



ABN 12 115 961 487  
PO Box 88  
Bacchus Marsh Vic 3340  
Phone: (03) 5366 6900  
Email:  
Report By:

20/04/2021



**Site Address:**

**Client Name:**

**Phone #:**

**Email:**

<b>Dwelling type:</b>	House and Garage.
<b>Dwelling configuration:</b>	Single Storey.
<b>Nature of works:</b>	New Building.
<b>Stage of inspection:</b>	Final 2nd Re-inspection.
<b>Construction Type:</b>	Brick Veneer.
<b>Garage:</b>	Attached.
<b>Foundations:</b>	Slab.
<b>Builder:</b>	

## **Client Brief**

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

## **Inspection and Report**

Our Inspection is a visual inspection of the overall finishes and the quality of those finishes presented by the Builder. This Report is a list of items that in our judgement do not reach an acceptable standard of quality, level of building practice, or have not been built in a proper workmanlike manner, in relation to the Building Code of Australia, (BCA's) the Building Regulations, any relevant Australian Standards and the acceptable standards and tolerances as set down by the Building Commission.

## **Access**

Access was gained to all required areas of the residence.

## **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.

Please note: **A fee of \$350.00 per hour**, or part thereof, plus GST will be charged for any clarification required by the builder, or any of the builders' employees, and a purchase order for same will be required prior to any contact between Darbecca Pty Ltd and the builder.

An inspection was conducted at the above address on 20/04/2021 for the purpose of a general home inspection, requested by the 'client'.

The inspection was conducted with the 'client' present, and details exterior and interior.

The weather was overcast at the time of the inspection.

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

## **Schedule of Defects:**

### **Defects, observations and other related comments from the Final Inspection on the 2021:**

#### **1.**

It was noted in parts around the dwelling the Vapour Barrier has been allowed to fall below FGL. Other areas are well installed.

It is a requirement of Part 3.2.2.6 Vapour Barriers of the NCC that *'The vapour barrier must be placed beneath the slab so that the bottom surface of the slab is entirely under laid and extends under edge beams to finish at ground level in accordance with Figure 3.2.2.3.'*

It must be further noted this is also required to class 10 buildings when the slab is continuous from a class 1 slab.

### 3.2.2.6 Vapour barriers

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

(a) Materials

A vapour barrier must be—

- (i) 0.2 mm nominal thickness polyethylene film; and
- (ii) medium impact resistant, determined in accordance with criteria specified in clause 5.3.3.3 of AS 2870; and
- (iii) be branded continuously “AS 2870 Concrete underlay, 0.2 mm Medium impact resistance”.

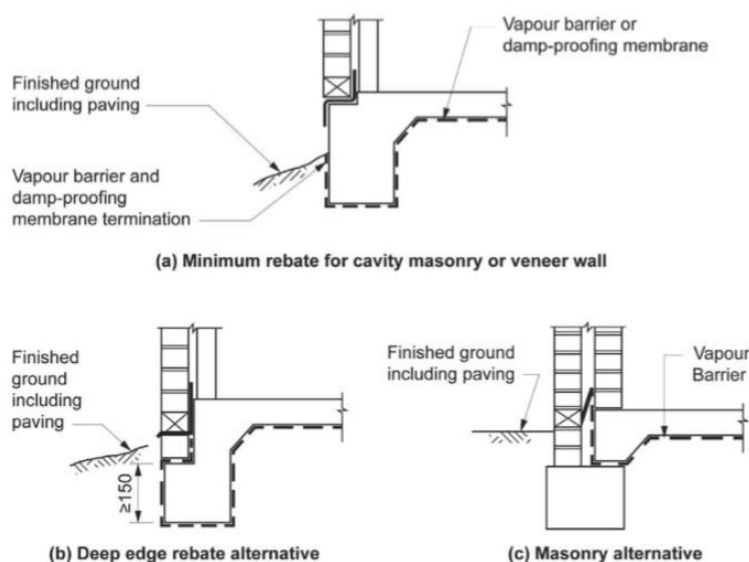
(b) Installation

A vapour barrier must be installed as follows—

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

- (c) The vapour barrier must be placed beneath the slab so that the bottom surface of the slab is entirely underlaid and extends under edge beams to finish at ground level in accordance with [Figure 3.2.2.3](#).

Figure 3.2.2.3 Acceptable vapour barrier and damp-proofing membrane location



It is known in high quality soils the vapour barrier can terminate at the bottom of the edge beam with local expert approval. If the builder wishes to claim local approval, they must provide documentation from the local council’s surveyor under section 26 of the domestic building contracts act 1995.

Otherwise, the builder must ensure that the barrier is fully installed as per the NCC and AS 2870.



## 2.

The dwellings slab footings can pool with water due to the way the block has been cut and the lack of back filling.

The NCC 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. We refer all to the NCC, part 3.1.3.3.

We also refer the builder to the soil report and engineering drawings that clearly call for the site drainage to be managed via sloping water away from the slab and more so, managing same.



### 3.1.3.3 Surface water drainage

*Surface water* must be diverted away from Class 1 buildings as follows:

(a) Slab-on-ground — finished ground level adjacent to buildings:

the external finished surface surrounding the slab must be drained to move *surface water* away from the building and graded to give a slope of not less than (see Figure 3.1.2.2)—

(i) 25 mm over the first 1 m from the building in *low rainfall intensity areas* for surfaces that are reasonably impermeable (such as concrete or clay paving); or

(ii) 50 mm over the first 1 m from the building in any other case.

(b) Slab-on-ground — finished slab heights:

the height of the slab-on-ground above external finished surfaces must be not less than (see Figure 3.1.3.2)—

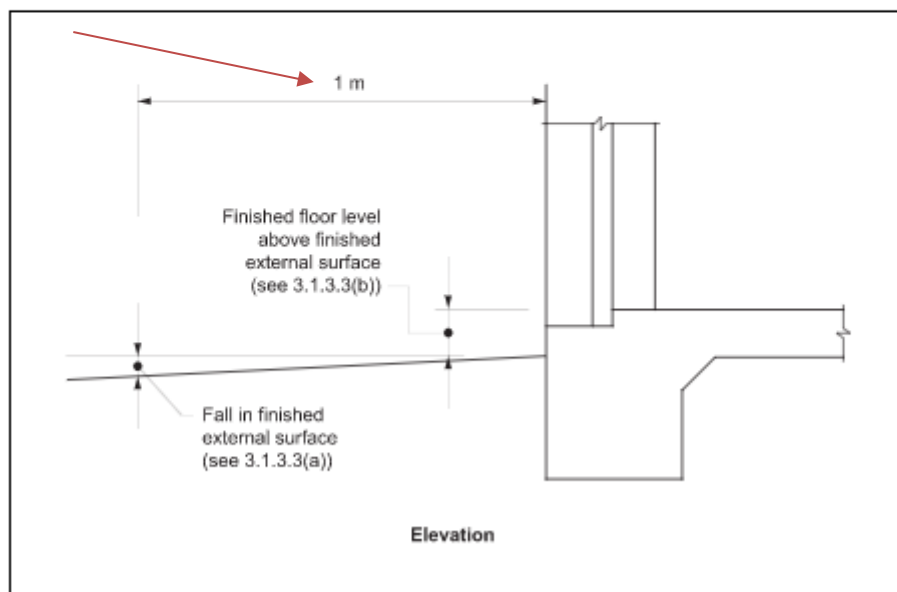
(i) 100 mm above the finished ground level in *low rainfall intensity areas* or sandy, well-drained areas; or

(ii) 50 mm above impermeable (paved or concreted areas) that slope away from the building in accordance with (a); or

(iii) 150 mm in any other case.

(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).

Figure 3.1.3.2 Site surface drainage





### 3.

The slab has been installed with what is known as over pour. On this home the over pour will affect the homeowner's ability to install paving and other landscaping.

The over pour will need to be removed. This will require:

- 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 processes and rectification statements in the engineering documentation.
- Supply a copy of all to my client as per section 26 of the Domestic building contracts Act 1995.
- Satisfy the defect has not been hidden by placing soil over the edge beam of the over poured slab.



Rear.

LHS.

**4.**

The internal corners documented have been constructed with unnecessary straight joins. The nominated bond for this dwelling is half bond and that is the method that should have been used throughout the brickwork, easily achieved by building in.

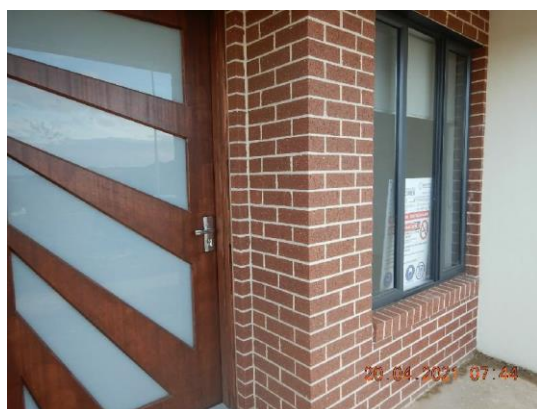
We referral to AS 3700, part 12.4.4.

**12.4.4 Bonding**

Masonry shall be bonded in accordance with the specified bond pattern and the applicable criteria of Clause 4.11.

Where necessary, the bond pattern shall provide for—

- (a) header units across vertical joints to achieve such monolithic structural action as required by the design (see Clause 4.11); and
- (b) the overlap of the units in successive courses to achieve such horizontal bending strength as required by the design (see Clause 7.4.3).



**5.**

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

**BlueScope Technical Bulletin-38:** - BlueScope do not 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, air-drying 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® steel. The application of post paint treatments or systems to the material will invalidate the BlueScope Warranty\*.





Dint, front elevation LHS.

6.

**VBA Guide to Standards and Tolerances:** - Rendered surfaces that show spot rust marks and other blemishes are defective if visible from a normal viewing position.

Rendered surfaces to this dwelling have not met this requirement.

#### 9.04 Cracking and other blemishes in rendered or hard plastered surfaces on a masonry substrate

Assess damage categories and defects in rendered or hard plastered surfaces on a masonry substrate, in accordance with Item 3.02.

Obvious spot rust marks, due to the composition of the material and other blemishes are defective if they are visible from a normal viewing position.



7.

**AS 3500; 4.4.3:** - Roof drainage systems and support systems shall be designed and installed to achieve complete drainage.

Flashings to this dwelling do not meet this requirement.

#### 4.4.3 Corrosion due to crevices

Metal roof drainage systems and support systems shall be designed and installed to achieve complete drainage or drying. Shielded areas capable of causing permanent ponding shall be avoided to prevent the possibility of intense localized corrosion known as crevice corrosion.

NOTE: This type of attack results from contact of metal with moisture and salts under oxygen-deficient conditions in which trapped moisture cannot readily evaporate. It can be caused by lap joints, absorbent gaskets, holes, crevices under bolt or rivet heads, or surface deposits, including non-metallic materials such as elastomeric materials, plastics, fabrics, lifted paint films or accumulated solids.



## 8.

**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.

External timbers 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.



Front porch.



## 9.

**The VBA Guide to Standards and Tolerances:** - Voids, holes, mortar smears, and stains in masonry walls are defective if visible from a normal viewing position.

Masonry faces are defective if they are not cleaned and free of excess mortar. Homeowners are entitled to expect that the works are clean and tidy on completion. This would include paint and plaster excesses, etc. to be removed from the brickwork.

The brickwork to this dwelling has not met these requirements.

### 3.09 Voids and holes in mortar

Voids and holes in mortar in masonry walls, with the exception of weepholes and vents, are defective if they are visible from a normal viewing position.

### 3.07 Masonry facing

Unless documented otherwise, masonry is defective if it is not laid with true, fair or finish face outwards.

Unless documented otherwise, masonry faces are defective if they are not cleaned and free of excess mortar.

### 3.11 Cleaning, mortar smears and stains

Stains, mortar smears and damage caused by cleaning are defective if they are visible from a normal viewing position.

## 18.08 Cleaning

Owners are entitled to expect that the building site and works are clean and tidy on completion. Where handover is delayed for any reason the owner must expect that dust may have settled on interior exposed surfaces.

Building sites are defective if they are not clear of building debris.

Building works are defective where windows are not clean, floors are not swept, mopped or vacuumed as appropriate, tiles, sinks, basins, troughs, baths, etc. are not cleaned, and shelving, drawers and cupboards ready for use.





## 10.

**VBA guide to standards and tolerances 2015:** - Building sites are defective if they are not clear of building debris.

This requirement has not been met.

### 18.08 Cleaning

Owners are entitled to expect that the building site and works are clean and tidy on completion. Where handover is delayed for any reason the owner must expect that dust may have settled on interior exposed surfaces.

Building sites are defective if they are not clear of building debris.

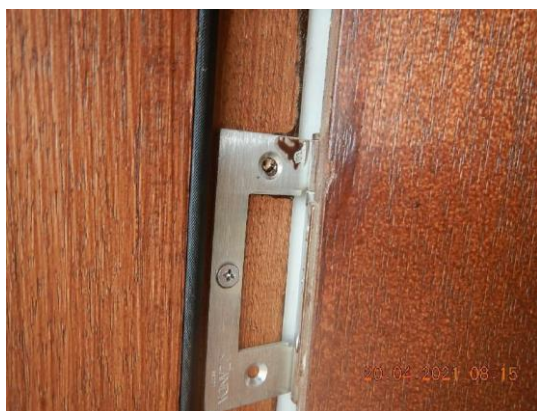
Building works are defective where windows are not clean, floors are not swept, mopped or vacuumed as appropriate, tiles, sinks, basins, troughs, baths, etc. are not cleaned, and shelving, drawers and cupboards ready for use.



# 11.

The builder will need to check all hinges and ensure they are fitted in a workman like manor.

- External hinges cleaned or replaced to present as new
- All screws installed
- Hinge pins knocked down
- Hinge pins installed the right way up



Screws & over paint.





12.

**Domestic Building Contracts Act 1995:** - The builder warrants that all work will be carried out in a proper and workmanlike manor, with reasonable care and skill.

The following items will need to be completed or repaired same.

*Domestic Building Contracts Act 1995*  
*Act No. 91/1995*

Part 2—Provisions that Apply to all Domestic Building Contracts

s. 8

---

**PART 2—PROVISIONS THAT APPLY TO ALL DOMESTIC  
BUILDING CONTRACTS**

**Division 1—General Warranties<sup>4</sup>**

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

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

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

(d) the builder warrants that the work will be carried out with reasonable care and skill and will be completed by the date (or within the period) specified by the contract;



Replace removed door seal.



Damaged door seal.



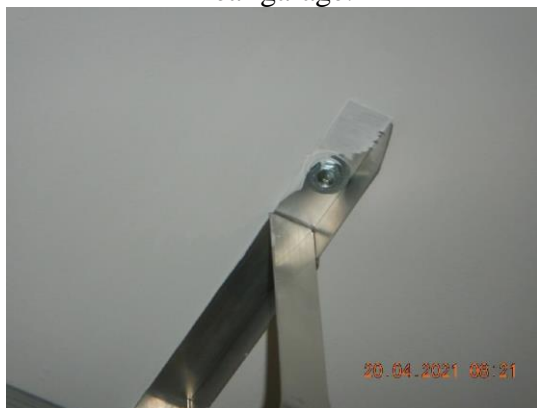
Hammer damage garage rear door.



Rear garage.



Rear garage.



Garage.





Garage.



Bedroom windowsill.



Bedroom windowsill.

### 13.

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

Painted areas to this dwelling are deemed to have fallen well short of these minimum 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.

## **VBA Guide, part 12: -**

# **12 PAINTING**

## **12.01 Standard of painting**

Coatings used are to be suitable for the relevant conditions and relevant wear and tear.

Painting is defective if it does not comply with the manufacturer's installation instructions or AS/NZS 2311.

## **12.02 Surface finish of paintwork**

Paintwork is defective if the application has 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, non-uniformity of gloss level and other irregularities in the surface that are visible from a normal viewing position.

Paintwork is defective if the application results in excessive over-painting of fittings, trims, skirtings, architraves, glazing and other finished edges.

## **12.03 Nail and screw fixings**

Fixings or unfilled depressions caused by fixings are defective in painted or stained surfaces if they can be seen from a normal viewing position.

## **12.04 Natural characteristics and mechanical imperfections/damage**

Unless the contract specifies otherwise, natural characteristics such as gum pockets, surface splits or sap bleeding are defective if they can be seen from a normal viewing position.

Mechanical imperfections/damage, holes or any other unfilled depressions are defective if they can be seen from a normal viewing position.



Painted wrong colour.



Examples only, all areas to comply.

**14.**

**AS 3000; 4.5.1.1:** - All lamp holders shall be located to be adequately protected against damage that might reasonably be expected. Lamp holders shall be installed not less than 1.8 m from the ground, floor, or platform, or be fitted with a suitable guard.

This requirement has not been met.

**4.5.1.1 Location**

**All lampholders shall be located to be adequately protected against damage that might reasonably be expected.**

In order to protect against inadvertent contact with live parts, low voltage lampholders shall be located to minimize the risk of—

- (a) direct contact with live parts of a lampholder when the lamp is removed; and
- (b) mechanical damage to the lamp or lampholder.

These requirements may be satisfied by—

- (i) installation not less than 1.8 m above the ground, floor or platform, or
- (ii) provision of a suitable guard for the lamp and its lampholder, or



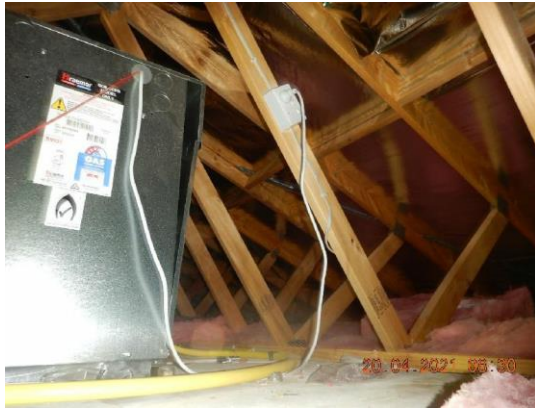
**15.**

**AS 5601, clause 5.3.11 (f):** - permanent artificial lighting is to be provided at the appliance, with the switch adjacent to the manhole.

The light switch to this dwelling fails this requirement.

- (f) Permanent artificial lighting is to be provided at the *appliance*, with the switch located adjacent to the access opening.





## 16.

A few door margins will need to be reworked to comply with the inserted.

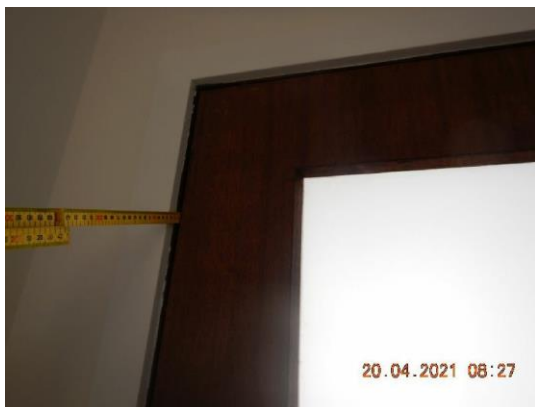
### 8.04 Internal door clearances

Unless documented otherwise, the installation of doors is defective if, within three months of completion:

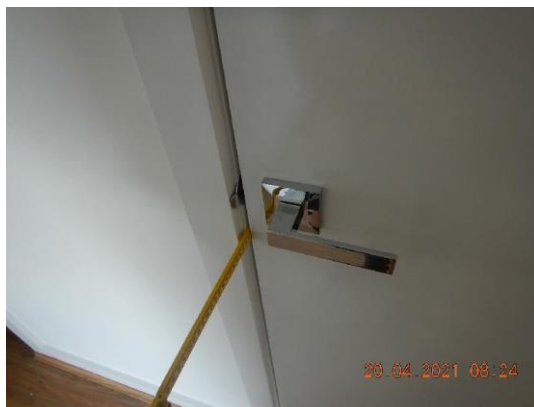
- a) clearances between door leaves and frames, and between adjacent door leaves are not uniform
- b) clearances between door leaves, or between a door leaf and the frame, is less than 2 mm or greater than 5 mm in width.

Unless additional clearance is required for removable toilet doors or air ventilation, a clearance between the door and the floor finish is defective if it is greater than 20 mm after installation of the floor covering.

Note: Clearances under doors will generally be determined by the nominated floor coverings.



Check all.



## 17.

A small number of window and door frames are presenting out of plumb more than the 4 mm over 2 m tolerance.

All windows and doors will need to be plumb and level.

#### 4.03 Straightness of steel and timber frame surfaces

Frames are defective if they deviate from plane (horizontal or vertical bow) by more than 4 mm in any 2 m length of wall. Refer to Diagram E.

We also refer the builder to AS2047 - 1999 window design and installation.

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

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

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

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

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



Garage.



Frame is still bowed, door difficult to latch.

#### 18.

**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:

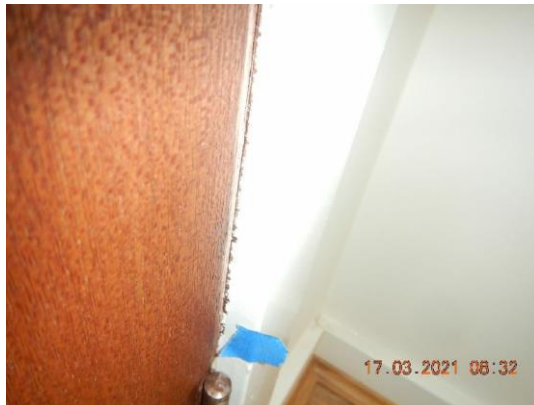
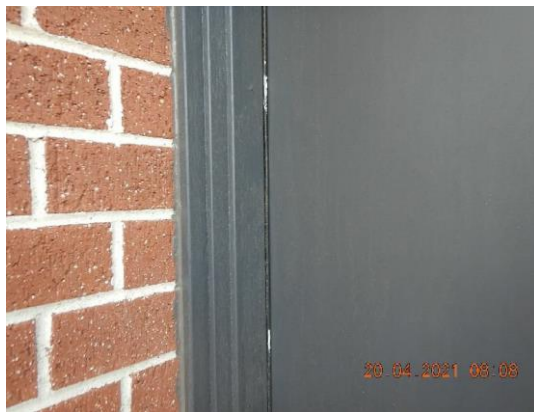
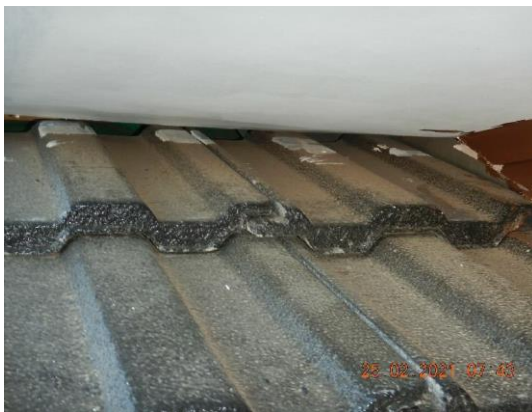
- (a) The painted surface shows—
  - (i) uniformity of gloss, colour and opacity;
  - (ii) correct range of dry film thickness of paint;
  - (iii) freedom from painting defects such as—
    - (A) tackiness and paint application defects; and
    - (B) brush marks, roller coater marks, spray application 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.



## 19.

The required weather seal as documented is non-functional. The NCC and the energy report on the dwelling calls for all doors and windows to be sealed, all areas must comply.

We refer all to the NCC 2019, part 3.12.3.3.

### 3.12.3.3 External windows and doors

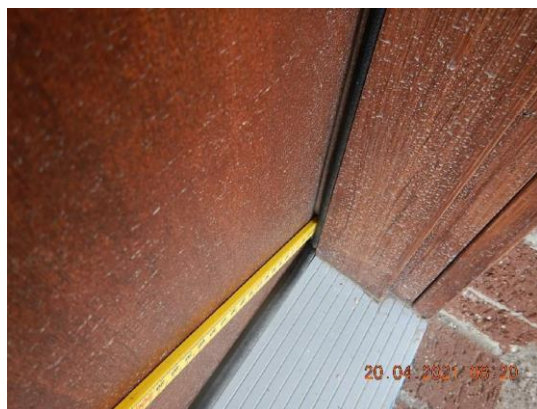
(a) An external door, internal door between a Class 1 building and an unconditioned Class 10a building, openable *window* and other such opening must be sealed when serving—

- (i) a *conditioned space*; or
- (ii) a *habitable room* in *climate zones* 4, 5, 6, 7 and 8.

(b) A seal to restrict air infiltration—

- (i) for the bottom edge of a door, must be a draft protection device; and
- (ii) for the other edges of a door or the edges of an openable *window* or other such opening, may be a foam or rubber compressible strip, fibrous seal or the like.

(c) A *window* complying with the maximum air infiltration rates specified in AS 2047 need not comply with (b)(ii).



20.

**VBA Guide to Standards and Tolerances:** - Tops and bottoms of door must be sealed in accordance with the manufacturer's specifications.

Doors to this dwelling have not met this requirement.

### 8.06 Sealing of door edges

Door leaves are defective if they do not have all sides, top and bottom edges sealed/painted in accordance with the manufacturer's specifications.





## 21.

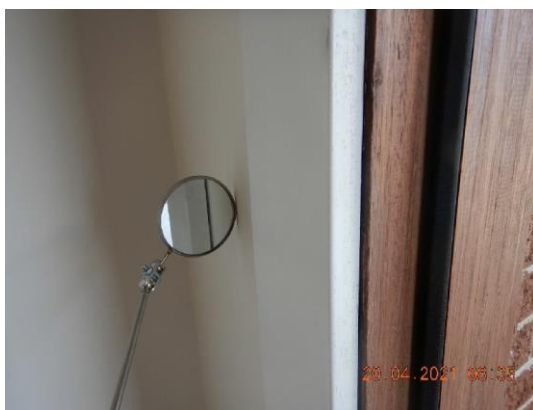
**NCC 3.12.3.5:** - Mandates that the dwelling is sealed. Perimeter window architraves and door architraves need to be gapped to the plaster as per the energy rating requirements and the NCC. All must be caulked closed to restrict the transfer of internal and external air.

### 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.
3. In [3.12.3.5\(b\)\(ii\)](#), penetrations include windows, doors, roof lights, flues, exhaust fans, heating and cooling ductwork and the like.



All areas to comply.

22.

The fixing to this dwelling is presenting as having a few visible defects. All areas must present in accordance with the following.

#### 10.01 Gaps associated with internal fixing

Unless documented otherwise, gaps between mouldings or between mouldings and other fixtures, at mitre or butt joints, or at junctions with a wall or other surfaces, are defective if they exist at handover, or exceed 1 mm in width within the first 12 months of completion and are visible from a normal viewing position.

After the first 12 months, gaps are defective if they exceed 2 mm in width and are visible from a normal viewing position.

Gaps between skirting and flooring are defective if they exceed 2 mm within the first 24 months after handover and are visible from a normal viewing position.

#### 10.02 Joints in fixing of internal mouldings

Unless documented otherwise, the faces of architraves and skirtings are defective if they are not aligned and flush at mitres and butt joints and the misalignment can be seen from a normal viewing position.

#### 10.03 Architrave quirks

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.



Misaligned.



Out of alignment, all to comply.

23.

**VBA Guide to Standards and Tolerances:** - Tiles are defective if cracked, pitted, scratched or loose.

Tiles to this dwelling are presenting as chipped, scratched, or overcut.

### 11.05 Cracked, pitted, chipped, scratched or loose tiles

Tiles are defective if they are cracked, pitted, chipped, scratched or loose at handover.

After handover, tiles are defective where the builder's workmanship causes the tiles to become cracked, pitted, chipped or loose within 24 months.



Chipped.



Over cut.

#### 24.

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

Objective – safeguard the occupants and protect the building from damage

Functionality – avoid creation of unhealthy or dangerous conditions

Performance – prevent water from penetrating into concealed spaces

The top of shower wall tiles has 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 **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.



## 25.

**The Victorian Building Authority:** - Calls for all glass to be protected during the build. Allowance is made for minor damage. This dwelling glass in parts exceeds the allowance stated in the VBA advice below.

I have applied the test of the inserted below in relation to why I have called these glass panels defective.

Given this item can be difficult to see, it can be assumed not all areas have been marked. The owner and builder will need to check for additional scratches in different lighting conditions.

## 18.04 Glazing

Scratches, fractures, chips or surface blemishes on glazing and mirrors are defective if they exist at handover and can be seen from a normal viewing position.

Minor scratches, fractures, chips or other blemishes that are not more than 10 mm long and where there are not more than three blemishes per pane, are not defects.





Scratched.



26.

All cabinet door margins that need to be reworked to ensure that all are aligned. This includes the draw fronts.

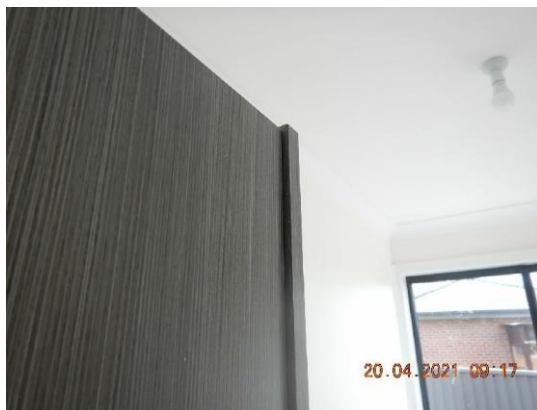
#### 10.04 Bench tops, cabinet doors and drawer fronts<sup>6</sup>

Unless otherwise specified, cabinet door and drawer fronts are defective if they are not aligned, or do not have consistent gaps between them at handover, and can be seen from a normal viewing position.

Where the time limit for defects in bench tops, cabinet doors, drawer fronts and similar joinery is not documented, it is to be taken as six months from completion.



All to comply.



27.

**AS 3500.2, part 13.27.2:** - Toilets have been installed with silicon only. The supplier brackets/ screws have not been installed.

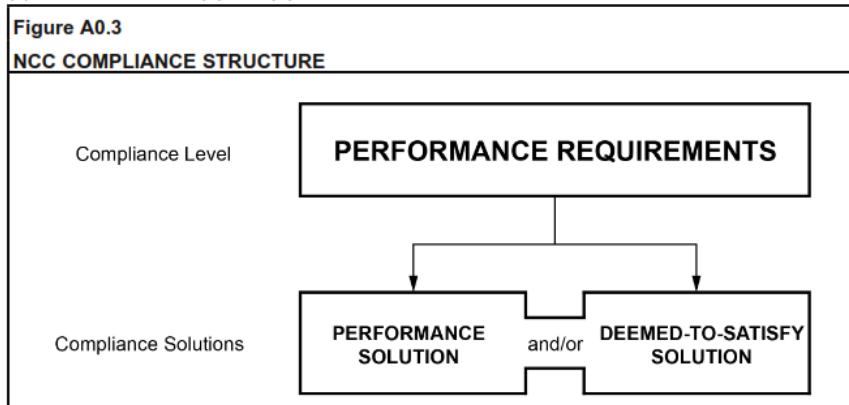
Toilet pans installed with silicon only do not meet the requirements of AS 3500.2, the NCC compliance process, or the manufacturer's instructions. (Caroma example given below)

#### 13.27 WATER CLOSET PANS

### 13.27.2 Installation

Water closet pans shall be securely fixed by—

- (a) bedding not thicker than 20 mm;
- (b) brackets; or
- (c) corrosion-resistant fasteners.



**Caroma**  
**Installation**  
**instructions: -**

## Important Information for Plumbers

Installers should be aware that the requirements of the National Plumbing Code are minimum standards and are based upon the premise that all aspects of the installation are correct and without fault. Should there be any elements which are not within the restraints of the Code conditions, such as trueness of bore, incorrect jointing or increased restrictions of ventilation to the system, then this may lead to the system failing and/or providing inefficient performance.

Where any doubt regarding the installation is anticipated, an **increase** over Code requirements would be prudent action.

### Pan/Bidette Fixing

There are two installation methods to fix a pan/bidette to the finished floor either by bedding or screw/bracket fixing.

#### • **Bedding Mix**

All height dimensions to underside of the foot, make allowance for mortar bedding. The pan should be fixed to the floor with a sand cement mixture of 3:1 to a depth of 60mm.

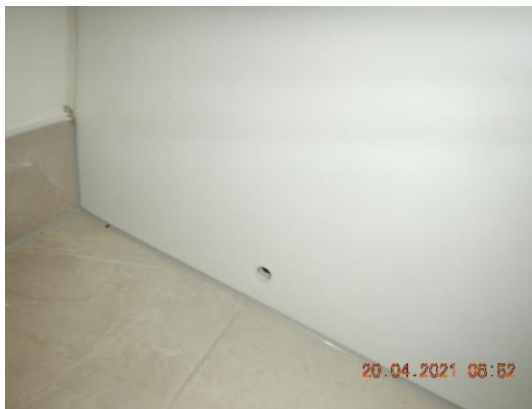
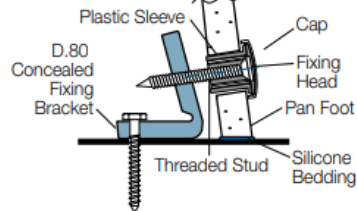
### • Screw/bracket Fixing Installation

The pan can be fixed directly to the finished floor with either corrosion resistant screws and pan guard washers or the D.80 Concealed bracket where applicable. The pan should be fixed into a bed of silicone sealant.

#### D.80 Concealed Fixing Bracket



#### Bracket Fixing Detail



### 28.

Under the cavity sliding doors there are not water stops. A rigid water stop must pass in front (or below) any plastic guide that may be installed, creating the waterproof seal to the perimeter.

The NCC BCA Volume Two Housing Provisions Performance Requirement P 2.4.1 prescribes:

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.

The Australian Standard 3740 states that a complete barrier at the door opening is required to contain moisture within the wet area to prevent damage occurring to building elements. The water stop angle is to be waterproofed to the perimeter flashing.

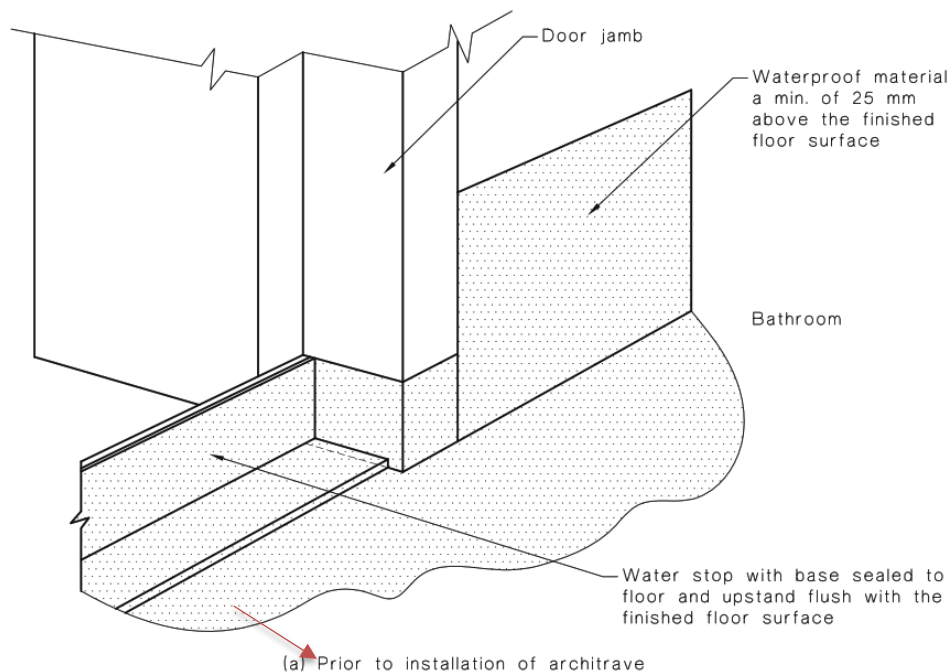
### 3.9.1.2 Perimeter flashing at floor level openings

The following applies:

- (a) *For whole wet area floor waterproofing* A water stop that has a vertical leg finishing flush with the top of the finished floor level shall be installed at floor level openings. The floor membrane shall be terminated to create a waterproof seal to the water stop and to the perimeter flashing.

NOTE: For typical bathroom detail for whole bathroom waterproofing, see Figures 3.3(a) and 3.3(b).

- (b) *For other than whole wet area floor waterproofing* A water stop that has a vertical leg finishing flush with the top of the finished floor level shall be installed at floor level openings. The water stop shall be waterproofed to the perimeter flashing.





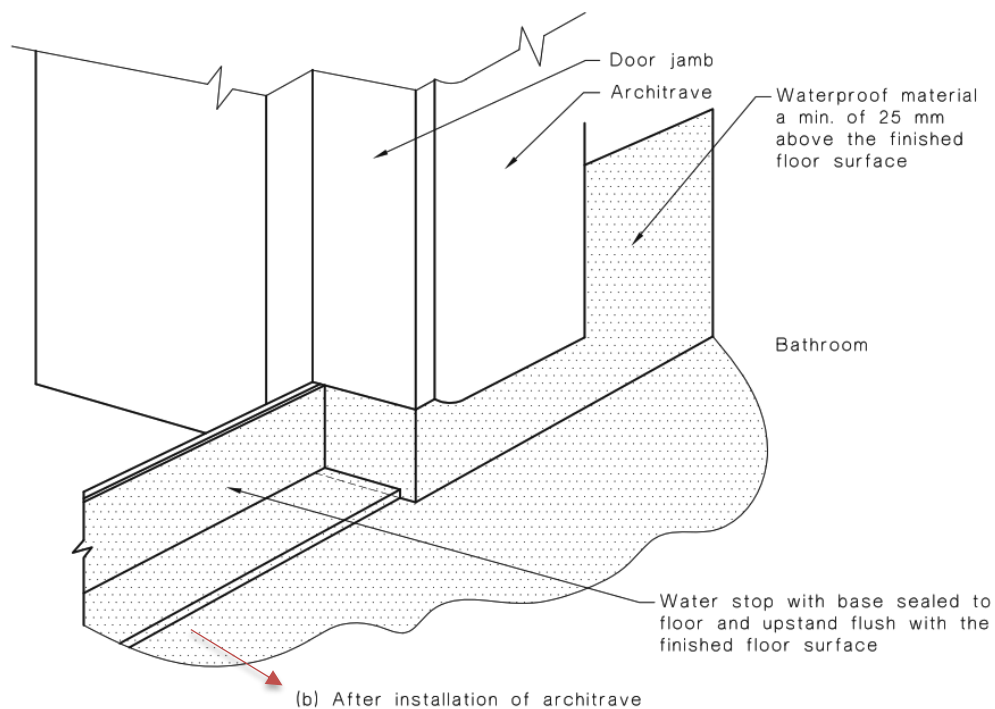


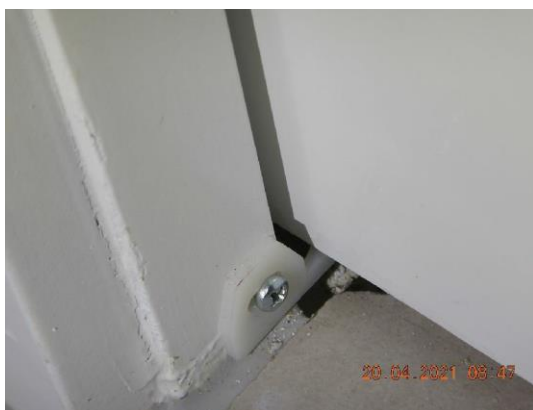
FIGURE 3.3 TYPICAL BATHROOM DOOR DETAIL FOR WHOLE BATHROOM WATERPROOFING

### 3.17 DOORJAMBS AND ARCHITRAVES

Where the bottom of doorjambs and architraves do not finish above the floor tiling, the portion of the doorframes and architraves below the floor tiling shall be waterproofed to provide a continuous seal between the perimeter flashing and the water stop.

#### NOTES:

- 1 For typical door detail, see Figure 3.3.
- 2 Where possible, the doorjambs and architraves should be installed above the floor tiling.



### 29.

There are a few areas in the home that exceed the allowance of 4 mm tolerance over 2 m.

- bulkhead out of level (BH OOL)

- out of level (OOL)
- out of plumb (OOP)

Please refer to photographs below:

As stated, the acceptable allowance is 4 mm over 2 m. These walls will need to be reworked to ensure that the builder complies with this requirement.

### 4.03 Straightness of steel and timber frame surfaces

Frames are defective if they deviate from plane (horizontal or vertical bow) by more than 4 mm in any 2 m length of wall. Refer to Diagram E.

We also refer the builder to AS 2589, clause 4.2.2.

#### 4.2.2 Finished framing deviations and tolerances

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

Where the dimensional tolerances of the fixing surface plane fall outside these tolerances, a suitable levelling system shall be used [see Figure 4.2.2(B)].

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

**TABLE 4.2.2**  
**DEVIATION IN THE POSITION OF THE**  
**BEARING SURFACE OF THE FINISHED FRAMING**

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

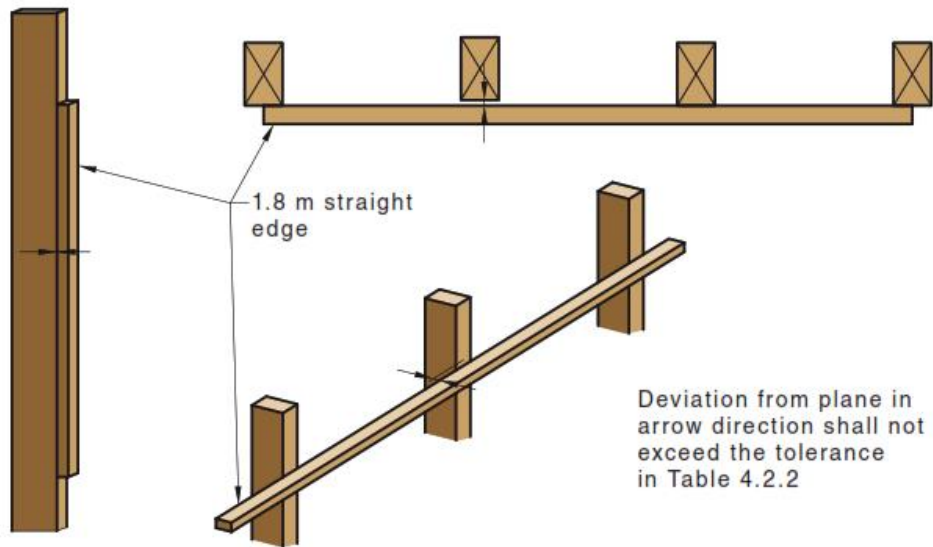


FIGURE 4.2.2(A) ASSESSING FRAMING TOLERANCE



30.

**VBA guide to standards and tolerances 2015:** - All areas shall be cleaned prior to handover, in accordance with part 18.08.

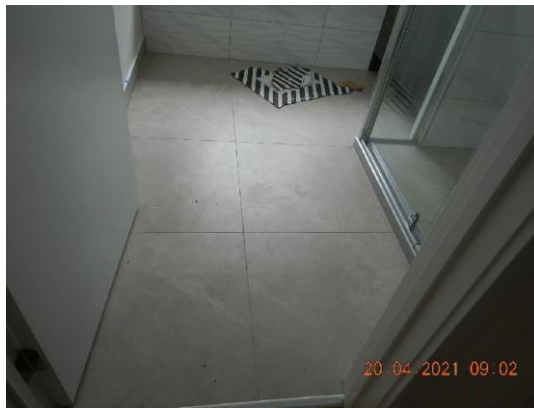
This requirement has not been met.

### 18.08 Cleaning

Owners are entitled to expect that the building site and works are clean and tidy on completion. Where handover is delayed for any reason the owner must expect that dust may have settled on interior exposed surfaces.

Building sites are defective if they are not clear of building debris.

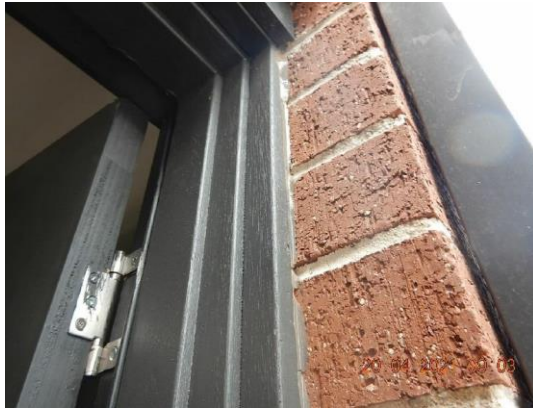
Building works are defective where windows are not clean, floors are not swept, mopped or vacuumed as appropriate, tiles, sinks, basins, troughs, baths, etc. are not cleaned, and shelving, drawers and cupboards ready for use.



### 31.

We noted poorly installed or missed caulking/gapping/grouting throughout the dwelling. The Builder will need to rework all areas prior to handover.





32.

**VBA Guide to Standards and Tolerances:** - The building site and works shall be clean and tidy on completion. Building sites are defective if they are not clear of building debris.

The concrete floors require cleaning to remove builder's waste including paint and plaster excesses etc.

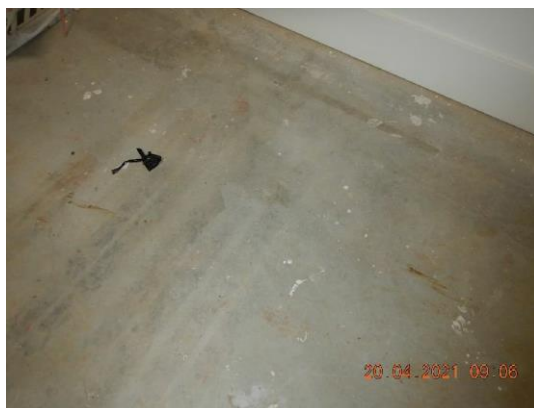
This requirement has not been met.

### 18.08 Cleaning

Owners are entitled to expect that the building site and works are clean and tidy on completion. Where handover is delayed for any reason the owner must expect that dust may have settled on interior exposed surfaces.

Building sites are defective if they are not clear of building debris.

Building works are defective where windows are not clean, floors are not swept, mopped or vacuumed as appropriate, tiles, sinks, basins, troughs, baths, etc. are not cleaned, and shelving, drawers and cupboards ready for use.



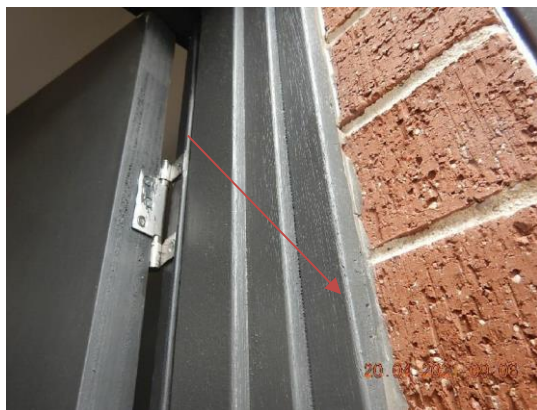
33.

**Victorian Domestic Building Contracts Act; Part 9 s.137:** - The vendor (builder) warrants that materials must be good and suitable for the purpose which they are used. Unless otherwise stated in the contract, materials shall be new.

Part 9—Liability

s. 137D

- (b) the vendor warrants that all materials used in that domestic building work were good and suitable for the purpose for which they were used and that, unless otherwise stated in the contract, those materials were new; and
- (c) the vendor warrants that that domestic building work was carried out in accordance with all laws and legal requirements, including, without limiting the generality of this warranty, this Act and the regulations.



Door damage.

34.

There are areas around the Dwelling with concrete over pour.

Concrete over pour increases the effectiveness of the footing width and depth and decreases the bearing capacity required to support the external walls. This can result in lifted or more highly loaded areas. Concrete over pours below finished ground level allows water to accumulate on top of the footings and prevents normal evaporation drying of subsoil moisture. Concrete over pours can interfere with future site works or landscaping.

All footings in the NCC and AS 2870 are shown with edges of their footings vertical and without overspill, easily achieved with adequate boxing.

All excess concrete over pour from the dwelling needs to be removed to allow the footing to work efficiently as designed.



Garage.

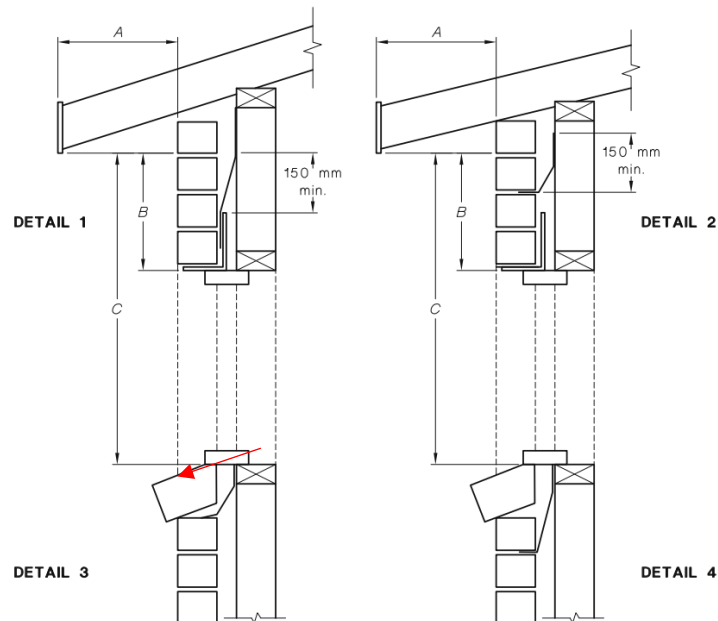
35.

**AS 4773.2 – Masonry in small buildings:** - The brick sill is falling towards the dwelling (falling backwards). Brick sills are intended to shed water away from the building. I am unaware of any diagram in the NCC or Australian Standards that show a brick sill with fall towards the structure. Common sense must prevail.

Sills with fall towards the dwelling require reworking by the bricklayer.

AS 4773.2:2015

52





Rear garage.

36.

Front facade - the eave trimming is uneven to the brickwork line. It is also showing the fascia out of level, front elevation.



37.

We refer the builder to the implied warranties where the builder agreed to build the dwelling in a **proper and workmanlike manner and with care and skill.**



## 8. Implied warranties concerning all domestic building work

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

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



Install flyscreen doors.



Loose.



OOL.



Close off.



Short track.



Trim.



Brick OOL front elevation.



Unsightly flashing, poor workmanship.



Excessive gap, rework.



Rattles.







Loose cupboard door.



Exposed copper pipe not fixed.



Screws in cupboards not capped.



Kitchen cupboard.



Poor workmanship, rework.

### 38.

The front water meter has been damaged and needs to be made new prior to hand over. The meter and tap have been covered in builder's waste. The meter was new when the project started and is not the property of the builder to damage. It must be made "as new" prior to handover.

## 18.08 Cleaning

Owners are entitled to expect that the building site and works are clean and tidy on completion. Where handover is delayed for any reason the owner must expect that dust may have settled on interior exposed surfaces.

→ Building sites are defective if they are not clear of building debris.

Building works are defective where windows are not clean, floors are not swept, mopped or vacuumed as appropriate, tiles, sinks, basins, troughs, baths, etc. are not cleaned, and shelving, drawers and cupboards ready for use.



### NOTE:

**VBA Guide to Standards and Tolerances:** - Classification of damage to concrete floors.

The concrete slab surface is showing category 1 cracking, these cracks are measuring between 1 - 2mm.

The builder and or homeowners may choose to photograph and document the cracking, then monitor its stability and changes (if any) over an agreed period.

## 2.10 Cracks in concrete slabs

Refer to Table 2.10 for descriptions of categories of cracks.

Cracks to slabs are defective where they are Category 3 and 4.

Category 1 and 2 cracks to slabs are to be monitored for a period of 12 months. At the end of the monitoring period, cracks are defective if they are greater than category 2 and attributed to the actions of the builder.



**TABLE 2.10 CLASSIFICATION OF DAMAGE TO CONCRETE FLOORS**

Description of typical damage	Approximate crack width limit in floor	Change in offset from 3 m straight edge placed over defect	Damage category
Hairline cracks, insignificant movement of slab from level	< 0.3 mm	< 8 mm	0 Negligible
Fine but noticeable cracks. Slab reasonably level	< 1.0 mm	< 10 mm	1 Very slight
Distinct cracks. Slab noticeably curved or changed in level	< 2.0 mm	< 15 mm	2 Slight
Wide cracks. Obvious curvature or change in level	2 mm to 4 mm	15 mm to 25 mm	3 Moderate
Gaps in slab. Disturbing curvature or change in level	4 mm to 10 mm	> 25 mm	4 Severe

*Taken from AS 2870: Residential slabs and footings – Construction, Table C2: Classification of damage with reference to concrete floors. Reproduced with permission from SAI Global Ltd under Licence 1407-c122.*

**Notes to Table 2.10**

1. The straightedge is centred where possible over the defect, and supported at its ends by equal height spacers. The change in offset is then measured relative to this straightedge, which is not necessarily horizontal.
2. Local deviation of slope, from the horizontal or vertical, of more than 1:100 will normally be clearly visible. Overall deviations in excess of 1:150 is undesirable.
3. Account should be taken of the past history of damage in order to assess whether it is stable or likely to increase.





## **Rectification Required: YES**

### **TERMS & CONDITIONS OF Darbecca Pty Ltd SITE INSPECTION AND REPORT**

#### **1. Purpose**

The purpose of our inspection is to identify any defects in the finishes and the quality of those finishes presented by the builder at the stage of works nominated on the front of this report. This report contains a schedule of building defects that in the writer's judgement do not reach an acceptable standard of quality, level of building practice, or have not been built in a proper workmanlike manner relative to the Building Code of Australia, the relevant Australian Standards or the acceptable standards and tolerances as set down by the Building Control Commission.

#### **2. Scope**

Our engagement is confined to that of a Building Consultant and not that of a Building Surveyor as defined in the Building Act, of 1993. We therefore have not checked and make no comment on the structural integrity of the building, nor have we checked the title boundaries, location of any easements, boundary setbacks, room dimensions, height limitations and or datum's, glazing, alpine and bush-fire code compliance, or any other requirements that is the responsibility of the Relevant Building Surveyor, unless otherwise specifically noted within this report.

#### **3. Assumed Finishes**

Our inspection was carried out on the quality of the fixtures and finishes as installed, and no investigation of any documentation or statutory requirements was carried out to verify their correctness.

#### **4. Documentation**

Unless otherwise noted any contractual documentation made available to us during our inspection is only viewed on an informal basis and we make no certification that the building has been constructed in accordance with them.

#### **5. Non-Destructive Inspection**

Unless otherwise noted our inspection was carried out on a non-destructive basis and exclude anything that would have require the removal of any fixtures, fittings, cladding, insulation, sisalation, roofing, lining materials, excavated of any soil or the removal of any part of the plastic membrane.

#### **6. Measurements/Levels**

Unless otherwise noted all measurements have been taken with a standard ruler, and levels with either a 900 or 2100mm long spirit level.

#### **7. Services, Appliances, Plants and Equipment**

Unless otherwise noted, we did not test or check for appropriateness, capacity, correct installation or certification of any service, appliances, plant, and equipment, i.e., heaters, hot water units, air conditioners, ovens, hotplates, dishwashers, range hoods, spa pump, electrical wiring, gas lines, electricity and water supply, sewer, stormwater, and agricultural drains.

#### **8. Client Use**

This report has been prepared for the exclusive use of the client/s whose name/s appear/s on the front of this report as supplied by Darbecca 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 sub-floor area unless otherwise noted,
- b) Defects not apparent by visual inspection, or only apparent in different weather or environmental conditions as to those prevailing at the time of the inspection,
- c) Defects that we did not consider significant enough to warrant any rectification work at the time of our inspection,
- d) Defects outside the scope of the client brief
- e) Check measure of rooms, walls, and the overall building, for size, parallel and squareness unless otherwise noted,
- f) Landscaping, retaining wall/s, or any structures outside the roofline of the main building unless otherwise noted,
- g) Enquiries of Council or any other Authorities,
- h) Investigation for asbestos and or soil contamination,
- i) Investigation for the presence of any termites or borers and for the correct installation of any termite barriers and or other risk management procedures or devices.
- j) Defects in relation to PVC sewage and storm water pipes are not covered in this inspection. Clients must seek the services of a licenced plumber to check all sewage and storm water pipes.

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

**Unless specifically noted this report has not been prepared in-line with the requirements of Practice Note VCAT 2.**