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Report By: Robert Sfiray



**Site Address:**

**Client Name:**

**Phone #:**

**Email:**

<b>Dwelling type:</b>	Double Storey
<b>Dwelling configuration:</b>	House and Garage
<b>Nature of works:</b>	New Build
<b>Stage of inspection:</b>	Fixing & Waterproofing
<b>Construction Type:</b>	Multiple Claddings
<b>Garage:</b>	Attached
<b>Foundations:</b>	Waffle Slab
<b>Builder:</b>	

## **Client Brief**

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

## **Inspection and Report**

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

## **Access**

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

## **Report Conditions**

The terms and conditions that our site inspection and this report are carried out and supplied under are listed on the last page of this report.

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

## Summary

The results of our inspection have been fully detailed in the attached schedule of Building Defects.

Should the reader of this report have any additional queries or questions in relation to the items set out within it, please do not hesitate to contact the writer via any of the methods detailed at the top of the cover page.

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

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

The weather was fine at the time of the inspection.

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

## **Schedule of Defects:**

### **Defects, observations and other related comments from Fixing & Waterproofing Inspection on 13/12/2023.**

#### **All completed items have been removed from the report, along with any items we are unable to inspect due to the progression of works.**

#### **1.**

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

Preparation for finished flooring material has not been met.

**3.1.1.4 Surface quality**

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

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

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

**AS 3958.1; 5.4.6: -**

**5.4.6 Tile finish and joints**

The recommendations for tile finish and joints are as follows:

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



Entry



Pantry



B1



Leisure



B1



B1

2.

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

The vapour barrier has not met this requirement.

### 3.2.2.6 Vapour barriers

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

(a) Materials

A vapour barrier must be—

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

(b) Installation

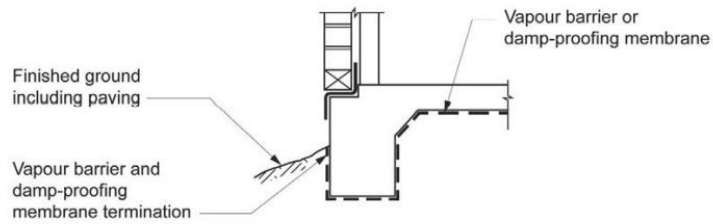
A vapour barrier must be installed as follows—

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

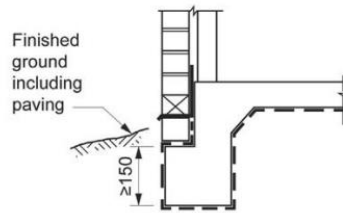
(c) The vapour barrier must be placed beneath the slab so that the bottom surface of the slab is entirely underlaid and extends under edge beams to finish at ground level in accordance with [Figure 3.2.2.3](#).



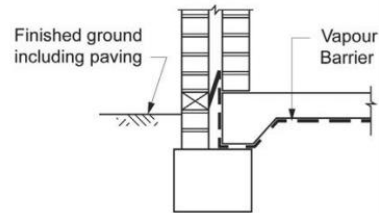
Figure 3.2.2.3 Acceptable vapour barrier and damp-proofing membrane location



(a) Minimum rebate for cavity masonry or veneer wall



(b) Deep edge rebate alternative



(c) Masonry alternative



### 3.

**NCC 2019:** - Exterior masonry must not overhang more than 15mm past the edge of the slab.

Brickwork to this dwelling that is overhanging the slab edge in-excess of 15mm is non-compliant.

#### 3.2.2.7 Edge rebates

Edge rebates for slab-on-ground, stiffened raft or *waffle raft* with masonry *cavity* or veneer construction must comply with the following:

- (a) The rebate must not be less than 20 mm, except as provided for in (d).
- (b) Exterior masonry must not overhang more than 15 mm past the edge of the slab.
- (c) The edge rebate must be flashed and drained in accordance with Part 3.3.4 and where it cannot be flashed it must be filled with mortar.
- (d) Edge rebates are not *required* for *single leaf masonry*.

#### Explanatory information:

See 3.2.5.4 for minimum edge beam details.



#### 4.

**AS 4773.2; clause 7.1:** - Articulation joints shall be clear of hard and non-compressible substances.

This dwelling's articulation joints require cleaning prior to sealing in order to meet this requirement.

#### **7.1 GENERAL**

All hard and incompressible substances (e.g. mortar dags) shall be removed from the gap in articulation and expansion joints.



## 5.

**NCC 2019; 3.1.3.3.:** -The land to the garage falls back towards the foundations of the slab. Given that this is a zero boundary, the builder must work in provisions for draining the soil to this area.

Engineering states that a 50 mm fall away from the footings must be installed. The builder needs to assist us with an understanding of how, with a zero boundary the builder expects to achieve this requirement.

The NCC mandates that water is controlled and must fall away from the dwelling. See part 3.1.2.3 and figure 3.1.2.2.

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

As this has the ability to cause damage it must be addressed without delay, as per section 39.1 of the domestic building contracts act.

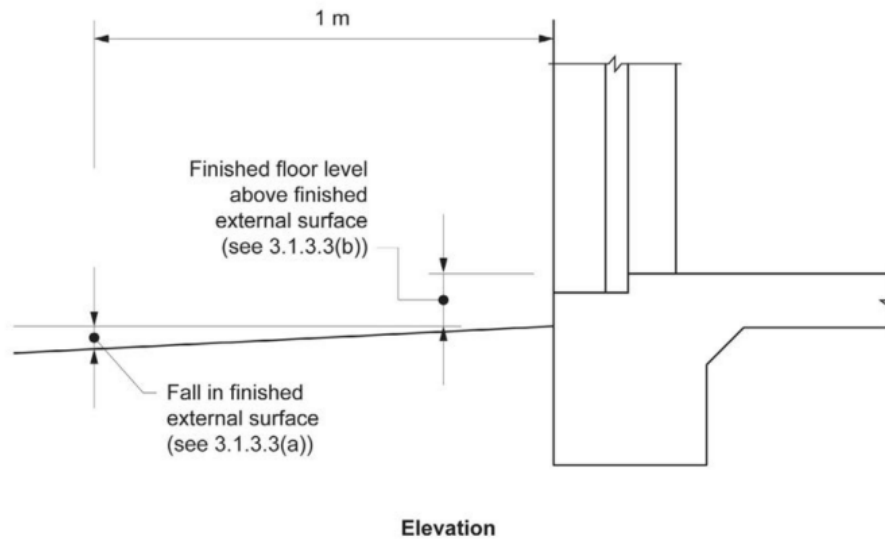
### 3.1.3.3 Surface water drainage

*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.



Figure 3.1.3.2 Site surface drainage



6.

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

Temporary downpipes have not been installed to this dwelling.

## Part 2.2 Damp and weatherproofing

### Explanatory information:

#### Objective

#### O2.2

The Objective is to—

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

#### Functional statements

##### F2.2.1 Surface water

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



7.

**NCC 2019 part 3.7.2.4(a)(ii)(A):** - All parts of the dwelling within 900 mm of a boundary must be sealed.

The gaps documented are a clear indication that this installation does not meet this requirement.

### 3.7.2.4 Construction of external walls

- (a) *External walls* (including gables) *required* to be *fire-resisting* (referred to in 3.7.2.2 or 3.7.2.5) must—
  - (i) commence at the footings or ground slab, except where the *external wall* commences above a *separating wall* complying with 3.7.3.2 (see Figure 3.7.2.2b); and

#### Explanatory information:

A *Performance Solution* must be used where an *external wall required* to be *fire-resisting* does not commence in accordance with 3.7.2.4(a)(i).

- (ii) extend to—

- (A) the underside of a *non-combustible* roof covering, except that a wall may terminate not more than 200 mm from the underside of a *non-combustible* roof covering, where the area between the *external wall* and underside of the roof covering is sealed with a *non-combustible* fascia, gutter or flashing; or



8.

**Domestic Builders Contract Act 1995:** -Various colours of mortar are neither proper nor workmanlike. Colours are to be consistent to all parts of the premises.

## 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;







## 9.

**Domestic Buildings Contract Act 1995:** -The slab has been installed with what is known as over pour. On this particular 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 process's 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.





10.

**AS 2589 & AS 3999:** - The dwelling was not water tight as documented below.

I further noted that the plaster and fix was installed. Wall and part of the roof batts to some areas have been installed.

Water cannot be allowed to enter a dwelling after the introduction of batts followed by plaster.

The builder as a matter of urgency must seal the dwelling or alternately replace batts and plaster if they are wetted. I refer the builder to AS 2589 (Australian Plaster Standard) and AS 3999, (Australian Insulation Standard) which calls for both to be fully protected from moisture.



11.

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

## 8. Implied warranties concerning all domestic building work

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

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



Quad out of parallel with bricks



Gaps



Nail home window nails



Repair floor



Shower base out of square with wall



Poor fixing finishes throughout

## 12.

**Bushfire Attack Level - AS 3959; 5.4.2 & 3.6:** - All joints in external surface material of walls shall be covered, sealed, overlapped, backed or butt-jointed. All gaps including vents, weepholes, and the like shall be screened, except for weep holes to the sills of windows and doors. The maximum allowable aperture size of any mesh or perforated material used as a screen shall be 2 mm.

There are gaps to the external fabric of the dwelling that have not met this critical safety requirement.

### 5.4.2 Joints

All joints in the external surface material of walls shall be covered, sealed, overlapped, backed or butt-jointed.

## 3.6 VENTS, WEEPHOLES, GAPS AND SCREENING MATERIALS

### 3.6.1 Vents, weepholes, joints and the like

All gaps including vents, weepholes and the like shall be screened, except for weepholes to the sills of windows and doors.

All joints shall be suitably backed with a breathable sarking or mesh, except as permitted by Clause 3.3.

The maximum allowable aperture size of any mesh or perforated material used as a screen shall be 2 mm.

*C3.6.1 Weepholes in sills of windows and doors and those gaps between doors and door jambs, heads or sills (thresholds) are exempt from screening because they do not provide a direct passage for embers to the interior of the building or building cavity.*

### 3.6.2 Gaps to door and window openings

Where screens are fitted to door openings for ember protection, they shall have a maximum aperture of 2.0 mm and be tight fitting to the frame in the closed position.

Gaps between doors including jambs, heads or sills (thresholds) shall be protected using draught seals and excluders or the like (see Figure 3.2).

Windows conformant with AS 2047 will satisfy the requirements for gap protection. Screens fitted to window openings shall have a maximum aperture of 2.0 mm and these shall be tight fitting to the frames.



Example

## 13.

**Bushfire Attack Level - AS 3959, 5.8:** - External gas pipes and fittings in BAL classified dwellings shall be of steel or copper construction.

Note: Steel or copper gas pipes must extend a minimum of 100 mm below ground, and 400 mm into the dwelling.

External plastic gas pipe installed to this dwelling fails to comply with this BAL requirement.



## 5.8 WATER AND GAS SUPPLY PIPES

Above-ground, exposed water supply pipes shall be metal.

External gas pipes and fittings above ground shall be of steel or copper construction having a minimum wall thickness in accordance with gas regulations or 0.9 mm whichever is the greater. The metal pipe shall extend a minimum of 400 mm within the building and 100 mm below ground.

NOTE: Refer to State and Territory gas regulations, AS/NZS 5601.1 and AS/NZS 4645.1.

*C5.8 Concern is raised for the protection of bottled gas installations. Location, shielding and venting of the gas bottles needs to be considered.*



14.

**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 [Table 5.10](#), measured from the proposed finished surface levels.

**Table 5.10 — Minimum depth of cover for buried pipes**

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 <a href="#">Clause 5.20</a> for minimum cover in bushfire areas.	

## 5.11 Bedding and backfill

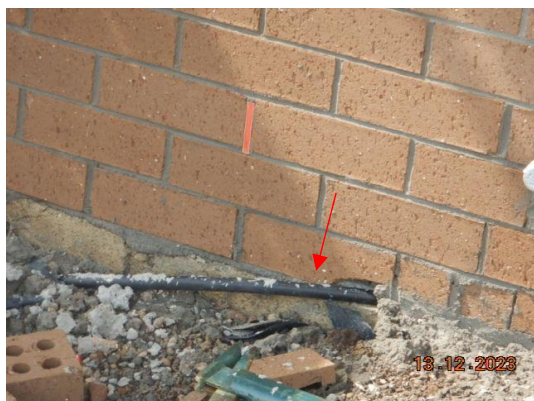
The water services shall be surrounded with not less than 75 mm of compacted sand, or fine-grained soil, with no hard-edged object in contact with or resting against any pipe or fitting.

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 [Clause 5.10](#) for minimum cover.



15.

**AS 2589; 4.2.2:** -There are a number of areas in the home that exceed the deviation allowance of 4 mm tolerance over 1.8 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.

#### 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

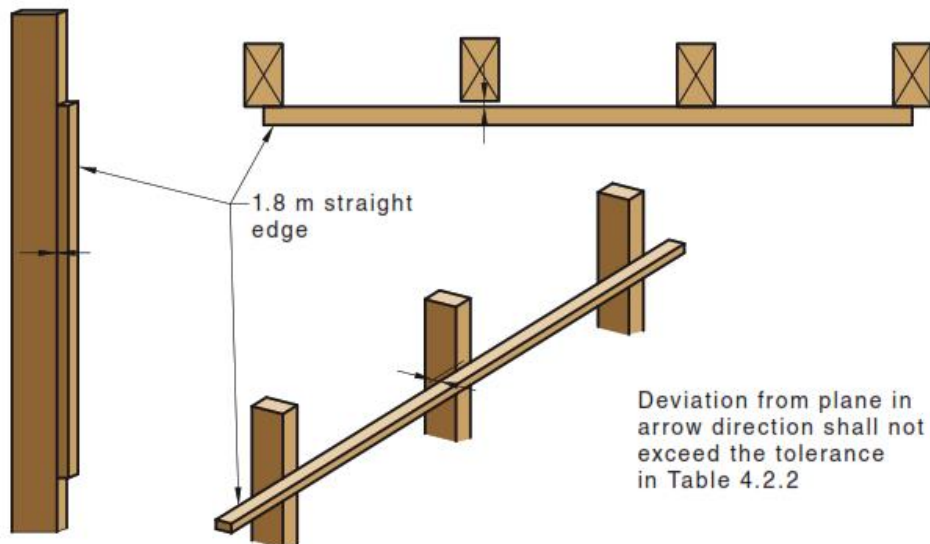


FIGURE 4.2.2(A) ASSESSING FRAMING TOLERANCE

**Note- The provided photos are for reference only. The builder must ensure all areas are reworked within the specified tolerance of 4mm over 2m.**



OOL



OOSQ



OOSQ



C-OOL



C-OOL



Large Bow



Ceiling Bowed



B2- C-OOL

16.



**AS 2688; 4.1.2; 7.2:** - Doors shall have a clearance of  $3 \pm 1$  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.



Align tops

**17.**

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

- (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.



All windows to present brandnew prior to handover

Discoloration spots to lintels



18.

**AS 2047; 5.5 & Victorian Domestic Building Contracts Act; Part 9 s.137:** - All steel fixing devices to windows shall be either of stainless steel, galvanised or similar products. Rust bleeding has been noted and documented, this timber frame will need to be treated or replaced as new.

**5.5 ANCHORING DEVICES** Anchor brackets or other devices and their attachments shall be so designed and located that they will transmit the combination of loads to the supporting building structure.

The anchor brackets and attachments shall be made of material of sufficient strength and stability to last for the life of the window. Ferrous brackets, other than stainless steel, shall comply with AS 1397, or shall be steel bar coated in accordance with AS 1650.

NOTES:

- 1 Ferrous anchoring devices are equivalent to wall ties in masonry walls.
- 2 Where site working or re-bending of anchor brackets is necessary, any damage caused to the protective coating of fixing brackets by such re-working shall be made good.
- 3 Cyclic loading does occur during a tropical cyclone and it could affect materials that are susceptible to low cyclic fatigue.

**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.



**19.**

**AS 2589; 4.2.2:** -Lined wall surfaces, internal and external, are defective if they deviate from plain (bow) by more than 4 millimetres within any 1.8 metre length of wall.

Visible hollows defined by thickening of skirting and cornice lines required plaster floating / skimming to fill the hollow.

**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  
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Substrate type	Levels 3 and 4		Level 5	
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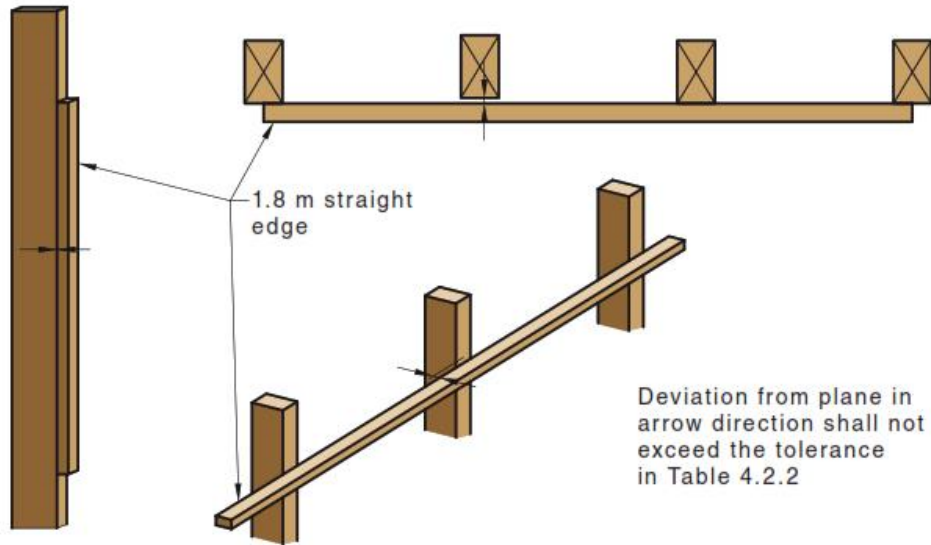


FIGURE 4.2.2(A) ASSESSING FRAMING TOLERANCE



20.

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

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

The dwellings installation has not met these requirements.

## 7.2 INSTALLATION

### 7.2.1 General

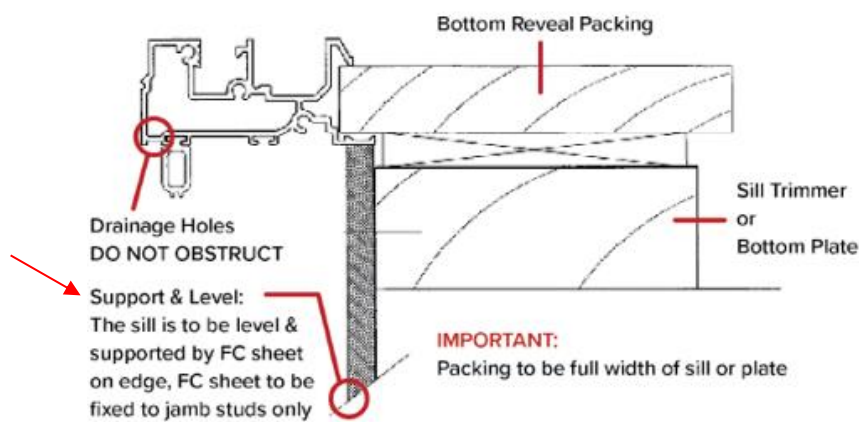
Openings in buildings into which windows are to be installed shall be of sufficient size to allow the window frame to be installed level and plumb.

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

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

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

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



### A&L: Example only



21.

It was noted that there is plaster that has been wetted and possibly soaked through. Below is an extract released by the Gypsum Association on the matters of plaster wetting and when the plaster should be replaced.

#### ASSESSING THE NEED FOR REPLACEMENT OF GYPSUM BOARD

When gypsum board is exposed to elevated levels of moisture, an assessment of the potential damage to the gypsum board must be made as to whether board exposed to these conditions must be replaced. Gypsum board may experience limited intermittent exposure to moisture from a variety of sources, such as improper storage, construction or design defects, water leaks, and janitorial activities. Gypsum board exposed to water should be replaced unless all of the following conditions are met.

- The source of the water or moisture is identified and eliminated.
- The water or moisture to which the gypsum board was exposed was uncontaminated<sup>1</sup>.
- The gypsum board can be dried thoroughly before mold growth begins (typically 24 to 48 hours depending on environmental conditions).
- The gypsum board is structurally sound and there is no evidence of rusting fasteners or physical damage that would diminish the physical properties of the gypsum board or system.

NCC definition,

**Mould** means a fungal growth that can be produced from conditions such as dampness, darkness, or poor ventilation.

The health and amenity requirements of the NCC clearly require all domestic homes to be constructed restricting unhealthy environments.

We highly recommend the builder engage an expert in the detection and treatment of mould due the well documented potential health issues associated with mould.





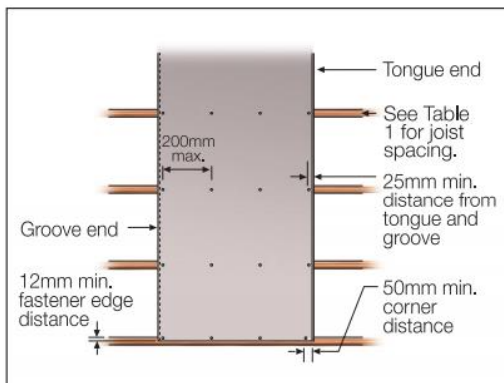
Note- Signs of mould appearing

**22.**

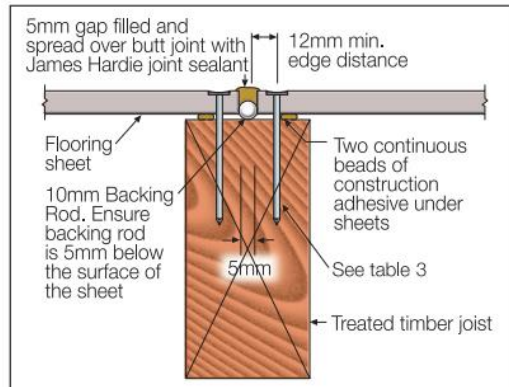
**James Hardies Scyon Secura External Flooring Installation Guide:** - The Scyon Secura External sheet flooring has not been installed as per the following manufacturer's instructions:

- Nail spacing is greater than 200mm max. centres
- Joints have not been sealed
- Butt joints less than the required 5mm
- Fastener heads not sealed
- Fixings closer than the minimum 25mm from tongue and groove edges
- Fixings closer than the minimum 12mm from butt joints

Dwellings flooring installation has not been completed as per manufacturers installation guide.



**FIGURE 4 FASTENER LAYOUT**



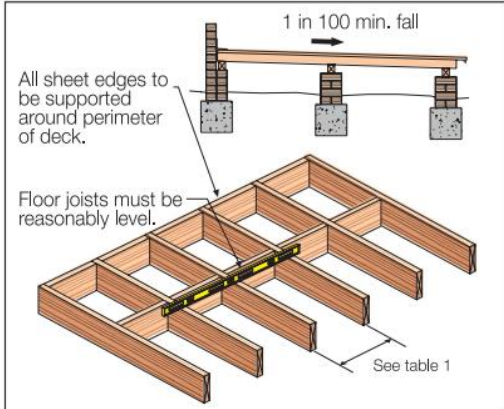
**FIGURE 9 BUTT JOINT**



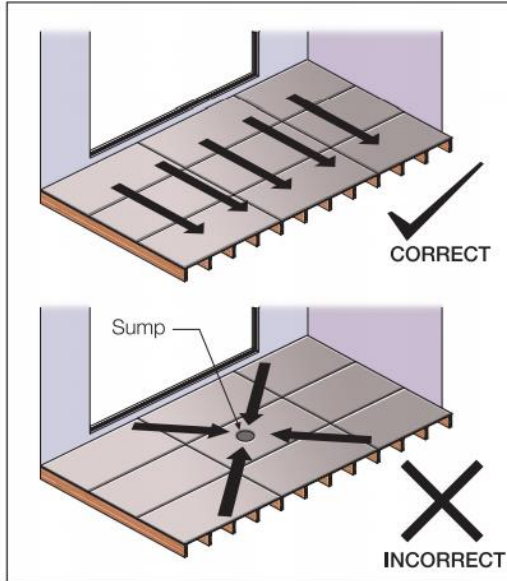
**Fall**

Decks must have a fall to facilitate drainage. Decks must have a fall of at least 1 in 100 away from the building. Floor joists must run in the direction of the fall.

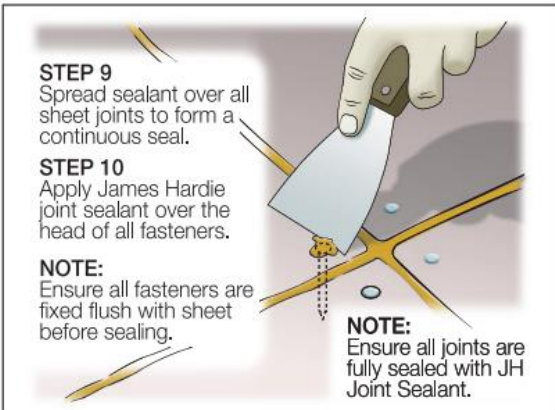
Do not provide fall by packing sheets. The fall can be created by trimming or sloping the joists.



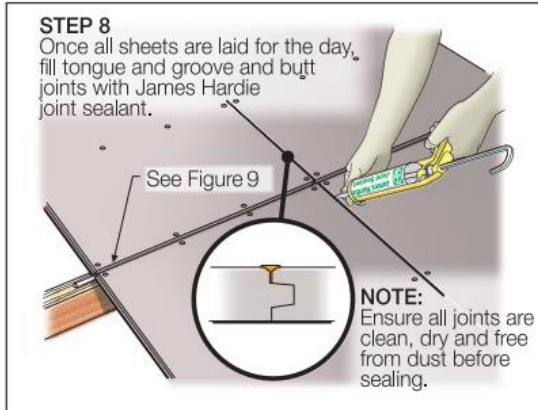
**FIGURE 1 FRAME PREPARATION**



**FIGURE 2 DRAINAGE**



**FIGURE 11 SEAL OVER FASTENERS AND JOINTS**



**FIGURE 10 SEALING ALL JOINTS**





23.

**Bushfire Attack Level - AS 3959; 5.6.5 :** - BAL 12.5 calls for all roof penetrations to be sealed. The material used to seal the penetrations shall be non-combustible.

These requirements have not been met.

#### 5.6.5 Roof penetrations

The following applies to roof penetrations:

- (a) Roof penetrations, including roof lights, roof ventilators, roof-mounted evaporative cooling units, aerials, vent pipes and supports for solar collectors or the like, shall be sealed. The material used to seal the penetration shall be non-combustible.
- (b) Openings in vented roof lights, roof ventilators or vent pipes shall conform with Clause 3.6 and be made of corrosion-resistant steel, bronze or aluminium.

#### AS 4200.2

**9.4 Hot flues** Notwithstanding Clauses 9.2 and 9.3, a pliable building membrane shall be cut back from any hot flue to avoid being fire hazard. This can be achieved with a clear space of at least 50 mm, or as recommended by the manufacturer of the flue and approved by the local authority.

NOTE: Where regulations require special attention in bushfire prone areas, it may be necessary for a pliable building membrane to comply with AS 3959.



24.

**AS 3740; 3.5:** - The membrane should be protected from physical and / chemical damage until covered by the finished surfaces.

Dirty footprints present on areas of the waterproofing membrane show that the membrane has not been protected. The membrane may have been penetrated by debris caught on the soles of work boots.

### 3.5 CURING OF MATERIALS

Materials shall be cured adequately for their intended use.

NOTE: The membrane should be protected from physical and/or chemical damage until covered by the finished surfaces.



25.

**AS 3740; 3.4:** - Falls in showers shall be sufficient to prevent surface water from being retained (except for residual water) and water discharging outside the shower. Falls in typical showers shall be 1:100.

### 3.4 SHOWER FLOORS

Falls in shower floors shall be sufficient to prevent—

- (a) surface water from being retained on the shower floor (except for residual water remaining due to surface tension); and
- (b) water from discharging outside the shower area.

For shower areas with a vertical separation between the shower area and the wet area, such as a shower screen, hob, step-down or water stop, the fall to the waste shall be 1:100.

As a minimum for other shower areas, the fall shall be a minimum of 1:80.



All areas to comply

## 26.

**AS 3740; 3.13.7:** - Bond breakers shall be included at all wall/floor, hob/wall junctions and at movement joints where the membrane is bonded to the substrate as per Table 3.2.

This installation has not met this requirement.

### 3.13.7 Bond breaker installation for bonded membranes

Bond breakers shall be included at all wall/floor, hob/wall junctions and at movement joints where the membrane is bonded to the substrate. Bond breakers shall be of the type compatible with the flexibility class of the membrane to be used.

#### NOTES:

- 1 For appropriate bond breakers, see Table 3.2.
- 2 Typical details for bond breakers are shown in Figure 3.7.
- 3 Additional information on bond breakers is given in Appendix A.

**TABLE 3.2**

**APPROPRIATE BOND BREAKER**

Membrane class	Elongation at break	Minimum bond breaker/tape width to bridge joints opening up by 5 mm
I	<60%	75 mm with backing rod
II	60% to 300%	35 mm
III	>300%	12 mm

#### NOTES:

- 1 Bond breakers for Class I membranes (low extensibility) allow the membrane to flex rather than stretch.
- 2 Bond breakers for Class II membranes (medium extensibility) allow the membrane to stretch. If a tape is used as a bond breaker, either the membrane will not bond to the tape or the tape will have elastic properties similar to the membrane; for example, for a Class II membrane, a 35 mm wide bond breaker/tape should be applied over a joint to accommodate the joint opening up by up to 5 mm.
- 3 Bond breakers for Class III membranes (high extensibility) allow the membrane to have even thickness.



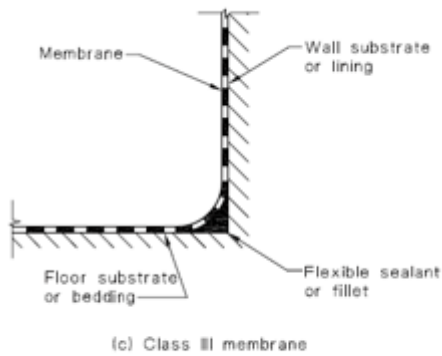
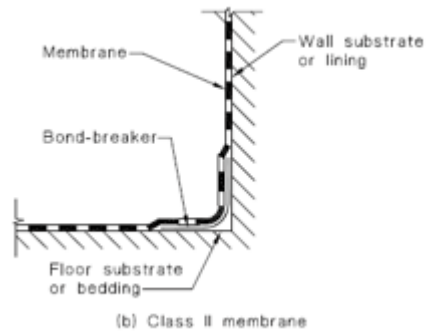
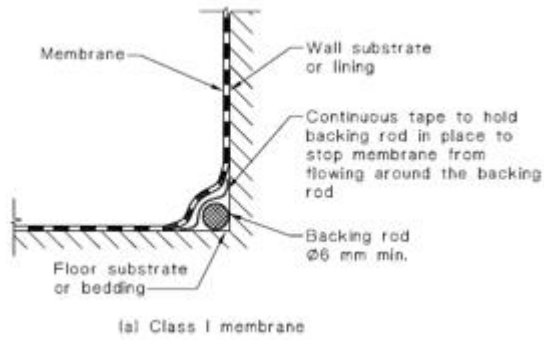


FIGURE 3.7 TYPICAL BOND BREAKER DETAILS



All areas to comply





27.

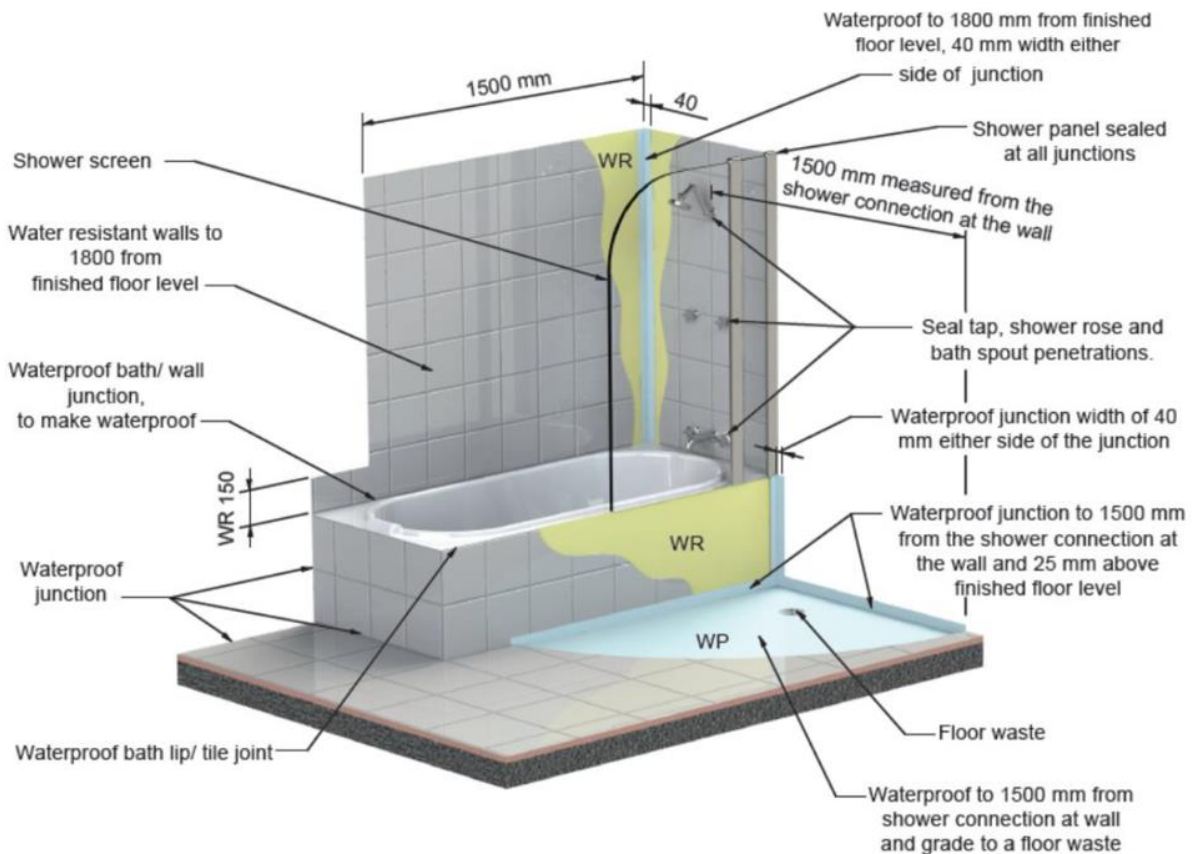
**The NCC Vol.2; Definitions:** - Waterproof means the property of a material that does not allow moisture to penetrate through it.

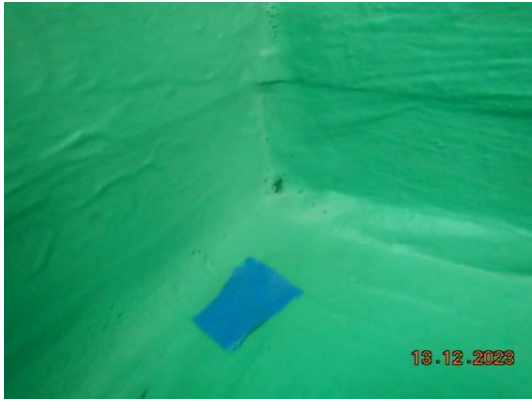
We noted some small holes, cracks, or gaps in various sections to the membrane in wet areas.

All areas must be **waterproof** in accordance with the NCC Volume 2 and the manufactures specifications.

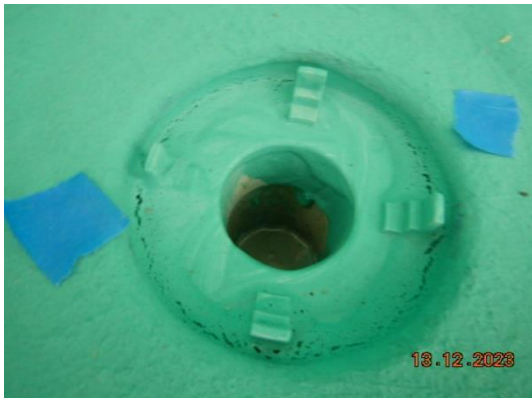
**Schedule 3 Definitions**

**Waterproof** means the property of a material that does not allow moisture to penetrate through it.





Small holes in membrane



## **Rectification Required: YES**

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

#### **1. Purpose**

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

## **2. Scope**

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

## **3. Assumed Finishes**

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

## **4. Documentation**

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

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

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

## **6. Measurements/Levels**

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

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

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

## **8. Client Use**

This report has been prepared for the exclusive use of the client/s whose name/s appear/s on the front of this report as supplied by Darbecca Pty Ltd ABN 12 115 961 487. Any other person who uses or relies on this report without the authors written consent does so at his or her own risk and no responsibility is accepted by Darbecca Pty Ltd or the author of this report for such use and or reliance.

## **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. If you wish to have this report converted to a VCAT 2 Practice Note, please contact our office on 03 5366 6900.**