



ABN 12 115 961 487
PO Box 3010
Birkdale QLD 4159
Phone: (07) 2101 5331
Email:
Report By:

19/04/2021



Site Address:

Client Name:

Phone #:

Email:

Dwelling type:	House and Garage.
Dwelling configuration:	Single Storey.
Nature of works:	New Building.
Stage of inspection:	Final.
Construction Type:	Multiple Claddings.
Garage:	Attached.
Foundations:	Slab.
Builder:	

Client Brief

We were 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 QBCC.

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 19/04/2021 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 fine at the time of the inspection.

Entry to site was obtained under the Queensland Building and Construction Commission Act, 1991 - Part 10, Section 109.

Schedule of Defects:

Defects, observations and other related comments from the Final Inspection on the 19/04/2021:

1.

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*.



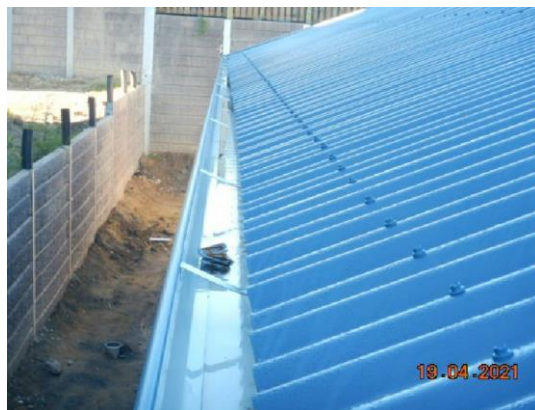
2.

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

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

3.6 CLEANING UP

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



3.

QBCC Standards and Tolerances Guide, 7.3: - Staining, dents, folds, etc. are defective if visible from a normal viewing position at the ground or an upper floor level.

Roof sheeting to this dwelling has not met this requirement.

7.3 Roof cladding

Within the first 12 months from completion of the work, staining, folds, splits, dents, open joints between panels, cracking and other distortions in roof cladding are defects if they are visible from a normal viewing position at ground level or an upper floor level, unless these imperfections were caused by actions or inactions of the owner, or other persons outside of the contractor's control (e.g. installation on the roof of satellite TV).



4.

A few roof screws have been overdriven deforming the washers and some have swarf (metal shaving) sticking out. This must be avoided as it can lead to a loss of the water seal and lead to future water leaks.

All screws must be completed in accordance with the minimum requirements of AS 1562.1-2018 clause 4.4.2 & Figure 3.6.1 of the manufacturer's specifications.

4.4.2 Pierced-fastened cladding

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

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

NOTES:

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



Figure 3.6.1

It is important that you set screws correctly

3.6 Setting of screws

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



5.

NCC 2019, part A5.0: - A building and plumbing or drainage installation must be constructed using materials and products that are fit for purpose.

Fixings used in external stormwater system present as zinc coated or 'gold' electroplated (indoor screws) and therefore unfit for their intended purpose.

A5.0 Suitability

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

Explanatory information:

[A5.0](#) relates to the quality of work and materials needed to construct a building to meet NCC requirements.

This means that—

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



6.

NCC, part 3.1.3.5: - It was noted the storm water system is presenting with less than the required coverage to the areas as documented in the photographs below.

All areas must meet the minimum standards set out in the NCC.

3.1.3.5 Stormwater drainage

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

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

Explanatory information:

The manner of discharge of stormwater drainage systems includes consideration of discharge points. Some examples of discharge points which may be acceptable to the [appropriate authority](#) are:

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

- (c) Cover to stormwater drains:
the cover to 90 mm Class 6 UPVC stormwater drains installed underground must be not less than—
- (i) under soil — 100 mm; or
 - (ii) under paved or concrete areas — 50 mm; or
 - (iii) under areas subject to light vehicle traffic—
 - (A) reinforced concrete — 75 mm; or
 - (B) paved — 100 mm.

Explanatory information:

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

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



7.

The QBCC Standards and Tolerances Guide: - Voids and holes in masonry walls are defective if visible from a normal viewing position.

Masonry faces are defective if they are not clean and free of excess mortar or stains. Stains would include paint and plaster excesses etc.

The brickwork to this dwelling has not met these requirements.

4.10 Voids and holes in mortar

Within the first 12 months from completion of the work, voids and holes in mortar in masonry walls, excepting weepholes and vents, are defects if they are visible from a normal viewing position.

4.12 Cleaning, mortar smears and stains

Within the first 12 months from completion of the work, stains, mortar smears and damage caused by cleaning are defects if they are visible from a normal viewing position.

4.8 Masonry facing

Within the first 12 months from completion of the work, and unless documented otherwise, masonry is defective if it is not laid with true, fair or finish face outwards.

Within the first 12 months from completion of the work and unless documented otherwise, masonry faces are defective if they are not cleaned and free of excess mortar or stains when viewed from the normal viewing position.





8.

NCC, 2019; 3.1.3.3: - The external finished surface surrounding the slab must be drained and graded to give a slope of not less than 50mm over the first 1 metre. (25mm in areas of *low rainfall intensity areas*)

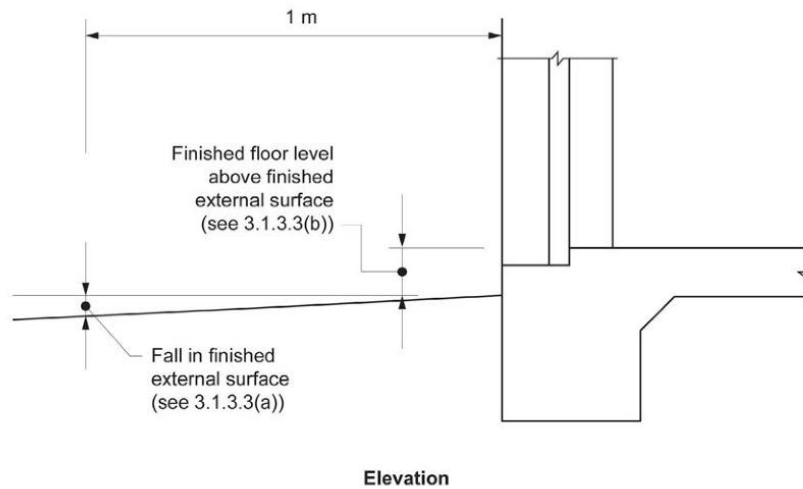
Surface water drainage on this site has not met the performance requirements of the National Construction Code.

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



9.

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—

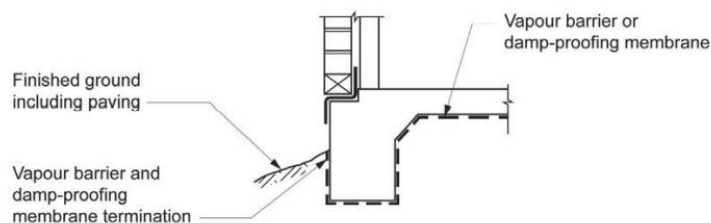
- (i) 0.2 mm nominal thickness polyethylene film; and
- (ii) medium impact resistant, determined in accordance with criteria specified in clause 5.3.3.3 of AS 2870; and
- (iii) be branded continuously "AS 2870 Concrete underlay, 0.2 mm Medium impact resistance".

(b) Installation

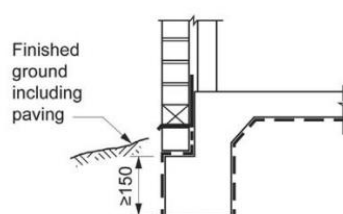
A vapour barrier must be installed as follows—

- (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.

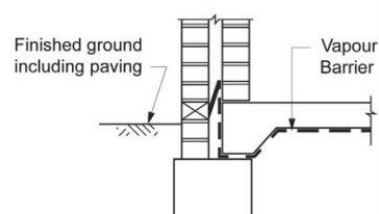
Figure 3.2.2.3 Acceptable vapour barrier and damp-proofing membrane location



(a) Minimum rebate for cavity masonry or veneer wall



(b) Deep edge rebate alternative



(c) Masonry alternative



10.

It appears there is efflorescence forming as documented below.

This is likely due to exposure to moisture prior to laying or during laying as explained in the following guidelines.

Think Brick Australia Manual 10
Construction Guidelines for Clay Masonry

All materials must be properly stored on site. Cement and lime must be adequately protected against water damage and masonry units should

be kept dry until laying.

Protecting masonry units from moisture

Masonry units of all types must be protected on site from moisture and contaminants from the ground, which can cause problems with efflorescence and salt attack in the completed masonry.

Entry of salts from the ground into the units will lead to unsightly efflorescence later, as the salts are mobilised by moisture from rain and the atmosphere. High moisture content at the time of laying can cause problems such as poor bond strength and efflorescence. It is strongly recommended that the masonry units should be stacked clear of the ground, for example on pallets, and covered to give protection from the rain. Figure 1 is an example of bad practice, where ground water can contact the units, with the possibility of staining and take-up of salts.



11.

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 to meet this requirement.

Note: All areas to be checked and cleared as required.

7.1 GENERAL

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



12.

NCC 2019: - Articulation Joints (AJ's) between masonry elements must have a width of not less than 10mm. This width needs to be maintained beside window and door frames.

The Articulation Joints beside windows and doors fail to meet this requirement.

3.3.5.13 Vertical articulation joints

- (a) Vertical articulation joints must be provided in masonry veneer walls in accordance with (b), except in walls constructed on [sites](#) where the soil classification is A or S (see [Part 3.2.4](#)).

Explanatory information:

For the purposes of [3.3.5.13](#), the vertical articulation joint also performs the function of a contraction or expansion joint.

- (b) Articulation joints between masonry elements must have a width of not less than 10 mm and be provided (see [Figures 3.3.5.3, 3.3.5.4 and 3.3.5.5](#))—
- (i) in straight, continuous walls having no openings — at not more than 6 m centres and within 4.5 m, but not closer than 470 mm of all corners; and
 - (ii) in straight, continuous walls with openings more than 900 x 900 mm — at not more than 5 m centres and located so that they are not more than 1.2 m away from openings; and



13.

It was noted that there are gaps to the cladding. The cladding needs to be installed in a manner that prevents water ingress and seals off the dwelling.

This area needs to be reworked to make watertight and prevent any water ingress.

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

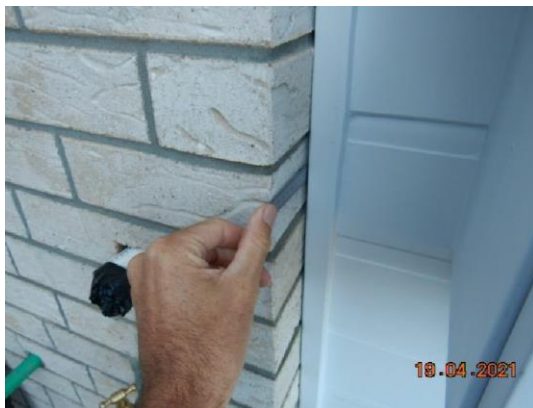
22 Standard of work and exercise of care and skill

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

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

AS 2047

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



14.

AS 3700, part 4.7.2: - Weepholes shall be spaced at centres not exceeding 1200mm.

There are no weepholes to the rendered wall below the cladded wall to this dwelling, therefore no provision has been made to drain any moisture that may enter the wall above the flashing.

This does not meet this requirement.

4.7.2 Weepholes

Weepholes shall be provided wherever it is necessary to drain moisture from or through masonry construction. Where flashings are incorporated in the masonry, weepholes shall be provided in the masonry course immediately above the flashing, at centres not exceeding 1200 mm.



15.

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.

Timbers installed to this dwelling have not met this requirement.

2.2.3 Painting end-grain

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

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

Timber Queensland Technical Data sheet 24: -

SUPPLEMENTARY TREATMENT, PAINTING & INSTALLATION

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

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

PRIOR TO INSTALLATION

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

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

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

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



16.

AS 3727.1; 5.4.3: - Isolation joints shall be sealed to resist the entrance of detritus.

The foam expansion joints around the dwelling have not been sealed as per this requirement.

Note: Engineering design shall be sought by the builder for driveways that fall outside the scope of AS 3727. Design documentation shall be made available to the homeowner in accordance with the contract and the Act. Regardless, the reasons for sealing the isolation joint remain the same, 'to prevent the ingress of detritus.

5.4.3 Isolation joints

Isolation joints shall be provided where a pavement abuts a building or other rigid structure such as a drainage pit or access hole. Isolation joints shall—

- (a) extend the full depth of the pavement;
- (b) allow freedom of movement both vertically and horizontally between the pavement and the structure; and
- (c) resist the entrance of detritus.

NOTE: A typical isolation joint is shown in Figure 5.4.3.

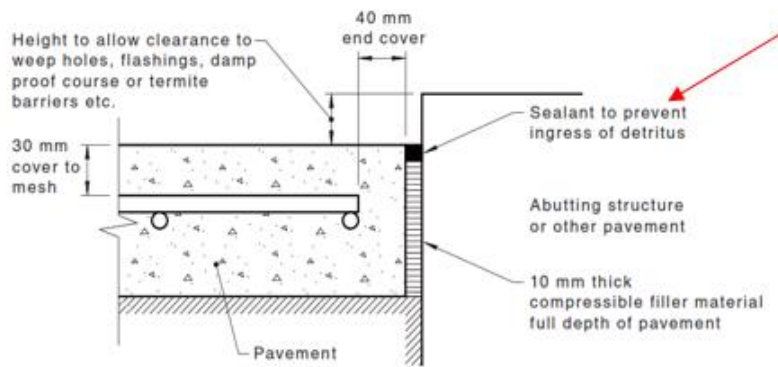


FIGURE 5.4.3 TYPICAL ISOLATION JOINT



17.

QBCC Act, Schedule 1B, Implied Warranties: - The builder warrants that the subject work shall be carried out in an appropriate and skilful way and with reasonable care and diligence.

Concrete floors require cleaning to remove builder's waste including paint and plaster excesses, mortar etc, prior to hand-over.

This requirement has not been met.

22 Standard of work and exercise of care and skill

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

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

25 Carrying out work with reasonable diligence

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

QBCC Standards and Tolerances Guide:

3.12 Finish to concrete slabs

Within the first 12 months from completion of the work, the finish to a concrete slab is defective if it is not suitable for the documented applied finishes such as tiles, polished concrete, carpet or sheet flooring, including set downs where required.



18.

General: - The builder has a zero step down to the house to garage wall. A zero stepdown is where the garage floor is level with the adjoining (class 1) slab areas. As such the wall must be sealed from the Class 10 (garage) to Class 1 (house) connection.

T2 treated framing is a termite treatment only. All pine must be protected from fungal attack and mould as per AS 1684. The untreated finger jointed pine or MDF skirting must also be protected.

We recently encountered a situation where water transitioned under the garage walls and into adjoining rooms. This resulted in wetting of the structural frame, skirting, and the adjacent room floor coverings. This example highlights the need to seal garage walls in zero stepdown situations.



19.

The insulation in the ceiling has the following defects.

- Batts have been installed over pipes, wires, and framing. The 90 mm plus gap between the top of the plaster and the bottom of the batts is making all installed batts that have this gap completely ineffectual. The R rating on the dwelling has been greatly reduced and the overall performance of the roof installing does not meet the requirements of the energy report on the dwelling. The whole roof will need to be reworked so that all batts are installed hard to the plaster with no gaps or holes to the installation.
- Other trades appear to have removed batts from their work areas with little regard for the information inserted below. Note that batts must be installed up to the 50 mm area around protected down lights.

These areas require insulation as per the energy rating requirements of the dwelling.

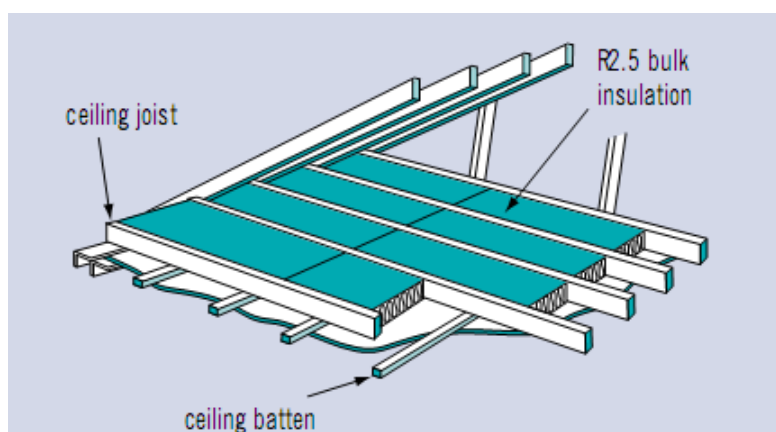
The insulation needs to be reworked to be installed in a manner that complies with AS 3999 with all areas covered and the batts flush to the top of the plaster.

The inserted diagram demonstrates the minimums that must be achieved.

Installing insulation

INSTALLATION GUIDELINES

It is vital that insulation is installed with careful attention to detail, as incorrect or inappropriate installation will significantly decrease performance. For instance, failure to butt all ends and edges of batts to give a snug fit could result in 5% of the ceiling area not being covered, losing up to 50% of the potential insulation benefits.



The NCC 2019 Volume 2:

Acceptable Construction Practice

3.12.1.1 Building fabric thermal insulation

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

Explanatory information:

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

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

Explanatory information:

Care should be taken when installing insulation to ensure that it does not interfere with the safety or performance of **domestic services** and fittings such as heating flues, recessed light fittings, light transformers, gas appliances and general plumbing and electrical components. This includes providing appropriate clearance as detailed in relevant legislation and referenced standards such as for electrical, gas and fuel oil installations.



20.

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

Doors to this dwelling have not met this requirement.

9.6 Sealing of door edges

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



21.

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

9.4 Internal door clearances

With the exception of fire doors and unless documented otherwise, the installation of doors is defective, if within the first 12 months of completion of the work, clearances between door leaves and frames and between adjacent door leaves are not uniform and within 1mm of the documented dimension.

Within the first 12 months after completion and if not otherwise documented:

- A clearance between door leaves or between a door leaf and the frame is defective if it is less than 2mm or greater than 4mm 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 15mm after installation of the floor covering.

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





No door stops or handles fitted



22.

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

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

3.4 CONTROL JOINTS

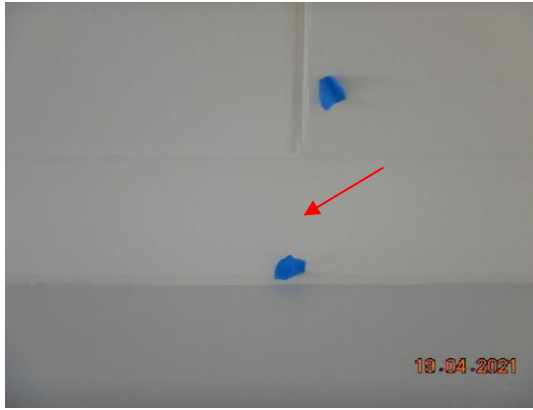
Control joints and their positioning shall be determined at design stage and included on relevant specifications and diagrams including accurate details for installation.

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

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

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

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



23.

3500.2 - 2018, part 4.3.1 (g): - the interior of each pipe must be cleared of any foreign matter prior to commissioning.

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

4.3 DRAINS

4.3.1 Below ground

Drains below ground shall—

- (a) be laid to an even grade, be straight and have no lipped joints or internal projections;
- (b) have a minimum number of changes of grade and direction;
- (c) be sized in accordance with the fixture unit loading given in Table 3.1;
- (d) be continuously supported under the barrel, other than for cast iron and ductile iron pipes and fittings;
- (e) be protected against damage;
- (f) be watertight;
- (g) → have the interior of each pipe cleared of any foreign matter before it is laid and prior to commissioning; and
- (h) have a jump-up installed to connect drains at different elevations.



24.

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

Cabinetry to this dwelling has not met this requirement.

11.4 Cabinet doors and door fronts

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



25.

AS 4386: - On completion of installation the gap between wall and panel is to be filled with a paintable gap filler.

The cabinetry to this dwelling has not met this requirement.

13 ON COMPLETION OF INSTALLATION

Before handing over the completed assembly, the following shall be carried out:

- (a) Clean all components of dust and debris.
- (b) Test all doors, drawers and hardware for operation and check that alignments match specifications.
- (c) Check for rough edges and sand, or smooth, as necessary.
- (d) Cap or conceal all visible screwheads.
- (e) → Fill gap between wall and panel with a paintable gap filler, where cabinets, infill panels, refrigerator panels, worktops and any other finished panels butt to walls.



26.

QBCC Standards and Tolerances Guide: - Basins are to be sealed between junctions of adjoining surfaces.

There are multiple openings into concealed spaces to sinks and basins that have to potential to cause unhealthy or dangerous conditions. The resulting mould and fungi build ups, once established, will be very difficult to arrest.

The NCC part F2.4.1, P2.4.1 and O2.4.1 call for all the photographed areas detailed below to be sealed.

The basins have not been fully sealed to the bench, as such it does not meet the requirements.

11.9 Sealing around benches and items installed in benches

Within the first 12 months from completion of the work and where required, junctions between bench tops and adjoining surfaces are defective if they are not sealed with an agreed or suitable flexible sealant of matching colour. Within the first 12 months from completion of the work, sealing around items such as sinks, hand basins etc., is defective if the joint leaks, or if it is not carried out in accordance with the manufacturer's installation instructions.

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.



27.

AS 3958.1, part 5.7.1, sub (f): - All installed grout needs to be installed uniform in colour, smooth and without voids. The as installed fails this requirement.

5.7 GROUTING

5.7.1 General

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

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

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

The procedure is as follows:

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





28.

QBCC Standards and Tolerances Guide: - Tiles are defective if they are cracked, pitted, chipped, or scratched, and the damage was not caused by the owner.

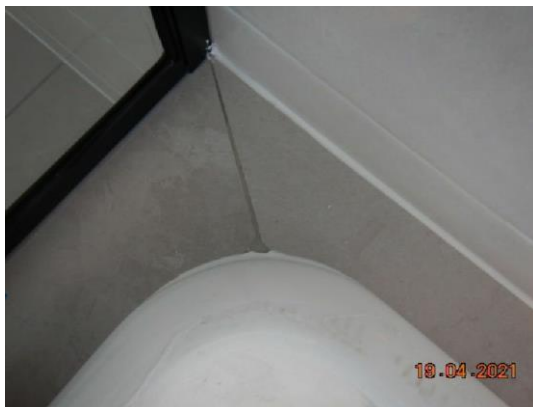
Damaged tiles to this dwelling do not meet this requirement.

12.4 Cracked, pitted, chipped, scratched, or loose tiles

Within the first 12 months of completion of the work, tiles are defective if they are cracked, pitted, chipped, scratched, or loose unless such cracking, pitting, chipping or scratching has been caused by actions or inactions of the owner or others outside of the contractor's control.

Within 6 years and 6 months from the completion of the work, cracked, pitted, chipped, scratched or loose tiles are defective if they allow water penetration into the building, or compromise the health and safety of those who use the building.





Tiles over cut at back of bath, one side filled with grout the other with silicone

29.

The caulking in a few areas has been installed over trade waste. The waste must be removed fully and only then can the caulking be installed.

There are also some areas that have gaps or are inconsistently laid.

QBCC Act, Schedule 1B, Implied Warranties: - The builder warrants that the subject work shall be carried out in an appropriate and skilful way and with reasonable care and diligence.

22 Standard of work and exercise of care and skill

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

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

25 Carrying out work with reasonable diligence

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





30.

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

Material present with damage.

20 Suitability of materials

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



31.

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.

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

13.1 Standard of painting

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

13.3 Nail and screw fixings

Within the first 12 months from completion of the work, fixings or unfilled depressions caused by fixings are defects in painted or stained surfaces if they can be seen from a normal viewing position.

13.2 Surface finish of paintwork

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

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

13.4 Mechanical damage and natural defects in surfaces

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



Screw head



Side of architraves not glossed



Inside cupboards not fully painted



32.

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

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

22 Standard of work and exercise of care and skill

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

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



Gaps between sheets and fascia.



Corner cover not set flush



Silicone not tooled off



Screw missing



Wedge sticking out under screens



Cutlry tray short



Door guide sticking out



Areas of flooring rasied and not stuck down to slab.

Rectification Required: YES

TERMS & CONDITIONS OF Darbecca Pty Ltd SITE INSPECTION AND REPORT

1. Purpose

The purpose of our inspection is to identify any defects in the finishes and the quality of those finishes presented by the builder at the stage of works nominated on the front of this report. This report contains a schedule of building defects that in the writer's judgement do not reach an acceptable standard of quality, level of building practice, or have not been built in a proper

workmanlike manner relative to the Building Code of Australia, the relevant Australian Standards or the acceptable standards and tolerances as set down by the Building Control Commission.

2. Scope

Our engagement is confined to that of a Building Consultant and not that of a Building Certifier as defined in the Queensland Building Act, of 1975. We therefore have not checked and make no comment on the structural integrity of the building, nor have we checked the title boundaries, location of any easements, boundary setbacks, room dimensions, height limitations and or datum's, glazing, alpine and bush-fire code compliance, or any other requirements that is the responsibility of the Relevant Building Certifier, unless otherwise specifically noted within this report.

3. Assumed Finishes

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

4. Documentation

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

5. Non-Destructive Inspection

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

6. Measurements/Levels

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

7. Services, Appliances, Plants and Equipment

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

8. Client Use

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

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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. QCAT Suitability

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