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**Report By:** 

12/04/2021



Site Address:

**Client Name:** 

Phone #:

Email:

Dwelling type: Dwelling configuration: Nature of works: Stage of inspection: Construction Type: Garage: Foundations: Builder: House and Garage. Single Storey. New Building. Pre Pour. Brick Veneer. Attached. Slab.

# **Client Brief**

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

## **Inspection and Report**

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

#### Access

Access was gained to all required areas of the residence.

#### **Report Conditions**

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

The building process is progressive and items in this report may or may not be covered during the build by materials installed over a documented defect. We recommend that all clients book a reinspection and state that the builder must present all defects rectified prior to moving forward with the build. All items that we are unable to look at from a previous report will not be included in any future reports. We will use all endeavours to ensure rectification, however we are limited to nondestructive 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: <u>A fee of \$350.00 per hour</u>, 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 12/04/2021 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, <u>section 17</u> and 19. We act and make limited representations under the direction of the dwellings owners under these two acts.

# **Schedule of Defects:**

Note; the concreters must ensure the correct concrete cover to all steel reinforcement during the pour.

<u>Defects, observations and other related comments from the Pre Pour Inspection</u> <u>on the 12/04/2021:</u>

#### 1.

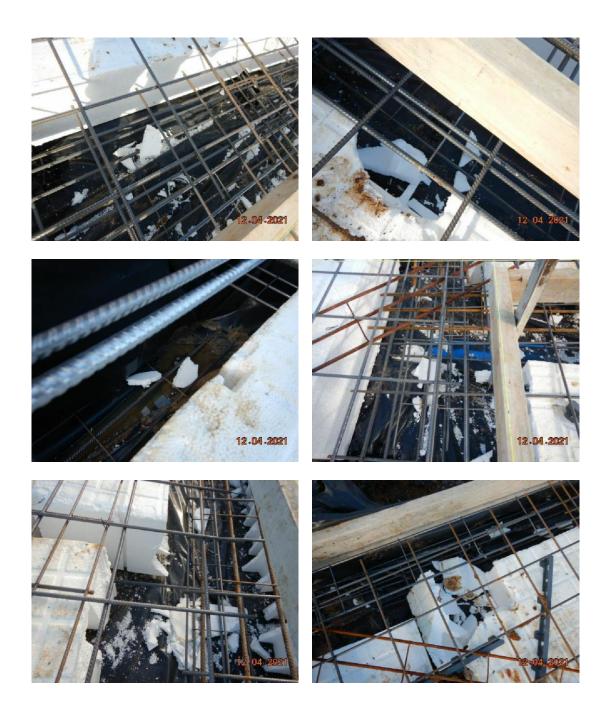
NCC 2019, 3.2.3.2 (d): - Pod debris and steel offcuts can potentially compromise the minimum concrete cover to reinforcement. The minimum distance from the outer edge of reinforcement bars to an internal surface is 20mm.

This dwelling's ribs and edge beams contain excessive amounts pod debris and / or steel offcuts.

#### 3.2.3.2 Steel reinforcement

(d) Footings and slabs-on-ground must have concrete cover between the outermost edge of the reinforcement (including ligatures, tie wire etc.) and the surface of the concrete of not less than the following:

- (i) 40 mm to unprotected ground.
- (ii) 30 mm to a membrane in contact with the ground.
- (iii) 20 mm to an internal surface.
- (iv) 40 mm to external exposure.





NCC 2019, 3.2.3.2 (d): - The minimum distance from the outer edge of reinforcement bars to an internal surface (such as a plumbing pipe, waffle pod, or the like) is 20mm.

Areas of reinforcement steel to this dwelling do not comply with this minimum requirement.

### 3.2.3.2 Steel reinforcement

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









AS 2870, 5.3.2(e) & NCC 2019, 3.2.3.2: - Reinforcement bars shall have a lap length at splices of not less than 500mm up to a bar diameter of 12mm, and not less than 700mm up to a bar diameter of 16mm.

This item was addressed during my inspection.

# AS 2870

# 5.3.2 Reinforcement

(e) Reinforcing bars shall have a lap length at splices not less than 500 mm up to a bar diameter of 12 mm, and not less than 700 mm up to a bar diameter of 16 mm. At T- and L-intersections, the bars shall be continued across the full width of the intersection. At L-intersections, one outer bar shall be bent and continued 500 mm, or a bent lap bar 500 mm long shall be provided on each leg.

# NCC 2019

#### 3.2.3.2 Steel reinforcement

(c) Minimum laps for reinforcement as shown in Table 3.2.3.1 and Figure 3.2.3.1 must be provided where reinforcing is used.

Reinforcement	Minimum splice	Minimum Lap at "T" inter- sections	Minimum Lap at "L" inter- sections
Steel reinforcing bars	500 mm	Full width across the junction	One outer bar must be bent and continue 500 mm (min) around corner
Trench mesh	500 mm	Full width across the junction	Full width across the junction
Square and Rectangular Mesh	The two outermost transverse wires of one sheet must overlap the two outermost transverse wires of the other	Not applicable	Not applicable

Table 3.2.3.1 Minimum lap for reinforcement



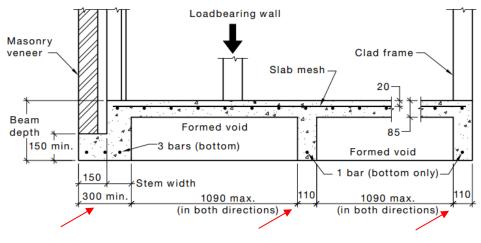
**AS 2870; 3.4.1:** - The minimum widths for edge beams and internal ribs shall be in accordance with Figure 3.4 (below).

Beam and rib widths to this dwelling do not meet this minimum requirement due to pods having moved. Areas require adjustment prior to the pour and must be maintained throughout the pour.

# 3.4 WAFFLE RAFTS

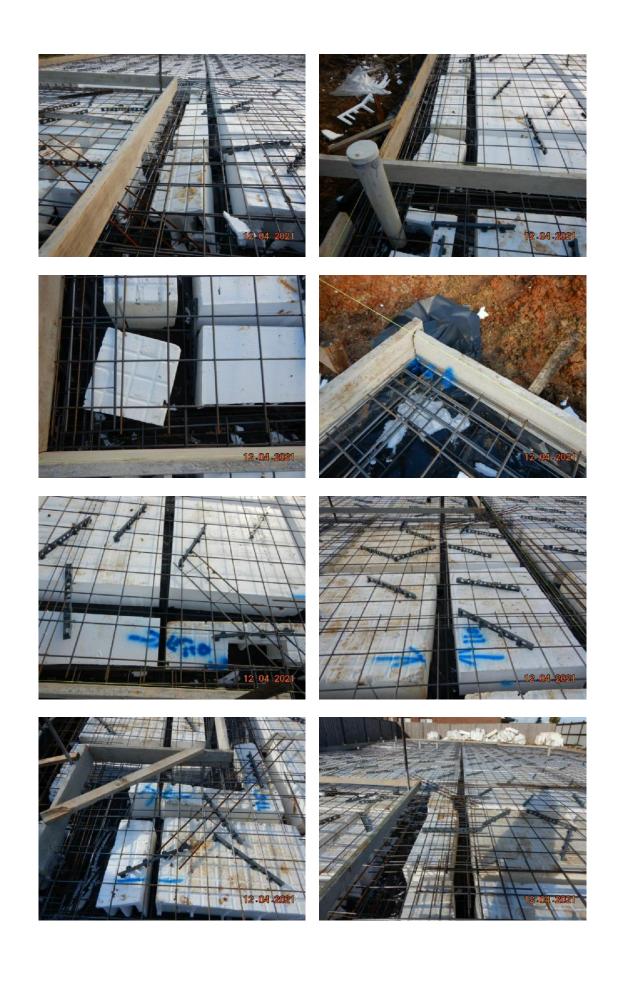
#### 3.4.1 General

Waffle rafts shall be specified in accordance with Figure 3.4. Modifications to the details given in Figure 3.4 shall not be undertaken without engineering design in accordance with Section 4.



DIMENSIONS IN MILLILMETRES

FIGURE 3.4 (in part) WAFFLE RAFT





NCC 2019, 3.2.3.2 (d): - The minimum distance from the outer edge of reinforcement bars and a vapour barrier in contact with the ground is 30mm.

Areas of reinforcement steel to this dwelling do not comply with this minimum requirement.

#### 3.2.3.2 Steel reinforcement

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







NCC 2019, 3.2.3.2 (f)(i): - All reinforcement must be firmly fixed in place to prevent it moving during the pour

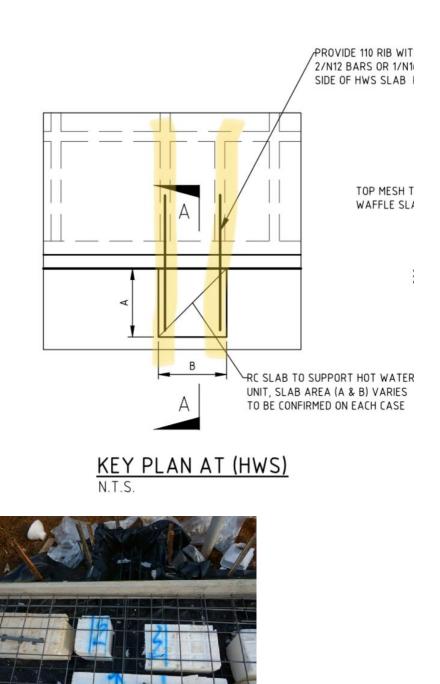
Areas of reinforcement have not been tied and therefore do not comply with the NCC.

#### 3.2.3.2 Steel reinforcement

- (f) Reinforcement must be placed as follows:
  - (i) All reinforcement must be firmly fixed in place to prevent it moving during concreting operations.
  - (ii) Reinforcement must be supported off the ground or the forms by bar chairs made from wire, concrete or plastic.
  - (iii) When using wire chairs the minimum concrete cover (see 3.2.3.2(d)) to the uncoated portion of the chair must be obtained.
  - (iv) Wire chairs on soft ground or plastic membrane must be placed on flat bases.
  - (v) Bar chairs must be spaced at not more than 800 mm centres for steel fabric.



The steel reinforcement and waffle pods require reworking to tie in the slab extension in accordance with the approved engineering detail.



The earthing facility installed to the dwellings slab steel as required in AS 3000 has not been installed. This dwelling has formed shower bases and it is mandatory that earthing of the slab steel is installed.

I refer the builder to AS 3000, clause 5.6.2.5 that states "Any conductive reinforcing within a concrete floor or wall forming part of a shower or bathroom shall be bonded to the earthing system".

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NCC 2019, 3.2.3.2 & AS 2870, 5.3.2 (f): - Where reinforcement has been cut to accommodate service (pipe) penetrations, the effect shall be taken into account by the provision of extra reinforcement. Laps of extra reinforcement shall be 500mm minimum.

This slab preparation has not met these requirements.

# AS 2870:

# 5.3.2 Reinforcement

Reinforcement in rafts and slabs shall be placed in accordance with the following:

(f) Service penetrations are permitted through the middle third of the depth of edge and stiffening beams. The effect of other service penetrations shall be taken into account by the provision of extra concrete depth or reinforcement.

# NCC 2019:

# 3.2.3.2 Steel reinforcement

(c) Minimum laps for reinforcement as shown in Table 3.2.3.1 and Figure 3.2.3.1 must be provided where reinforcing is used.

#### Table 3.2.3.1 Minimum lap for reinforcement

Reinforcement	Minimum splice	Minimum Lap at "T" inter- sections	Minimum Lap at "L" inter- sections
Steel reinforcing bars	500 mm	Full width across the junction	One outer bar must be bent and continue 500 mm (min) around corner
Trench mesh	500 mm	Full width across the junction	Full width across the junction
Square and Rectangular Mesh	The two outermost transverse wires of one sheet must overlap the two outermost transverse wires of the other	Not applicable	Not applicable



# **<u>Rectification Required:</u>** YES

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

# 1. Purpose

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

# 2. Scope

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

# 3. Assumed Finishes

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

#### 4. Documentation

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

# 5. Non-Destructive Inspection

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

# 6. Measurements/Levels

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

# 7. Services, Appliances, Plants and Equipment

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

# 8. Client Use

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

# 9. Report Reproduction

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

# **10. Reference**

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

# **11. Report Exclusions**

**a**) Defects in inaccessible parts of the building including, but not limited to, the roof space and or the sub-floor area unless otherwise noted,

**b**) Defects not apparent by visual inspection, or only apparent in different weather or environmental conditions as to those prevailing at the time of the inspection,

c) Defects that we did not consider significant enough to warrant any rectification work at the time of our inspection,

d) Defects outside the scope of the client brief

e) Check measure of rooms, walls, and the overall building, for size, parallel and squareness unless otherwise noted,

**f**) Landscaping, retaining wall/s, or any structures outside the roofline of the main building unless otherwise noted,

g) Enquiries of Council or any other Authorities,

h) Investigation for asbestos and or soil contamination,

i) Investigation for the presence of any termites or borers and for the correct installation of any termite barriers and or other risk management procedures or devices.

**j**) Defects in relation to PVC sewage and storm water pipes are not covered in this inspection. Clients must seek the services of a licenced plumber to check all sewage and storm water pipes.

## **12. VCAT Suitability**

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