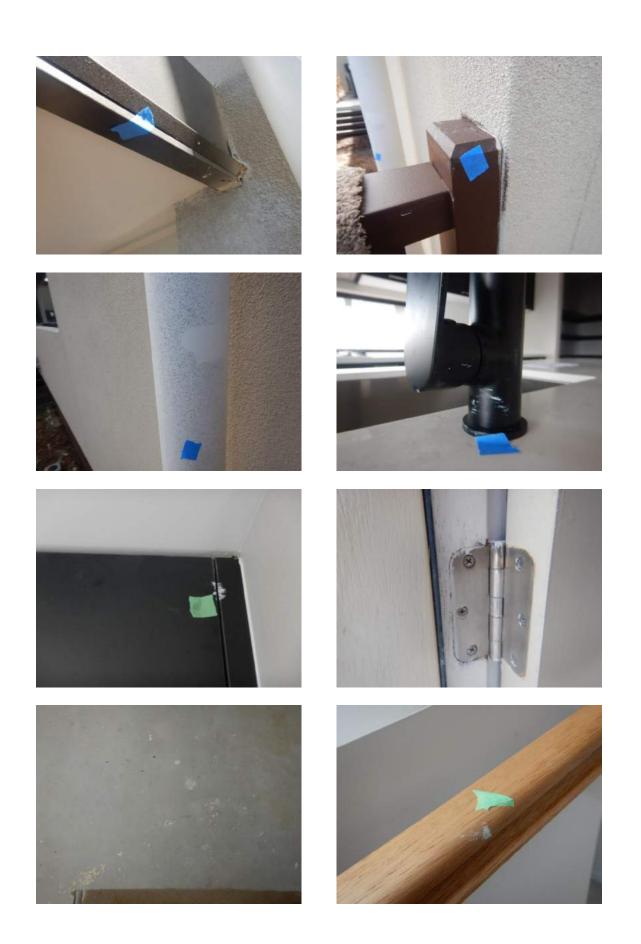
(b) The surrounding area is clean, tidy and undamaged, and all of the paint contractor's materials, equipment and debris related to the work performed, are removed from the premises or site.

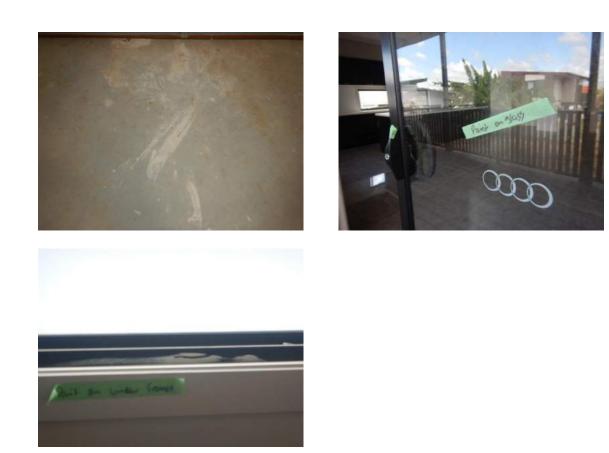












**QBCC Act, Schedule 1B:** - Builder to complete all caulking in a proper and workmanlike manner. Caulking is necessary to prevent water entry and achieve an acceptable cosmetic finish.

Rework required to multiple locations.

## 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.











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AS 2589; 1.2 & 3.4: - It was noted the pre-paint plaster touch ups are not yet completed. All required areas to be addressed, ensuring a minimum level 4 finish in accordance with AS 2589.

## **1.2 APPLICATION**

This Standard provides a choice of different levels of finish, which allows for flexibility of application. Unless otherwise specified, compliance with this Standard is achieved by a Level 4 finish for all gypsum linings except for those areas which are non-visible and generally non-habitable (i.e. non-walk-in cupboards, concealed storage areas and non-livable attics) where a Level 3 finish is acceptable.

This Standard is suitable for use with gypsum plasterboard in accordance with AS/NZS 2588, fibre-reinforced gypsum linings in accordance with Clause 2.3 and gypsum cornices in accordance with Clause 2.4.

## 3.1 QUALITY OF GYPSUM LINING APPLICATION AND FINISHING

#### 3.1.1 General

The needs of the client shall be determined at the design stage. Gypsum lining will require different specifications depending on where they are installed and the level of finish required. Level 4, as specified in Clause 3.1.4, shall be the default level for gypsum lining systems unless specified otherwise.

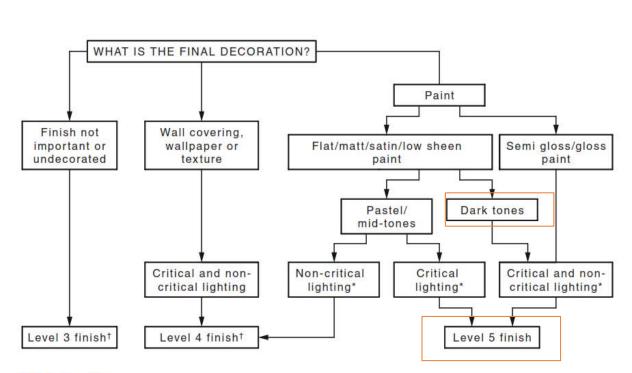
#### 3.1.2 Gypsum lining finishes

Gypsum linings will require different specifications depending on where they are installed and the level of gypsum lining finish required. These levels of gypsum lining finish [see Items (a), (b) and (c)] only apply to gypsum-lined walls and ceilings, prior to decoration.

The specification levels of gypsum lining finishes shall be as follows:

- (a) Level 3 (see Clause 3.1.3).
- (b) Level 4 (see Clause 3.1.4).
- (c) Level 5 (see Clause 3.1.5).

The choice of a level of finish, depending on the final decoration of the room or lining, shall be as shown in Figure 3.1.2.



#### 3.1.4 Level 4

Level 4 shall be the default level for gypsum lining.

Flat, matt or low sheen paints shall be used for this Level 4.

All joints and interior angles shall have tape embedded in jointing cement/jointing compound and a minimum of two separate coats of jointing cement/jointing compound applied over all joints, angles, fastener heads and accessories. All jointing cement/jointing compound shall be finished evenly and be free of tool marks and ridges in preparation for decoration.

# **NOTE:** AS 2589 calls for a level of finish in accordance with the dwelling design. Level 5 finish is required to areas directly affected by elements as detailed below.

#### NOTES:

- 1 At the time of design, factors that will affect visual appearance are as follows:
  - (a) Architectural designs that encompass large unbroken ceiling areas, large windows and a minimalist and uncluttered look.
  - (b) The direction and location of natural and artificial lighting, as it may have detrimental effect on the appearance of the gypsum lining.
  - (c) The construction schedule and site conditions.
  - (d) The quality of workmanship at all stages of installation, jointing and decoration of linings.
  - (e) The framing quality.
  - (f) The type of decoration to be applied.
- 2 Prior to the commencement of interior lining work, it is good practice to establish a sample or reference area of the finished decorated wall or ceiling, or both, which may be used to subjectively judge acceptability of the quality of finish under prescribed conditions of inspection.
- 3 Customer satisfaction with the quality of the final decorated finish will be achieved by setting expectations followed by the appropriate specification of materials, work standards and choice of skilled trade people. Specification of key aspects of functionality and the performance of the walls and ceilings of a building should reflect the needs and expectations of the customer.

#### 3.1.5 Level 5

Level 5 shall be used where gloss or semi-gloss paints are to be used or where critical lighting conditions occur on flat, matt or low sheen paints.

A Level 5 finish is characterized by a parity of texture and porosity. The surface texture shall be random in fashion and monolithic, concealing joints and fixing points.

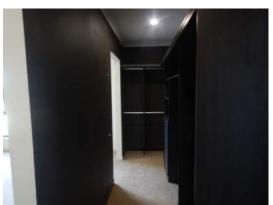
All joints and interior angles shall have tape embedded into jointing cement/jointing compound and a minimum of two separate coats of jointing cement/jointing compound applied over all joints, angles, fastener heads and accessories. All jointing cements/jointing compounds shall be finished free of tool marks and ridges.

A paint or plaster material shall then be sprayed, rolled or trowelled over the defined area. NOTES:

- 1 See Clause 3.1.1 for achieving agreed quality of finish.
- 2 A Level 5 finish does not mean the surface is without texture variation.
- 3 When installed and jointed in accordance with Clause 4.5, fibre-reinforced gypsum linings will inherently be in accordance with the requirements of Level 5 without the need for further surface treatment to achieve parity of texture and porosity.
- 4 A Level 5 finish is difficult to achieve and always requires the cooperation of the framer, plasterer and painter in establishing suitable work practices that deliver the agreed painted finish for the given project.
- 5 Some minor surface imperfections may still be visible in a Level 5 finish; however, these will be minimized under the additional measures applied under Level 5.
- 6 Level 5 expectations can be compromised by dark colours, glancing light and gloss finishes.
- 7 The surface of the defined area may require sanding to be suitable for decoration.

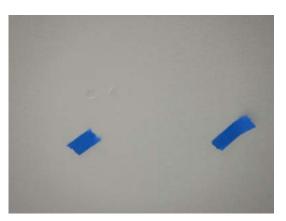






Level 5 Finish required to Dark walls





**AS 2311; Appendix C Inspection and Testing:** - Painted areas shall meet the requirements C4 Final Inspection.

Painted areas have not met these requirements.

Note - not all areas have been marked. The following images are an example of this defect.

## **C4** FINAL INSPECTION

The final inspection should ensure the following where appropriate:

- (a) The painted surface shows—
  - (i) uniformity of gloss, colour and opacity;
  - (ii) correct range of dry film thickness of paint;
  - (iii) freedom from painting defects such as-
    - (A) tackiness and paint application defects; and
    - (B) brush marks, roller coater marks, spray application defects and those irregularities in texture, which are inconsistent with good trade practice.

NOTE: Differences in appearance will occur; however, where such differences are not clearly discernible from a distance of typically 1.5 to 2 m when viewed under normal lighting conditions the finish is usually considered acceptable. Joinery should be also inspected for the presence of light surface grit or coarse particles which may only be identified by touching the surface.

(iv) General cleanliness and absence of disfigurement, related to paint application.

NOTE: Surfaces, fixtures and fittings should be checked to ensure that they have been masked or removed, and that all paint spills or stains have been removed as set out in the specifications.

(b) The surrounding area is clean, tidy and undamaged, and all of the paint contractor's materials, equipment and debris related to the work performed, are removed from the premises or site.

## QBCC Standards and Tolerances Guide, Section 13 - Painting: -

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## 13.1 Standard of painting

Coatings used are to be suitable for the relevant conditions and relevant wear and tear. Unless documented otherwise, within the first 12 months from completion of the work, painting is defective if it does not comply with the manufacturer's installation instructions or AS/NZS 2311 - Guide to the Painting of Buildings.

## 13.2 Surface finish of paintwork

Within the first 12 months from completion of the work, paintwork is defective if application defects or blemishes such as paint runs, paint sags, wrinkling, dust, bare or starved painted areas, colour variations, surface cracks, irregular and coarse brush marks, sanding marks, blistering, uniformity of gloss level and other irregularities are visible in the surface from a normal viewing position.

Within the first 12 months from completion of the work, excessive over-painting of fittings, trims, skirtings, architraves, glazing and other finished edges is a defect.

# Within the first 12 months from completion of

13.3 Nail and screw fixings

the work, fixings or unfilled depressions caused by fixings are defects in painted or stained surfaces if they can be seen from a normal viewing position.

# 13.4 Mechanical damage and natural defects in surfaces

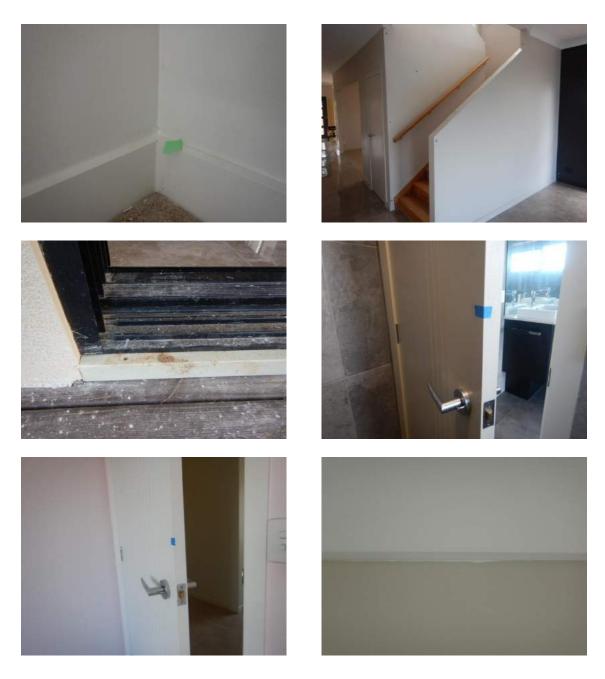
Within the first 12 months from completion of the work, holes and any other unfilled depressions in painted or stained timber such as surface defects caused by mechanical damage, natural characteristics such as gum pockets or surface splits are defects if they can be seen from a normal viewing position.









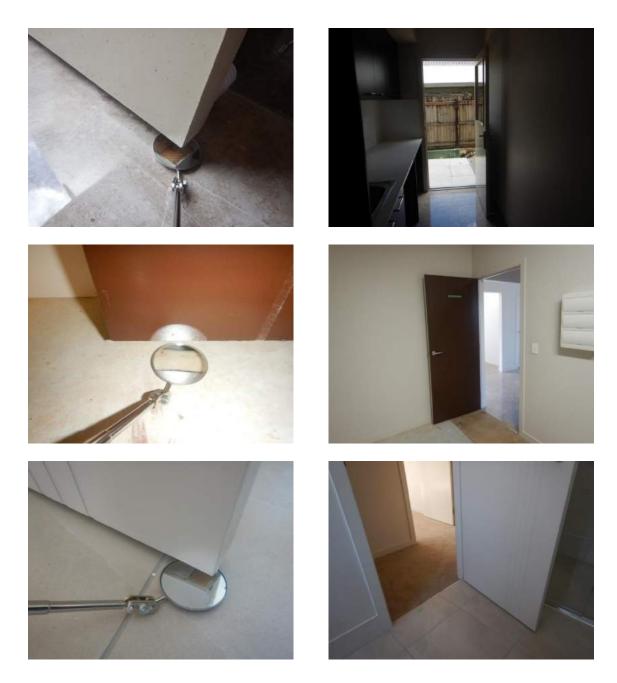


**QBCC Standards and Tolerances Guide, 9.6:** - All sides of doors including top and bottom edges must be sealed in accordance with the manufacturer's recommendations.

Doors to this dwelling have not met this requirement.

# 9.6 Sealing of door edges

Within the first 12 months from completion of the work, door leaves are defective if they do not have all sides, top and bottom edges sealed in accordance with manufacturer's recommendations.



AS 2589; 3.4: - Control joints shall be continuous through battens and mouldings, such as cornices.

The control joint/s in this dwelling do not continue through the cornices.

#### 3.4 CONTROL JOINTS

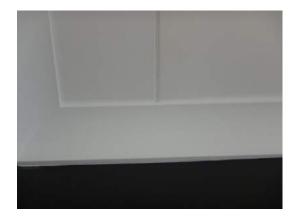
Control joints and their positioning shall be determined at design stage and included on relevant specifications and diagrams including accurate details for installation.

Control joints shall be provided at not more than 12 m intervals in either direction for internal walls and ceilings, and at not more than 6 m intervals in either direction for external ceilings. Where a control joint is required in a wall or ceiling it shall be continuous through battens and mouldings, such as cornices, in order to maintain continuity. Additionally, control joints shall coincide with movement joints in the substrate and with a change in substrate material.

Control joints shall be capable of accommodating the magnitude of the following expected movement:

- (a) A separation of underlying frame to achieve an effective control joint in the gypsum lining which is aligned with the movement joint in the underlying structure [see Figure 3.4(A)].
- (b) A control joint in the gypsum lining placed at the junction of two different substrates [see Figure 3.4(B)].
- (c) A horizontal control joint at an internal mid-floor position such as a stairwell in a multi-storey building [see Figure 3.4(C)].

NOTE: When correctly designed, a full height door, window, bulkhead or archway may perform the same function as a control joint (see Paragraphs D5 and D6 of Appendix D for further information).





## 32.

**NCC**; **3.12.3.5**: - Ceilings, walls, floors, and openings such as a window frame must be constructed to minimise air leakage when forming part of the external fabric. Junctions and penetrations must be sealed with close fitting architrave, skirting, or cornice; or expanding foam, rubber compressive strip, caulking or the like.

Architraves to perimeter walls, that are not close fitting, must be sealed off.

#### 3.12.3.5 Construction of ceilings, walls and floors

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

#### Explanatory information:

- 1. A close fitting internal lining system is considered to include an allowance for minimum lining movement gaps at wall, floor and ceiling junctions.
- 2. Caulking includes sealant, mastic or other gap filling material.
- In 3.12.3.5(b)(ii), penetrations include windows, doors, roof lights, flues, exhaust fans, heating and cooling ductwork and the like.









33.

**QBCC Act; Implied Warranties, section 20:** - The building contractor warrants that all materials shall be good, suitable, and new.

Damaged powder coated surfaces have not met this requirement.

The powder coat finish to window and door frames has been damaged in areas.

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Powder coating is a process using specialist equipment, products, and conditions. For this reason, we recommend full replacement of damaged sections / extrusions. Touch up paint products have been found to stand out and fade more quickly as they are less durable than the factory applied powder coating.

#### 20 Suitability of materials

- (1) The building contractor warrants that all materials to be supplied for use in the subject work
  - will be good and, having regard to the relevant criteria, (a) suitable for the purpose for which they are used; and
  - (b) unless otherwise stated in the contract, will be new.

relevant criteria, for materials, means-

- generally accepted practices or standards applied in the (a) building industry for the materials; or
- specifications, instructions or recommendations of (b) manufacturers or suppliers of the materials.









## 34.

**QBCC Standards and Tolerances Guide:** - Architrave quirks must be consistent when viewed from a normal viewing position.

Quirks to this dwelling have not met this requirement.

# 11.3 Architrave quirks

Within the first 12 months from completion of the work, and unless documented otherwise the width of the quirk (setback from the edge) of each length of an architrave is defective if it is not consistent and where the irregularity can be seen from a normal viewing position.





35.

**QBCC Standards and Tolerances Guide:** - Cabinet door and drawer fronts are defective if they do not align, or do not have consistent gaps.

Cabinetry to this dwelling has not met this requirement.

## 11.4 Cabinet doors and door fronts

Within the first 12 months from completion of the work, and unless otherwise specified, cabinet door and drawer fronts are defective if they are not aligned, or do not have consistent gaps between doors and between drawers.







**QBCC Act; Schedule 1B, s.20:** - Materials shall be suitable for the purpose for which they are used, and unless stated in the contract shall be new.

Material present with damage.

## 20 Suitability of materials

- (1) The building contractor warrants that all materials to be supplied for use in the subject work—
  - (a) will be good and, having regard to the relevant criteria, suitable for the purpose for which they are used; and
  - (b) unless otherwise stated in the contract, will be new.



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37.

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## NCC; O2.4.1, F2.4.1, & P2.4.1: -

Objective- safeguard the occupants and protect the building from damageFunctionality- avoid creation of unhealthy or dangerous conditionsPerformance- prevent water from penetrating into concealed spaces

The top of shower wall tiles have not been sealed, or sealed fully to the wall, and as such, have not complied with these requirements.

Objective
O2.4.1 Wet areas
The Objective is to safeguard the occupants from illness or injury and protect the building from damage caused by the accumulation of internal moisture arising from the use of <i>wet areas</i> in a building. <b>Functional statements</b>
F2.4.1 Wet areas
A building is to be constructed to avoid the likelihood of-
(a) the creation of any unhealthy or dangerous conditions; or
(b) damage to building elements,
caused by dampness or water overflow from bathrooms, laundries and the like.
Performance Requirements

#### P2.4.1 Wet areas

To protect the structure of the building and to maintain the amenity of the occupants, water must be prevented from penetrating—

(a) behind fittings and linings; or

(b) into concealed spaces,

of sanitary facilities, bathrooms, laundries and the like.





## 38.

**QBCC Standards and Tolerances Guide 2019, part 15.6:** - Structural floors that squeak excessively in trafficable areas are defective.

Areas of floor to this dwelling are deemed to be squeaking excessively.

## 15.6 Squeaking structural floors

Within the first 12 months from completion of the work, floors that squeak excessively in trafficable areas are defective.

All areas to comply



## 39.

AS 3500.2; part 4.3.1 (g): - The interior of each pipe must be cleared of any foreign matter prior to commissioning.

The shower wastes and floor waste gullies are presenting with an amount of trade waste.

#### 4.3 Drains

#### 4.3.1 Below ground

Drains below ground shall -

- 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 <u>Table 3.3.1</u>;
- 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;
- (g) have the interior of each pipe cleared of any foreign matter before it is laid and prior to commissioning; and
- (h) have a jump-up installed to connect drains at different elevations.



NCC part F2.4.1, P2.4.1 and O2.4.1: - Calls for the void between the bath and the floor to be fully sealed to all parts.

The free-standing bath has not been caulked to the floor. Any moisture that makes its way into the void cannot be easily removed, it will allow moisture to remain long after. A building is to be constructed to avoid the likelihood of the creation of an unhealthy condition.

The dwelling bath installation does not meet these requirements.

## Part 2.4 Health and amenity

#### Explanatory information:

#### Objective

#### O2.4.1 Wet areas

The Objective is to safeguard the occupants from illness or injury and protect the building from damage caused by the accumulation of internal moisture arising from the use of *wet areas* in a building. **Functional statements** 

## F2.4.1 Wet areas

A building is to be constructed to avoid the likelihood of-

- (a) the creation of any unhealthy or dangerous conditions; or
- (b) damage to building elements,

caused by dampness or water overflow from bathrooms, laundries and the like.

#### **Performance Requirements**

#### P2.4.1 Wet areas

To protect the structure of the building and to maintain the amenity of the occupants, water must be prevented from penetrating-

- (a) behind fittings and linings; or
- (b) into concealed spaces,

of sanitary facilities, bathrooms, laundries and the like.





41.

AS 2688; 4.1.2; 7.2: - Doors shall have a clearance of 3 + 1 mm between vertical members of a door frame/door jamb and door leaves.

This requirement has not been met.

#### 4.1.2 Doorsets

For doors exceeding the dimensions of Table 4.1, structural adequacy shall be ensured, and the tolerances given in Table 4.1 shall still apply.

Doors shall have a clearance of  $3 \pm 1$  mm between the vertical and horizontal members of a door frame/door jamb.

Clearance at the bottom of the door shall not exceed 15 mm after the installation of floor coverings.

NOTE: For doors complying with the NCC requirements for lift-off doors, the  $3 \pm 1$  mm clearance at the top of the door does not apply.

#### 7.2 CLEARANCES FOR HINGED DOORS

Door leaves shall be fitted to their door frames to meet the clearance requirements set out in Clause 4.1.2.

NOTE: The leading edges of doors may be splayed if required to prevent binding between stile and jamb.





AS 3958.1, part 5.7.1, sub (f): - All installed grout needs to be installed uniform in colour, smooth, and without voids, pinholes, or low spots.

Areas of tile grout have not met this requirement.

#### 5.7 GROUTING

#### 5.7.1 General

Grouting of the joints may be carried out at any time to suit the convenience of the work but should preferably be left for at least 12 h after fixing of tiles, unless otherwise specified. Sufficient time should elapse to ensure adequate setting, and to preclude disturbance of the finish during the grouting operation. It is not advisable to delay the grouting unduly as the open joints may collect general building dust and deleterious material.

Where proprietary coloured grouts or cement grouts containing coloured oxides are used, a sample tile or small inconspicuous area should be tested to determine if staining will occur. The application of a grout release or penetrating sealer may facilitate the use of such grout without staining the tile. This may be particularly relevant when using porous or polished tiles.

Where a sand/cement grout is required a suitable mix is 1 part Portland cement to 2–4 parts fine sand mixed to a paste consistency with the minimum of water (too wet a mix may result in the joint-filling cracking on drying out). If a proprietary grouting material is specified, it should be mixed and applied strictly in accordance with the manufacturer's recommendations. For optimum strength and resistance to wear and cleaning agents, the grouting mix should be fresh and with a higher proportion of cement (within the specified range). It should, however, be pointed out that higher strength grout mixes may not take up induced stresses as well as a lower strength mix.

The procedure is as follows:

(f) Fill all gaps so that adhesive does not show through grouted joints. Remove surplus grout from the tiles with the aid of a damp, not wet, cloth and tool the joints with a piece of wood or other material of suitable size and shape. When a proprietary grouting material is used, observe the manufacturer's recommendations for cleaning. Do not use sawdust for removing surplus grout from floors. The finished grout should be uniform in colour, smooth and without voids, pinholes or low spots.



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

## Preparation for finished flooring material has not been met.

## 3.1.1.4 Surface quality

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

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

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

## AS 3958.1; 5.4.6: -

## 5.4.6 Tile finish and joints

The recommendations for tile finish and joints are as follows:

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



44.

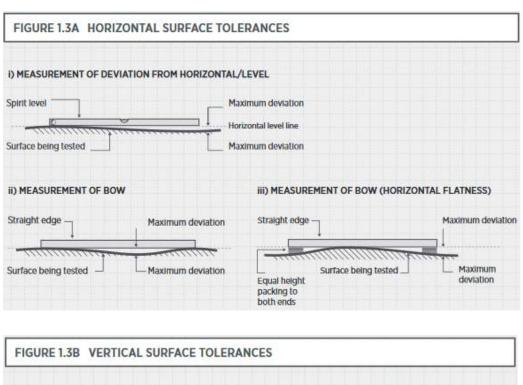
**QBCC Guide to Standards and Tolerances; Section 5 & AS 2589; 4.2.2: -**There are a number of areas in the home that exceed the deviation allowance of 4 mm tolerance over 2 m. The following acronyms apply.

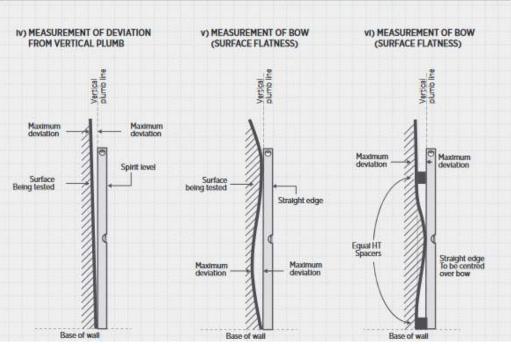
- bowed walls or studs (B)
- out of plumb walls (OOP)
- out of square skirting (OOS)
- out of alignment walls (OOA)
- ceiling or cornice out of level (C-OOL)
- bulkhead out of level (BH OOL)
- niche out of level (N OOL)

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.





## 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)].

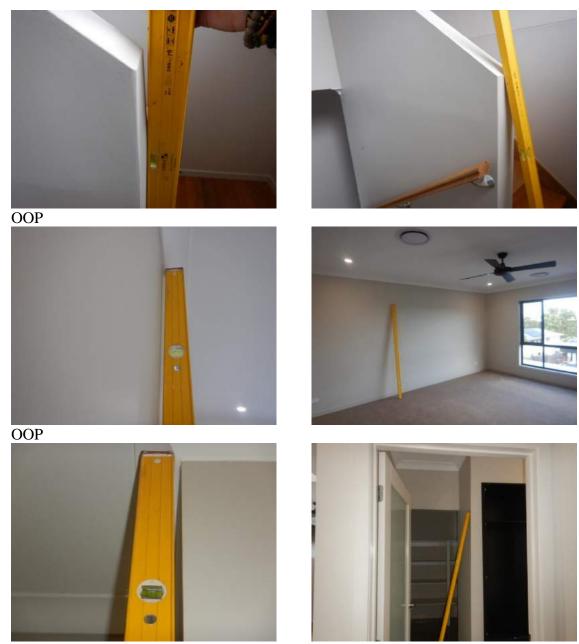
For wall and ceiling framing that is in accordance with the dimensional tolerances of this Clause, gypsum linings may be fixed directly to the framing with an appropriate fastening system in accordance with Clause 4.4.3.

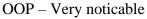
## **TABLE 4.2.2**

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

DEITHIT	. som non			
	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 mm
Steel and timber framing, and battened masonry	4	5	3	4
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Bow





**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.



Drain under tap



Tie down bolt to Condensor



Screw Cover plates



rubber short









Loose Toilet Roll holder





Screw / nail can be felt through carpet



Accesshole doesn't fit

46.

**NCC 2019, 3.12.1.1:** - Where required, insulation must be installed so that it abuts or overlaps adjoining insulation, and forms a continuous barrier with ceilings, walls, bulkheads, floors or the like, in accordance with Clause 3.12.1.1, (a), (i) & (ii) below.

This installation has not met these requirements.

**Acceptable Construction Practice** 

#### 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-

- 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.









# **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 statuary requirements was carried out to verify their correctness.

#### 4. Documentation

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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.

#### 9. Report Reproduction

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

#### 10. Reference

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

#### 11. Report Exclusions

**a**) Defects in inaccessible parts of the building including, but not limited to, the roof space and or the subfloor 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.