

1 October 2020

Structerre Reference: D250330 / J357817

Daleford Property Pty Ltd  
PO Box 788  
West Perth WA 6005

Attn Mr Lachlan Blight

## **THE BROOK AT BYFORD - STAGE 2C - BYFORD WA**

### **ANTICIPATED LOT CLASSIFICATION (AS2870-2011)**

#### **1. INTRODUCTION**

At the request of Daleford Property Pty Ltd, Structerre Consulting, (Structerre), have prepared this letter to provide anticipated Lot Classifications at the completion of earthworks for the Lots within Stage 2C of the residential subdivision of The Brook at Byford, located in Byford, Western Australia. Stage 2C of the development consists of 34 residential Lots and is located to the south east of the existing subdivision.

This report provides an assessment of the provided geotechnical information, proposed design levels and summary of the onsite assessment conducted to date for the development to provide an anticipated Site Classification of the proposed Lots at the completion of earthworks, as defined by AS2870-2011, "Residential slabs and footings".

Structerre on behalf of the client have been conducting regular site assessments during earthworks construction of the development and have provided geotechnical advice, where required to provide Class A Lots at the completion of the works.

#### **2. PREVIOUS SITE INFORMATION**

Coffey Geotechnics have previously conducted a geotechnical investigation of Lot 2 South Western Highway, Byford of which Stage 2C forms part in 2008, Coffey Geotechnics reference GEOTHERD08278 – AB dated 29 April 2008.

The report included test pitting, borehole logging and laboratory analysis of the underlying ground conditions to provide for earthworks recommendations for the development of the site for residential purposes. Test holing indicated the natural soil profile generally consisted of a thin layer of topsoils, overlying sands and or silty sands to approximately between 0.1m to 0.6m, overlying clayey sands / gravels of low to medium plasticity and the report provided recommendations for the placement of a minimum of 1m of sand fill to be placed above the natural (reactive) profile to provide Class "S" for the developed Lots as defined by AS2870 (1996).

Structerre provided a review of the information contained in the initial geotechnical investigation in conjunction with the proposed residential design and provided recommendations to the design engineering consultant, JDSI Consulting Engineers, for fill requirements for each of proposed Lots within Stage 2C to provide Class "A" as defined by AS2870.

### 3. EARTHWORKS MONITORING AND INSPECTIONS

During the bulk earthworks for Stage 2C, Structerre have conducted regular site visits to assess the ongoing works including the following:

- Assessment of vegetation and topsoil stripping,
- Base excavation assessments of over excavation of clayey soils, where required,
- Proof compaction of the base of excavation and stripped surfaces prior to placement of structural fill,
- Assessment of import sand fill used in backfilling and compaction to design levels.

JDSI Consulting Engineers as the design engineers, have also attended the site at regular intervals to assess general works during construction.

It is understood general earthworks within Stage 2C will be completed in October 2020.

### 4. SITE CLASSIFICATION (AS2870)

AS2870 provides recommendations for foundation design based the estimated vertical surface movements (Ys) from seasonal moisture change (shrink swell reactivity) of the site.

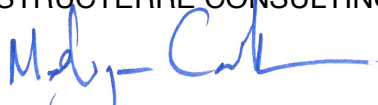
Based on the information provided within the Coffey Geotechnical report and the ongoing assessments conducted by Structerre and JDSI during the construction it can be concluded that the Lots at completion will be Classified Class A as defined by AS2870. The Lots included in this assessment are as follows;

- Lots 243 to 252 inclusive
- Lots 291 to 297 inclusive
- Lots 308 to 311 inclusive
- Lots 312 to 324 inclusive, and
- Lot 334.

Subject to the successful completion of the proposed earthworks, the Lots within Stage 2C will achieve a standard Structerre "A" footing and slab recommendation for single storey full masonry construction within the scope of AS2870. A copy of the Structerre "A" footing and slab detail is attached to this letter.

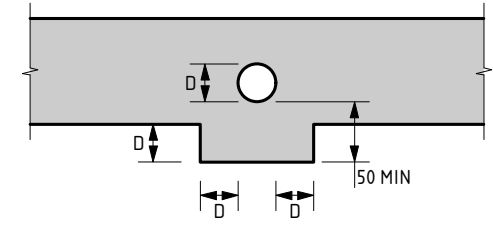
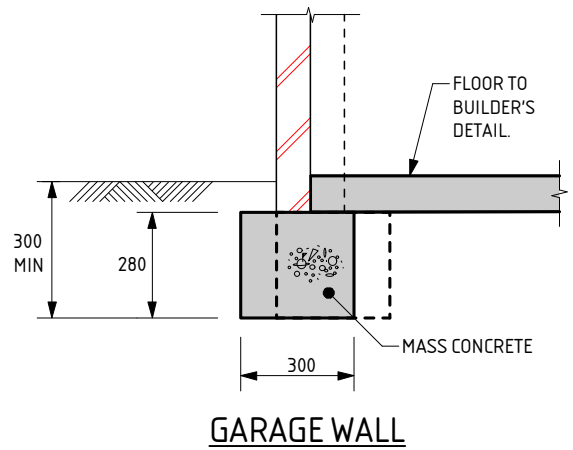
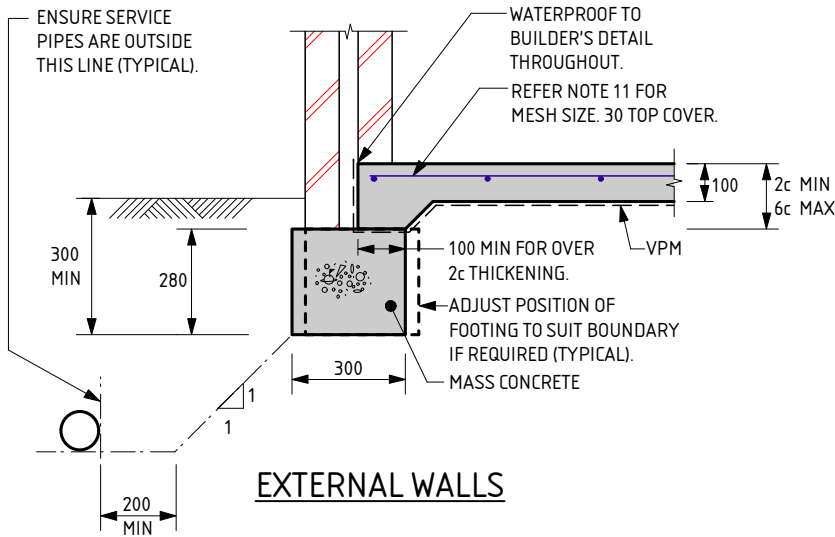
We trust this meets with your requirements. Should you require any additional information, or clarification of the information included in this report, please contact the undersigned.

For and behalf of  
STRUCTERRE CONSULTING



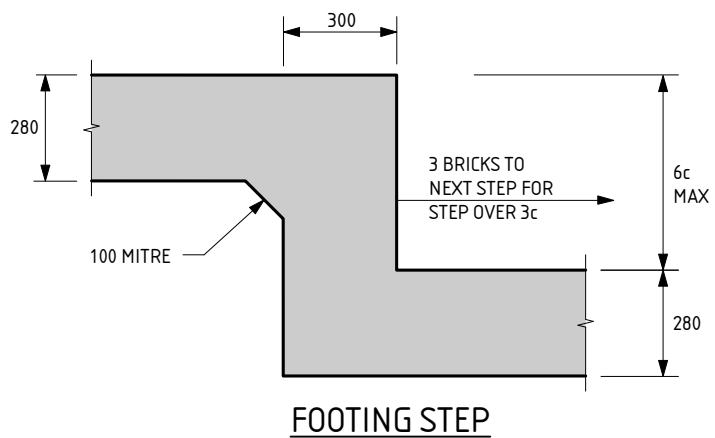
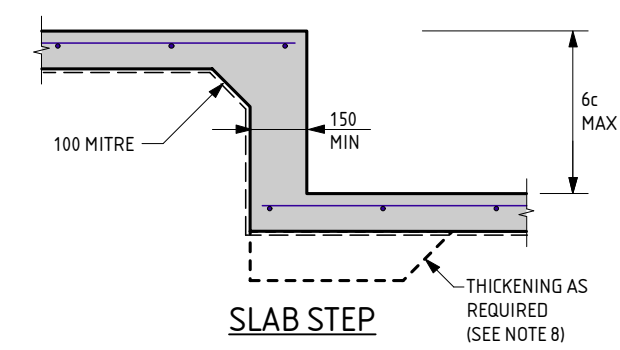
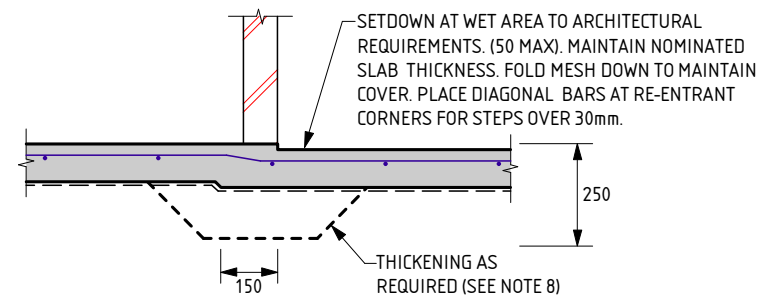
Mel Castle  
Division Manager - Geotechnical

Attachments: Structerre "A" footing and slab detail.



**SERVICE PIPE DIAGRAM**

- MINIMUM HORIZONTAL DISTANCE BETWEEN 2 PENETRATIONS TO BE 2 x DIAMETER OF THE LARGER PIPE.
- MAXIMUM PENETRATION SIZE TO BE Ø150.



**A FOOTING NOTES:**

1. REMOVE ALL TOPSOIL, VEGETATION AND DELETERIOUS FILL MATERIAL FROM THE BUILDING AREA.
2. SAND FILL TO BE CLEAN WELL DRAINED, WITH MAX FINES (PARTICLES UP TO 0.07mm) CONTENT OF 5%. SAND TO BE COMPACTED TO A MIN 6 BLOWS/300mm FOR 750mm OR DEPTH OF PAD.
3. A MIN OF 150mm OF SAND REQUIRED UNDER FOOTINGS.
4. IF CLAY ON SITE AN ENGINEER TO BE CONSULTED.
5. ROOF AND SURFACE WATER TO BE TAKEN AWAY FROM FOUNDATION AREA.
6. EXCAVATIONS FOR PLUMBING NOT TO UNDERMINE FOOTINGS. IF UNDERMINING IS LIKELY TO OCCUR, CONTACT THE ENGINEER.
7. WHERE PLUMBING PIPES PASS THROUGH FOOTINGS OR SLAB, SPECIFIED DEPTH OF ALL CONCRETE IS ALWAYS TO BE MAINTAINED.
8. PLACE SLAB THICKENINGS (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m.
9. REINFORCEMENT SHALL BE IN ACCORDANCE WITH THE FOLLOWING STANDARDS:  
SL INDICATES DEFORMED SQUARE MESH D500L TO AS/NZS 4671. ALL STEELWORK TO BE TREATED IN ACCORDANCE WITH THE NATIONAL CONSTRUCTION CODE OR TO AS 3700, AS APPLICABLE.
10. LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.
11. IF THE LENGTH TO WIDTH RATIO OF THE GROUND SLAB OR ANY PART OF THE GROUND SLAB EXCEEDS 3:1. REFER BACK TO THIS OFFICE FOR MESH SIZE. IF THE LENGTH TO WIDTH RATIO IS LESS THAN 3:1, USE THE FOLLOWING:  
USE SL52/SL63 MESH FOR SLAB SPAN UP TO 22m.  
USE SL62 MESH FOR SLAB SPAN UP TO 26m.  
USE SL72 MESH FOR SLAB SPAN UP TO 30m.  
USE SL82 MESH FOR SLAB SPAN UP TO 32m.
12. CONCRETE TO CONFORM WITH AS 3600.
13. BLENDED CEMENT TO CONFORM WITH AS 3972.
14. ALL CONCRETE TO BE N20/20/100.
15. CURE SLAB AS DETERMINED BY ENGINEER.
16. THIS IS A PERFORMANCE-BASED DESIGN.
17. A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
18. IF POLISHED (OR HONED) CONCRETE FINISHES ARE DESIRED, THIS DESIGN SHOULD BE REFERRED BACK TO THIS OFFICE FOR CONSIDERATION, AS IT IS NOT THE INTENTION OF THESE DESIGNS FOR SUCH FINISHES.
19. PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS WILL STILL ENABLE THE BARRIER TO MEET THE PERFORMANCE PROVISIONS OF THE BUILDING CODE OF AUSTRALIA.
20. THE SLAB DESIGN IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES.

THE APPROVED SIGNATURE ON THIS FOOTING AND SLAB DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON CLASS A STABLE SITES.

**A**

DATE LAST MODIFIED - 25/08/20



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PROJECT : <b>THE BROOK STAGE 2C - BYFORD</b>	
CLIENT : <b>DALEFORD PROPERTY PTY LTD</b>	
SCALE : <b>1:20</b>	APPROVED
DATE : <b>2/10/20</b>	