

SITE CLASSIFICATION REPORT
CERTIFICATE 2595304

CLIENT DENSFORD CIVIL
JOB ADDRESS LOT 1124 CONJOLA ST YANCHEP
CLIENT JOB NO.
OWNER
STRUCTERRE JOB NO. S1085331
DATE OF ASSESSMENT 17/11/22

SITE RECORD

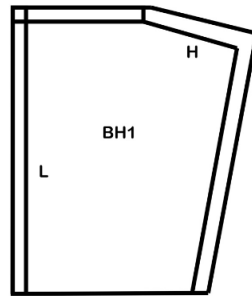


SITE CLASSIFICATION	A	<i>(in accordance with AS2870)</i>
FOOTING DETAIL	A	
SAND PAD	No sand pad required structurally	
BUSHFIRE PRONE AREA	Yes	<i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	R3	<i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	N1	<i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	Full Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1500 FILL sand trace gravel (limestone) - brown; 1500 - 1800 FILL sand; 1800 end of hole.

APPROXIMATE BOREHOLE LOCATIONS



Conjola St

NOTE 1 Explanatory Notes & Standard Recommendations

This site classification report must be read in conjunction with the applicable Explanatory Notes & Standard Recommendations. For A Class sites, refer to the Explanatory Notes and Standard Recommendations for Stable (A Class) Sites, version 1.0 July 2018. For S, M, H1, H2 & E Class sites, refer to the Explanatory Notes and Standard Recommendations for Reactive (S, M, H1, H2 & E Class) Sites version 1.0 July 2018. For Equivalent Class sites, refer to the Explanatory Notes and Standard Recommendations for Equivalent Class Sites, version 1.0 July 2018.

NOTE 2 Bushfire - Prone Area

The Site may be situated in a bush fire prone area in accordance with the Department of Fire and Emergency Services (DFES) Bushfire Prone Area Map (Reference: <http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/>) the current version at the time of this assessment. A Bushfire Attack Level (BAL) assessment may be required for this site, please confirm with the local authority. Should you require an assessment, please contact this Office.

ADDITIONAL NOTES / REQUIREMENTS

Site Condition

At the time of inspection the site was considered to be level and cleared. For specific levels of this site or topographical features, please refer to a professional site survey.

Structerre Geotech Reference

The Site Classification is based on any remedial works being successfully completed as outlined in the Structerre Geotechnical Report J414449 dated 01/08/2022. The footing details are subject to the recommendations being completed to an acceptable level as outlined in this report, if applicable.

-- END OF REPORT --

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 1 of 2)

GENERAL

1. THE EXPLANATORY NOTES AND THE STANDARD RECOMMENDATIONS ARE TO BE READ IN CONJUNCTION WITH THE SITE CLASSIFICATION REPORT.
2. ALL REFERRED STANDARDS TO BE THE CURRENT VERSION AT THE TIME OF THE CONSTRUCTION.
3. THE PURPOSE OF THE SITE CLASSIFICATION REPORT IS TO CLASSIFY THE SITE IN ACCORDANCE WITH AS2870 "RESIDENTIAL SLABS AND FOOTING". IT IS NOT INTENDED FOR ANY OTHER PURPOSE, INCLUDING SOLE INFORMATION IN THE PROVISION OF A QUOTATION FOR SITE WORKS BY EARTH WORKERS. IT IS RECOMMENDED EARTH WORKERS PERFORM THEIR OWN INVESTIGATION FOR QUOTATION PURPOSES.
4. THE SITE CLASSIFICATION REPORT WILL INCLUDE BUT IS NOT LIMITED TO:
 - a. THE SITE CLASSIFICATION IN ACCORDANCE WITH AS2870 RESIDENTIAL SLABS AND FOOTING CONSTRUCTION,
 - b. A WIND RATING IN ACCORDANCE WITH AS 4055 WIND LOADS FOR HOUSING,
 - c. A COASTAL CORROSION CLASSIFICATION,
 - d. ADDITIONAL EARTHWORK RECOMMENDATION WHERE APPLICABLE,
 - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONDITIONS.
5. THE SITE CLASSIFICATION REPORT IS BASED ON THE SITE AS PRESENTED AT THE TIME OF ASSESSMENT. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
6. CLASS A SITES ARE STABLE SITES, GENERALLY SAND, LIMESTONE, GRAVEL OR A COMBINATION. CLASS P ARE PARTICULAR CLASSIFICATIONS SUCH AN UNUSUAL SITES OR SITES REQUIRING ADDITIONAL INVESTIGATION PRIOR TO PROVIDING DETAILS.
7. BOREHOLES EXCAVATED REVEAL THE SOIL PROFILE AT THE BOREHOLE LOCATION ONLY. FROM THIS, IT IS INFERRED THAT THESE ARE THE SOIL CONDITION OVER THE SITE. VARIATIONS CAN OCCUR WHICH MAY NOT HAVE BEEN DETECTED AT THE INVESTIGATION STAGE. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR REASSESSMENT.
8. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE IN ORDER TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
9. THIS REPORT IS FOR STRUCTERRE ONLY TO USE IN DESIGN. ANY DESIGN BY ANYONE ELSE FOR ANY STRUCTURE MUST BE SPECIFICALLY APPROVED BY STRUCTERRE. IF USED BY ANYONE ELSE FOR ANYTHING OTHER THAN A STRUCTERRE DESIGN OR STRUCTURE, STRUCTERRE TAKES NO RESPONSIBILITY.

SAND PAD

10. THE RECOMMENDED FOOTING DESIGN IS ONLY TO BE USED IN CONJUNCTION WITH THE RECOMMENDED SAND PAD AND EARTHWORKS AS OUTLINED IN THE SITE CLASSIFICATION REPORT.
11. THE RECOMMENDATIONS FOR THE SAND PAD IS FOR STRUCTURAL PURPOSES ONLY, AND DOES NOT PROVIDE THE MINIMUM FINISHED PAD LEVEL IN RELATION TO FLOOD LEVELS, OR DEPTH TO GROUNDWATER. SHOULD THE TEST BE LOCATED IN A LOW LYING OR FLOOD PRONE AREA, REFER TO THE LOCAL AUTHORITY FOR MINIMUM BUILDING HEIGHT.
12. IMPORTED FILL FOR USE AS A SAND PAD TO BE IN ACCORDANCE TO AS 3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS" WHICH INCLUDES BUT IS NOT LIMITED TO: BE FREE FROM ANY DELETERIOUS MATERIALS INCLUDING ORGANICS, (ROOTS, STUMPS, GRASSES, DECOMPOSED ORGANICS – PEAT, TIMBER, ETC), BUILDING RUBBLE, GLASS, PLASTICS OR WASTE MATERIAL. THE FINES CONTENT, (PERCENTAGE PASSING THE 0.075mm SIEVE) TO BE LESS THAN 5% BY MASS.
13. ON CLASS A SITES, A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 450mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
14. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
15. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

EARTHWORKS

16. RECOMMENDED EARTHWORKS TO BE CONDUCTED IN ACCORDANCE WITH AS3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS", AND TO INCLUDE BUT NOT BE LIMITED TO:
 - a. REMOVAL OF ALL VEGETATION, TOPSOILS, UNCONTROLLED FILLS AND OTHER DELETERIOUS MATERIALS FROM THE BUILDING AREA,
 - b. GRUBBING OUT OF ANY TREES ENSURING THE REMAINING HOLES ARE BACKFILLED WITH CLEAN COMPACTED SAND,
 - c. NOTIFYING THE ENGINEER OF ANY UNUSUAL FEATURE OR DISCREPANCY THAT MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING,
 - d. COMPACTING TO MEET THE REQUIREMENTS AS OUTLINED IN AS 3798 TABLE 5.1.
17. FILL MATERIAL (WHICH IS NOT ALWAYS APPARENT AT THE INITIAL INVESTIGATION STAGE) IS TO BE DEALT WITH AS FOLLOWS:
 - a. IF IT IS CERTIFIED BY OTHERS IT CAN REMAIN.
 - b. IF IT IS NOT CERTIFIED WILL REQUIRE REMOVAL DOWN TO NATURAL GROUND OR VERIFIED. ANY SAND CAN BE REUSED.
 - c. IF A PAD HAS ALREADY BEEN CONSTRUCTED, THE SITE CLASSIFICATION IS NOT CERTIFICATION OF THE PAD. CONTACT THIS OFFICE SHOULD A SAND PAD CERTIFICATION BE REQUIRED.
18. ANY ORGANIC MATTER OR ROOTS ENCOUNTERED, WHICH IS BEYOND WHAT IS NORMALLY CONSIDERED ACCEPTABLE IS TO BE REMOVED. THIS WILL NECESSITATE RAKING THE SITE TO REMOVE ORGANIC MATERIAL, TURNING THE SITE OVER AND RE- COMPACTING TO A MINIMUM.

RETAINING WALLS

19. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
20. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER TO THE RETAINING WALL THAN THE HEIGHT OF THE RETAINING WALL, THIS MAY PLACE ADDITIONAL LOADS ON THE WALL THAT WERE NOT INITIALLY DESIGNED FOR. AN INSPECTION OF THE STRUCTURAL INTEGRITY OF THE RETAINING WALL WILL BE REQUIRED TO PROVIDE CERTIFICATION AND/OR RECOMMENDATIONS PRIOR TO ANY CONSTRUCTION. PLEASE REFER BACK TO THIS OFFICE FOR ASSISTANCE.

STORMWATER DRAINAGE

21. ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF SOAKWELL AWAY FROM THE BUILDING AND SETBACK MINIMUM OF 1200mm, WHICHEVER IS GREATER. PLEASE REFER BACK TO THIS OFFICE IF REQUIRED THE SET-BACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



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PROJECT :
LOT 1124 CONJOLA ST YANCHEP

CLIENT : DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 2 of 2)

WIND CLASSIFICATION

22. WIND CLASSIFICATION IS GIVEN FOR THE EXPECTED CONDITION 5 YEARS HENCE. THIS CLASSIFICATION IS LIMITED TO BUILDINGS CLASSES 1 AND 10, WHICH HAVE THE FOLLOWING LIMITATION (AS PER AS4055):

- a. MAXIMUM DISTANCE FROM THE GROUND LEVEL TO THE UNDERSIDE OF EAVES SHALL NOT EXCEED 6.0m.
- b. MAXIMUM DISTANCE FROM GROUND LEVEL TO THE HIGHEST POINT OF THE ROOF, EXCLUDING CHIMNEYS, SHALL NOT EXCEED 8.5m.
- c. THE ROOF PITCH SHALL NOT EXCEED 35°.
- d. THE WIDTH, EXCLUDING EAVES, SHALL NOT EXCEED 16.0m AND THE LENGTH SHALL NOT EXCEED 5x THE WIDTH.

IF THE BUILDING FALLS OUTSIDE OF THESE LIMITATIONS, THE STATED WIND CLASSIFICATION DOES NOT APPLY. REFER BACK TO THIS OFFICE FOR A REVISED WIND CLASSIFICATION.

ENVIRONMENTAL

23. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, IT IS RECOMMENDED THAT AN ENVIRONMENTAL ENGINEER BE ENGAGED.

SEISMIC

24. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF ≤ 0.11 . RECOMMENDED FOOTING DETAILS PROVIDED FOR SITES WITH AN EARTHQUAKE HAZARD FACTOR OF > 0.11 , ARE NOT FOR CONSTRUCTION, BUT FOR COSTING PURPOSES ONLY. IT IS RECOMMENDED REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

CORROSION CLASSIFICATION

25. THE CORROSION CLASSIFICATION HAS BEEN ASSESSED IN ACCORDANCE WITH AS3700.

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PROJECT:
LOT 1124 CONJOLA ST YANCHEP

CLIENT: DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

A blue ink handwritten signature is written over the 'APPROVED' field.

SITE CLASSIFICATION REPORT
CERTIFICATE 2595303

CLIENT DENSFORD CIVIL
JOB ADDRESS LOT 1125 CONJOLA ST YANCHEP
CLIENT JOB NO.
OWNER
STRUCTERRE JOB NO. S1085329
DATE OF ASSESSMENT 17/11/22

SITE RECORD

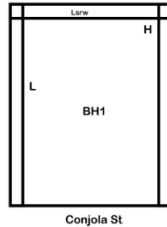


SITE CLASSIFICATION	A	<i>(in accordance with AS2870)</i>
FOOTING DETAIL	B1	
SAND PAD	No sand pad required structurally	
BUSHFIRE PRONE AREA	Yes	<i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	R3	<i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	N1	<i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	Full Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1500 FILL sand trace gravel (limestone) - brown; 1500 - 1800 FILL sand; 1800 end of hole.

APPROXIMATE BOREHOLE LOCATIONS



NOTE 1 Explanatory Notes & Standard Recommendations

This site classification report must be read in conjunction with the applicable Explanatory Notes & Standard Recommendations. For A Class sites, refer to the Explanatory Notes and Standard Recommendations for Stable (A Class) Sites, version 1.0 July 2018. For S, M, H1, H2 & E Class sites, refer to the Explanatory Notes and Standard Recommendations for Reactive (S, M, H1, H2 & E Class) Sites version 1.0 July 2018. For Equivalent Class sites, refer to the Explanatory Notes and Standard Recommendations for Equivalent Class Sites, version 1.0 July 2018.

NOTE 2 Bushfire - Prone Area

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ADDITIONAL NOTES / REQUIREMENTS

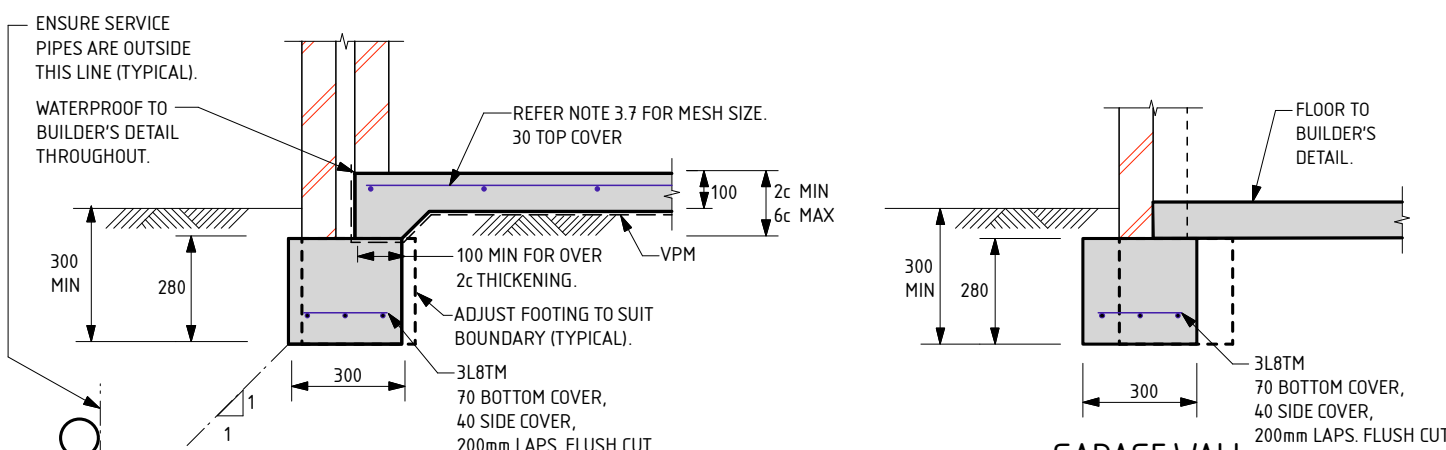
Site Condition

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Structerre Geotech Reference

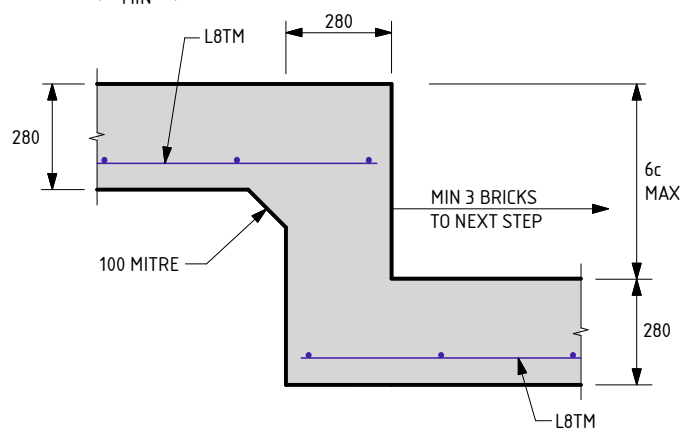
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-- END OF REPORT --

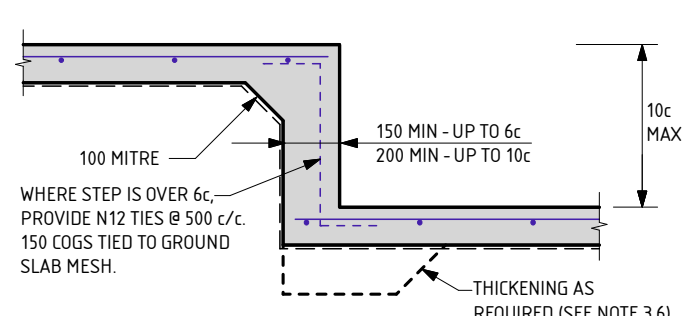


EXTERNAL WALLS

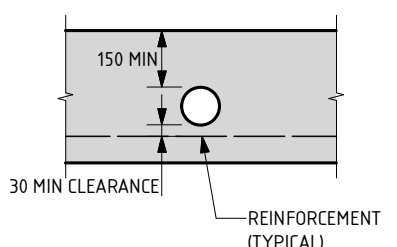
GARAGE WALL



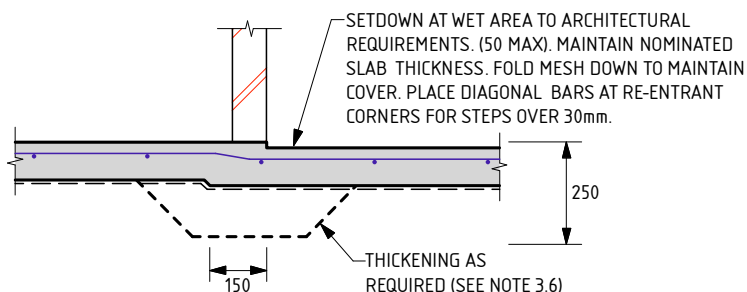
FOOTING STEP



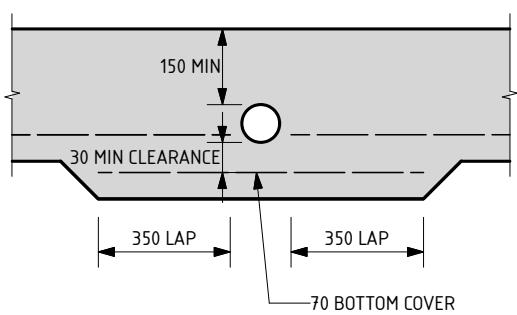
SLAB STEP



**OPTION A
PENETRATION CLEAR OF REINFORCEMENT**



WET AREA STEP



**OPTION B
PENETRATION INTERRUPTS REINFORCEMENT**

SERVICE PIPE DIAGRAM

- MAXIMUM PENETRATION SIZE TO BE Ø150.

THE APPROVED SIGNATURE ON THIS FOOTING AND SLAB DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS.
DATE LAST MODIFIED - 23/11/21

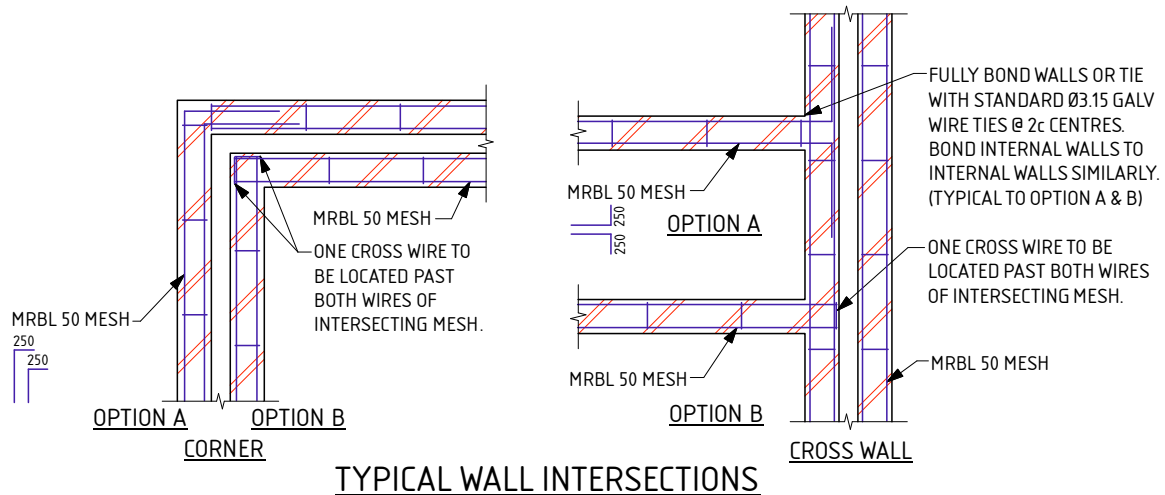
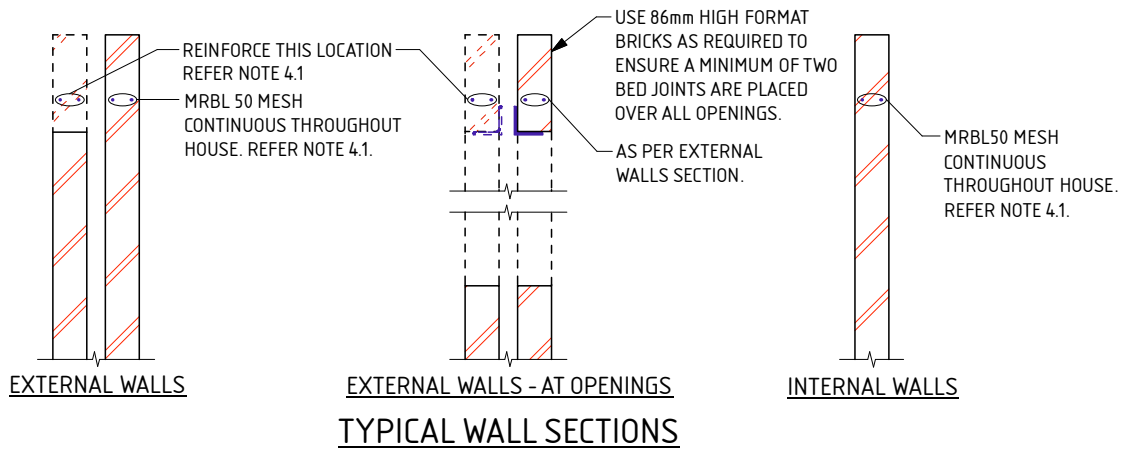
B1

SHEET 1 OF 2



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PROJECT: LOT 1125 CONJOLA ST YANCHEP	
CLIENT: DENSFORD CIVIL	
SCALE: 1:20	APPROVED
DATE: 21/11/22	



NOTES FOR B1 FOOTING

THESE NOTES ARE TO BE READ IN CONJUNCTION WITH THE ATTACHED FOOTING DETAILS.

1.0 SITE CLASSIFICATION

- 1.1 THE SITE CLASSIFICATION NOTED IN THE SITE CLASSIFICATION REPORT IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS AS DETERMINED BY AN ASSESSMENT OF THE SITE. REFER TO THE ATTACHED REPORT FOR ANY SPECIAL REQUIREMENTS.

2.0 EARTHWORKS

- 2.1 SAND PAD, IF APPLICABLE, TO BE AS PER SITE INSPECTION REPORT.
- 2.2 EARTHWORKS SHALL INCLUDE, BUT NOT BE LIMITED TO:
- REMOVE ALL ORGANIC MATERIAL FROM THE BUILDING AREA.
 - REMOVE ALL RUBBISH AND DELETERIOUS FILL FROM THE PAD AREA.
 - GRUB OUT ANY TREES WHERE NECESSARY AND ENSURE THE REMAINING HOLES ARE FILLED AND COMPACTED SATISFACTORILY WITH SAND.
 - NOTIFY THE ENGINEER OF ANY UNUSUAL FEATURES OR DISCREPANCIES WHICH MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING.
- 2.3 ANY PREDOMINANT ROCK IN THE HOUSE PAD AREAS IS TO BE INSPECTED BY THE ENGINEER.
- 2.4 IF CLAY ON SITE, AN ENGINEER TO BE CONSULTED.
- 2.5 SAND FILL TO BE CLEAN WELL DRAINED, WITH MAX FINES (PARTICLES UP TO 0.075mm) CONTENT OF 5%. SAND TO BE COMPACTED TO A MIN 6 BLOWS/300mm FOR 750mm OR THE DEPTH OF THE PAD.

3.0 FOOTINGS & SLABS

- 3.1 A MINIMUM OF 150mm OF SAND REQUIRED UNDER FOOTINGS.
- 3.2 ROOF AND SURFACE WATER TO BE TAKEN AWAY FROM FOUNDATION AREA.
- 3.3 EXCAVATIONS FOR ALL SERVICE PIPES NOT TO UNDERMINE FOOTINGS. IF UNDERMINING IS LIKELY TO OCCUR, CONTACT THE ENGINEER PRIOR TO PROCEEDING.
- 3.4 WHERE PLUMBING PIPES PASS THROUGH FOOTINGS OR SLAB, SPECIFIED TOTAL THICKNESS OF ALL CONCRETE IS ALWAYS TO BE MAINTAINED.
- 3.5 SETDOWN AT WET AREA TO ARCHITECTURAL REQUIREMENT (50mm MAX). MAINTAIN 100mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12 x 1200 LONG.
- 3.6 PLACE SLAB THICKENINGS (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m.
- 3.7 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 1:3. 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.

- 3.8 FOR SLAB SPANS > 32m REFER TO ENGINEER FOR MESH SIZE.

- 3.9 REINFORCEMENT SHALL BE IN ACCORDANCE WITH THE FOLLOWING STANDARDS;

L INDICATES PLAIN OR DEFORMED WIRE R500L OR D500L TO AS/NZS 4671.

SL INDICATES DEFORMED SQUARE MESH D500L TO AS/NZS 4671.

N INDICATES DEFORMED BARS D500N TO AS/NZS 4671.

TM SUFFIX INDICATES TRENCH MESH USING DEFORMED BARS D500L TO AS/NZS 4671.

ALL STEELWORK TO BE TREATED IN ACCORDANCE WITH THE NATIONAL CONSTRUCTION CODE OR TO AS 3700, AS APPLICABLE.

- 3.10 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.11 CONCRETE TO CONFORM WITH AS 3600.

- 3.12 BLENDED CEMENT TO CONFORM WITH AS 3972.

- 3.13 ALL CONCRETE TO BE N20/20/100.

- 3.14 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.

- 3.15 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.

- 3.16 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.

- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.

- 3.18 REFER BACK TO THE ENGINEER IF AGGRESSIVE SOILS ARE ENCOUNTERED (IN ACCORDANCE WITH AS2870).

- 3.19 CURE SLAB AS DETERMINED BY ENGINEER.

- 3.20 THE FOOTING DETAILS HAVE BEEN DESIGNED IN ACCORDANCE WITH AS3600 AND SECTION 4 OF AS2870.

4.0 MASONRY

- 4.1 PLACE MRBL50 MESH IN THE BED JOINT IMMEDIATELY OVER DOOR AND WINDOW HEAD LEVEL CONTINUOUS THROUGHOUT THE BUILDING IN BOTH INTERNAL AND EXTERNAL WALLS. MESH MAY STEP BED JOINTS UP TO A HEIGHT OF 1c, 500 LAP IS REQUIRED AT EACH STEP.

- 4.2 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.

- 4.3 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.

- 4.4 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1.

- 4.5 ALL PERPENDS TO BE FULLY MORTARED.

- 4.6 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.

- 4.7 2L6 WIRES MAY BE USED AS AN ALTERNATIVE TO THE MRBL50 MESH. WHERE L6 WIRES ARE USED, ALL SPLICES AND COGS TO BE 500 LONG.

DATE LAST MODIFIED - 23/11/21

SHEET 2 OF 2



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PROJECT :

LOT 1125 CONJOLA ST YANCHEP

CLIENT : DENSFORD CIVIL

SCALE 1:20

APPROVED

DATE 21/11/22

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 1 of 2)

GENERAL

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SAND PAD

10. THE RECOMMENDED FOOTING DESIGN IS ONLY TO BE USED IN CONJUNCTION WITH THE RECOMMENDED SAND PAD AND EARTHWORKS AS OUTLINED IN THE SITE CLASSIFICATION REPORT.
11. THE RECOMMENDATIONS FOR THE SAND PAD IS FOR STRUCTURAL PURPOSES ONLY, AND DOES NOT PROVIDE THE MINIMUM FINISHED PAD LEVEL IN RELATION TO FLOOD LEVELS, OR DEPTH TO GROUNDWATER. SHOULD THE TEST BE LOCATED IN A LOW LYING OR FLOOD PRONE AREA, REFER TO THE LOCAL AUTHORITY FOR MINIMUM BUILDING HEIGHT.
12. IMPORTED FILL FOR USE AS A SAND PAD TO BE IN ACCORDANCE TO AS 3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS" WHICH INCLUDES BUT IS NOT LIMITED TO: BE FREE FROM ANY DELETERIOUS MATERIALS INCLUDING ORGANICS, (ROOTS, STUMPS, GRASSES, DECOMPOSED ORGANICS – PEAT, TIMBER, ETC), BUILDING RUBBLE, GLASS, PLASTICS OR WASTE MATERIAL. THE FINES CONTENT, (PERCENTAGE PASSING THE 0.075mm SIEVE) TO BE LESS THAN 5% BY MASS.
13. ON CLASS A SITES, A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 450mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
14. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
15. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

EARTHWORKS

16. RECOMMENDED EARTHWORKS TO BE CONDUCTED IN ACCORDANCE WITH AS3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS", AND TO INCLUDE BUT NOT BE LIMITED TO:
 - a. REMOVAL OF ALL VEGETATION, TOPSOILS, UNCONTROLLED FILLS AND OTHER DELETERIOUS MATERIALS FROM THE BUILDING AREA,
 - b. GRUBBING OUT OF ANY TREES ENSURING THE REMAINING HOLES ARE BACKFILLED WITH CLEAN COMPACTED SAND,
 - c. NOTIFYING THE ENGINEER OF ANY UNUSUAL FEATURE OR DISCREPANCY THAT MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING,
 - d. COMPACTING TO MEET THE REQUIREMENTS AS OUTLINED IN AS 3798 TABLE 5.1.
17. FILL MATERIAL (WHICH IS NOT ALWAYS APPARENT AT THE INITIAL INVESTIGATION STAGE) IS TO BE DEALT WITH AS FOLLOWS:
 - a. IF IT IS CERTIFIED BY OTHERS IT CAN REMAIN.
 - b. IF IT IS NOT CERTIFIED WILL REQUIRE REMOVAL DOWN TO NATURAL GROUND OR VERIFIED. ANY SAND CAN BE REUSED.
 - c. IF A PAD HAS ALREADY BEEN CONSTRUCTED, THE SITE CLASSIFICATION IS NOT CERTIFICATION OF THE PAD. CONTACT THIS OFFICE SHOULD A SAND PAD CERTIFICATION BE REQUIRED.
18. ANY ORGANIC MATTER OR ROOTS ENCOUNTERED, WHICH IS BEYOND WHAT IS NORMALLY CONSIDERED ACCEPTABLE IS TO BE REMOVED. THIS WILL NECESSITATE RAKING THE SITE TO REMOVE ORGANIC MATERIAL, TURNING THE SITE OVER AND RE- COMPACTING TO A MINIMUM.

RETAINING WALLS

19. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
20. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER TO THE RETAINING WALL THAN THE HEIGHT OF THE RETAINING WALL, THIS MAY PLACE ADDITIONAL LOADS ON THE WALL THAT WERE NOT INITIALLY DESIGNED FOR. AN INSPECTION OF THE STRUCTURAL INTEGRITY OF THE RETAINING WALL WILL BE REQUIRED TO PROVIDE CERTIFICATION AND/OR RECOMMENDATIONS PRIOR TO ANY CONSTRUCTION. PLEASE REFER BACK TO THIS OFFICE FOR ASSISTANCE.

STORMWATER DRAINAGE

21. ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF SOAKWELL AWAY FROM THE BUILDING AND SETBACK MINIMUM OF 1200mm, WHICHEVER IS GREATER. PLEASE REFER BACK TO THIS OFFICE IF REQUIRED THE SET-BACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham
Unit Trust trading as StrucTerre Consulting Engineers
1 ERINDALE ROAD, BALCATTA W.A. 6021

TEL (08) 9205 4500 FAX (08) 9205 4541 EMAIL: perth@strucTerre.com.au

PROJECT :
LOT 1125 CONJOLA ST YANCHEP

CLIENT : DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 2 of 2)

WIND CLASSIFICATION

22. WIND CLASSIFICATION IS GIVEN FOR THE EXPECTED CONDITION 5 YEARS HENCE. THIS CLASSIFICATION IS LIMITED TO BUILDINGS CLASSES 1 AND 10, WHICH HAVE THE FOLLOWING LIMITATION (AS PER AS4055):

- a. MAXIMUM DISTANCE FROM THE GROUND LEVEL TO THE UNDERSIDE OF EAVES SHALL NOT EXCEED 6.0m.
- b. MAXIMUM DISTANCE FROM GROUND LEVEL TO THE HIGHEST POINT OF THE ROOF, EXCLUDING CHIMNEYS, SHALL NOT EXCEED 8.5m.
- c. THE ROOF PITCH SHALL NOT EXCEED 35°.
- d. THE WIDTH, EXCLUDING EAVES, SHALL NOT EXCEED 16.0m AND THE LENGTH SHALL NOT EXCEED 5x THE WIDTH.

IF THE BUILDING FALLS OUTSIDE OF THESE LIMITATIONS, THE STATED WIND CLASSIFICATION DOES NOT APPLY. REFER BACK TO THIS OFFICE FOR A REVISED WIND CLASSIFICATION.

ENVIRONMENTAL

23. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, IT IS RECOMMENDED THAT AN ENVIRONMENTAL ENGINEER BE ENGAGED.

SEISMIC

24. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF ≤ 0.11 . RECOMMENDED FOOTING DETAILS PROVIDED FOR SITES WITH AN EARTHQUAKE HAZARD FACTOR OF > 0.11 , ARE NOT FOR CONSTRUCTION, BUT FOR COSTING PURPOSES ONLY. IT IS RECOMMENDED REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

CORROSION CLASSIFICATION

25. THE CORROSION CLASSIFICATION HAS BEEN ASSESSED IN ACCORDANCE WITH AS3700.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



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1 ERINDALE ROAD, BALCATTA W.A. 6021

TEL (08) 9205 4500 FAX (08) 9205 4541 EMAIL: perth@strucTerre.com.au

PROJECT:
LOT 1125 CONJOLA ST YANCHEP

CLIENT: DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

A blue ink handwritten signature is written over the 'APPROVED' field.

SITE CLASSIFICATION REPORT
CERTIFICATE 2595302

CLIENT DENSFORD CIVIL
JOB ADDRESS LOT 1126 CONJOLA ST YANCHEP
CLIENT JOB NO.
OWNER
STRUCTERRE JOB NO. S1085327
DATE OF ASSESSMENT 17/11/22

SITE RECORD

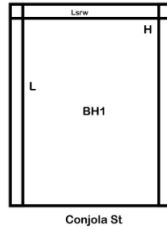


SITE CLASSIFICATION	A	<i>(in accordance with AS2870)</i>
FOOTING DETAIL	B1	
SAND PAD	No sand pad required structurally	
BUSHFIRE PRONE AREA	Yes	<i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	R3	<i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	N1	<i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	Full Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1500 FILL sand trace gravel (limestone) - brown; 1500 - 1800 FILL sand; 1800 end of hole.

APPROXIMATE BOREHOLE LOCATIONS



NOTE 1 Explanatory Notes & Standard Recommendations

This site classification report must be read in conjunction with the applicable Explanatory Notes & Standard Recommendations. For A Class sites, refer to the Explanatory Notes and Standard Recommendations for Stable (A Class) Sites, version 1.0 July 2018. For S, M, H1, H2 & E Class sites, refer to the Explanatory Notes and Standard Recommendations for Reactive (S, M, H1, H2 & E Class) Sites version 1.0 July 2018. For Equivalent Class sites, refer to the Explanatory Notes and Standard Recommendations for Equivalent Class Sites, version 1.0 July 2018.

NOTE 2 Bushfire - Prone Area

The Site may be situated in a bush fire prone area in accordance with the Department of Fire and Emergency Services (DFES) Bushfire Prone Area Map (Reference: <http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/>) the current version at the time of this assessment. A Bushfire Attack Level (BAL) assessment may be required for this site, please confirm with the local authority. Should you require an assessment, please contact this Office.

ADDITIONAL NOTES / REQUIREMENTS

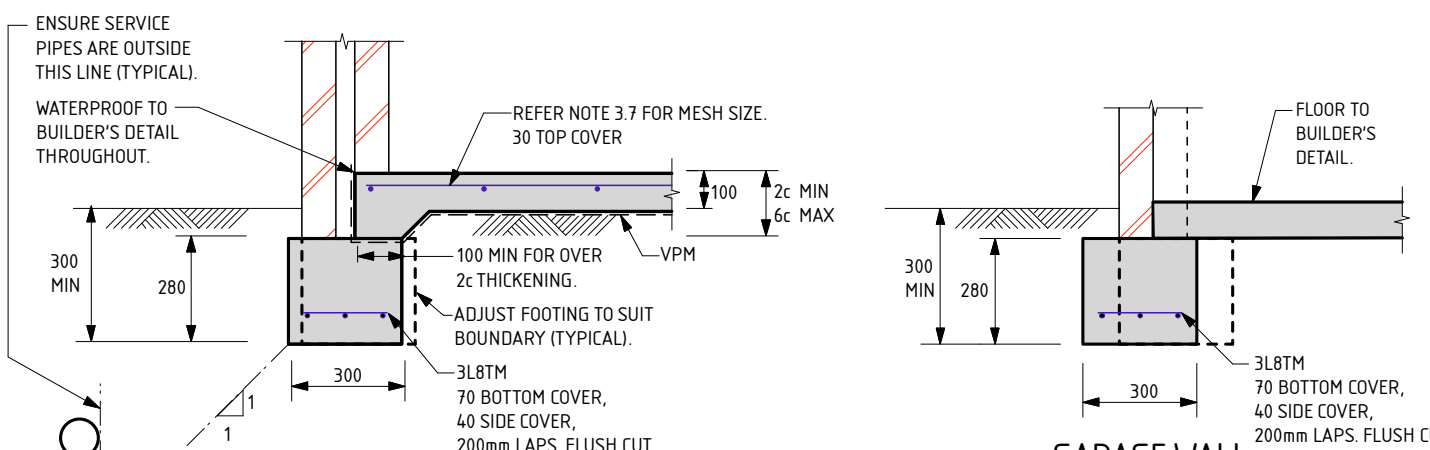
Site Condition

At the time of inspection the site was considered to be level and cleared. For specific levels of this site or topographical features, please refer to a professional site survey.

Structerre Geotech Reference

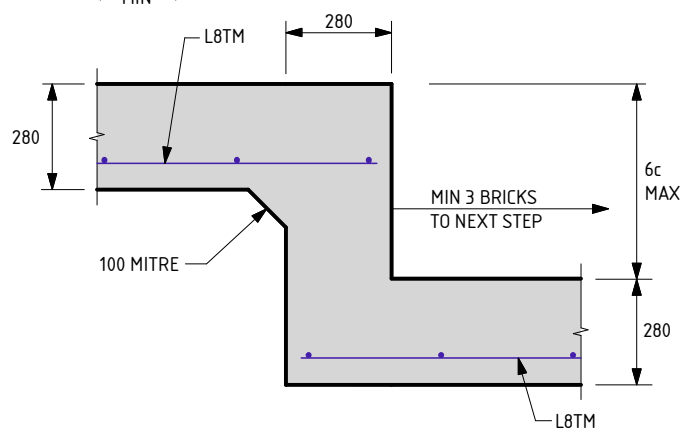
The Site Classification is based on any remedial works being successfully completed as outlined in the Structerre Geotechnical Report J414449 dated 01/08/2022. The footing details are subject to the recommendations being completed to an acceptable level as outlined in this report, if applicable.

-- END OF REPORT --

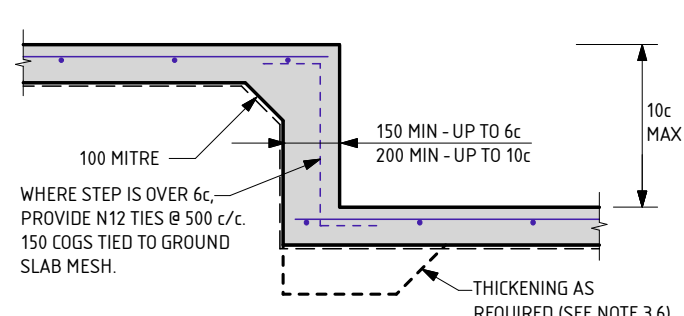


EXTERNAL WALLS

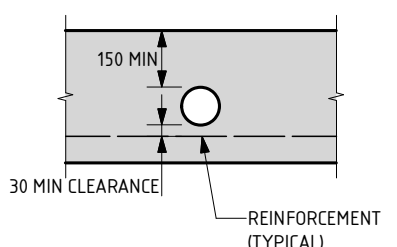
GARAGE WALL



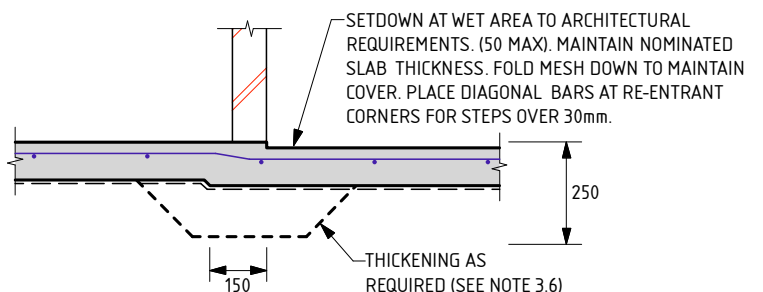
FOOTING STEP



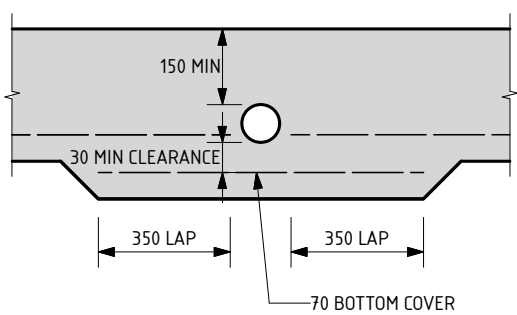
SLAB STEP



**OPTION A
PENETRATION CLEAR OF REINFORCEMENT**



WET AREA STEP



**OPTION B
PENETRATION INTERRUPTS REINFORCEMENT**

SERVICE PIPE DIAGRAM

- MAXIMUM PENETRATION SIZE TO BE Ø150.

THE APPROVED SIGNATURE ON THIS FOOTING AND SLAB DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS.
DATE LAST MODIFIED - 23/11/21

B1

SHEET 1 OF 2



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham Unit Trust trading as StrucTerre Consulting Engineers
1 ERINDALE ROAD, BALCATTA WA 6021

TEL (08) 9205 4500 FAX (08) 9205 4541 EMAIL: perth@strucTerre.com.au

PROJECT: LOT 1126 CONJOLA ST YANCHEP

CLIENT: DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 1 of 2)

GENERAL

1. THE EXPLANATORY NOTES AND THE STANDARD RECOMMENDATIONS ARE TO BE READ IN CONJUNCTION WITH THE SITE CLASSIFICATION REPORT.
2. ALL REFERRED STANDARDS TO BE THE CURRENT VERSION AT THE TIME OF THE CONSTRUCTION.
3. THE PURPOSE OF THE SITE CLASSIFICATION REPORT IS TO CLASSIFY THE SITE IN ACCORDANCE WITH AS2870 "RESIDENTIAL SLABS AND FOOTING". IT IS NOT INTENDED FOR ANY OTHER PURPOSE, INCLUDING SOLE INFORMATION IN THE PROVISION OF A QUOTATION FOR SITE WORKS BY EARTH WORKERS. IT IS RECOMMENDED EARTH WORKERS PERFORM THEIR OWN INVESTIGATION FOR QUOTATION PURPOSES.
4. THE SITE CLASSIFICATION REPORT WILL INCLUDE BUT IS NOT LIMITED TO:
 - a. THE SITE CLASSIFICATION IN ACCORDANCE WITH AS2870 RESIDENTIAL SLABS AND FOOTING CONSTRUCTION,
 - b. A WIND RATING IN ACCORDANCE WITH AS 4055 WIND LOADS FOR HOUSING,
 - c. A COASTAL CORROSION CLASSIFICATION,
 - d. ADDITIONAL EARTHWORK RECOMMENDATION WHERE APPLICABLE,
 - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONDITIONS.
5. THE SITE CLASSIFICATION REPORT IS BASED ON THE SITE AS PRESENTED AT THE TIME OF ASSESSMENT. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
6. CLASS A SITES ARE STABLE SITES, GENERALLY SAND, LIMESTONE, GRAVEL OR A COMBINATION. CLASS P ARE PARTICULAR CLASSIFICATIONS SUCH AN UNUSUAL SITES OR SITES REQUIRING ADDITIONAL INVESTIGATION PRIOR TO PROVIDING DETAILS.
7. BOREHOLES EXCAVATED REVEAL THE SOIL PROFILE AT THE BOREHOLE LOCATION ONLY. FROM THIS, IT IS INFERRED THAT THESE ARE THE SOIL CONDITION OVER THE SITE. VARIATIONS CAN OCCUR WHICH MAY NOT HAVE BEEN DETECTED AT THE INVESTIGATION STAGE. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR REASSESSMENT.
8. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE IN ORDER TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
9. THIS REPORT IS FOR STRUCTERRE ONLY TO USE IN DESIGN. ANY DESIGN BY ANYONE ELSE FOR ANY STRUCTURE MUST BE SPECIFICALLY APPROVED BY STRUCTERRE. IF USED BY ANYONE ELSE FOR ANYTHING OTHER THAN A STRUCTERRE DESIGN OR STRUCTURE, STRUCTERRE TAKES NO RESPONSIBILITY.

SAND PAD

10. THE RECOMMENDED FOOTING DESIGN IS ONLY TO BE USED IN CONJUNCTION WITH THE RECOMMENDED SAND PAD AND EARTHWORKS AS OUTLINED IN THE SITE CLASSIFICATION REPORT.
11. THE RECOMMENDATIONS FOR THE SAND PAD IS FOR STRUCTURAL PURPOSES ONLY, AND DOES NOT PROVIDE THE MINIMUM FINISHED PAD LEVEL IN RELATION TO FLOOD LEVELS, OR DEPTH TO GROUNDWATER. SHOULD THE TEST BE LOCATED IN A LOW LYING OR FLOOD PRONE AREA, REFER TO THE LOCAL AUTHORITY FOR MINIMUM BUILDING HEIGHT.
12. IMPORTED FILL FOR USE AS A SAND PAD TO BE IN ACCORDANCE TO AS 3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS" WHICH INCLUDES BUT IS NOT LIMITED TO: BE FREE FROM ANY DELETERIOUS MATERIALS INCLUDING ORGANICS, (ROOTS, STUMPS, GRASSES, DECOMPOSED ORGANICS – PEAT, TIMBER, ETC), BUILDING RUBBLE, GLASS, PLASTICS OR WASTE MATERIAL. THE FINES CONTENT, (PERCENTAGE PASSING THE 0.075mm SIEVE) TO BE LESS THAN 5% BY MASS.
13. ON CLASS A SITES, A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 450mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
14. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
15. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

EARTHWORKS

16. RECOMMENDED EARTHWORKS TO BE CONDUCTED IN ACCORDANCE WITH AS3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS", AND TO INCLUDE BUT NOT BE LIMITED TO:
 - a. REMOVAL OF ALL VEGETATION, TOPSOILS, UNCONTROLLED FILLS AND OTHER DELETERIOUS MATERIALS FROM THE BUILDING AREA,
 - b. GRUBBING OUT OF ANY TREES ENSURING THE REMAINING HOLES ARE BACKFILLED WITH CLEAN COMPACTED SAND,
 - c. NOTIFYING THE ENGINEER OF ANY UNUSUAL FEATURE OR DISCREPANCY THAT MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING,
 - d. COMPACTING TO MEET THE REQUIREMENTS AS OUTLINED IN AS 3798 TABLE 5.1.
17. FILL MATERIAL (WHICH IS NOT ALWAYS APPARENT AT THE INITIAL INVESTIGATION STAGE) IS TO BE DEALT WITH AS FOLLOWS:
 - a. IF IT IS CERTIFIED BY OTHERS IT CAN REMAIN.
 - b. IF IT IS NOT CERTIFIED WILL REQUIRE REMOVAL DOWN TO NATURAL GROUND OR VERIFIED. ANY SAND CAN BE REUSED.
 - c. IF A PAD HAS ALREADY BEEN CONSTRUCTED, THE SITE CLASSIFICATION IS NOT CERTIFICATION OF THE PAD. CONTACT THIS OFFICE SHOULD A SAND PAD CERTIFICATION BE REQUIRED.
18. ANY ORGANIC MATTER OR ROOTS ENCOUNTERED, WHICH IS BEYOND WHAT IS NORMALLY CONSIDERED ACCEPTABLE IS TO BE REMOVED. THIS WILL NECESSITATE RAKING THE SITE TO REMOVE ORGANIC MATERIAL, TURNING THE SITE OVER AND RE- COMPACTING TO A MINIMUM.

RETAINING WALLS

19. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
20. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER TO THE RETAINING WALL THAN THE HEIGHT OF THE RETAINING WALL, THIS MAY PLACE ADDITIONAL LOADS ON THE WALL THAT WERE NOT INITIALLY DESIGNED FOR. AN INSPECTION OF THE STRUCTURAL INTEGRITY OF THE RETAINING WALL WILL BE REQUIRED TO PROVIDE CERTIFICATION AND/OR RECOMMENDATIONS PRIOR TO ANY CONSTRUCTION. PLEASE REFER BACK TO THIS OFFICE FOR ASSISTANCE.

STORMWATER DRAINAGE

21. ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF SOAKWELL AWAY FROM THE BUILDING AND SETBACK MINIMUM OF 1200mm, WHICHEVER IS GREATER. PLEASE REFER BACK TO THIS OFFICE IF REQUIRED THE SET-BACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham
Unit Trust trading as StrucTerre Consulting Engineers
1 ERINDALE ROAD, BALCATTWA, 6021

TEL (08) 9205 4500 FAX (08) 9205 4541 EMAIL: perth@strucTerre.com.au

PROJECT :
LOT 1126 CONJOLA ST YANCHEP

CLIENT : DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 2 of 2)

WIND CLASSIFICATION

22. WIND CLASSIFICATION IS GIVEN FOR THE EXPECTED CONDITION 5 YEARS HENCE. THIS CLASSIFICATION IS LIMITED TO BUILDINGS CLASSES 1 AND 10, WHICH HAVE THE FOLLOWING LIMITATION (AS PER AS4055):

- a. MAXIMUM DISTANCE FROM THE GROUND LEVEL TO THE UNDERSIDE OF EAVES SHALL NOT EXCEED 6.0m.
- b. MAXIMUM DISTANCE FROM GROUND LEVEL TO THE HIGHEST POINT OF THE ROOF, EXCLUDING CHIMNEYS, SHALL NOT EXCEED 8.5m.
- c. THE ROOF PITCH SHALL NOT EXCEED 35°.
- d. THE WIDTH, EXCLUDING EAVES, SHALL NOT EXCEED 16.0m AND THE LENGTH SHALL NOT EXCEED 5x THE WIDTH.

IF THE BUILDING FALLS OUTSIDE OF THESE LIMITATIONS, THE STATED WIND CLASSIFICATION DOES NOT APPLY. REFER BACK TO THIS OFFICE FOR A REVISED WIND CLASSIFICATION.

ENVIRONMENTAL

23. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, IT IS RECOMMENDED THAT AN ENVIRONMENTAL ENGINEER BE ENGAGED.

SEISMIC

24. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF ≤ 0.11 . RECOMMENDED FOOTING DETAILS PROVIDED FOR SITES WITH AN EARTHQUAKE HAZARD FACTOR OF > 0.11 , ARE NOT FOR CONSTRUCTION, BUT FOR COSTING PURPOSES ONLY. IT IS RECOMMENDED REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

CORROSION CLASSIFICATION

25. THE CORROSION CLASSIFICATION HAS BEEN ASSESSED IN ACCORDANCE WITH AS3700.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



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PROJECT:
LOT 1126 CONJOLA ST YANCHEP

CLIENT: DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

A blue ink handwritten signature is written over the 'APPROVED' field.

SITE CLASSIFICATION REPORT
CERTIFICATE 2595301

CLIENT DENSFORD CIVIL
JOB ADDRESS LOT 1127 CONJOLA ST YANCHEP
CLIENT JOB NO.
OWNER
STRUCTERRE JOB NO. S1085325
DATE OF ASSESSMENT 17/11/22

SITE RECORD

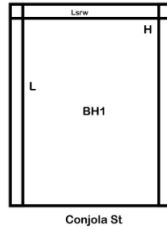


SITE CLASSIFICATION	A	<i>(in accordance with AS2870)</i>
FOOTING DETAIL	B1	
SAND PAD	No sand pad required structurally	
BUSHFIRE PRONE AREA	Yes	<i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	R3	<i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	N1	<i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	Full Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1500 FILL sand trace gravel (limestone) - brown; 1500 - 1800 FILL sand; 1800 end of hole.

APPROXIMATE BOREHOLE LOCATIONS



NOTE 1 Explanatory Notes & Standard Recommendations

This site classification report must be read in conjunction with the applicable Explanatory Notes & Standard Recommendations. For A Class sites, refer to the Explanatory Notes and Standard Recommendations for Stable (A Class) Sites, version 1.0 July 2018. For S, M, H1, H2 & E Class sites, refer to the Explanatory Notes and Standard Recommendations for Reactive (S, M, H1, H2 & E Class) Sites version 1.0 July 2018. For Equivalent Class sites, refer to the Explanatory Notes and Standard Recommendations for Equivalent Class Sites, version 1.0 July 2018.

NOTE 2 Bushfire - Prone Area

The Site may be situated in a bush fire prone area in accordance with the Department of Fire and Emergency Services (DFES) Bushfire Prone Area Map (Reference: <http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/>) the current version at the time of this assessment. A Bushfire Attack Level (BAL) assessment may be required for this site, please confirm with the local authority. Should you require an assessment, please contact this Office.

ADDITIONAL NOTES / REQUIREMENTS

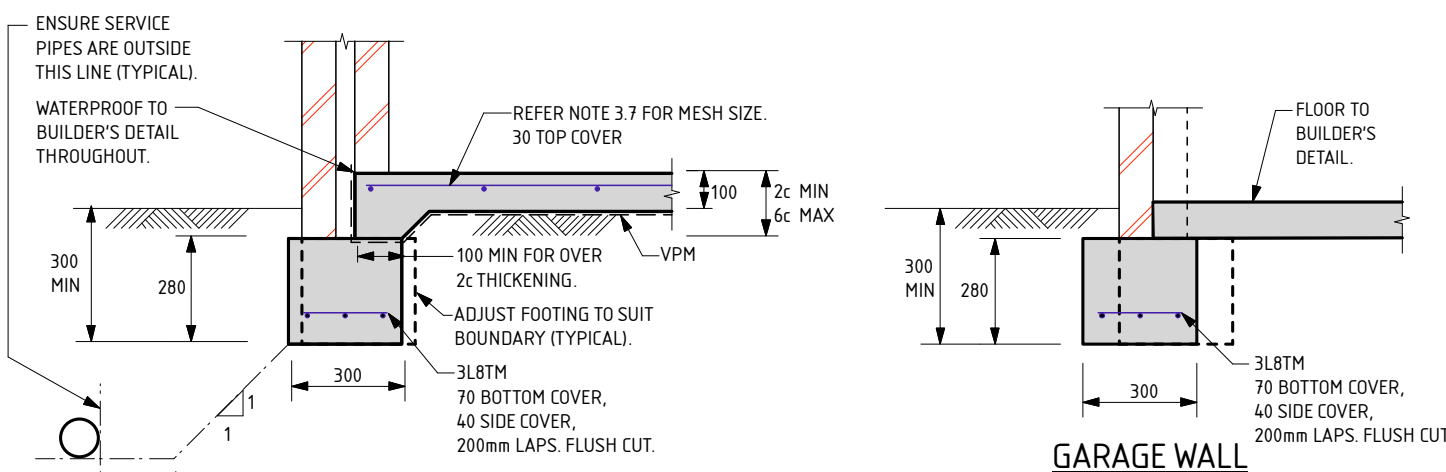
Site Condition

At the time of inspection the site was considered to be level and cleared. For specific levels of this site or topographical features, please refer to a professional site survey.

Structerre Geotech Reference

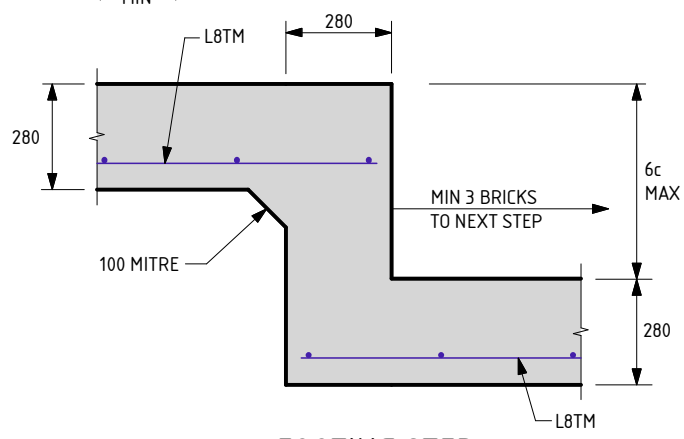
The Site Classification is based on any remedial works being successfully completed as outlined in the Structerre Geotechnical Report J414449 dated 01/08/2022. The footing details are subject to the recommendations being completed to an acceptable level as outlined in this report, if applicable.

-- END OF REPORT --

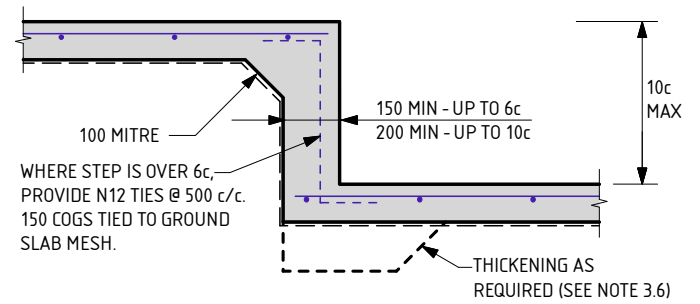


EXTERNAL WALLS

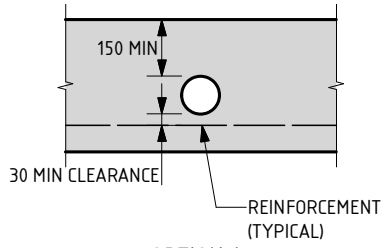
GARAGE WALL



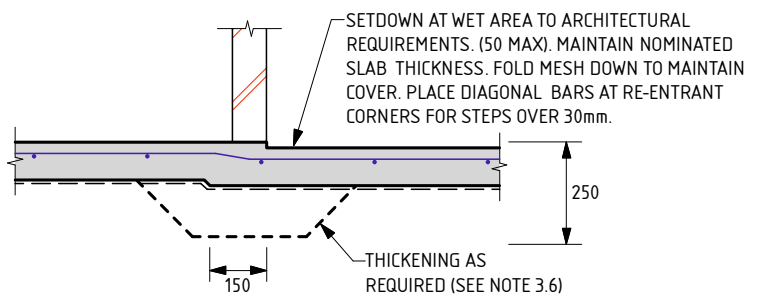
FOOTING STEP



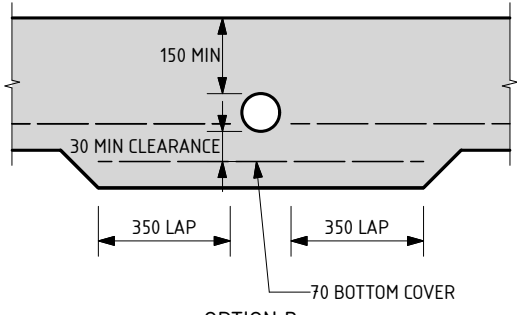
SLAB STEP



**OPTION A
PENETRATION CLEAR OF REINFORCEMENT**



WET AREA STEP



**OPTION B
PENETRATION INTERRUPTS REINFORCEMENT**

SERVICE PIPE DIAGRAM

- MAXIMUM PENETRATION SIZE TO BE Ø150.


THE APPROVED SIGNATURE ON THIS FOOTING AND SLAB DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS.
 DATE LAST MODIFIED - 23/11/21

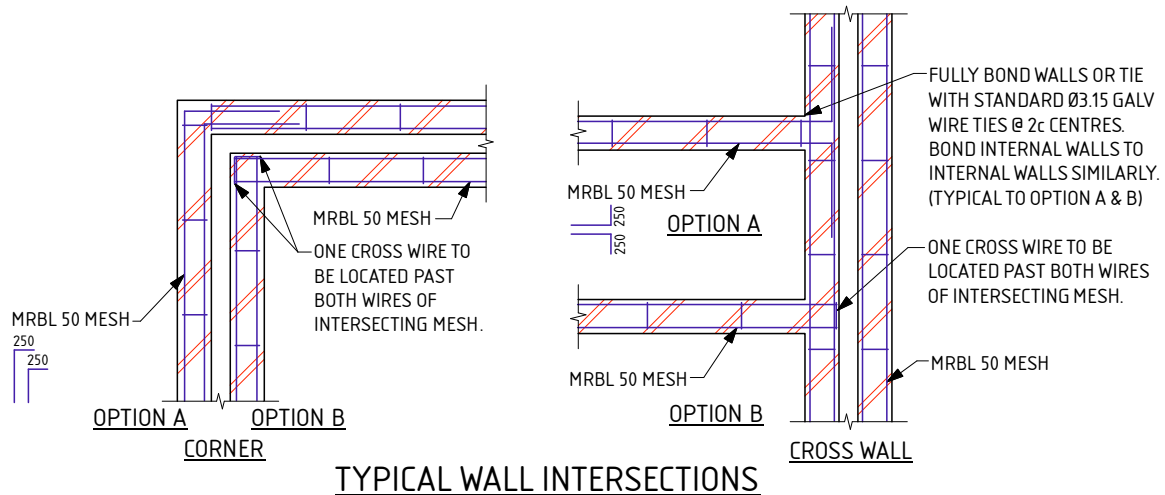
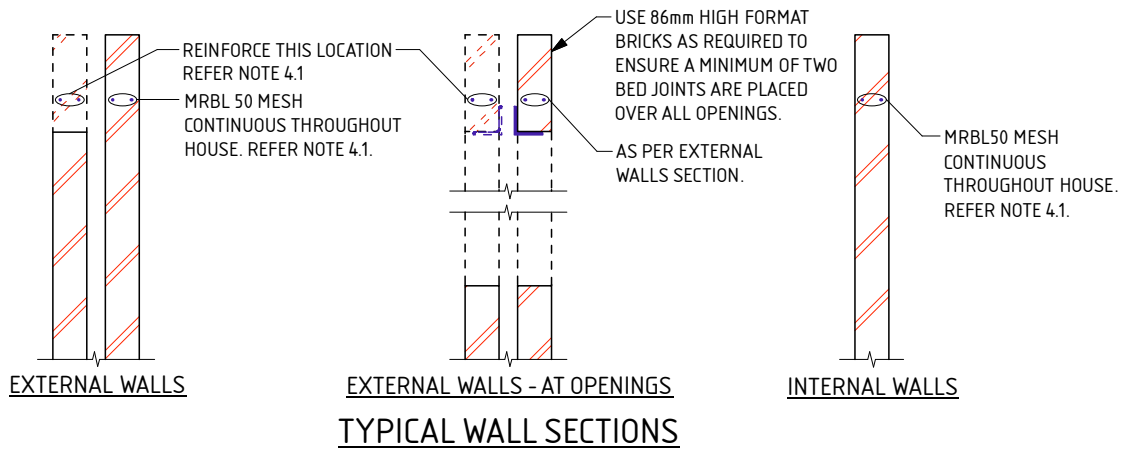
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SHEET 1 OF 2



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham Unit Trust trading as StrucTerre Consulting Engineers
 1 ERINDALE ROAD, BALCATTA WA 6021
 TEL (08) 9205 4500 FAX (08) 9205 4541 EMAIL: perth@strucTerre.com.au

PROJECT: LOT 1127 CONJOLA ST YANCHEP	
CLIENT: DENSFORD CIVIL	
SCALE: 1:20	APPROVED 
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NOTES FOR B1 FOOTING

THESE NOTES ARE TO BE READ IN CONJUNCTION WITH THE ATTACHED FOOTING DETAILS.

1.0 SITE CLASSIFICATION

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2.0 EARTHWORKS

- 2.1 SAND PAD, IF APPLICABLE, TO BE AS PER SITE INSPECTION REPORT.
- 2.2 EARTHWORKS SHALL INCLUDE, BUT NOT BE LIMITED TO:
 - a) REMOVE ALL ORGANIC MATERIAL FROM THE BUILDING AREA.
 - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL FROM THE PAD AREA.
 - c) GRUB OUT ANY TREES WHERE NECESSARY AND ENSURE THE REMAINING HOLES ARE FILLED AND COMPACTED SATISFACTORILY WITH SAND.
 - d) NOTIFY THE ENGINEER OF ANY UNUSUAL FEATURES OR DISCREPANCIES WHICH MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING.
- 2.3 ANY PREDOMINANT ROCK IN THE HOUSE PAD AREAS IS TO BE INSPECTED BY THE ENGINEER.
- 2.4 IF CLAY ON SITE, AN ENGINEER TO BE CONSULTED.
- 2.5 SAND FILL TO BE CLEAN WELL DRAINED, WITH MAX FINES (PARTICLES UP TO 0.075mm) CONTENT OF 5%. SAND TO BE COMPACTED TO A MIN 6 BLOWS/300mm FOR 750mm OR THE DEPTH OF THE PAD.

3.0 FOOTINGS & SLABS

- 3.1 A MINIMUM OF 150mm OF SAND REQUIRED UNDER FOOTINGS.
- 3.2 ROOF AND SURFACE WATER TO BE TAKEN AWAY FROM FOUNDATION AREA.
- 3.3 EXCAVATIONS FOR ALL SERVICE PIPES NOT TO UNDERMINE FOOTINGS. IF UNDERMINING IS LIKELY TO OCCUR, CONTACT THE ENGINEER PRIOR TO PROCEEDING.
- 3.4 WHERE PLUMBING PIPES PASS THROUGH FOOTINGS OR SLAB, SPECIFIED TOTAL THICKNESS OF ALL CONCRETE IS ALWAYS TO BE MAINTAINED.
- 3.5 SETDOWN AT WET AREA TO ARCHITECTURAL REQUIREMENT (50mm MAX). MAINTAIN 100mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12 x 1200 LONG.
- 3.6 PLACE SLAB THICKENINGS (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m.
- 3.7 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 1:3. 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.

3.8 FOR SLAB SPANS > 32m REFER TO ENGINEER FOR MESH SIZE.

3.9 REINFORCEMENT SHALL BE IN ACCORDANCE WITH THE FOLLOWING STANDARDS;

- L INDICATES PLAIN OR DEFORMED WIRE R500L OR D500L TO AS/NZS 4671.
- SL INDICATES DEFORMED SQUARE MESH D500L TO AS/NZS 4671.
- N INDICATES DEFORMED BARS D500N TO AS/NZS 4671.
- TM SUFFIX INDICATES TRENCH MESH USING DEFORMED BARS D500L TO AS/NZS 4671.

ALL STEELWORK TO BE TREATED IN ACCORDANCE WITH THE NATIONAL CONSTRUCTION CODE OR TO AS 3700, AS APPLICABLE.

3.10 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

3.11 CONCRETE TO CONFORM WITH AS 3600.

3.12 BLENDED CEMENT TO CONFORM WITH AS 3972.

3.13 ALL CONCRETE TO BE N20/20/100.

3.14 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.

3.15 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.

3.16 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.

3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.

3.18 REFER BACK TO THE ENGINEER IF AGGRESSIVE SOILS ARE ENCOUNTERED (IN ACCORDANCE WITH AS2870).

3.19 CURE SLAB AS DETERMINED BY ENGINEER.

3.20 THE FOOTING DETAILS HAVE BEEN DESIGNED IN ACCORDANCE WITH AS3600 AND SECTION 4 OF AS2870.

4.0 MASONRY

- 4.1 PLACE MRBL50 MESH IN THE BED JOINT IMMEDIATELY OVER DOOR AND WINDOW HEAD LEVEL CONTINUOUS THROUGHOUT THE BUILDING IN BOTH INTERNAL AND EXTERNAL WALLS. MESH MAY STEP BED JOINTS UP TO A HEIGHT OF 1c, 500 LAP IS REQUIRED AT EACH STEP.
- 4.2 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.3 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.4 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1.
- 4.5 ALL PERPENDS TO BE FULLY MORTARED.
- 4.6 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.7 2L6 WIRES MAY BE USED AS AN ALTERNATIVE TO THE MRBL50 MESH. WHERE L6 WIRES ARE USED, ALL SPLICES AND COGS TO BE 500 LONG.

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SHEET 2 OF 2



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PROJECT :

LOT 1127 CONJOLA ST YANCHEP

CLIENT :

DENSFORD CIVIL

SCALE

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DATE

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EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 1 of 2)

GENERAL

1. THE EXPLANATORY NOTES AND THE STANDARD RECOMMENDATIONS ARE TO BE READ IN CONJUNCTION WITH THE SITE CLASSIFICATION REPORT.
2. ALL REFERRED STANDARDS TO BE THE CURRENT VERSION AT THE TIME OF THE CONSTRUCTION.
3. THE PURPOSE OF THE SITE CLASSIFICATION REPORT IS TO CLASSIFY THE SITE IN ACCORDANCE WITH AS2870 "RESIDENTIAL SLABS AND FOOTING". IT IS NOT INTENDED FOR ANY OTHER PURPOSE, INCLUDING SOLE INFORMATION IN THE PROVISION OF A QUOTATION FOR SITE WORKS BY EARTH WORKERS. IT IS RECOMMENDED EARTH WORKERS PERFORM THEIR OWN INVESTIGATION FOR QUOTATION PURPOSES.
4. THE SITE CLASSIFICATION REPORT WILL INCLUDE BUT IS NOT LIMITED TO:
 - a. THE SITE CLASSIFICATION IN ACCORDANCE WITH AS2870 RESIDENTIAL SLABS AND FOOTING CONSTRUCTION,
 - b. A WIND RATING IN ACCORDANCE WITH AS 4055 WIND LOADS FOR HOUSING,
 - c. A COASTAL CORROSION CLASSIFICATION,
 - d. ADDITIONAL EARTHWORK RECOMMENDATION WHERE APPLICABLE,
 - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONDITIONS.
5. THE SITE CLASSIFICATION REPORT IS BASED ON THE SITE AS PRESENTED AT THE TIME OF ASSESSMENT. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
6. CLASS A SITES ARE STABLE SITES, GENERALLY SAND, LIMESTONE, GRAVEL OR A COMBINATION. CLASS P ARE PARTICULAR CLASSIFICATIONS SUCH AN UNUSUAL SITES OR SITES REQUIRING ADDITIONAL INVESTIGATION PRIOR TO PROVIDING DETAILS.
7. BOREHOLES EXCAVATED REVEAL THE SOIL PROFILE AT THE BOREHOLE LOCATION ONLY. FROM THIS, IT IS INFERRED THAT THESE ARE THE SOIL CONDITION OVER THE SITE. VARIATIONS CAN OCCUR WHICH MAY NOT HAVE BEEN DETECTED AT THE INVESTIGATION STAGE. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR REASSESSMENT.
8. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE IN ORDER TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
9. THIS REPORT IS FOR STRUCTERRE ONLY TO USE IN DESIGN. ANY DESIGN BY ANYONE ELSE FOR ANY STRUCTURE MUST BE SPECIFICALLY APPROVED BY STRUCTERRE. IF USED BY ANYONE ELSE FOR ANYTHING OTHER THAN A STRUCTERRE DESIGN OR STRUCTURE, STRUCTERRE TAKES NO RESPONSIBILITY.

SAND PAD

10. THE RECOMMENDED FOOTING DESIGN IS ONLY TO BE USED IN CONJUNCTION WITH THE RECOMMENDED SAND PAD AND EARTHWORKS AS OUTLINED IN THE SITE CLASSIFICATION REPORT.
11. THE RECOMMENDATIONS FOR THE SAND PAD IS FOR STRUCTURAL PURPOSES ONLY, AND DOES NOT PROVIDE THE MINIMUM FINISHED PAD LEVEL IN RELATION TO FLOOD LEVELS, OR DEPTH TO GROUNDWATER. SHOULD THE TEST BE LOCATED IN A LOW LYING OR FLOOD PRONE AREA, REFER TO THE LOCAL AUTHORITY FOR MINIMUM BUILDING HEIGHT.
12. IMPORTED FILL FOR USE AS A SAND PAD TO BE IN ACCORDANCE TO AS 3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS" WHICH INCLUDES BUT IS NOT LIMITED TO: BE FREE FROM ANY DELETERIOUS MATERIALS INCLUDING ORGANICS, (ROOTS, STUMPS, GRASSES, DECOMPOSED ORGANICS – PEAT, TIMBER, ETC), BUILDING RUBBLE, GLASS, PLASTICS OR WASTE MATERIAL. THE FINES CONTENT, (PERCENTAGE PASSING THE 0.075mm SIEVE) TO BE LESS THAN 5% BY MASS.
13. ON CLASS A SITES, A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 450mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
14. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
15. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

EARTHWORKS

16. RECOMMENDED EARTHWORKS TO BE CONDUCTED IN ACCORDANCE WITH AS3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS", AND TO INCLUDE BUT NOT BE LIMITED TO:
 - a. REMOVAL OF ALL VEGETATION, TOPSOILS, UNCONTROLLED FILLS AND OTHER DELETERIOUS MATERIALS FROM THE BUILDING AREA,
 - b. GRUBBING OUT OF ANY TREES ENSURING THE REMAINING HOLES ARE BACKFILLED WITH CLEAN COMPACTED SAND,
 - c. NOTIFYING THE ENGINEER OF ANY UNUSUAL FEATURE OR DISCREPANCY THAT MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING,
 - d. COMPACTING TO MEET THE REQUIREMENTS AS OUTLINED IN AS 3798 TABLE 5.1.
17. FILL MATERIAL (WHICH IS NOT ALWAYS APPARENT AT THE INITIAL INVESTIGATION STAGE) IS TO BE DEALT WITH AS FOLLOWS:
 - a. IF IT IS CERTIFIED BY OTHERS IT CAN REMAIN.
 - b. IF IT IS NOT CERTIFIED WILL REQUIRE REMOVAL DOWN TO NATURAL GROUND OR VERIFIED. ANY SAND CAN BE REUSED.
 - c. IF A PAD HAS ALREADY BEEN CONSTRUCTED, THE SITE CLASSIFICATION IS NOT CERTIFICATION OF THE PAD. CONTACT THIS OFFICE SHOULD A SAND PAD CERTIFICATION BE REQUIRED.
18. ANY ORGANIC MATTER OR ROOTS ENCOUNTERED, WHICH IS BEYOND WHAT IS NORMALLY CONSIDERED ACCEPTABLE IS TO BE REMOVED. THIS WILL NECESSITATE RAKING THE SITE TO REMOVE ORGANIC MATERIAL, TURNING THE SITE OVER AND RE- COMPACTING TO A MINIMUM.

RETAINING WALLS

19. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
20. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER TO THE RETAINING WALL THAN THE HEIGHT OF THE RETAINING WALL, THIS MAY PLACE ADDITIONAL LOADS ON THE WALL THAT WERE NOT INITIALLY DESIGNED FOR. AN INSPECTION OF THE STRUCTURAL INTEGRITY OF THE RETAINING WALL WILL BE REQUIRED TO PROVIDE CERTIFICATION AND/OR RECOMMENDATIONS PRIOR TO ANY CONSTRUCTION. PLEASE REFER BACK TO THIS OFFICE FOR ASSISTANCE.

STORMWATER DRAINAGE

21. ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF SOAKWELL AWAY FROM THE BUILDING AND SETBACK MINIMUM OF 1200mm, WHICHEVER IS GREATER. PLEASE REFER BACK TO THIS OFFICE IF REQUIRED THE SET-BACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



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EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 2 of 2)

WIND CLASSIFICATION

22. WIND CLASSIFICATION IS GIVEN FOR THE EXPECTED CONDITION 5 YEARS HENCE. THIS CLASSIFICATION IS LIMITED TO BUILDINGS CLASSES 1 AND 10, WHICH HAVE THE FOLLOWING LIMITATION (AS PER AS4055):

- a. MAXIMUM DISTANCE FROM THE GROUND LEVEL TO THE UNDERSIDE OF EAVES SHALL NOT EXCEED 6.0m.
- b. MAXIMUM DISTANCE FROM GROUND LEVEL TO THE HIGHEST POINT OF THE ROOF, EXCLUDING CHIMNEYS, SHALL NOT EXCEED 8.5m.
- c. THE ROOF PITCH SHALL NOT EXCEED 35°.
- d. THE WIDTH, EXCLUDING EAVES, SHALL NOT EXCEED 16.0m AND THE LENGTH SHALL NOT EXCEED 5x THE WIDTH.

IF THE BUILDING FALLS OUTSIDE OF THESE LIMITATIONS, THE STATED WIND CLASSIFICATION DOES NOT APPLY. REFER BACK TO THIS OFFICE FOR A REVISED WIND CLASSIFICATION.

ENVIRONMENTAL

23. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, IT IS RECOMMENDED THAT AN ENVIRONMENTAL ENGINEER BE ENGAGED.

SEISMIC

24. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF ≤ 0.11 . RECOMMENDED FOOTING DETAILS PROVIDED FOR SITES WITH AN EARTHQUAKE HAZARD FACTOR OF > 0.11 , ARE NOT FOR CONSTRUCTION, BUT FOR COSTING PURPOSES ONLY. IT IS RECOMMENDED REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

CORROSION CLASSIFICATION

25. THE CORROSION CLASSIFICATION HAS BEEN ASSESSED IN ACCORDANCE WITH AS3700.

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APPROVED

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SITE CLASSIFICATION REPORT
CERTIFICATE 2595300

CLIENT DENSFORD CIVIL
JOB ADDRESS LOT 1128 CONJOLA ST YANCHEP
CLIENT JOB NO.
OWNER
STRUCTERRE JOB NO. S1085323
DATE OF ASSESSMENT 17/11/22

SITE RECORD

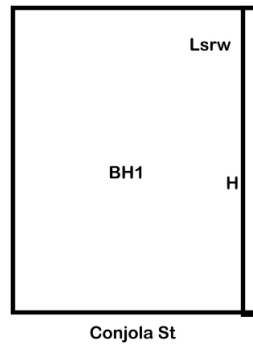


SITE CLASSIFICATION	A	<i>(in accordance with AS2870)</i>
FOOTING DETAIL	B1	
SAND PAD	No sand pad required structurally	
BUSHFIRE PRONE AREA	Yes	<i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	R3	<i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	N2	<i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	Partial Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1500 FILL sand trace gravel (limestone) - brown; 1500 - 1800 FILL sand; 1800 end of hole.

APPROXIMATE BOREHOLE LOCATIONS



NOTE 1 Explanatory Notes & Standard Recommendations

This site classification report must be read in conjunction with the applicable Explanatory Notes & Standard Recommendations. For A Class sites, refer to the Explanatory Notes and Standard Recommendations for Stable (A Class) Sites, version 1.0 July 2018. For S, M, H1, H2 & E Class sites, refer to the Explanatory Notes and Standard Recommendations for Reactive (S, M, H1, H2 & E Class) Sites version 1.0 July 2018. For Equivalent Class sites, refer to the Explanatory Notes and Standard Recommendations for Equivalent Class Sites, version 1.0 July 2018.

NOTE 2 Bushfire - Prone Area

The Site may be situated in a bush fire prone area in accordance with the Department of Fire and Emergency Services (DFES) Bushfire Prone Area Map (Reference: <http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/>) the current version at the time of this assessment. A Bushfire Attack Level (BAL) assessment may be required for this site, please confirm with the local authority. Should you require an assessment, please contact this Office.

ADDITIONAL NOTES / REQUIREMENTS

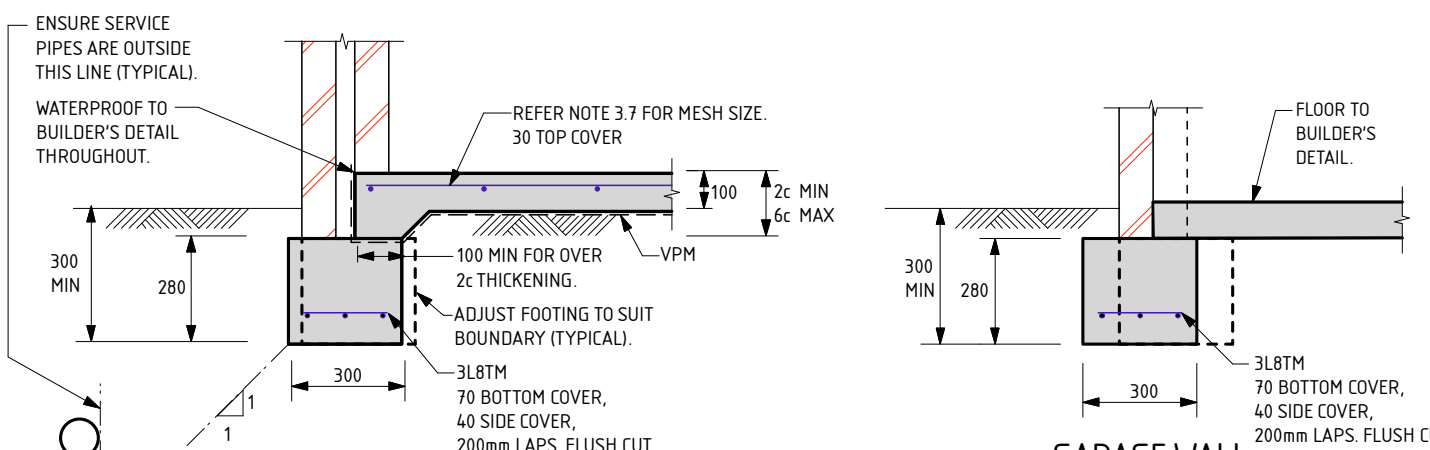
Site Condition

At the time of inspection the site was considered to be level and cleared. For specific levels of this site or topographical features, please refer to a professional site survey.

Structerre Geotech Reference

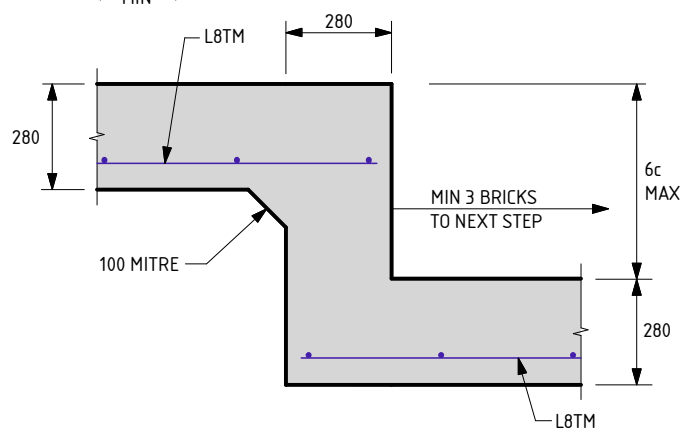
The Site Classification is based on any remedial works being successfully completed as outlined in the Structerre Geotechnical Report J414449 dated 01/08/2022. The footing details are subject to the recommendations being completed to an acceptable level as outlined in this report, if applicable.

-- END OF REPORT --

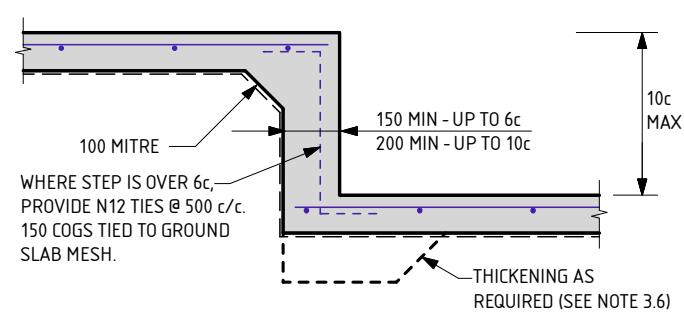


EXTERNAL WALLS

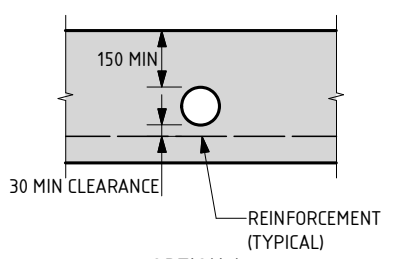
GARAGE WALL



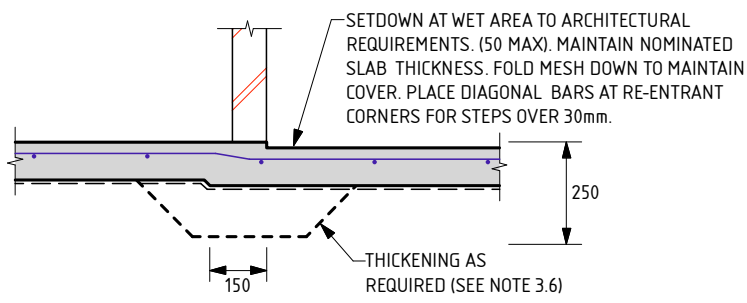
FOOTING STEP



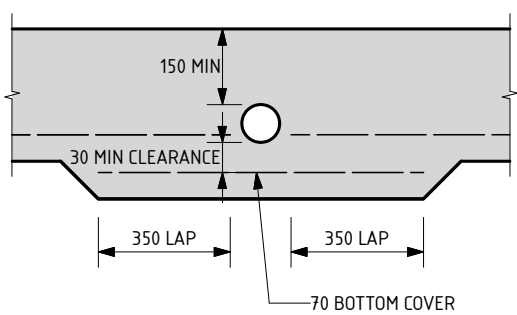
SLAB STEP



**OPTION A
PENETRATION CLEAR OF REINFORCEMENT**



WET AREA STEP



**OPTION B
PENETRATION INTERRUPTS REINFORCEMENT**

SERVICE PIPE DIAGRAM

- MAXIMUM PENETRATION SIZE TO BE Ø150.


THE APPROVED SIGNATURE ON THIS FOOTING AND SLAB DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS.
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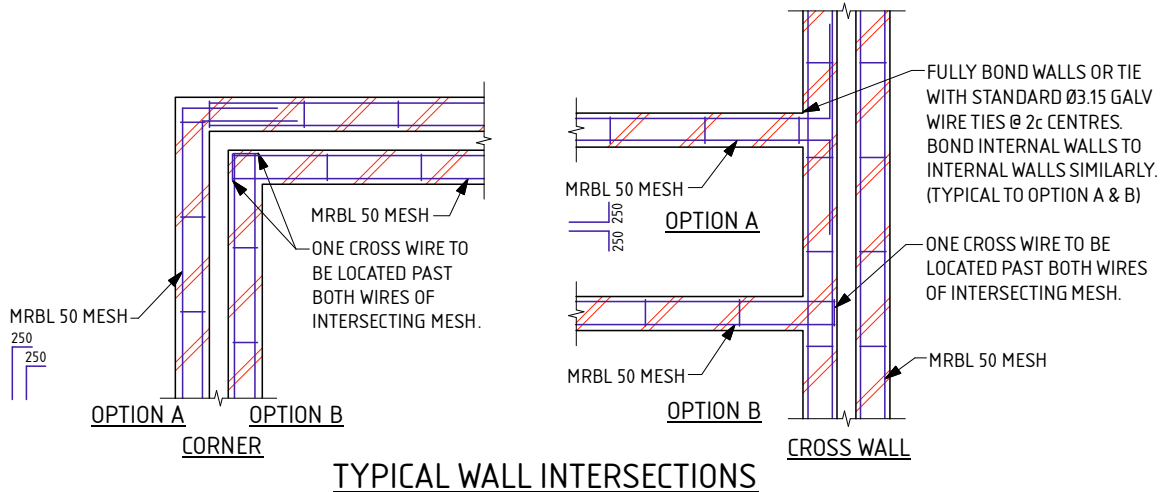
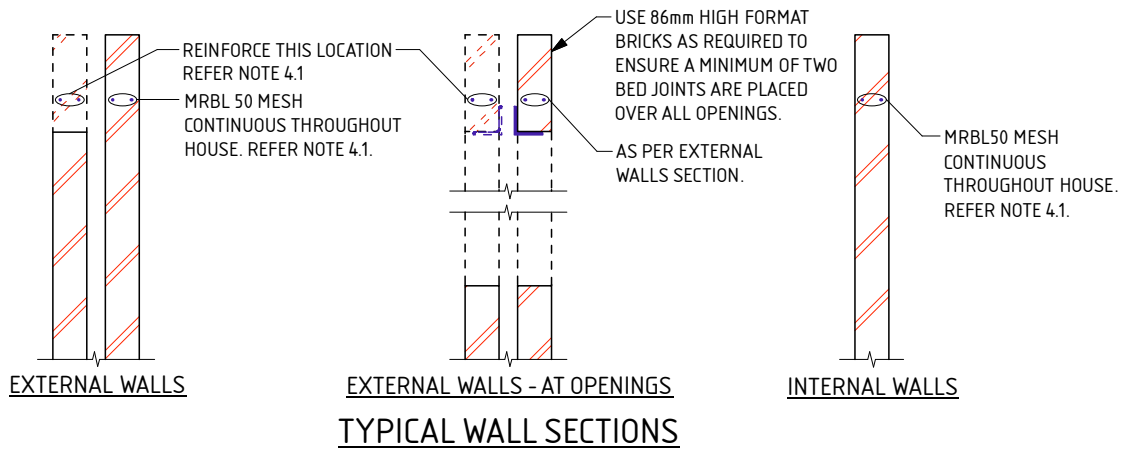
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SHEET 1 OF 2



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 - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL FROM THE PAD AREA.
 - c) GRUB OUT ANY TREES WHERE NECESSARY AND ENSURE THE REMAINING HOLES ARE FILLED AND COMPACTED SATISFACTORILY WITH SAND.
 - d) NOTIFY THE ENGINEER OF ANY UNUSUAL FEATURES OR DISCREPANCIES WHICH MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING.
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- 2.4 IF CLAY ON SITE, AN ENGINEER TO BE CONSULTED.
- 2.5 SAND FILL TO BE CLEAN WELL DRAINED, WITH MAX FINES (PARTICLES UP TO 0.075mm) CONTENT OF 5%. SAND TO BE COMPACTED TO A MIN 6 BLOWS/300mm FOR 750mm OR THE DEPTH OF THE PAD.

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- 3.2 ROOF AND SURFACE WATER TO BE TAKEN AWAY FROM FOUNDATION AREA.
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- 3.4 WHERE PLUMBING PIPES PASS THROUGH FOOTINGS OR SLAB, SPECIFIED TOTAL THICKNESS OF ALL CONCRETE IS ALWAYS TO BE MAINTAINED.
- 3.5 SETDOWN AT WET AREA TO ARCHITECTURAL REQUIREMENT (50mm MAX). MAINTAIN 100mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12 x 1200 LONG.
- 3.6 PLACE SLAB THICKENINGS (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m.
- 3.7 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 1:3. USE THE FOLLOWING:
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- 3.8 FOR SLAB SPANS > 32m REFER TO ENGINEER FOR MESH SIZE.

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L INDICATES PLAIN OR DEFORMED WIRE R500L OR D500L TO AS/NZS 4671.

SL INDICATES DEFORMED SQUARE MESH D500L TO AS/NZS 4671.

N INDICATES DEFORMED BARS D500N TO AS/NZS 4671.

TM SUFFIX INDICATES TRENCH MESH USING DEFORMED BARS D500L TO AS/NZS 4671.

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- 3.10 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

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- 3.13 ALL CONCRETE TO BE N20/20/100.

- 3.14 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.

- 3.15 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.

- 3.16 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.

- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.

- 3.18 REFER BACK TO THE ENGINEER IF AGGRESSIVE SOILS ARE ENCOUNTERED (IN ACCORDANCE WITH AS2870).

- 3.19 CURE SLAB AS DETERMINED BY ENGINEER.

- 3.20 THE FOOTING DETAILS HAVE BEEN DESIGNED IN ACCORDANCE WITH AS3600 AND SECTION 4 OF AS2870.

4.0 MASONRY

- 4.1 PLACE MRBL50 MESH IN THE BED JOINT IMMEDIATELY OVER DOOR AND WINDOW HEAD LEVEL CONTINUOUS THROUGHOUT THE BUILDING IN BOTH INTERNAL AND EXTERNAL WALLS. MESH MAY STEP BED JOINTS UP TO A HEIGHT OF 1c, 500 LAP IS REQUIRED AT EACH STEP.

- 4.2 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.

- 4.3 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.

- 4.4 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1.

- 4.5 ALL PERPENDS TO BE FULLY MORTARED.

- 4.6 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.

- 4.7 2L6 WIRES MAY BE USED AS AN ALTERNATIVE TO THE MRBL50 MESH. WHERE L6 WIRES ARE USED, ALL SPLICES AND COGS TO BE 500 LONG.

DATE LAST MODIFIED - 23/11/21

SHEET 2 OF 2



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PROJECT :

LOT 1128 CONJOLA ST YANCHEP

CLIENT : DENSFORD CIVIL

SCALE 1:20

APPROVED

DATE 21/11/22

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 1 of 2)

GENERAL

1. THE EXPLANATORY NOTES AND THE STANDARD RECOMMENDATIONS ARE TO BE READ IN CONJUNCTION WITH THE SITE CLASSIFICATION REPORT.
2. ALL REFERRED STANDARDS TO BE THE CURRENT VERSION AT THE TIME OF THE CONSTRUCTION.
3. THE PURPOSE OF THE SITE CLASSIFICATION REPORT IS TO CLASSIFY THE SITE IN ACCORDANCE WITH AS2870 "RESIDENTIAL SLABS AND FOOTING". IT IS NOT INTENDED FOR ANY OTHER PURPOSE, INCLUDING SOLE INFORMATION IN THE PROVISION OF A QUOTATION FOR SITE WORKS BY EARTH WORKERS. IT IS RECOMMENDED EARTH WORKERS PERFORM THEIR OWN INVESTIGATION FOR QUOTATION PURPOSES.
4. THE SITE CLASSIFICATION REPORT WILL INCLUDE BUT IS NOT LIMITED TO:
 - a. THE SITE CLASSIFICATION IN ACCORDANCE WITH AS2870 RESIDENTIAL SLABS AND FOOTING CONSTRUCTION,
 - b. A WIND RATING IN ACCORDANCE WITH AS 4055 WIND LOADS FOR HOUSING,
 - c. A COASTAL CORROSION CLASSIFICATION,
 - d. ADDITIONAL EARTHWORK RECOMMENDATION WHERE APPLICABLE,
 - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONDITIONS.
5. THE SITE CLASSIFICATION REPORT IS BASED ON THE SITE AS PRESENTED AT THE TIME OF ASSESSMENT. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
6. CLASS A SITES ARE STABLE SITES, GENERALLY SAND, LIMESTONE, GRAVEL OR A COMBINATION. CLASS P ARE PARTICULAR CLASSIFICATIONS SUCH AN UNUSUAL SITES OR SITES REQUIRING ADDITIONAL INVESTIGATION PRIOR TO PROVIDING DETAILS.
7. BOREHOLES EXCAVATED REVEAL THE SOIL PROFILE AT THE BOREHOLE LOCATION ONLY. FROM THIS, IT IS INFERRED THAT THESE ARE THE SOIL CONDITION OVER THE SITE. VARIATIONS CAN OCCUR WHICH MAY NOT HAVE BEEN DETECTED AT THE INVESTIGATION STAGE. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR REASSESSMENT.
8. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE IN ORDER TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
9. THIS REPORT IS FOR STRUCTERRE ONLY TO USE IN DESIGN. ANY DESIGN BY ANYONE ELSE FOR ANY STRUCTURE MUST BE SPECIFICALLY APPROVED BY STRUCTERRE. IF USED BY ANYONE ELSE FOR ANYTHING OTHER THAN A STRUCTERRE DESIGN OR STRUCTURE, STRUCTERRE TAKES NO RESPONSIBILITY.

SAND PAD

10. THE RECOMMENDED FOOTING DESIGN IS ONLY TO BE USED IN CONJUNCTION WITH THE RECOMMENDED SAND PAD AND EARTHWORKS AS OUTLINED IN THE SITE CLASSIFICATION REPORT.
11. THE RECOMMENDATIONS FOR THE SAND PAD IS FOR STRUCTURAL PURPOSES ONLY, AND DOES NOT PROVIDE THE MINIMUM FINISHED PAD LEVEL IN RELATION TO FLOOD LEVELS, OR DEPTH TO GROUNDWATER. SHOULD THE TEST BE LOCATED IN A LOW LYING OR FLOOD PRONE AREA, REFER TO THE LOCAL AUTHORITY FOR MINIMUM BUILDING HEIGHT.
12. IMPORTED FILL FOR USE AS A SAND PAD TO BE IN ACCORDANCE TO AS 3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS" WHICH INCLUDES BUT IS NOT LIMITED TO: BE FREE FROM ANY DELETERIOUS MATERIALS INCLUDING ORGANICS, (ROOTS, STUMPS, GRASSES, DECOMPOSED ORGANICS – PEAT, TIMBER, ETC), BUILDING RUBBLE, GLASS, PLASTICS OR WASTE MATERIAL. THE FINES CONTENT, (PERCENTAGE PASSING THE 0.075mm SIEVE) TO BE LESS THAN 5% BY MASS.
13. ON CLASS A SITES, A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 450mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
14. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
15. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

EARTHWORKS

16. RECOMMENDED EARTHWORKS TO BE CONDUCTED IN ACCORDANCE WITH AS3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS", AND TO INCLUDE BUT NOT BE LIMITED TO:
 - a. REMOVAL OF ALL VEGETATION, TOPSOILS, UNCONTROLLED FILLS AND OTHER DELETERIOUS MATERIALS FROM THE BUILDING AREA,
 - b. GRUBBING OUT OF ANY TREES ENSURING THE REMAINING HOLES ARE BACKFILLED WITH CLEAN COMPACTED SAND,
 - c. NOTIFYING THE ENGINEER OF ANY UNUSUAL FEATURE OR DISCREPANCY THAT MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING,
 - d. COMPACTING TO MEET THE REQUIREMENTS AS OUTLINED IN AS 3798 TABLE 5.1.
17. FILL MATERIAL (WHICH IS NOT ALWAYS APPARENT AT THE INITIAL INVESTIGATION STAGE) IS TO BE DEALT WITH AS FOLLOWS:
 - a. IF IT IS CERTIFIED BY OTHERS IT CAN REMAIN.
 - b. IF IT IS NOT CERTIFIED WILL REQUIRE REMOVAL DOWN TO NATURAL GROUND OR VERIFIED. ANY SAND CAN BE REUSED.
 - c. IF A PAD HAS ALREADY BEEN CONSTRUCTED, THE SITE CLASSIFICATION IS NOT CERTIFICATION OF THE PAD. CONTACT THIS OFFICE SHOULD A SAND PAD CERTIFICATION BE REQUIRED.
18. ANY ORGANIC MATTER OR ROOTS ENCOUNTERED, WHICH IS BEYOND WHAT IS NORMALLY CONSIDERED ACCEPTABLE IS TO BE REMOVED. THIS WILL NECESSITATE RAKING THE SITE TO REMOVE ORGANIC MATERIAL, TURNING THE SITE OVER AND RE- COMPACTING TO A MINIMUM.

RETAINING WALLS

19. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
20. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER TO THE RETAINING WALL THAN THE HEIGHT OF THE RETAINING WALL, THIS MAY PLACE ADDITIONAL LOADS ON THE WALL THAT WERE NOT INITIALLY DESIGNED FOR. AN INSPECTION OF THE STRUCTURAL INTEGRITY OF THE RETAINING WALL WILL BE REQUIRED TO PROVIDE CERTIFICATION AND/OR RECOMMENDATIONS PRIOR TO ANY CONSTRUCTION. PLEASE REFER BACK TO THIS OFFICE FOR ASSISTANCE.

STORMWATER DRAINAGE

21. ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF SOAKWELL AWAY FROM THE BUILDING AND SETBACK MINIMUM OF 1200mm, WHICHEVER IS GREATER. PLEASE REFER BACK TO THIS OFFICE IF REQUIRED THE SET-BACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



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LOT 1128 CONJOLA ST YANCHEP

CLIENT : DENSFORD CIVIL

SCALE 1:20

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APPROVED

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 2 of 2)

WIND CLASSIFICATION

22. WIND CLASSIFICATION IS GIVEN FOR THE EXPECTED CONDITION 5 YEARS HENCE. THIS CLASSIFICATION IS LIMITED TO BUILDINGS CLASSES 1 AND 10, WHICH HAVE THE FOLLOWING LIMITATION (AS PER AS4055):

- a. MAXIMUM DISTANCE FROM THE GROUND LEVEL TO THE UNDERSIDE OF EAVES SHALL NOT EXCEED 6.0m.
- b. MAXIMUM DISTANCE FROM GROUND LEVEL TO THE HIGHEST POINT OF THE ROOF, EXCLUDING CHIMNEYS, SHALL NOT EXCEED 8.5m.
- c. THE ROOF PITCH SHALL NOT EXCEED 35°.
- d. THE WIDTH, EXCLUDING EAVES, SHALL NOT EXCEED 16.0m AND THE LENGTH SHALL NOT EXCEED 5x THE WIDTH.

IF THE BUILDING FALLS OUTSIDE OF THESE LIMITATIONS, THE STATED WIND CLASSIFICATION DOES NOT APPLY. REFER BACK TO THIS OFFICE FOR A REVISED WIND CLASSIFICATION.

ENVIRONMENTAL

23. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, IT IS RECOMMENDED THAT AN ENVIRONMENTAL ENGINEER BE ENGAGED.

SEISMIC

24. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF ≤ 0.11 . RECOMMENDED FOOTING DETAILS PROVIDED FOR SITES WITH AN EARTHQUAKE HAZARD FACTOR OF > 0.11 , ARE NOT FOR CONSTRUCTION, BUT FOR COSTING PURPOSES ONLY. IT IS RECOMMENDED REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

CORROSION CLASSIFICATION

25. THE CORROSION CLASSIFICATION HAS BEEN ASSESSED IN ACCORDANCE WITH AS3700.

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DATE 21/11/22

APPROVED

A blue ink handwritten signature is written over the 'APPROVED' field.

SITE CLASSIFICATION REPORT
CERTIFICATE 2595298

CLIENT DENSFORD CIVIL
JOB ADDRESS LOT 1129 BUTTERLEAF AV YANCHEP
CLIENT JOB NO.
OWNER
STRUCTERRE JOB NO. S1085322
DATE OF ASSESSMENT 17/11/22

SITE RECORD

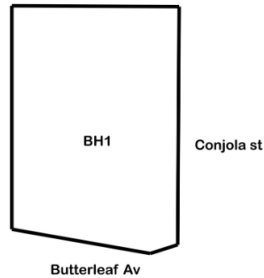


SITE CLASSIFICATION	A	<i>(in accordance with AS2870)</i>
FOOTING DETAIL	B1	
SAND PAD	No sand pad required structurally	
BUSHFIRE PRONE AREA	Yes	<i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	R3	<i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	N2	<i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	No Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1500 FILL sand trace gravel (limestone) - brown; 1500 - 1800 FILL sand; 1800 end of hole.

APPROXIMATE BOREHOLE LOCATIONS



NOTE 1 Explanatory Notes & Standard Recommendations

This site classification report must be read in conjunction with the applicable Explanatory Notes & Standard Recommendations. For A Class sites, refer to the Explanatory Notes and Standard Recommendations for Stable (A Class) Sites, version 1.0 July 2018. For S, M, H1, H2 & E Class sites, refer to the Explanatory Notes and Standard Recommendations for Reactive (S, M, H1, H2 & E Class) Sites version 1.0 July 2018. For Equivalent Class sites, refer to the Explanatory Notes and Standard Recommendations for Equivalent Class Sites, version 1.0 July 2018.

NOTE 2 Bushfire - Prone Area

The Site may be situated in a bush fire prone area in accordance with the Department of Fire and Emergency Services (DFES) Bushfire Prone Area Map (Reference: <http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/>) the current version at the time of this assessment. A Bushfire Attack Level (BAL) assessment may be required for this site, please confirm with the local authority. Should you require an assessment, please contact this Office.

ADDITIONAL NOTES / REQUIREMENTS

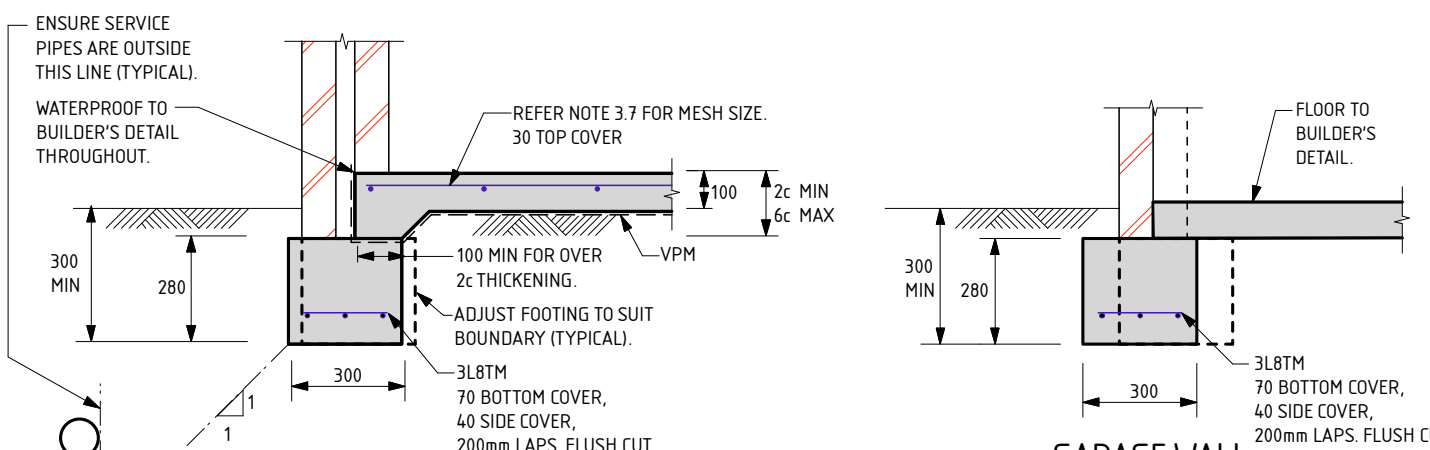
Site Condition

At the time of inspection the site was considered to be level and cleared. For specific levels of this site or topographical features, please refer to a professional site survey.

Structerre Geotech Reference

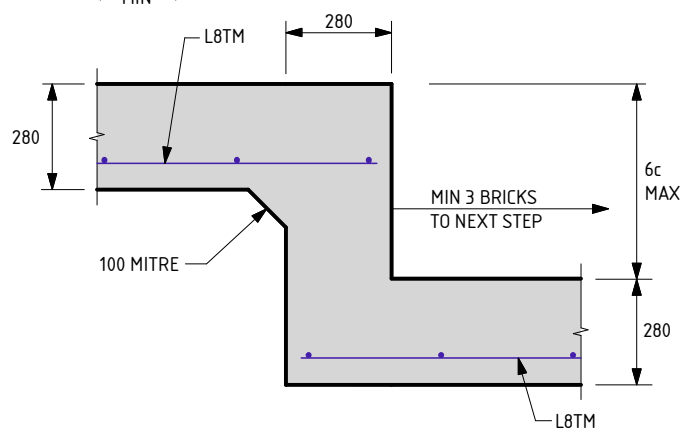
The Site Classification is based on any remedial works being successfully completed as outlined in the Structerre Geotechnical Report J414449 dated 01/08/2022. The footing details are subject to the recommendations being completed to an acceptable level as outlined in this report, if applicable.

-- END OF REPORT --

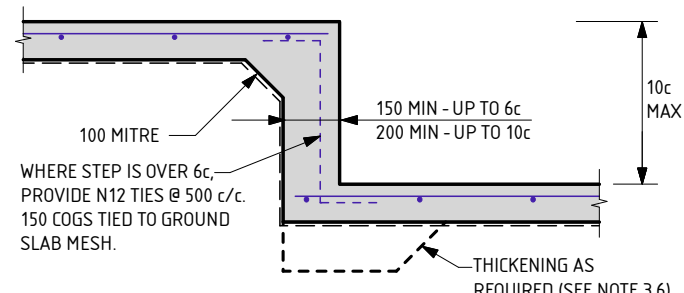


EXTERNAL WALLS

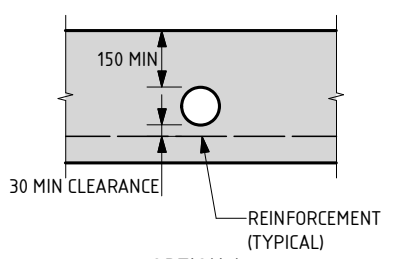
GARAGE WALL



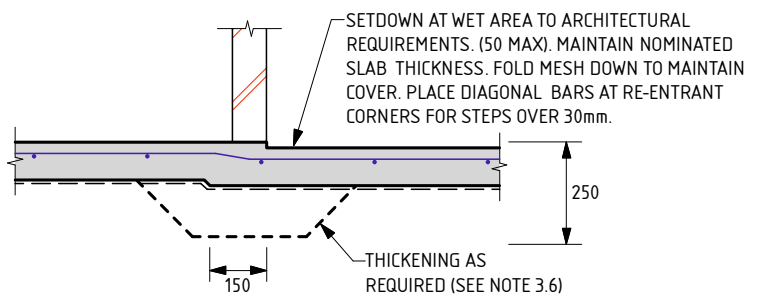
FOOTING STEP



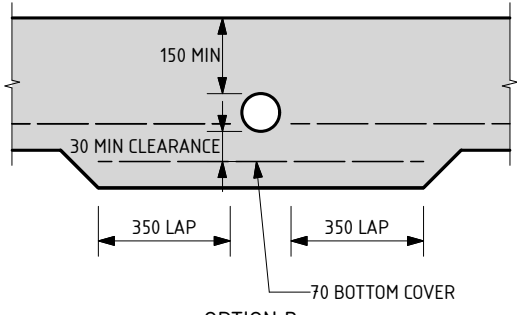
SLAB STEP



**OPTION A
PENETRATION CLEAR OF REINFORCEMENT**



WET AREA STEP



**OPTION B
PENETRATION INTERRUPTS REINFORCEMENT**

SERVICE PIPE DIAGRAM

- MAXIMUM PENETRATION SIZE TO BE Ø150.

THE APPROVED SIGNATURE ON THIS FOOTING AND SLAB DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS.
DATE LAST MODIFIED - 23/11/21

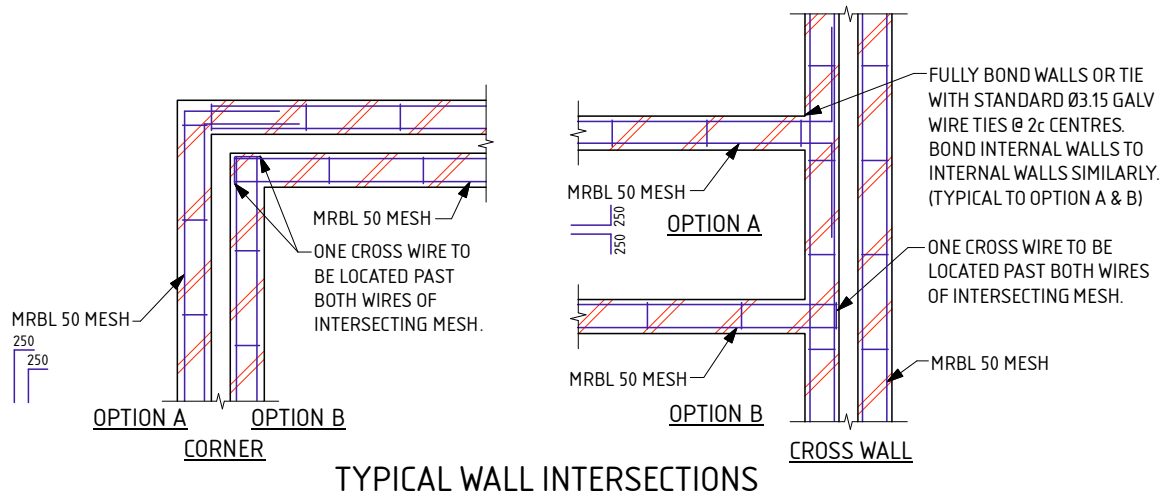
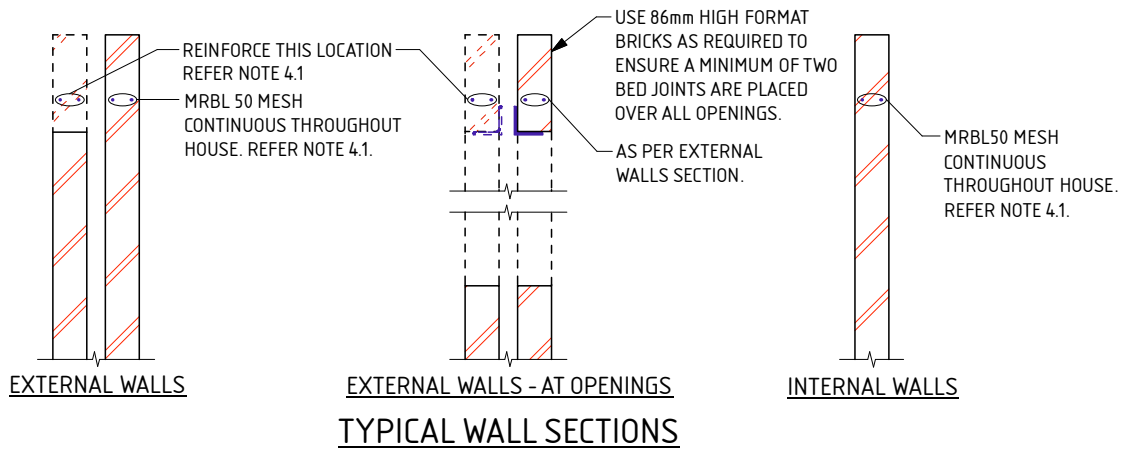
B1

SHEET 1 OF 2



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PROJECT: LOT 1129 BUTTERLEAF AV YANCHEP	
CLIENT: DENSFORD CIVIL	
SCALE: 1:20	APPROVED
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NOTES FOR B1 FOOTING

THESE NOTES ARE TO BE READ IN CONJUNCTION WITH THE ATTACHED FOOTING DETAILS.

1.0 SITE CLASSIFICATION

- 1.1 THE SITE CLASSIFICATION NOTED IN THE SITE CLASSIFICATION REPORT IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS AS DETERMINED BY AN ASSESSMENT OF THE SITE. REFER TO THE ATTACHED REPORT FOR ANY SPECIAL REQUIREMENTS.

2.0 EARTHWORKS

- 2.1 SAND PAD, IF APPLICABLE, TO BE AS PER SITE INSPECTION REPORT.
- 2.2 EARTHWORKS SHALL INCLUDE, BUT NOT BE LIMITED TO:
- REMOVE ALL ORGANIC MATERIAL FROM THE BUILDING AREA.
 - REMOVE ALL RUBBISH AND DELETERIOUS FILL FROM THE PAD AREA.
 - GRUB OUT ANY TREES WHERE NECESSARY AND ENSURE THE REMAINING HOLES ARE FILLED AND COMPACTED SATISFACTORILY WITH SAND.
 - NOTIFY THE ENGINEER OF ANY UNUSUAL FEATURES OR DISCREPANCIES WHICH MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING.
- 2.3 ANY PREDOMINANT ROCK IN THE HOUSE PAD AREAS IS TO BE INSPECTED BY THE ENGINEER.
- 2.4 IF CLAY ON SITE, AN ENGINEER TO BE CONSULTED.
- 2.5 SAND FILL TO BE CLEAN WELL DRAINED, WITH MAX FINES (PARTICLES UP TO 0.075mm) CONTENT OF 5%. SAND TO BE COMPACTED TO A MIN 6 BLOWS/300mm FOR 750mm OR THE DEPTH OF THE PAD.

3.0 FOOTINGS & SLABS

- 3.1 A MINIMUM OF 150mm OF SAND REQUIRED UNDER FOOTINGS.
- 3.2 ROOF AND SURFACE WATER TO BE TAKEN AWAY FROM FOUNDATION AREA.
- 3.3 EXCAVATIONS FOR ALL SERVICE PIPES NOT TO UNDERMINE FOOTINGS. IF UNDERMINING IS LIKELY TO OCCUR, CONTACT THE ENGINEER PRIOR TO PROCEEDING.
- 3.4 WHERE PLUMBING PIPES PASS THROUGH FOOTINGS OR SLAB, SPECIFIED TOTAL THICKNESS OF ALL CONCRETE IS ALWAYS TO BE MAINTAINED.
- 3.5 SETDOWN AT WET AREA TO ARCHITECTURAL REQUIREMENT (50mm MAX). MAINTAIN 100mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12 x 1200 LONG.
- 3.6 PLACE SLAB THICKENINGS (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m.
- 3.7 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 1:3. 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.

- 3.8 FOR SLAB SPANS > 32m REFER TO ENGINEER FOR MESH SIZE.

- 3.9 REINFORCEMENT SHALL BE IN ACCORDANCE WITH THE FOLLOWING STANDARDS;

- L INDICATES PLAIN OR DEFORMED WIRE R500L OR D500L TO AS/NZS 4671.
- SL INDICATES DEFORMED SQUARE MESH D500L TO AS/NZS 4671.
- N INDICATES DEFORMED BARS D500N TO AS/NZS 4671.
- TM SUFFIX INDICATES TRENCH MESH USING DEFORMED BARS D500L TO AS/NZS 4671.

ALL STEELWORK TO BE TREATED IN ACCORDANCE WITH THE NATIONAL CONSTRUCTION CODE OR TO AS 3700, AS APPLICABLE.

- 3.10 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.11 CONCRETE TO CONFORM WITH AS 3600.

- 3.12 BLENDED CEMENT TO CONFORM WITH AS 3972.

- 3.13 ALL CONCRETE TO BE N20/20/100.

- 3.14 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.

- 3.15 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.

- 3.16 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.

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- 4.3 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.

- 4.4 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1.

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SHEET 2 OF 2



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PROJECT :

LOT 1129 BUTTERLEAF AV YANCHEP

CLIENT : DENSFORD CIVIL

SCALE 1:20

APPROVED

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EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 1 of 2)

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SAND PAD

10. THE RECOMMENDED FOOTING DESIGN IS ONLY TO BE USED IN CONJUNCTION WITH THE RECOMMENDED SAND PAD AND EARTHWORKS AS OUTLINED IN THE SITE CLASSIFICATION REPORT.
11. THE RECOMMENDATIONS FOR THE SAND PAD IS FOR STRUCTURAL PURPOSES ONLY, AND DOES NOT PROVIDE THE MINIMUM FINISHED PAD LEVEL IN RELATION TO FLOOD LEVELS, OR DEPTH TO GROUNDWATER. SHOULD THE TEST BE LOCATED IN A LOW LYING OR FLOOD PRONE AREA, REFER TO THE LOCAL AUTHORITY FOR MINIMUM BUILDING HEIGHT.
12. IMPORTED FILL FOR USE AS A SAND PAD TO BE IN ACCORDANCE TO AS 3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS" WHICH INCLUDES BUT IS NOT LIMITED TO: BE FREE FROM ANY DELETERIOUS MATERIALS INCLUDING ORGANICS, (ROOTS, STUMPS, GRASSES, DECOMPOSED ORGANICS – PEAT, TIMBER, ETC), BUILDING RUBBLE, GLASS, PLASTICS OR WASTE MATERIAL. THE FINES CONTENT, (PERCENTAGE PASSING THE 0.075mm SIEVE) TO BE LESS THAN 5% BY MASS.
13. ON CLASS A SITES, A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 450mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
14. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
15. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

EARTHWORKS

16. RECOMMENDED EARTHWORKS TO BE CONDUCTED IN ACCORDANCE WITH AS3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS", AND TO INCLUDE BUT NOT BE LIMITED TO:
 - a. REMOVAL OF ALL VEGETATION, TOPSOILS, UNCONTROLLED FILLS AND OTHER DELETERIOUS MATERIALS FROM THE BUILDING AREA,
 - b. GRUBBING OUT OF ANY TREES ENSURING THE REMAINING HOLES ARE BACKFILLED WITH CLEAN COMPACTED SAND,
 - c. NOTIFYING THE ENGINEER OF ANY UNUSUAL FEATURE OR DISCREPANCY THAT MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING,
 - d. COMPACTING TO MEET THE REQUIREMENTS AS OUTLINED IN AS 3798 TABLE 5.1.
17. FILL MATERIAL (WHICH IS NOT ALWAYS APPARENT AT THE INITIAL INVESTIGATION STAGE) IS TO BE DEALT WITH AS FOLLOWS:
 - a. IF IT IS CERTIFIED BY OTHERS IT CAN REMAIN.
 - b. IF IT IS NOT CERTIFIED WILL REQUIRE REMOVAL DOWN TO NATURAL GROUND OR VERIFIED. ANY SAND CAN BE REUSED.
 - c. IF A PAD HAS ALREADY BEEN CONSTRUCTED, THE SITE CLASSIFICATION IS NOT CERTIFICATION OF THE PAD. CONTACT THIS OFFICE SHOULD A SAND PAD CERTIFICATION BE REQUIRED.
18. ANY ORGANIC MATTER OR ROOTS ENCOUNTERED, WHICH IS BEYOND WHAT IS NORMALLY CONSIDERED ACCEPTABLE IS TO BE REMOVED. THIS WILL NECESSITATE RAKING THE SITE TO REMOVE ORGANIC MATERIAL, TURNING THE SITE OVER AND RE- COMPACTING TO A MINIMUM.

RETAINING WALLS

19. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
20. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER TO THE RETAINING WALL THAN THE HEIGHT OF THE RETAINING WALL, THIS MAY PLACE ADDITIONAL LOADS ON THE WALL THAT WERE NOT INITIALLY DESIGNED FOR. AN INSPECTION OF THE STRUCTURAL INTEGRITY OF THE RETAINING WALL WILL BE REQUIRED TO PROVIDE CERTIFICATION AND/OR RECOMMENDATIONS PRIOR TO ANY CONSTRUCTION. PLEASE REFER BACK TO THIS OFFICE FOR ASSISTANCE.

STORMWATER DRAINAGE

21. ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF SOAKWELL AWAY FROM THE BUILDING AND SETBACK MINIMUM OF 1200mm, WHICHEVER IS GREATER. PLEASE REFER BACK TO THIS OFFICE IF REQUIRED THE SET-BACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



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PROJECT :
LOT 1129 BUTTERLEAF AV YANCHEP

CLIENT : DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 2 of 2)

WIND CLASSIFICATION

22. WIND CLASSIFICATION IS GIVEN FOR THE EXPECTED CONDITION 5 YEARS HENCE. THIS CLASSIFICATION IS LIMITED TO BUILDINGS CLASSES 1 AND 10, WHICH HAVE THE FOLLOWING LIMITATION (AS PER AS4055):

- a. MAXIMUM DISTANCE FROM THE GROUND LEVEL TO THE UNDERSIDE OF EAVES SHALL NOT EXCEED 6.0m.
- b. MAXIMUM DISTANCE FROM GROUND LEVEL TO THE HIGHEST POINT OF THE ROOF, EXCLUDING CHIMNEYS, SHALL NOT EXCEED 8.5m.
- c. THE ROOF PITCH SHALL NOT EXCEED 35°.
- d. THE WIDTH, EXCLUDING EAVES, SHALL NOT EXCEED 16.0m AND THE LENGTH SHALL NOT EXCEED 5x THE WIDTH.

IF THE BUILDING FALLS OUTSIDE OF THESE LIMITATIONS, THE STATED WIND CLASSIFICATION DOES NOT APPLY. REFER BACK TO THIS OFFICE FOR A REVISED WIND CLASSIFICATION.

ENVIRONMENTAL

23. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, IT IS RECOMMENDED THAT AN ENVIRONMENTAL ENGINEER BE ENGAGED.

SEISMIC

24. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF ≤ 0.11 . RECOMMENDED FOOTING DETAILS PROVIDED FOR SITES WITH AN EARTHQUAKE HAZARD FACTOR OF > 0.11 , ARE NOT FOR CONSTRUCTION, BUT FOR COSTING PURPOSES ONLY. IT IS RECOMMENDED REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

CORROSION CLASSIFICATION

25. THE CORROSION CLASSIFICATION HAS BEEN ASSESSED IN ACCORDANCE WITH AS3700.

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APPROVED

A blue ink handwritten signature is written over the 'APPROVED' field.

SITE CLASSIFICATION REPORT
CERTIFICATE 2595299

CLIENT DENSFORD CIVIL
JOB ADDRESS LOT 1130 BUTTERLEAF AV YANCHEP
CLIENT JOB NO.
OWNER
STRUCTERRE JOB NO. S1085321
DATE OF ASSESSMENT 17/11/22

SITE RECORD

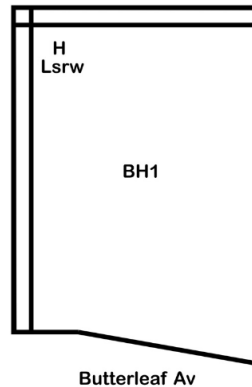


SITE CLASSIFICATION	A	<i>(in accordance with AS2870)</i>
FOOTING DETAIL	B1	
SAND PAD	No sand pad required structurally	
BUSHFIRE PRONE AREA	Yes	<i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	R3	<i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	N2	<i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	No Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1500 FILL sand trace gravel (limestone) - brown; 1500 - 1800 FILL sand; 1800 end of hole.

APPROXIMATE BOREHOLE LOCATIONS



NOTE 1 Explanatory Notes & Standard Recommendations

This site classification report must be read in conjunction with the applicable Explanatory Notes & Standard Recommendations. For A Class sites, refer to the Explanatory Notes and Standard Recommendations for Stable (A Class) Sites, version 1.0 July 2018. For S, M, H1, H2 & E Class sites, refer to the Explanatory Notes and Standard Recommendations for Reactive (S, M, H1, H2 & E Class) Sites version 1.0 July 2018. For Equivalent Class sites, refer to the Explanatory Notes and Standard Recommendations for Equivalent Class Sites, version 1.0 July 2018.

NOTE 2 Bushfire - Prone Area

The Site may be situated in a bush fire prone area in accordance with the Department of Fire and Emergency Services (DFES) Bushfire Prone Area Map (Reference: <http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/>) the current version at the time of this assessment. A Bushfire Attack Level (BAL) assessment may be required for this site, please confirm with the local authority. Should you require an assessment, please contact this Office.

ADDITIONAL NOTES / REQUIREMENTS

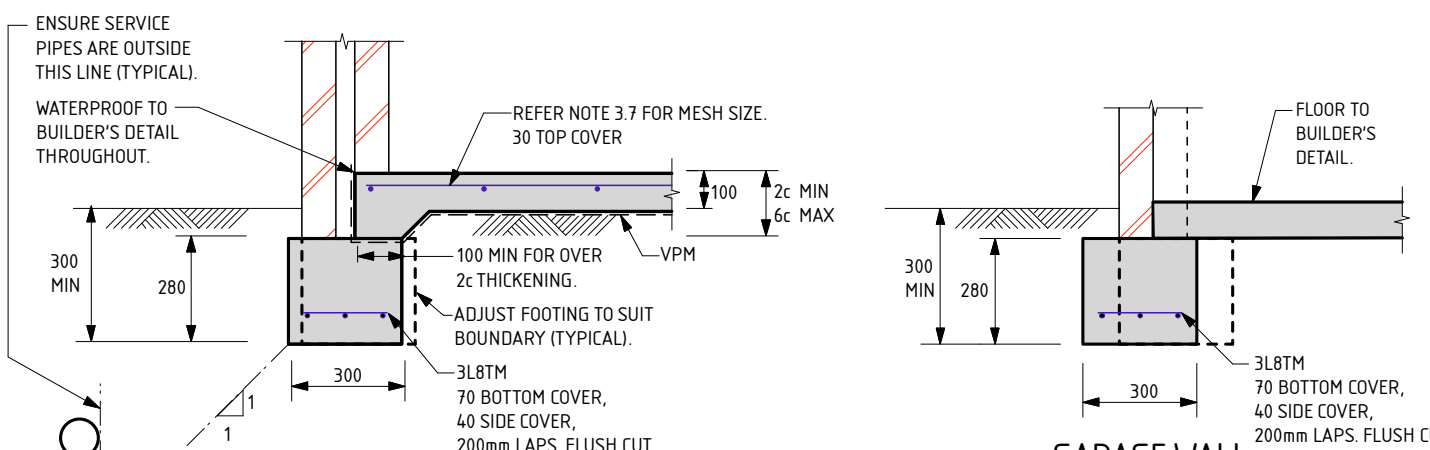
Site Condition

At the time of inspection the site was considered to be level and cleared. For specific levels of this site or topographical features, please refer to a professional site survey.

Structerre Geotech Reference

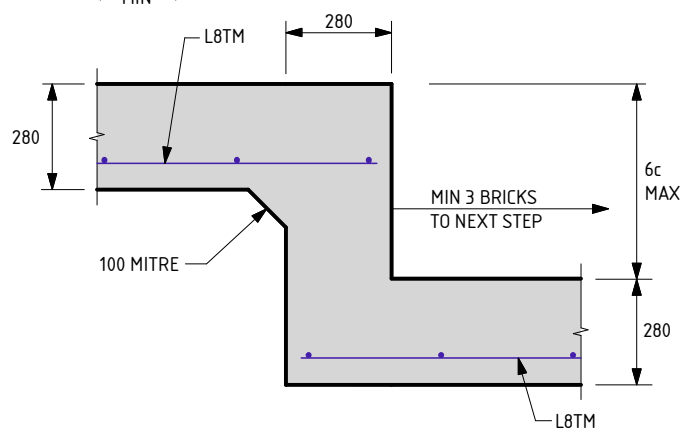
The Site Classification is based on any remedial works being successfully completed as outlined in the Structerre Geotechnical Report J414449 dated 01/08/2022. The footing details are subject to the recommendations being completed to an acceptable level as outlined in this report, if applicable.

-- END OF REPORT --

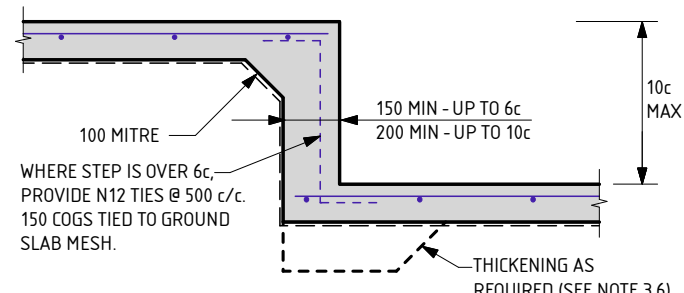


EXTERNAL WALLS

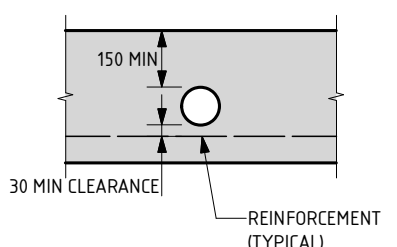
GARAGE WALL



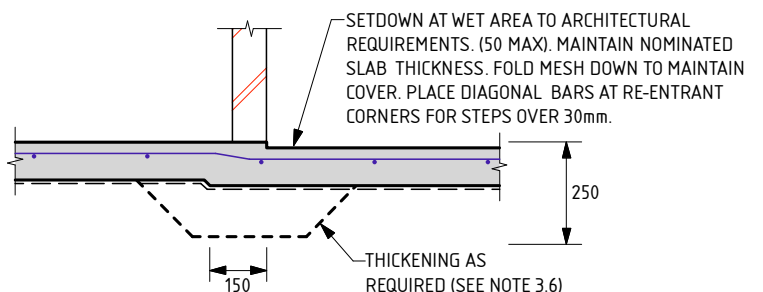
FOOTING STEP



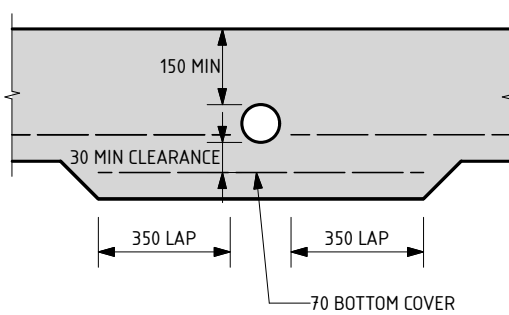
SLAB STEP



**OPTION A
PENETRATION CLEAR OF REINFORCEMENT**



WET AREA STEP



**OPTION B
PENETRATION INTERRUPTS REINFORCEMENT**

SERVICE PIPE DIAGRAM

- MAXIMUM PENETRATION SIZE TO BE Ø150.

THE APPROVED SIGNATURE ON THIS FOOTING AND SLAB DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS.
DATE LAST MODIFIED - 23/11/21

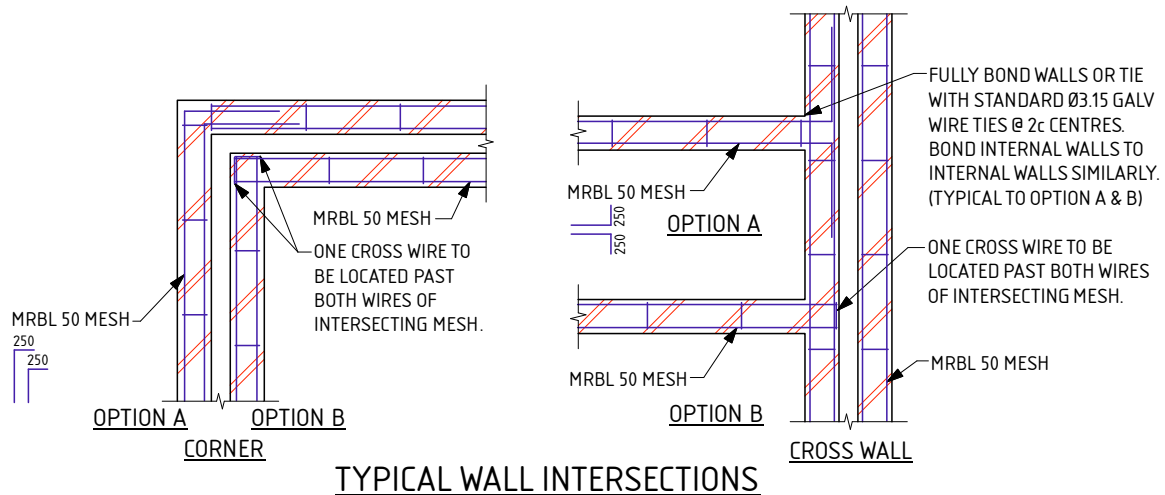
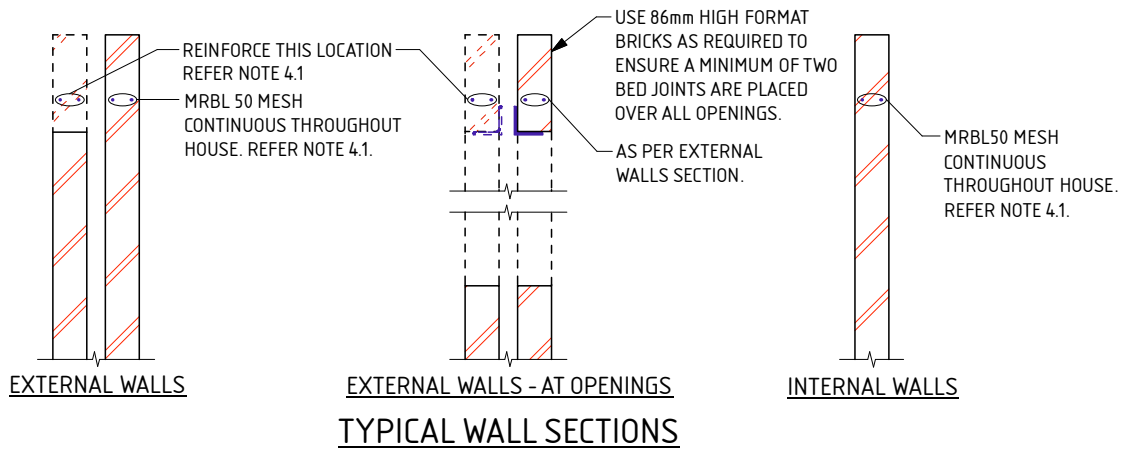
B1

SHEET 1 OF 2



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PROJECT: LOT 1130 BUTTERLEAF AV YANCHEP	
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SCALE: 1:20	APPROVED
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NOTES FOR B1 FOOTING

THESE NOTES ARE TO BE READ IN CONJUNCTION WITH THE ATTACHED FOOTING DETAILS.

1.0 SITE CLASSIFICATION

- 1.1 THE SITE CLASSIFICATION NOTED IN THE SITE CLASSIFICATION REPORT IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS AS DETERMINED BY AN ASSESSMENT OF THE SITE. REFER TO THE ATTACHED REPORT FOR ANY SPECIAL REQUIREMENTS.

2.0 EARTHWORKS

- 2.1 SAND PAD, IF APPLICABLE, TO BE AS PER SITE INSPECTION REPORT.
- 2.2 EARTHWORKS SHALL INCLUDE, BUT NOT BE LIMITED TO:
 - a) REMOVE ALL ORGANIC MATERIAL FROM THE BUILDING AREA.
 - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL FROM THE PAD AREA.
 - c) GRUB OUT ANY TREES WHERE NECESSARY AND ENSURE THE REMAINING HOLES ARE FILLED AND COMPACTED SATISFACTORILY WITH SAND.
 - d) NOTIFY THE ENGINEER OF ANY UNUSUAL FEATURES OR DISCREPANCIES WHICH MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING.
- 2.3 ANY PREDOMINANT ROCK IN THE HOUSE PAD AREAS IS TO BE INSPECTED BY THE ENGINEER.
- 2.4 IF CLAY ON SITE, AN ENGINEER TO BE CONSULTED.
- 2.5 SAND FILL TO BE CLEAN WELL DRAINED, WITH MAX FINES (PARTICLES UP TO 0.075mm) CONTENT OF 5%. SAND TO BE COMPACTED TO A MIN 6 BLOWS/300mm FOR 750mm OR THE DEPTH OF THE PAD.

3.0 FOOTINGS & SLABS

- 3.1 A MINIMUM OF 150mm OF SAND REQUIRED UNDER FOOTINGS.
- 3.2 ROOF AND SURFACE WATER TO BE TAKEN AWAY FROM FOUNDATION AREA.
- 3.3 EXCAVATIONS FOR ALL SERVICE PIPES NOT TO UNDERMINE FOOTINGS. IF UNDERMINING IS LIKELY TO OCCUR, CONTACT THE ENGINEER PRIOR TO PROCEEDING.
- 3.4 WHERE PLUMBING PIPES PASS THROUGH FOOTINGS OR SLAB, SPECIFIED TOTAL THICKNESS OF ALL CONCRETE IS ALWAYS TO BE MAINTAINED.
- 3.5 SETDOWN AT WET AREA TO ARCHITECTURAL REQUIREMENT (50mm MAX). MAINTAIN 100mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12 x 1200 LONG.
- 3.6 PLACE SLAB THICKENINGS (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m.
- 3.7 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 1:3. 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.

- 3.8 FOR SLAB SPANS > 32m REFER TO ENGINEER FOR MESH SIZE.

- 3.9 REINFORCEMENT SHALL BE IN ACCORDANCE WITH THE FOLLOWING STANDARDS;

- L INDICATES PLAIN OR DEFORMED WIRE R500L OR D500L TO AS/NZS 4671.
- SL INDICATES DEFORMED SQUARE MESH D500L TO AS/NZS 4671.
- N INDICATES DEFORMED BARS D500N TO AS/NZS 4671.
- TM SUFFIX INDICATES TRENCH MESH USING DEFORMED BARS D500L TO AS/NZS 4671.

ALL STEELWORK TO BE TREATED IN ACCORDANCE WITH THE NATIONAL CONSTRUCTION CODE OR TO AS 3700, AS APPLICABLE.

- 3.10 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.11 CONCRETE TO CONFORM WITH AS 3600.

- 3.12 BLENDED CEMENT TO CONFORM WITH AS 3972.

- 3.13 ALL CONCRETE TO BE N20/20/100.

- 3.14 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.

- 3.15 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.

- 3.16 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.

- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.

- 3.18 REFER BACK TO THE ENGINEER IF AGGRESSIVE SOILS ARE ENCOUNTERED (IN ACCORDANCE WITH AS2870).

- 3.19 CURE SLAB AS DETERMINED BY ENGINEER.

- 3.20 THE FOOTING DETAILS HAVE BEEN DESIGNED IN ACCORDANCE WITH AS3600 AND SECTION 4 OF AS2870.

4.0 MASONRY

- 4.1 PLACE MRBL50 MESH IN THE BED JOINT IMMEDIATELY OVER DOOR AND WINDOW HEAD LEVEL CONTINUOUS

- THROUGHOUT THE BUILDING IN BOTH INTERNAL AND EXTERNAL WALLS. MESH MAY STEP BED JOINTS

- UP TO A HEIGHT OF 1c, 500 LAP IS REQUIRED AT EACH STEP.

- 4.2 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.

- 4.3 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.

- 4.4 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1.

- 4.5 ALL PERPENDS TO BE FULLY MORTARED.

- 4.6 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.

- 4.7 2L6 WIRES MAY BE USED AS AN ALTERNATIVE TO THE MRBL50 MESH. WHERE L6 WIRES ARE USED, ALL SPLICES AND COGS TO BE 500 LONG.

DATE LAST MODIFIED - 23/11/21

SHEET 2 OF 2



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LOT 1130 BUTTERLEAF AV YANCHEP

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SCALE 1:20

APPROVED

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EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 1 of 2)

GENERAL

1. THE EXPLANATORY NOTES AND THE STANDARD RECOMMENDATIONS ARE TO BE READ IN CONJUNCTION WITH THE SITE CLASSIFICATION REPORT.
2. ALL REFERRED STANDARDS TO BE THE CURRENT VERSION AT THE TIME OF THE CONSTRUCTION.
3. THE PURPOSE OF THE SITE CLASSIFICATION REPORT IS TO CLASSIFY THE SITE IN ACCORDANCE WITH AS2870 "RESIDENTIAL SLABS AND FOOTING". IT IS NOT INTENDED FOR ANY OTHER PURPOSE, INCLUDING SOLE INFORMATION IN THE PROVISION OF A QUOTATION FOR SITE WORKS BY EARTH WORKERS. IT IS RECOMMENDED EARTH WORKERS PERFORM THEIR OWN INVESTIGATION FOR QUOTATION PURPOSES.
4. THE SITE CLASSIFICATION REPORT WILL INCLUDE BUT IS NOT LIMITED TO:
 - a. THE SITE CLASSIFICATION IN ACCORDANCE WITH AS2870 RESIDENTIAL SLABS AND FOOTING CONSTRUCTION,
 - b. A WIND RATING IN ACCORDANCE WITH AS 4055 WIND LOADS FOR HOUSING,
 - c. A COASTAL CORROSION CLASSIFICATION,
 - d. ADDITIONAL EARTHWORK RECOMMENDATION WHERE APPLICABLE,
 - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONDITIONS.
5. THE SITE CLASSIFICATION REPORT IS BASED ON THE SITE AS PRESENTED AT THE TIME OF ASSESSMENT. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
6. CLASS A SITES ARE STABLE SITES, GENERALLY SAND, LIMESTONE, GRAVEL OR A COMBINATION. CLASS P ARE PARTICULAR CLASSIFICATIONS SUCH AN UNUSUAL SITES OR SITES REQUIRING ADDITIONAL INVESTIGATION PRIOR TO PROVIDING DETAILS.
7. BOREHOLES EXCAVATED REVEAL THE SOIL PROFILE AT THE BOREHOLE LOCATION ONLY. FROM THIS, IT IS INFERRED THAT THESE ARE THE SOIL CONDITION OVER THE SITE. VARIATIONS CAN OCCUR WHICH MAY NOT HAVE BEEN DETECTED AT THE INVESTIGATION STAGE. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR REASSESSMENT.
8. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE IN ORDER TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
9. THIS REPORT IS FOR STRUCTERRE ONLY TO USE IN DESIGN. ANY DESIGN BY ANYONE ELSE FOR ANY STRUCTURE MUST BE SPECIFICALLY APPROVED BY STRUCTERRE. IF USED BY ANYONE ELSE FOR ANYTHING OTHER THAN A STRUCTERRE DESIGN OR STRUCTURE, STRUCTERRE TAKES NO RESPONSIBILITY.

SAND PAD

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WIND CLASSIFICATION

22. WIND CLASSIFICATION IS GIVEN FOR THE EXPECTED CONDITION 5 YEARS HENCE. THIS CLASSIFICATION IS LIMITED TO BUILDINGS CLASSES 1 AND 10, WHICH HAVE THE FOLLOWING LIMITATION (AS PER AS4055):

- a. MAXIMUM DISTANCE FROM THE GROUND LEVEL TO THE UNDERSIDE OF EAVES SHALL NOT EXCEED 6.0m.
- b. MAXIMUM DISTANCE FROM GROUND LEVEL TO THE HIGHEST POINT OF THE ROOF, EXCLUDING CHIMNEYS, SHALL NOT EXCEED 8.5m.
- c. THE ROOF PITCH SHALL NOT EXCEED 35°.
- d. THE WIDTH, EXCLUDING EAVES, SHALL NOT EXCEED 16.0m AND THE LENGTH SHALL NOT EXCEED 5x THE WIDTH.

IF THE BUILDING FALLS OUTSIDE OF THESE LIMITATIONS, THE STATED WIND CLASSIFICATION DOES NOT APPLY. REFER BACK TO THIS OFFICE FOR A REVISED WIND CLASSIFICATION.

ENVIRONMENTAL

23. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, IT IS RECOMMENDED THAT AN ENVIRONMENTAL ENGINEER BE ENGAGED.

SEISMIC

24. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF ≤ 0.11 . RECOMMENDED FOOTING DETAILS PROVIDED FOR SITES WITH AN EARTHQUAKE HAZARD FACTOR OF > 0.11 , ARE NOT FOR CONSTRUCTION, BUT FOR COSTING PURPOSES ONLY. IT IS RECOMMENDED REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

CORROSION CLASSIFICATION

25. THE CORROSION CLASSIFICATION HAS BEEN ASSESSED IN ACCORDANCE WITH AS3700.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham
Unit Trust trading as StrucTerre Consulting Engineers
1 ERINDALE ROAD, BALCATTA W.A. 6021
TEL (08) 9205 4500 FAX (08) 9205 4541 EMAIL: perth@strucTerre.com.au

PROJECT:
LOT 1130 BUTTERLEAF AV YANCHEP

CLIENT: DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

A blue ink handwritten signature is written over the 'APPROVED' field.

SITE CLASSIFICATION REPORT
CERTIFICATE 2595294

CLIENT DENSFORD CIVIL
JOB ADDRESS LOT 1131 BUTTERLEAF AV YANCHEP
CLIENT JOB NO.
OWNER
STRUCTERRE JOB NO. S1085318
DATE OF ASSESSMENT 17/11/22

SITE RECORD

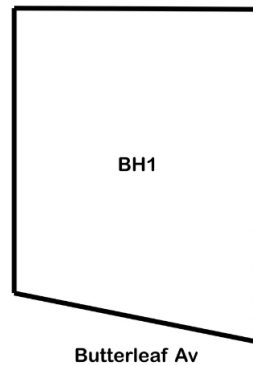


SITE CLASSIFICATION	A	<i>(in accordance with AS2870)</i>
FOOTING DETAIL	B1	
SAND PAD	No sand pad required structurally	
BUSHFIRE PRONE AREA	Yes	<i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	R3	<i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	N2	<i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	No Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1500 FILL sand trace gravel (limestone) - brown; 1500 - 1800 FILL sand; 1800 end of hole.

APPROXIMATE BOREHOLE LOCATIONS



NOTE 1 Explanatory Notes & Standard Recommendations

This site classification report must be read in conjunction with the applicable Explanatory Notes & Standard Recommendations. For A Class sites, refer to the Explanatory Notes and Standard Recommendations for Stable (A Class) Sites, version 1.0 July 2018. For S, M, H1, H2 & E Class sites, refer to the Explanatory Notes and Standard Recommendations for Reactive (S, M, H1, H2 & E Class) Sites version 1.0 July 2018. For Equivalent Class sites, refer to the Explanatory Notes and Standard Recommendations for Equivalent Class Sites, version 1.0 July 2018.

NOTE 2 Bushfire - Prone Area

The Site may be situated in a bush fire prone area in accordance with the Department of Fire and Emergency Services (DFES) Bushfire Prone Area Map (Reference: <http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/>) the current version at the time of this assessment. A Bushfire Attack Level (BAL) assessment may be required for this site, please confirm with the local authority. Should you require an assessment, please contact this Office.

ADDITIONAL NOTES / REQUIREMENTS

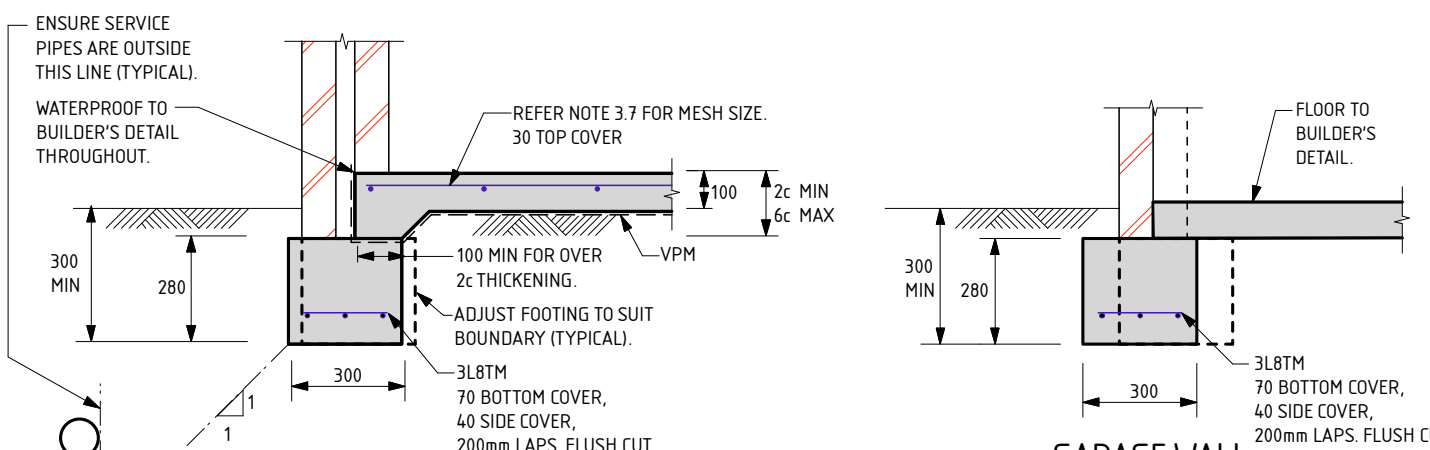
Site Condition

At the time of inspection the site was considered to be level and cleared. For specific levels of this site or topographical features, please refer to a professional site survey.

Structerre Geotech Reference

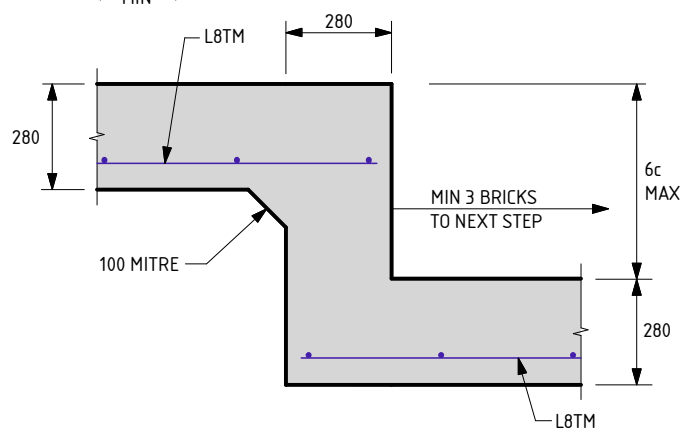
The Site Classification is based on any remedial works being successfully completed as outlined in the Structerre Geotechnical Report J414449 dated 01/08/2022. The footing details are subject to the recommendations being completed to an acceptable level as outlined in this report, if applicable.

-- END OF REPORT --

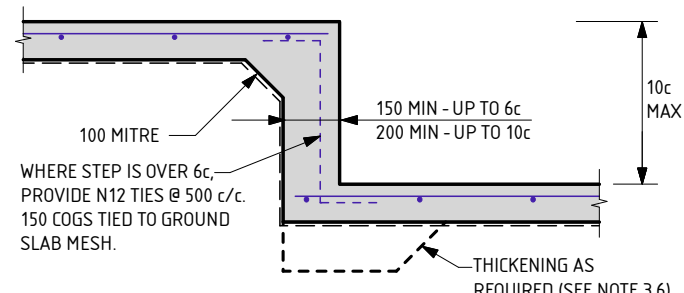


EXTERNAL WALLS

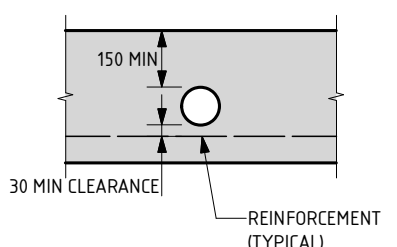
GARAGE WALL



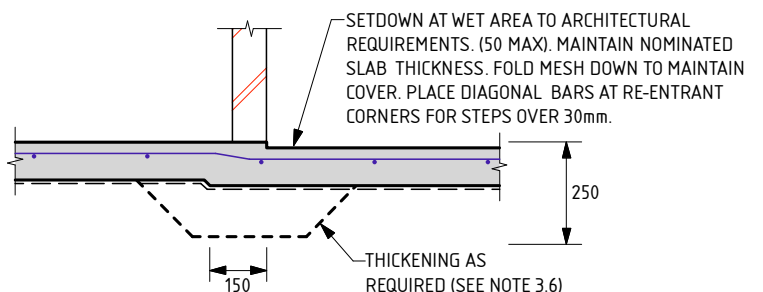
FOOTING STEP



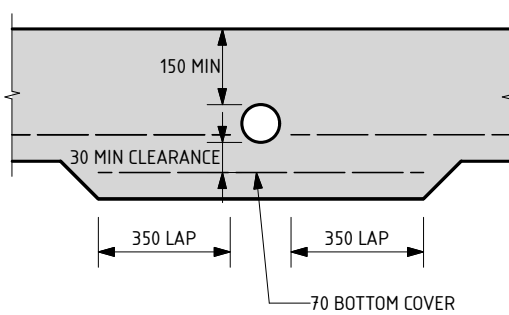
SLAB STEP



**OPTION A
PENETRATION CLEAR OF REINFORCEMENT**



WET AREA STEP



**OPTION B
PENETRATION INTERRUPTS REINFORCEMENT**

SERVICE PIPE DIAGRAM

- MAXIMUM PENETRATION SIZE TO BE Ø150.


THE APPROVED SIGNATURE ON THIS FOOTING AND SLAB DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS.
DATE LAST MODIFIED - 23/11/21

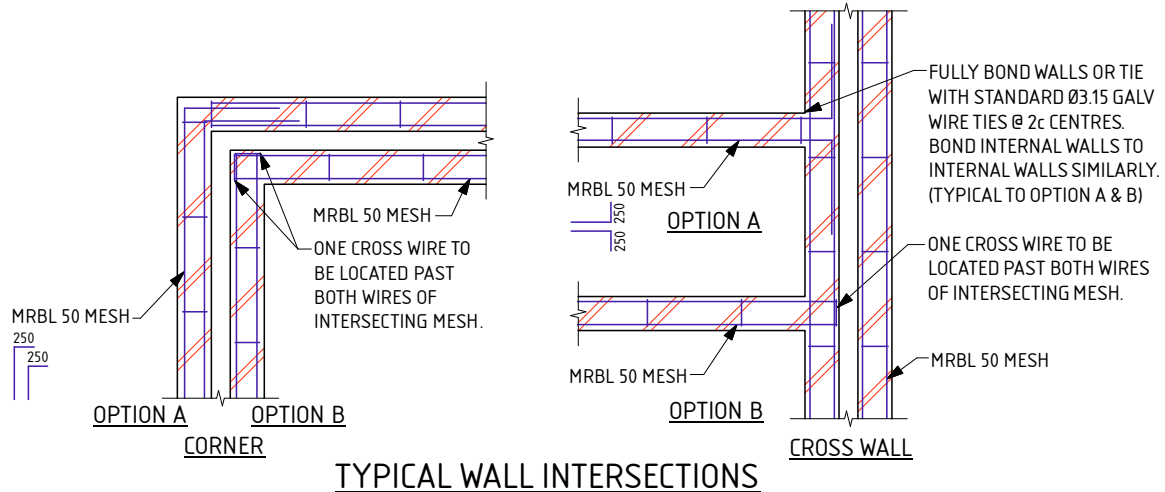
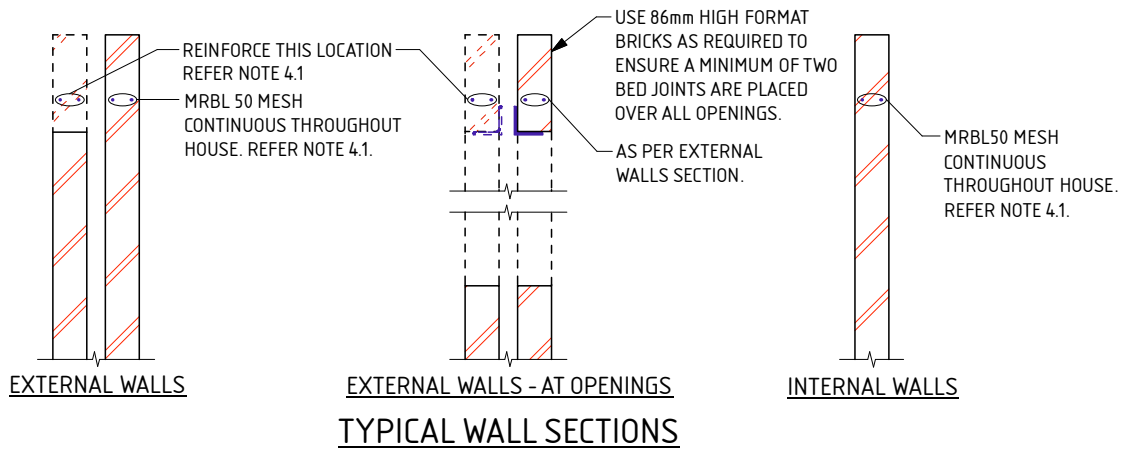
B1

SHEET 1 OF 2



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham Unit Trust trading as StrucTerre Consulting Engineers
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PROJECT: LOT 1131 BUTTERLEAF AV YANCHEP	
CLIENT: DENSFORD CIVIL	
SCALE: 1:20	APPROVED 
DATE: 21/11/22	



NOTES FOR B1 FOOTING

THESE NOTES ARE TO BE READ IN CONJUNCTION WITH THE ATTACHED FOOTING DETAILS.

1.0 SITE CLASSIFICATION

1.1 THE SITE CLASSIFICATION NOTED IN THE SITE CLASSIFICATION REPORT IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS AS DETERMINED BY AN ASSESSMENT OF THE SITE. REFER TO THE ATTACHED REPORT FOR ANY SPECIAL REQUIREMENTS.

2.0 EARTHWORKS

- 2.1 SAND PAD, IF APPLICABLE, TO BE AS PER SITE INSPECTION REPORT.
- 2.2 EARTHWORKS SHALL INCLUDE, BUT NOT BE LIMITED TO:
 - a) REMOVE ALL ORGANIC MATERIAL FROM THE BUILDING AREA.
 - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL FROM THE PAD AREA.
 - c) GRUB OUT ANY TREES WHERE NECESSARY AND ENSURE THE REMAINING HOLES ARE FILLED AND COMPACTED SATISFACTORILY WITH SAND.
 - d) NOTIFY THE ENGINEER OF ANY UNUSUAL FEATURES OR DISCREPANCIES WHICH MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING.
- 2.3 ANY PREDOMINANT ROCK IN THE HOUSE PAD AREAS IS TO BE INSPECTED BY THE ENGINEER.
- 2.4 IF CLAY ON SITE, AN ENGINEER TO BE CONSULTED.
- 2.5 SAND FILL TO BE CLEAN WELL DRAINED, WITH MAX FINES (PARTICLES UP TO 0.075mm) CONTENT OF 5%. SAND TO BE COMPACTED TO A MIN 6 BLOWS/300mm FOR 750mm OR THE DEPTH OF THE PAD.

3.0 FOOTINGS & SLABS

- 3.1 A MINIMUM OF 150mm OF SAND REQUIRED UNDER FOOTINGS.
- 3.2 ROOF AND SURFACE WATER TO BE TAKEN AWAY FROM FOUNDATION AREA.
- 3.3 EXCAVATIONS FOR ALL SERVICE PIPES NOT TO UNDERMINE FOOTINGS. IF UNDERMINING IS LIKELY TO OCCUR, CONTACT THE ENGINEER PRIOR TO PROCEEDING.
- 3.4 WHERE PLUMBING PIPES PASS THROUGH FOOTINGS OR SLAB, SPECIFIED TOTAL THICKNESS OF ALL CONCRETE IS ALWAYS TO BE MAINTAINED.
- 3.5 SETDOWN AT WET AREA TO ARCHITECTURAL REQUIREMENT (50mm MAX). MAINTAIN 100mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12 x 1200 LONG.
- 3.6 PLACE SLAB THICKENINGS (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m.
- 3.7 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 1:3. 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.

3.8 FOR SLAB SPANS > 32m REFER TO ENGINEER FOR MESH SIZE.

3.9 REINFORCEMENT SHALL BE IN ACCORDANCE WITH THE FOLLOWING STANDARDS;

- L INDICATES PLAIN OR DEFORMED WIRE R500L OR D500L TO AS/NZS 4671.
- SL INDICATES DEFORMED SQUARE MESH D500L TO AS/NZS 4671.
- N INDICATES DEFORMED BARS D500N TO AS/NZS 4671.
- TM SUFFIX INDICATES TRENCH MESH USING DEFORMED BARS D500L TO AS/NZS 4671.

ALL STEELWORK TO BE TREATED IN ACCORDANCE WITH THE NATIONAL CONSTRUCTION CODE OR TO AS 3700, AS APPLICABLE.

3.10 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

3.11 CONCRETE TO CONFORM WITH AS 3600.

3.12 BLENDED CEMENT TO CONFORM WITH AS 3972.

3.13 ALL CONCRETE TO BE N20/20/100.

3.14 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.

3.15 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.

3.16 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.

3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.

3.18 REFER BACK TO THE ENGINEER IF AGGRESSIVE SOILS ARE ENCOUNTERED (IN ACCORDANCE WITH AS2870).

3.19 CURE SLAB AS DETERMINED BY ENGINEER.

3.20 THE FOOTING DETAILS HAVE BEEN DESIGNED IN ACCORDANCE WITH AS3600 AND SECTION 4 OF AS2870.

4.0 MASONRY

- 4.1 PLACE MRBL50 MESH IN THE BED JOINT IMMEDIATELY OVER DOOR AND WINDOW HEAD LEVEL CONTINUOUS THROUGHOUT THE BUILDING IN BOTH INTERNAL AND EXTERNAL WALLS. MESH MAY STEP BED JOINTS UP TO A HEIGHT OF 1c, 500 LAP IS REQUIRED AT EACH STEP.
- 4.2 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.3 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.4 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1.
- 4.5 ALL PERPENDS TO BE FULLY MORTARED.
- 4.6 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.7 2L6 WIRES MAY BE USED AS AN ALTERNATIVE TO THE MRBL50 MESH. WHERE L6 WIRES ARE USED, ALL SPLICES AND COGS TO BE 500 LONG.

DATE LAST MODIFIED - 23/11/21

SHEET 2 OF 2



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PROJECT: LOT 1131 BUTTERLEAF AV YANCHEP

CLIENT: DENSFORD CIVIL

SCALE: 1:20

DATE: 21/11/22

APPROVED

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 1 of 2)

GENERAL

1. THE EXPLANATORY NOTES AND THE STANDARD RECOMMENDATIONS ARE TO BE READ IN CONJUNCTION WITH THE SITE CLASSIFICATION REPORT.
2. ALL REFERRED STANDARDS TO BE THE CURRENT VERSION AT THE TIME OF THE CONSTRUCTION.
3. THE PURPOSE OF THE SITE CLASSIFICATION REPORT IS TO CLASSIFY THE SITE IN ACCORDANCE WITH AS2870 "RESIDENTIAL SLABS AND FOOTING". IT IS NOT INTENDED FOR ANY OTHER PURPOSE, INCLUDING SOLE INFORMATION IN THE PROVISION OF A QUOTATION FOR SITE WORKS BY EARTH WORKERS. IT IS RECOMMENDED EARTH WORKERS PERFORM THEIR OWN INVESTIGATION FOR QUOTATION PURPOSES.
4. THE SITE CLASSIFICATION REPORT WILL INCLUDE BUT IS NOT LIMITED TO:
 - a. THE SITE CLASSIFICATION IN ACCORDANCE WITH AS2870 RESIDENTIAL SLABS AND FOOTING CONSTRUCTION,
 - b. A WIND RATING IN ACCORDANCE WITH AS 4055 WIND LOADS FOR HOUSING,
 - c. A COASTAL CORROSION CLASSIFICATION,
 - d. ADDITIONAL EARTHWORK RECOMMENDATION WHERE APPLICABLE,
 - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONDITIONS.
5. THE SITE CLASSIFICATION REPORT IS BASED ON THE SITE AS PRESENTED AT THE TIME OF ASSESSMENT. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
6. CLASS A SITES ARE STABLE SITES, GENERALLY SAND, LIMESTONE, GRAVEL OR A COMBINATION. CLASS P ARE PARTICULAR CLASSIFICATIONS SUCH AN UNUSUAL SITES OR SITES REQUIRING ADDITIONAL INVESTIGATION PRIOR TO PROVIDING DETAILS.
7. BOREHOLES EXCAVATED REVEAL THE SOIL PROFILE AT THE BOREHOLE LOCATION ONLY. FROM THIS, IT IS INFERRED THAT THESE ARE THE SOIL CONDITION OVER THE SITE. VARIATIONS CAN OCCUR WHICH MAY NOT HAVE BEEN DETECTED AT THE INVESTIGATION STAGE. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR REASSESSMENT.
8. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE IN ORDER TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
9. THIS REPORT IS FOR STRUCTERRE ONLY TO USE IN DESIGN. ANY DESIGN BY ANYONE ELSE FOR ANY STRUCTURE MUST BE SPECIFICALLY APPROVED BY STRUCTERRE. IF USED BY ANYONE ELSE FOR ANYTHING OTHER THAN A STRUCTERRE DESIGN OR STRUCTURE, STRUCTERRE TAKES NO RESPONSIBILITY.

SAND PAD

10. THE RECOMMENDED FOOTING DESIGN IS ONLY TO BE USED IN CONJUNCTION WITH THE RECOMMENDED SAND PAD AND EARTHWORKS AS OUTLINED IN THE SITE CLASSIFICATION REPORT.
11. THE RECOMMENDATIONS FOR THE SAND PAD IS FOR STRUCTURAL PURPOSES ONLY, AND DOES NOT PROVIDE THE MINIMUM FINISHED PAD LEVEL IN RELATION TO FLOOD LEVELS, OR DEPTH TO GROUNDWATER. SHOULD THE TEST BE LOCATED IN A LOW LYING OR FLOOD PRONE AREA, REFER TO THE LOCAL AUTHORITY FOR MINIMUM BUILDING HEIGHT.
12. IMPORTED FILL FOR USE AS A SAND PAD TO BE IN ACCORDANCE TO AS 3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS" WHICH INCLUDES BUT IS NOT LIMITED TO: BE FREE FROM ANY DELETERIOUS MATERIALS INCLUDING ORGANICS, (ROOTS, STUMPS, GRASSES, DECOMPOSED ORGANICS – PEAT, TIMBER, ETC), BUILDING RUBBLE, GLASS, PLASTICS OR WASTE MATERIAL. THE FINES CONTENT, (PERCENTAGE PASSING THE 0.075mm SIEVE) TO BE LESS THAN 5% BY MASS.
13. ON CLASS A SITES, A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 450mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
14. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
15. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

EARTHWORKS

16. RECOMMENDED EARTHWORKS TO BE CONDUCTED IN ACCORDANCE WITH AS3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS", AND TO INCLUDE BUT NOT BE LIMITED TO:
 - a. REMOVAL OF ALL VEGETATION, TOPSOILS, UNCONTROLLED FILLS AND OTHER DELETERIOUS MATERIALS FROM THE BUILDING AREA,
 - b. GRUBBING OUT OF ANY TREES ENSURING THE REMAINING HOLES ARE BACKFILLED WITH CLEAN COMPACTED SAND,
 - c. NOTIFYING THE ENGINEER OF ANY UNUSUAL FEATURE OR DISCREPANCY THAT MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING,
 - d. COMPACTING TO MEET THE REQUIREMENTS AS OUTLINED IN AS 3798 TABLE 5.1.
17. FILL MATERIAL (WHICH IS NOT ALWAYS APPARENT AT THE INITIAL INVESTIGATION STAGE) IS TO BE DEALT WITH AS FOLLOWS:
 - a. IF IT IS CERTIFIED BY OTHERS IT CAN REMAIN.
 - b. IF IT IS NOT CERTIFIED WILL REQUIRE REMOVAL DOWN TO NATURAL GROUND OR VERIFIED. ANY SAND CAN BE REUSED.
 - c. IF A PAD HAS ALREADY BEEN CONSTRUCTED, THE SITE CLASSIFICATION IS NOT CERTIFICATION OF THE PAD. CONTACT THIS OFFICE SHOULD A SAND PAD CERTIFICATION BE REQUIRED.
18. ANY ORGANIC MATTER OR ROOTS ENCOUNTERED, WHICH IS BEYOND WHAT IS NORMALLY CONSIDERED ACCEPTABLE IS TO BE REMOVED. THIS WILL NECESSITATE RAKING THE SITE TO REMOVE ORGANIC MATERIAL, TURNING THE SITE OVER AND RE- COMPACTING TO A MINIMUM.

RETAINING WALLS

19. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
20. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER TO THE RETAINING WALL THAN THE HEIGHT OF THE RETAINING WALL, THIS MAY PLACE ADDITIONAL LOADS ON THE WALL THAT WERE NOT INITIALLY DESIGNED FOR. AN INSPECTION OF THE STRUCTURAL INTEGRITY OF THE RETAINING WALL WILL BE REQUIRED TO PROVIDE CERTIFICATION AND/OR RECOMMENDATIONS PRIOR TO ANY CONSTRUCTION. PLEASE REFER BACK TO THIS OFFICE FOR ASSISTANCE.

STORMWATER DRAINAGE

21. ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF SOAKWELL AWAY FROM THE BUILDING AND SETBACK MINIMUM OF 1200mm, WHICHEVER IS GREATER. PLEASE REFER BACK TO THIS OFFICE IF REQUIRED THE SET-BACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



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1 ERINDALE ROAD, BALCATT WA 6021
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PROJECT :
LOT 1131 BUTTERLEAF AV YANCHEP

CLIENT : DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 2 of 2)

WIND CLASSIFICATION

22. WIND CLASSIFICATION IS GIVEN FOR THE EXPECTED CONDITION 5 YEARS HENCE. THIS CLASSIFICATION IS LIMITED TO BUILDINGS CLASSES 1 AND 10, WHICH HAVE THE FOLLOWING LIMITATION (AS PER AS4055):

- a. MAXIMUM DISTANCE FROM THE GROUND LEVEL TO THE UNDERSIDE OF EAVES SHALL NOT EXCEED 6.0m.
- b. MAXIMUM DISTANCE FROM GROUND LEVEL TO THE HIGHEST POINT OF THE ROOF, EXCLUDING CHIMNEYS, SHALL NOT EXCEED 8.5m.
- c. THE ROOF PITCH SHALL NOT EXCEED 35°.
- d. THE WIDTH, EXCLUDING EAVES, SHALL NOT EXCEED 16.0m AND THE LENGTH SHALL NOT EXCEED 5x THE WIDTH.

IF THE BUILDING FALLS OUTSIDE OF THESE LIMITATIONS, THE STATED WIND CLASSIFICATION DOES NOT APPLY. REFER BACK TO THIS OFFICE FOR A REVISED WIND CLASSIFICATION.

ENVIRONMENTAL

23. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, IT IS RECOMMENDED THAT AN ENVIRONMENTAL ENGINEER BE ENGAGED.

SEISMIC

24. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF ≤ 0.11 . RECOMMENDED FOOTING DETAILS PROVIDED FOR SITES WITH AN EARTHQUAKE HAZARD FACTOR OF > 0.11 , ARE NOT FOR CONSTRUCTION, BUT FOR COSTING PURPOSES ONLY. IT IS RECOMMENDED REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

CORROSION CLASSIFICATION

25. THE CORROSION CLASSIFICATION HAS BEEN ASSESSED IN ACCORDANCE WITH AS3700.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



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PROJECT:
LOT 1131 BUTTERLEAF AV YANCHEP

CLIENT: DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

A blue ink handwritten signature is written over the 'APPROVED' field.

SITE CLASSIFICATION REPORT
CERTIFICATE 2595297

CLIENT DENSFORD CIVIL
JOB ADDRESS LOT 1132 BUTTERLEAF AV YANCHEP
CLIENT JOB NO.
OWNER
STRUCTERRE JOB NO. S1085315
DATE OF ASSESSMENT 17/11/22

SITE RECORD

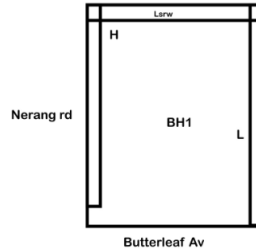


SITE CLASSIFICATION	A	<i>(in accordance with AS2870)</i>
FOOTING DETAIL	B1	
SAND PAD	No sand pad required structurally	
BUSHFIRE PRONE AREA	Yes	<i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	R3	<i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	N2	<i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	No Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1500 FILL sand trace gravel (limestone) - brown; 1500 - 1800 FILL sand; 1800 end of hole.

APPROXIMATE BOREHOLE LOCATIONS



NOTE 1 Explanatory Notes & Standard Recommendations

This site classification report must be read in conjunction with the applicable Explanatory Notes & Standard Recommendations. For A Class sites, refer to the Explanatory Notes and Standard Recommendations for Stable (A Class) Sites, version 1.0 July 2018. For S, M, H1, H2 & E Class sites, refer to the Explanatory Notes and Standard Recommendations for Reactive (S, M, H1, H2 & E Class) Sites version 1.0 July 2018. For Equivalent Class sites, refer to the Explanatory Notes and Standard Recommendations for Equivalent Class Sites, version 1.0 July 2018.

NOTE 2 Bushfire - Prone Area

The Site may be situated in a bush fire prone area in accordance with the Department of Fire and Emergency Services (DFES) Bushfire Prone Area Map (Reference: <http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/>) the current version at the time of this assessment. A Bushfire Attack Level (BAL) assessment may be required for this site, please confirm with the local authority. Should you require an assessment, please contact this Office.

ADDITIONAL NOTES / REQUIREMENTS

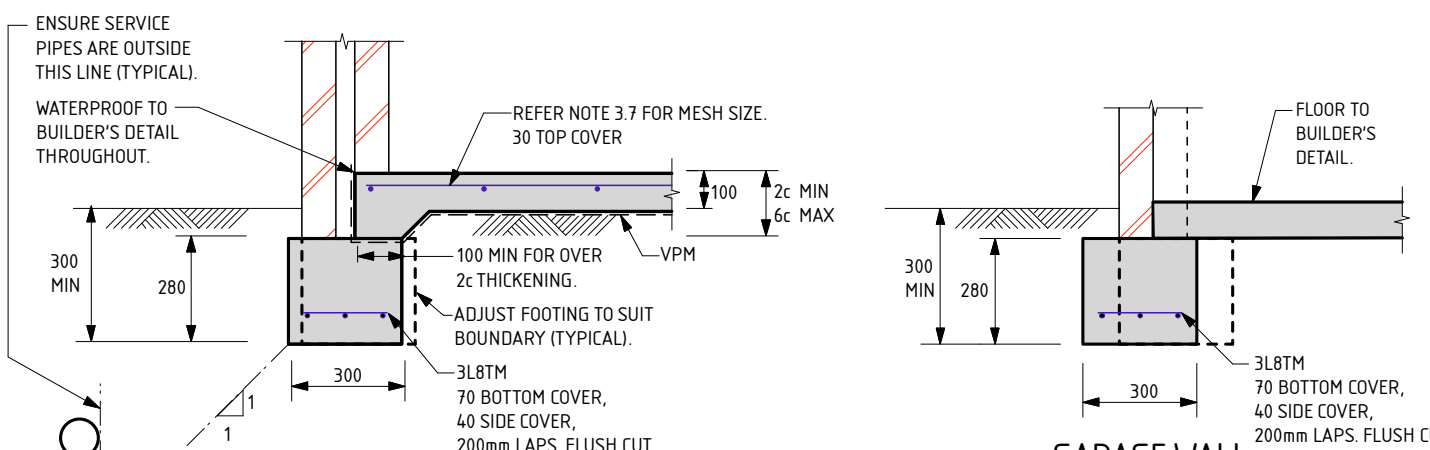
Site Condition

At the time of inspection the site was considered to be level and cleared. For specific levels of this site or topographical features, please refer to a professional site survey.

Structerre Geotech Reference

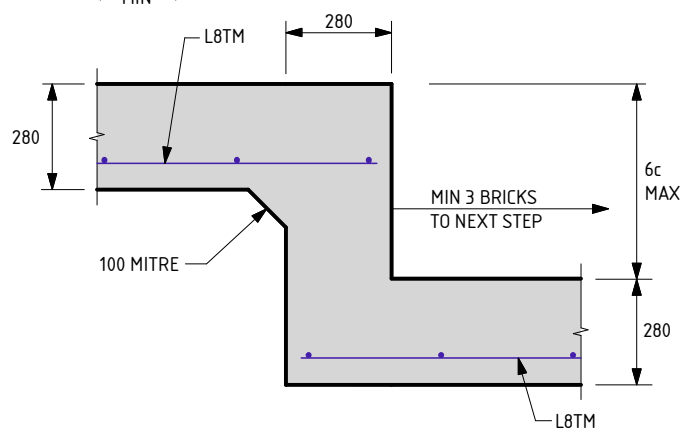
The Site Classification is based on any remedial works being successfully completed as outlined in the Structerre Geotechnical Report J414449 dated 01/08/2022. The footing details are subject to the recommendations being completed to an acceptable level as outlined in this report, if applicable.

-- END OF REPORT --

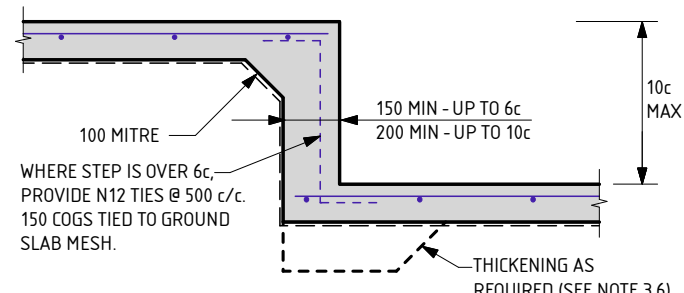


EXTERNAL WALLS

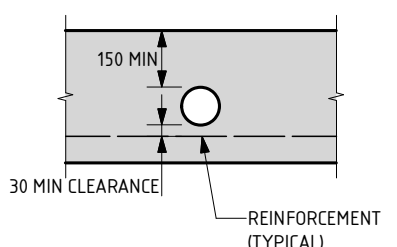
GARAGE WALL



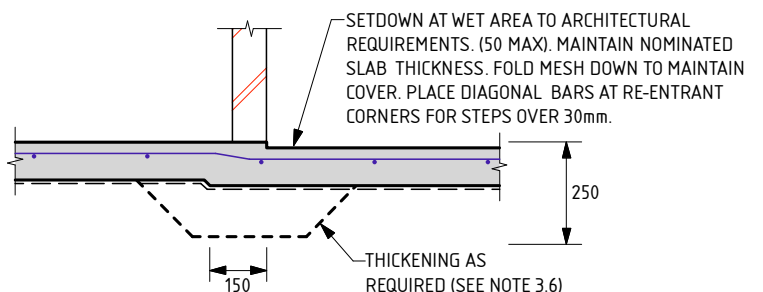
FOOTING STEP



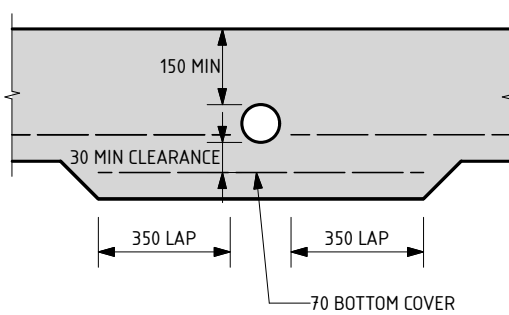
SLAB STEP



**OPTION A
PENETRATION CLEAR OF REINFORCEMENT**



WET AREA STEP



**OPTION B
PENETRATION INTERRUPTS REINFORCEMENT**

SERVICE PIPE DIAGRAM

- MAXIMUM PENETRATION SIZE TO BE Ø150.


THE APPROVED SIGNATURE ON THIS FOOTING AND SLAB DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS.
DATE LAST MODIFIED - 23/11/21

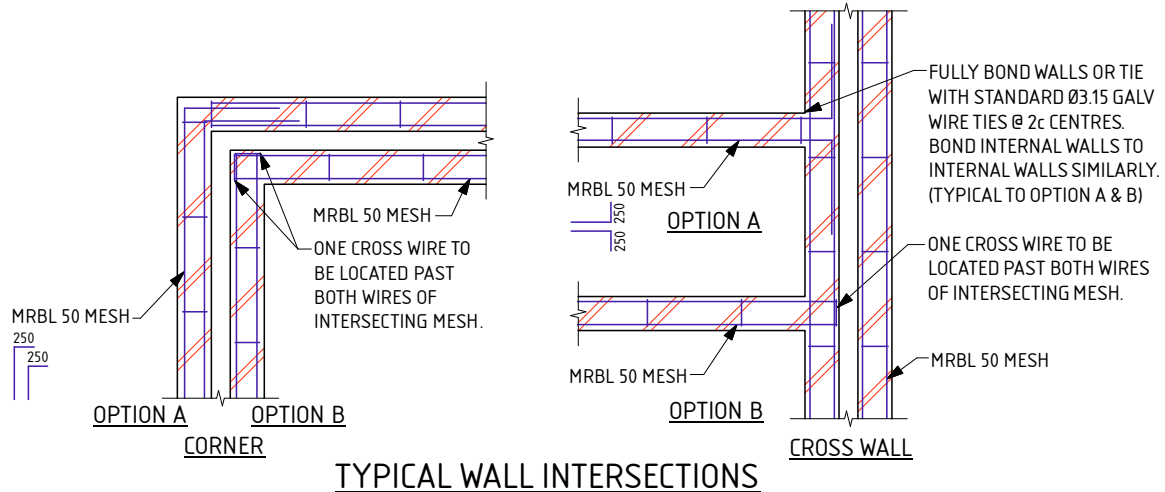
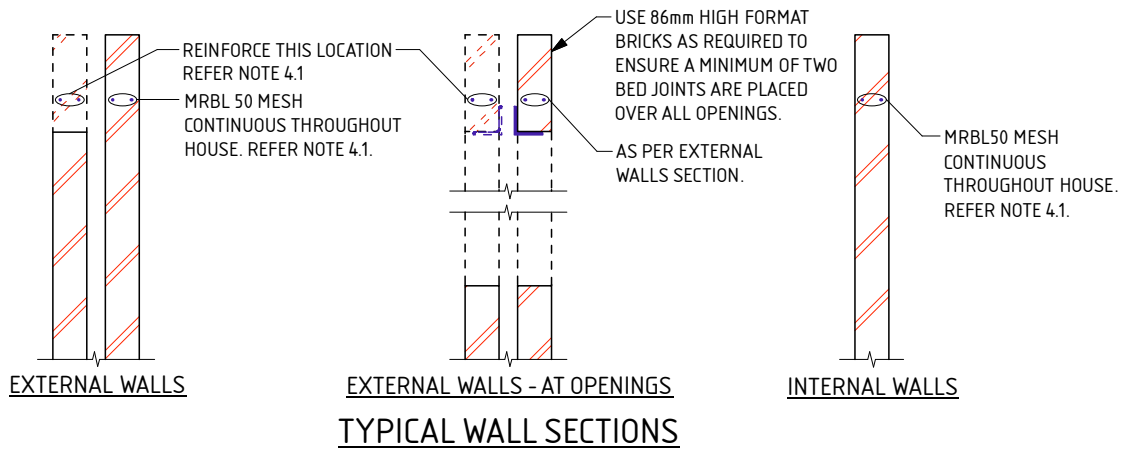
B1

SHEET 1 OF 2



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham Unit Trust trading as StrucTerre Consulting Engineers
1 ERINDALE ROAD, BALCATTA W.A. 6021
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PROJECT: LOT 1132 BUTTERLEAF AV YANCHEP	
CLIENT: DENSFORD CIVIL	
SCALE: 1:20	APPROVED 
DATE: 21/11/22	



NOTES FOR B1 FOOTING

THESE NOTES ARE TO BE READ IN CONJUNCTION WITH THE ATTACHED FOOTING DETAILS.

1.0 SITE CLASSIFICATION

1.1 THE SITE CLASSIFICATION NOTED IN THE SITE CLASSIFICATION REPORT IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS AS DETERMINED BY AN ASSESSMENT OF THE SITE. REFER TO THE ATTACHED REPORT FOR ANY SPECIAL REQUIREMENTS.

2.0 EARTHWORKS

- 2.1 SAND PAD, IF APPLICABLE, TO BE AS PER SITE INSPECTION REPORT.
- 2.2 EARTHWORKS SHALL INCLUDE, BUT NOT BE LIMITED TO:
 - a) REMOVE ALL ORGANIC MATERIAL FROM THE BUILDING AREA.
 - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL FROM THE PAD AREA.
 - c) GRUB OUT ANY TREES WHERE NECESSARY AND ENSURE THE REMAINING HOLES ARE FILLED AND COMPACTED SATISFACTORILY WITH SAND.
 - d) NOTIFY THE ENGINEER OF ANY UNUSUAL FEATURES OR DISCREPANCIES WHICH MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING.
- 2.3 ANY PREDOMINANT ROCK IN THE HOUSE PAD AREAS IS TO BE INSPECTED BY THE ENGINEER.
- 2.4 IF CLAY ON SITE, AN ENGINEER TO BE CONSULTED.
- 2.5 SAND FILL TO BE CLEAN WELL DRAINED, WITH MAX FINES (PARTICLES UP TO 0.075mm) CONTENT OF 5%. SAND TO BE COMPACTED TO A MIN 6 BLOWS/300mm FOR 750mm OR THE DEPTH OF THE PAD.

3.0 FOOTINGS & SLABS

- 3.1 A MINIMUM OF 150mm OF SAND REQUIRED UNDER FOOTINGS.
- 3.2 ROOF AND SURFACE WATER TO BE TAKEN AWAY FROM FOUNDATION AREA.
- 3.3 EXCAVATIONS FOR ALL SERVICE PIPES NOT TO UNDERMINE FOOTINGS. IF UNDERMINING IS LIKELY TO OCCUR, CONTACT THE ENGINEER PRIOR TO PROCEEDING.
- 3.4 WHERE PLUMBING PIPES PASS THROUGH FOOTINGS OR SLAB, SPECIFIED TOTAL THICKNESS OF ALL CONCRETE IS ALWAYS TO BE MAINTAINED.
- 3.5 SETDOWN AT WET AREA TO ARCHITECTURAL REQUIREMENT (50mm MAX). MAINTAIN 100mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12 x 1200 LONG.
- 3.6 PLACE SLAB THICKENINGS (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m.
- 3.7 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 1:3. 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.

- 3.8 FOR SLAB SPANS > 32m REFER TO ENGINEER FOR MESH SIZE.
- 3.9 REINFORCEMENT SHALL BE IN ACCORDANCE WITH THE FOLLOWING STANDARDS:
 - L INDICATES PLAIN OR DEFORMED WIRE R500L OR D500L TO AS/NZS 4671.
 - SL INDICATES DEFORMED SQUARE MESH D500L TO AS/NZS 4671.
 - N INDICATES DEFORMED BARS D500N TO AS/NZS 4671.
 - TM SUFFIX INDICATES TRENCH MESH USING DEFORMED BARS D500L TO AS/NZS 4671.
- ALL STEELWORK TO BE TREATED IN ACCORDANCE WITH THE NATIONAL CONSTRUCTION CODE OR TO AS 3700, AS APPLICABLE.
- 3.10 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.
- 3.11 CONCRETE TO CONFORM WITH AS 3600.
- 3.12 BLENDED CEMENT TO CONFORM WITH AS 3972.
- 3.13 ALL CONCRETE TO BE N20/20/100.
- 3.14 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.15 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.16 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.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 REFER BACK TO THE ENGINEER IF AGGRESSIVE SOILS ARE ENCOUNTERED (IN ACCORDANCE WITH AS2870).
- 3.19 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.20 THE FOOTING DETAILS HAVE BEEN DESIGNED IN ACCORDANCE WITH AS3600 AND SECTION 4 OF AS2870.

4.0 MASONRY

- 4.1 PLACE MRBL50 MESH IN THE BED JOINT IMMEDIATELY OVER DOOR AND WINDOW HEAD LEVEL CONTINUOUS THROUGHOUT THE BUILDING IN BOTH INTERNAL AND EXTERNAL WALLS. MESH MAY STEP BED JOINTS UP TO A HEIGHT OF 1c, 500 LAP IS REQUIRED AT EACH STEP.
- 4.2 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.3 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.4 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1.
- 4.5 ALL PERPENDS TO BE FULLY MORTARED.
- 4.6 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.7 2L6 WIRES MAY BE USED AS AN ALTERNATIVE TO THE MRBL50 MESH. WHERE L6 WIRES ARE USED, ALL SPLICES AND COGS TO BE 500 LONG.

DATE LAST MODIFIED - 23/11/21

SHEET 2 OF 2



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PROJECT: LOT 1132 BUTTERLEAF AV YANCHEP	
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EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 1 of 2)

GENERAL

1. THE EXPLANATORY NOTES AND THE STANDARD RECOMMENDATIONS ARE TO BE READ IN CONJUNCTION WITH THE SITE CLASSIFICATION REPORT.
2. ALL REFERRED STANDARDS TO BE THE CURRENT VERSION AT THE TIME OF THE CONSTRUCTION.
3. THE PURPOSE OF THE SITE CLASSIFICATION REPORT IS TO CLASSIFY THE SITE IN ACCORDANCE WITH AS2870 "RESIDENTIAL SLABS AND FOOTING". IT IS NOT INTENDED FOR ANY OTHER PURPOSE, INCLUDING SOLE INFORMATION IN THE PROVISION OF A QUOTATION FOR SITE WORKS BY EARTH WORKERS. IT IS RECOMMENDED EARTH WORKERS PERFORM THEIR OWN INVESTIGATION FOR QUOTATION PURPOSES.
4. THE SITE CLASSIFICATION REPORT WILL INCLUDE BUT IS NOT LIMITED TO:
 - a. THE SITE CLASSIFICATION IN ACCORDANCE WITH AS2870 RESIDENTIAL SLABS AND FOOTING CONSTRUCTION,
 - b. A WIND RATING IN ACCORDANCE WITH AS 4055 WIND LOADS FOR HOUSING,
 - c. A COASTAL CORROSION CLASSIFICATION,
 - d. ADDITIONAL EARTHWORK RECOMMENDATION WHERE APPLICABLE,
 - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONDITIONS.
5. THE SITE CLASSIFICATION REPORT IS BASED ON THE SITE AS PRESENTED AT THE TIME OF ASSESSMENT. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
6. CLASS A SITES ARE STABLE SITES, GENERALLY SAND, LIMESTONE, GRAVEL OR A COMBINATION. CLASS P ARE PARTICULAR CLASSIFICATIONS SUCH AN UNUSUAL SITES OR SITES REQUIRING ADDITIONAL INVESTIGATION PRIOR TO PROVIDING DETAILS.
7. BOREHOLES EXCAVATED REVEAL THE SOIL PROFILE AT THE BOREHOLE LOCATION ONLY. FROM THIS, IT IS INFERRED THAT THESE ARE THE SOIL CONDITION OVER THE SITE. VARIATIONS CAN OCCUR WHICH MAY NOT HAVE BEEN DETECTED AT THE INVESTIGATION STAGE. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR REASSESSMENT.
8. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE IN ORDER TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
9. THIS REPORT IS FOR STRUCTERRE ONLY TO USE IN DESIGN. ANY DESIGN BY ANYONE ELSE FOR ANY STRUCTURE MUST BE SPECIFICALLY APPROVED BY STRUCTERRE. IF USED BY ANYONE ELSE FOR ANYTHING OTHER THAN A STRUCTERRE DESIGN OR STRUCTURE, STRUCTERRE TAKES NO RESPONSIBILITY.

SAND PAD

10. THE RECOMMENDED FOOTING DESIGN IS ONLY TO BE USED IN CONJUNCTION WITH THE RECOMMENDED SAND PAD AND EARTHWORKS AS OUTLINED IN THE SITE CLASSIFICATION REPORT.
11. THE RECOMMENDATIONS FOR THE SAND PAD IS FOR STRUCTURAL PURPOSES ONLY, AND DOES NOT PROVIDE THE MINIMUM FINISHED PAD LEVEL IN RELATION TO FLOOD LEVELS, OR DEPTH TO GROUNDWATER. SHOULD THE TEST BE LOCATED IN A LOW LYING OR FLOOD PRONE AREA, REFER TO THE LOCAL AUTHORITY FOR MINIMUM BUILDING HEIGHT.
12. IMPORTED FILL FOR USE AS A SAND PAD TO BE IN ACCORDANCE TO AS 3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS" WHICH INCLUDES BUT IS NOT LIMITED TO: BE FREE FROM ANY DELETERIOUS MATERIALS INCLUDING ORGANICS, (ROOTS, STUMPS, GRASSES, DECOMPOSED ORGANICS – PEAT, TIMBER, ETC), BUILDING RUBBLE, GLASS, PLASTICS OR WASTE MATERIAL. THE FINES CONTENT, (PERCENTAGE PASSING THE 0.075mm SIEVE) TO BE LESS THAN 5% BY MASS.
13. ON CLASS A SITES, A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 450mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
14. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
15. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

EARTHWORKS

16. RECOMMENDED EARTHWORKS TO BE CONDUCTED IN ACCORDANCE WITH AS3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS", AND TO INCLUDE BUT NOT BE LIMITED TO:
 - a. REMOVAL OF ALL VEGETATION, TOPSOILS, UNCONTROLLED FILLS AND OTHER DELETERIOUS MATERIALS FROM THE BUILDING AREA,
 - b. GRUBBING OUT OF ANY TREES ENSURING THE REMAINING HOLES ARE BACKFILLED WITH CLEAN COMPACTED SAND,
 - c. NOTIFYING THE ENGINEER OF ANY UNUSUAL FEATURE OR DISCREPANCY THAT MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING,
 - d. COMPACTING TO MEET THE REQUIREMENTS AS OUTLINED IN AS 3798 TABLE 5.1.
17. FILL MATERIAL (WHICH IS NOT ALWAYS APPARENT AT THE INITIAL INVESTIGATION STAGE) IS TO BE DEALT WITH AS FOLLOWS:
 - a. IF IT IS CERTIFIED BY OTHERS IT CAN REMAIN.
 - b. IF IT IS NOT CERTIFIED WILL REQUIRE REMOVAL DOWN TO NATURAL GROUND OR VERIFIED. ANY SAND CAN BE REUSED.
 - c. IF A PAD HAS ALREADY BEEN CONSTRUCTED, THE SITE CLASSIFICATION IS NOT CERTIFICATION OF THE PAD. CONTACT THIS OFFICE SHOULD A SAND PAD CERTIFICATION BE REQUIRED.
18. ANY ORGANIC MATTER OR ROOTS ENCOUNTERED, WHICH IS BEYOND WHAT IS NORMALLY CONSIDERED ACCEPTABLE IS TO BE REMOVED. THIS WILL NECESSITATE RAKING THE SITE TO REMOVE ORGANIC MATERIAL, TURNING THE SITE OVER AND RE- COMPACTING TO A MINIMUM.

RETAINING WALLS

19. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
20. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER TO THE RETAINING WALL THAN THE HEIGHT OF THE RETAINING WALL, THIS MAY PLACE ADDITIONAL LOADS ON THE WALL THAT WERE NOT INITIALLY DESIGNED FOR. AN INSPECTION OF THE STRUCTURAL INTEGRITY OF THE RETAINING WALL WILL BE REQUIRED TO PROVIDE CERTIFICATION AND/OR RECOMMENDATIONS PRIOR TO ANY CONSTRUCTION. PLEASE REFER BACK TO THIS OFFICE FOR ASSISTANCE.

STORMWATER DRAINAGE

21. ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF SOAKWELL AWAY FROM THE BUILDING AND SETBACK MINIMUM OF 1200mm, WHICHEVER IS GREATER. PLEASE REFER BACK TO THIS OFFICE IF REQUIRED THE SET-BACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



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PROJECT :
LOT 1132 BUTTERLEAF AV YANCHEP

CLIENT : DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 2 of 2)

WIND CLASSIFICATION

22. WIND CLASSIFICATION IS GIVEN FOR THE EXPECTED CONDITION 5 YEARS HENCE. THIS CLASSIFICATION IS LIMITED TO BUILDINGS CLASSES 1 AND 10, WHICH HAVE THE FOLLOWING LIMITATION (AS PER AS4055):

- a. MAXIMUM DISTANCE FROM THE GROUND LEVEL TO THE UNDERSIDE OF EAVES SHALL NOT EXCEED 6.0m.
- b. MAXIMUM DISTANCE FROM GROUND LEVEL TO THE HIGHEST POINT OF THE ROOF, EXCLUDING CHIMNEYS, SHALL NOT EXCEED 8.5m.
- c. THE ROOF PITCH SHALL NOT EXCEED 35°.
- d. THE WIDTH, EXCLUDING EAVES, SHALL NOT EXCEED 16.0m AND THE LENGTH SHALL NOT EXCEED 5x THE WIDTH.

IF THE BUILDING FALLS OUTSIDE OF THESE LIMITATIONS, THE STATED WIND CLASSIFICATION DOES NOT APPLY. REFER BACK TO THIS OFFICE FOR A REVISED WIND CLASSIFICATION.

ENVIRONMENTAL

23. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, IT IS RECOMMENDED THAT AN ENVIRONMENTAL ENGINEER BE ENGAGED.

SEISMIC

24. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF ≤ 0.11 . RECOMMENDED FOOTING DETAILS PROVIDED FOR SITES WITH AN EARTHQUAKE HAZARD FACTOR OF > 0.11 , ARE NOT FOR CONSTRUCTION, BUT FOR COSTING PURPOSES ONLY. IT IS RECOMMENDED REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

CORROSION CLASSIFICATION

25. THE CORROSION CLASSIFICATION HAS BEEN ASSESSED IN ACCORDANCE WITH AS3700.

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APPROVED

A blue ink handwritten signature is written over the 'APPROVED' field.

SITE CLASSIFICATION REPORT
CERTIFICATE 2595279

CLIENT DENSFORD CIVIL
JOB ADDRESS LOT 1133 NERANG RD YANCHEP
CLIENT JOB NO.
OWNER
STRUCTERRE JOB NO. S1085313
DATE OF ASSESSMENT 17/11/22

SITE RECORD

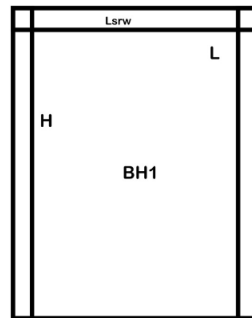


SITE CLASSIFICATION	A	<i>(in accordance with AS2870)</i>
FOOTING DETAIL	B1	
SAND PAD	No sand pad required structurally	
BUSHFIRE PRONE AREA	Yes	<i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	R3	<i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	N2	<i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	Partial Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1500 FILL sand trace gravel (limestone) - brown; 1500 - 1800 FILL sand; 1800 end of hole.

APPROXIMATE BOREHOLE LOCATIONS



Nerang rd

NOTE 1 Explanatory Notes & Standard Recommendations

This site classification report must be read in conjunction with the applicable Explanatory Notes & Standard Recommendations. For A Class sites, refer to the Explanatory Notes and Standard Recommendations for Stable (A Class) Sites, version 1.0 July 2018. For S, M, H1, H2 & E Class sites, refer to the Explanatory Notes and Standard Recommendations for Reactive (S, M, H1, H2 & E Class) Sites version 1.0 July 2018. For Equivalent Class sites, refer to the Explanatory Notes and Standard Recommendations for Equivalent Class Sites, version 1.0 July 2018.

NOTE 2 Bushfire - Prone Area

The Site may be situated in a bush fire prone area in accordance with the Department of Fire and Emergency Services (DFES) Bushfire Prone Area Map (Reference: <http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/>) the current version at the time of this assessment. A Bushfire Attack Level (BAL) assessment may be required for this site, please confirm with the local authority. Should you require an assessment, please contact this Office.

ADDITIONAL NOTES / REQUIREMENTS

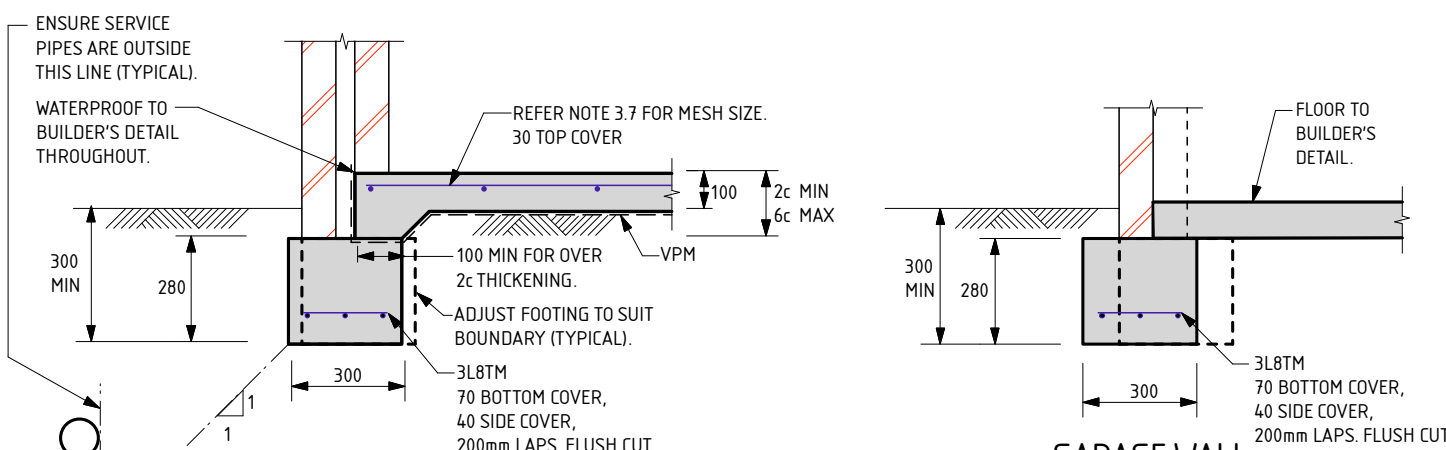
Site Condition

At the time of inspection the site was considered to be level and cleared. For specific levels of this site or topographical features, please refer to a professional site survey.

Structerre Geotech Reference

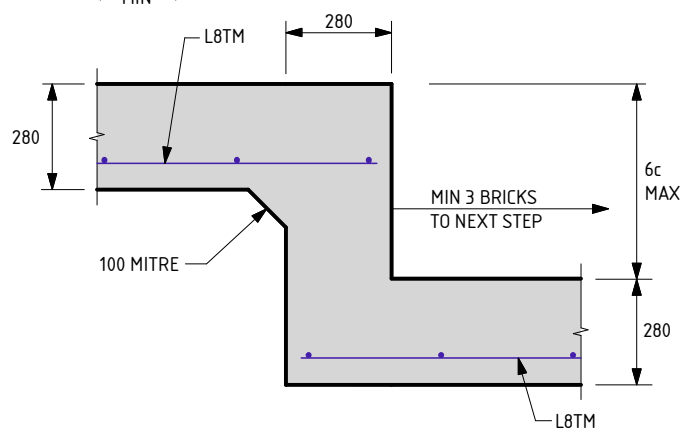
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-- END OF REPORT --

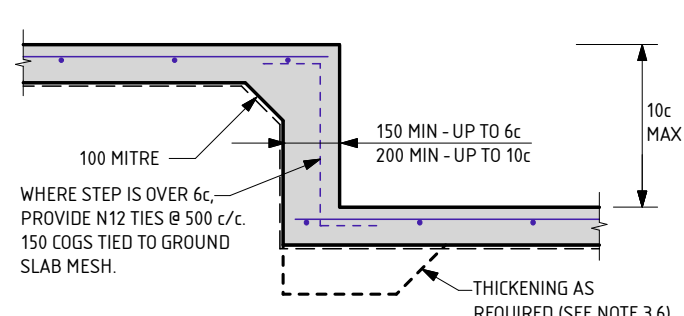


EXTERNAL WALLS

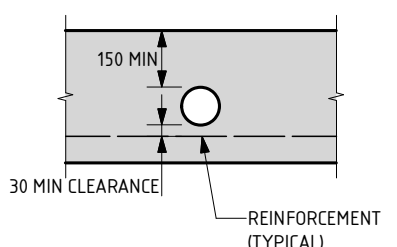
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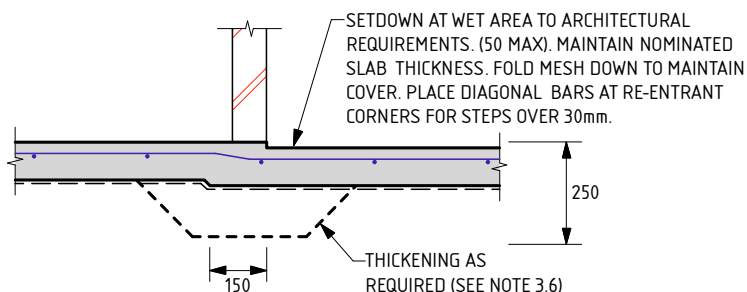
FOOTING STEP



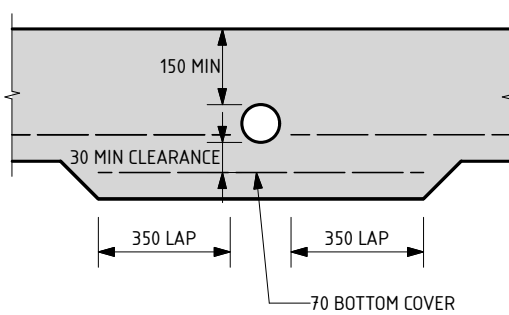
SLAB STEP



**OPTION A
PENETRATION CLEAR OF REINFORCEMENT**



WET AREA STEP



**OPTION B
PENETRATION INTERRUPTS REINFORCEMENT**

SERVICE PIPE DIAGRAM

- MAXIMUM PENETRATION SIZE TO BE Ø150.

THE APPROVED SIGNATURE ON THIS FOOTING AND SLAB DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS.
DATE LAST MODIFIED - 23/11/21

B1

SHEET 1 OF 2



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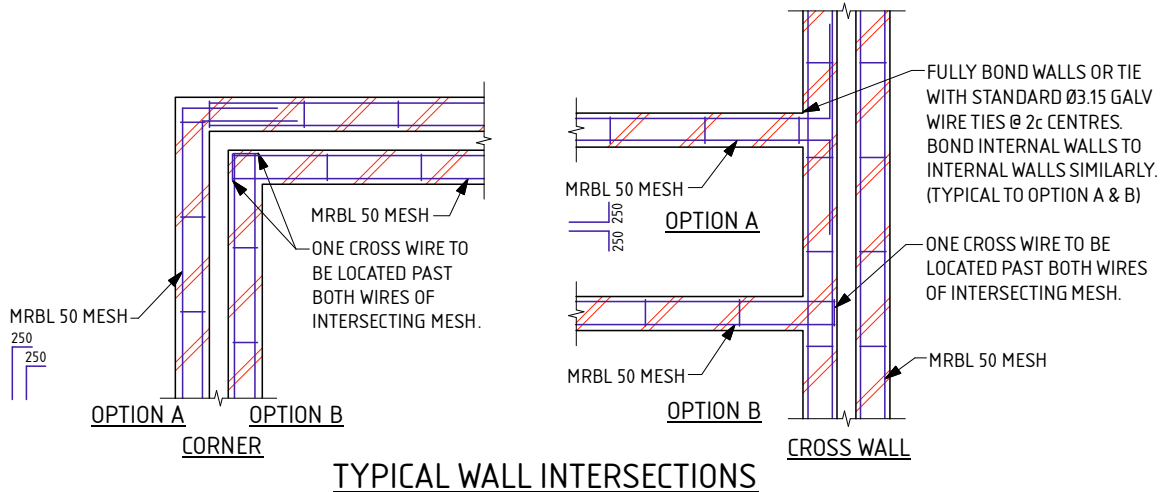
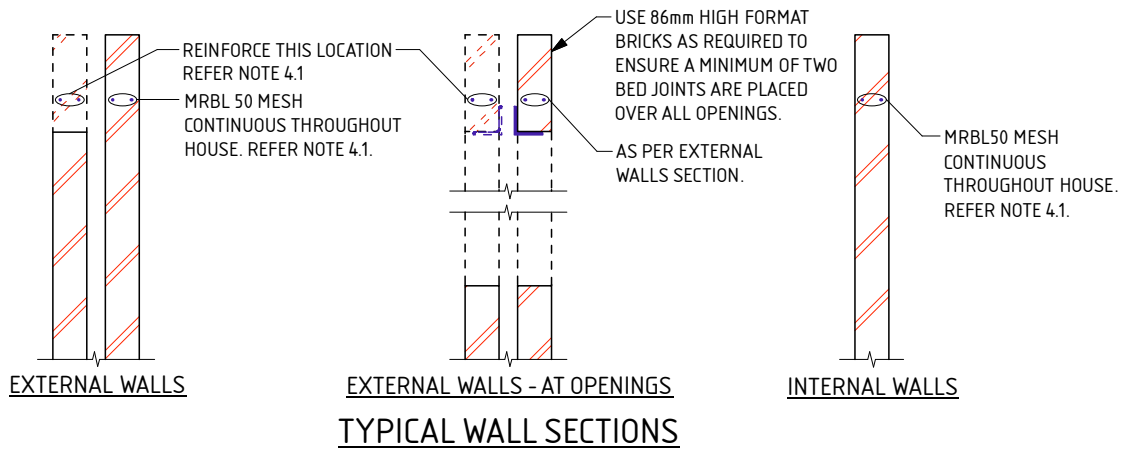
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 - REMOVE ALL RUBBISH AND DELETERIOUS FILL FROM THE PAD AREA.
 - GRUB OUT ANY TREES WHERE NECESSARY AND ENSURE THE REMAINING HOLES ARE FILLED AND COMPACTED SATISFACTORILY WITH SAND.
 - NOTIFY THE ENGINEER OF ANY UNUSUAL FEATURES OR DISCREPANCIES WHICH MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING.
- 2.3 ANY PREDOMINANT ROCK IN THE HOUSE PAD AREAS IS TO BE INSPECTED BY THE ENGINEER.
- 2.4 IF CLAY ON SITE, AN ENGINEER TO BE CONSULTED.
- 2.5 SAND FILL TO BE CLEAN WELL DRAINED, WITH MAX FINES (PARTICLES UP TO 0.075mm) CONTENT OF 5%. SAND TO BE COMPACTED TO A MIN 6 BLOWS/300mm FOR 750mm OR THE DEPTH OF THE PAD.

3.0 FOOTINGS & SLABS

- 3.1 A MINIMUM OF 150mm OF SAND REQUIRED UNDER FOOTINGS.
- 3.2 ROOF AND SURFACE WATER TO BE TAKEN AWAY FROM FOUNDATION AREA.
- 3.3 EXCAVATIONS FOR ALL SERVICE PIPES NOT TO UNDERMINE FOOTINGS. IF UNDERMINING IS LIKELY TO OCCUR, CONTACT THE ENGINEER PRIOR TO PROCEEDING.
- 3.4 WHERE PLUMBING PIPES PASS THROUGH FOOTINGS OR SLAB, SPECIFIED TOTAL THICKNESS OF ALL CONCRETE IS ALWAYS TO BE MAINTAINED.
- 3.5 SETDOWN AT WET AREA TO ARCHITECTURAL REQUIREMENT (50mm MAX). MAINTAIN 100mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12 x 1200 LONG.
- 3.6 PLACE SLAB THICKENINGS (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m.
- 3.7 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 1:3. 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.

- 3.8 FOR SLAB SPANS > 32m REFER TO ENGINEER FOR MESH SIZE.

- 3.9 REINFORCEMENT SHALL BE IN ACCORDANCE WITH THE FOLLOWING STANDARDS;

- L INDICATES PLAIN OR DEFORMED WIRE R500L OR D500L TO AS/NZS 4671.
- SL INDICATES DEFORMED SQUARE MESH D500L TO AS/NZS 4671.
- N INDICATES DEFORMED BARS D500N TO AS/NZS 4671.
- TM SUFFIX INDICATES TRENCH MESH USING DEFORMED BARS D500L TO AS/NZS 4671.

ALL STEELWORK TO BE TREATED IN ACCORDANCE WITH THE NATIONAL CONSTRUCTION CODE OR TO AS 3700, AS APPLICABLE.

- 3.10 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.11 CONCRETE TO CONFORM WITH AS 3600.

- 3.12 BLENDED CEMENT TO CONFORM WITH AS 3972.

- 3.13 ALL CONCRETE TO BE N20/20/100.

- 3.14 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.

- 3.15 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.

- 3.16 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.

- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.

- 3.18 REFER BACK TO THE ENGINEER IF AGGRESSIVE SOILS ARE ENCOUNTERED (IN ACCORDANCE WITH AS2870).

- 3.19 CURE SLAB AS DETERMINED BY ENGINEER.

- 3.20 THE FOOTING DETAILS HAVE BEEN DESIGNED IN ACCORDANCE WITH AS3600 AND SECTION 4 OF AS2870.

4.0 MASONRY

- 4.1 PLACE MRBL50 MESH IN THE BED JOINT IMMEDIATELY OVER DOOR AND WINDOW HEAD LEVEL CONTINUOUS

- THROUGHOUT THE BUILDING IN BOTH INTERNAL AND EXTERNAL WALLS. MESH MAY STEP BED JOINTS

- UP TO A HEIGHT OF 1c, 500 LAP IS REQUIRED AT EACH STEP.

- 4.2 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.

- 4.3 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.

- 4.4 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1.

- 4.5 ALL PERPENDS TO BE FULLY MORTARED.

- 4.6 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.

- 4.7 2L6 WIRES MAY BE USED AS AN ALTERNATIVE TO THE MRBL50 MESH. WHERE L6 WIRES ARE USED, ALL SPLICES AND COGS TO BE 500 LONG.

DATE LAST MODIFIED - 23/11/21

SHEET 2 OF 2



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PROJECT :

LOT 1133 NERANG RD YANCHEP

CLIENT : DENSFORD CIVIL

SCALE 1:20

APPROVED

DATE 21/11/22

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 1 of 2)

GENERAL

1. THE EXPLANATORY NOTES AND THE STANDARD RECOMMENDATIONS ARE TO BE READ IN CONJUNCTION WITH THE SITE CLASSIFICATION REPORT.
2. ALL REFERRED STANDARDS TO BE THE CURRENT VERSION AT THE TIME OF THE CONSTRUCTION.
3. THE PURPOSE OF THE SITE CLASSIFICATION REPORT IS TO CLASSIFY THE SITE IN ACCORDANCE WITH AS2870 "RESIDENTIAL SLABS AND FOOTING". IT IS NOT INTENDED FOR ANY OTHER PURPOSE, INCLUDING SOLE INFORMATION IN THE PROVISION OF A QUOTATION FOR SITE WORKS BY EARTH WORKERS. IT IS RECOMMENDED EARTH WORKERS PERFORM THEIR OWN INVESTIGATION FOR QUOTATION PURPOSES.
4. THE SITE CLASSIFICATION REPORT WILL INCLUDE BUT IS NOT LIMITED TO:
 - a. THE SITE CLASSIFICATION IN ACCORDANCE WITH AS2870 RESIDENTIAL SLABS AND FOOTING CONSTRUCTION,
 - b. A WIND RATING IN ACCORDANCE WITH AS 4055 WIND LOADS FOR HOUSING,
 - c. A COASTAL CORROSION CLASSIFICATION,
 - d. ADDITIONAL EARTHWORK RECOMMENDATION WHERE APPLICABLE,
 - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONDITIONS.
5. THE SITE CLASSIFICATION REPORT IS BASED ON THE SITE AS PRESENTED AT THE TIME OF ASSESSMENT. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
6. CLASS A SITES ARE STABLE SITES, GENERALLY SAND, LIMESTONE, GRAVEL OR A COMBINATION. CLASS P ARE PARTICULAR CLASSIFICATIONS SUCH AN UNUSUAL SITES OR SITES REQUIRING ADDITIONAL INVESTIGATION PRIOR TO PROVIDING DETAILS.
7. BOREHOLES EXCAVATED REVEAL THE SOIL PROFILE AT THE BOREHOLE LOCATION ONLY. FROM THIS, IT IS INFERRED THAT THESE ARE THE SOIL CONDITION OVER THE SITE. VARIATIONS CAN OCCUR WHICH MAY NOT HAVE BEEN DETECTED AT THE INVESTIGATION STAGE. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR REASSESSMENT.
8. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE IN ORDER TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
9. THIS REPORT IS FOR STRUCTERRE ONLY TO USE IN DESIGN. ANY DESIGN BY ANYONE ELSE FOR ANY STRUCTURE MUST BE SPECIFICALLY APPROVED BY STRUCTERRE. IF USED BY ANYONE ELSE FOR ANYTHING OTHER THAN A STRUCTERRE DESIGN OR STRUCTURE, STRUCTERRE TAKES NO RESPONSIBILITY.

SAND PAD

10. THE RECOMMENDED FOOTING DESIGN IS ONLY TO BE USED IN CONJUNCTION WITH THE RECOMMENDED SAND PAD AND EARTHWORKS AS OUTLINED IN THE SITE CLASSIFICATION REPORT.
11. THE RECOMMENDATIONS FOR THE SAND PAD IS FOR STRUCTURAL PURPOSES ONLY, AND DOES NOT PROVIDE THE MINIMUM FINISHED PAD LEVEL IN RELATION TO FLOOD LEVELS, OR DEPTH TO GROUNDWATER. SHOULD THE TEST BE LOCATED IN A LOW LYING OR FLOOD PRONE AREA, REFER TO THE LOCAL AUTHORITY FOR MINIMUM BUILDING HEIGHT.
12. IMPORTED FILL FOR USE AS A SAND PAD TO BE IN ACCORDANCE TO AS 3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS" WHICH INCLUDES BUT IS NOT LIMITED TO: BE FREE FROM ANY DELETERIOUS MATERIALS INCLUDING ORGANICS, (ROOTS, STUMPS, GRASSES, DECOMPOSED ORGANICS – PEAT, TIMBER, ETC), BUILDING RUBBLE, GLASS, PLASTICS OR WASTE MATERIAL. THE FINES CONTENT, (PERCENTAGE PASSING THE 0.075mm SIEVE) TO BE LESS THAN 5% BY MASS.
13. ON CLASS A SITES, A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 450mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
14. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
15. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

EARTHWORKS

16. RECOMMENDED EARTHWORKS TO BE CONDUCTED IN ACCORDANCE WITH AS3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS", AND TO INCLUDE BUT NOT BE LIMITED TO:
 - a. REMOVAL OF ALL VEGETATION, TOPSOILS, UNCONTROLLED FILLS AND OTHER DELETERIOUS MATERIALS FROM THE BUILDING AREA,
 - b. GRUBBING OUT OF ANY TREES ENSURING THE REMAINING HOLES ARE BACKFILLED WITH CLEAN COMPACTED SAND,
 - c. NOTIFYING THE ENGINEER OF ANY UNUSUAL FEATURE OR DISCREPANCY THAT MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING,
 - d. COMPACTING TO MEET THE REQUIREMENTS AS OUTLINED IN AS 3798 TABLE 5.1.
17. FILL MATERIAL (WHICH IS NOT ALWAYS APPARENT AT THE INITIAL INVESTIGATION STAGE) IS TO BE DEALT WITH AS FOLLOWS:
 - a. IF IT IS CERTIFIED BY OTHERS IT CAN REMAIN.
 - b. IF IT IS NOT CERTIFIED WILL REQUIRE REMOVAL DOWN TO NATURAL GROUND OR VERIFIED. ANY SAND CAN BE REUSED.
 - c. IF A PAD HAS ALREADY BEEN CONSTRUCTED, THE SITE CLASSIFICATION IS NOT CERTIFICATION OF THE PAD. CONTACT THIS OFFICE SHOULD A SAND PAD CERTIFICATION BE REQUIRED.
18. ANY ORGANIC MATTER OR ROOTS ENCOUNTERED, WHICH IS BEYOND WHAT IS NORMALLY CONSIDERED ACCEPTABLE IS TO BE REMOVED. THIS WILL NECESSITATE RAKING THE SITE TO REMOVE ORGANIC MATERIAL, TURNING THE SITE OVER AND RE- COMPACTING TO A MINIMUM.

RETAINING WALLS

19. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
20. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER TO THE RETAINING WALL THAN THE HEIGHT OF THE RETAINING WALL, THIS MAY PLACE ADDITIONAL LOADS ON THE WALL THAT WERE NOT INITIALLY DESIGNED FOR. AN INSPECTION OF THE STRUCTURAL INTEGRITY OF THE RETAINING WALL WILL BE REQUIRED TO PROVIDE CERTIFICATION AND/OR RECOMMENDATIONS PRIOR TO ANY CONSTRUCTION. PLEASE REFER BACK TO THIS OFFICE FOR ASSISTANCE.

STORMWATER DRAINAGE

21. ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF SOAKWELL AWAY FROM THE BUILDING AND SETBACK MINIMUM OF 1200mm, WHICHEVER IS GREATER. PLEASE REFER BACK TO THIS OFFICE IF REQUIRED THE SET-BACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



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EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 2 of 2)

WIND CLASSIFICATION

22. WIND CLASSIFICATION IS GIVEN FOR THE EXPECTED CONDITION 5 YEARS HENCE. THIS CLASSIFICATION IS LIMITED TO BUILDINGS CLASSES 1 AND 10, WHICH HAVE THE FOLLOWING LIMITATION (AS PER AS4055):

- a. MAXIMUM DISTANCE FROM THE GROUND LEVEL TO THE UNDERSIDE OF EAVES SHALL NOT EXCEED 6.0m.
- b. MAXIMUM DISTANCE FROM GROUND LEVEL TO THE HIGHEST POINT OF THE ROOF, EXCLUDING CHIMNEYS, SHALL NOT EXCEED 8.5m.
- c. THE ROOF PITCH SHALL NOT EXCEED 35°.
- d. THE WIDTH, EXCLUDING EAVES, SHALL NOT EXCEED 16.0m AND THE LENGTH SHALL NOT EXCEED 5x THE WIDTH.

IF THE BUILDING FALLS OUTSIDE OF THESE LIMITATIONS, THE STATED WIND CLASSIFICATION DOES NOT APPLY. REFER BACK TO THIS OFFICE FOR A REVISED WIND CLASSIFICATION.

ENVIRONMENTAL

23. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, IT IS RECOMMENDED THAT AN ENVIRONMENTAL ENGINEER BE ENGAGED.

SEISMIC

24. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF ≤ 0.11 . RECOMMENDED FOOTING DETAILS PROVIDED FOR SITES WITH AN EARTHQUAKE HAZARD FACTOR OF > 0.11 , ARE NOT FOR CONSTRUCTION, BUT FOR COSTING PURPOSES ONLY. IT IS RECOMMENDED REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

CORROSION CLASSIFICATION

25. THE CORROSION CLASSIFICATION HAS BEEN ASSESSED IN ACCORDANCE WITH AS3700.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



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APPROVED

A blue ink handwritten signature is written over the 'APPROVED' field.

SITE CLASSIFICATION REPORT
CERTIFICATE 2595278

CLIENT DENSFORD CIVIL
JOB ADDRESS LOT 1134 NERANG RD YANCHEP
CLIENT JOB NO.
OWNER
STRUCTERRE JOB NO. S1085310
DATE OF ASSESSMENT 17/11/22

SITE RECORD

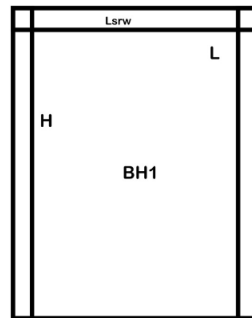


SITE CLASSIFICATION	A	<i>(in accordance with AS2870)</i>
FOOTING DETAIL	B1	
SAND PAD	No sand pad required structurally	
BUSHFIRE PRONE AREA	Yes	<i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	R3	<i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	N1	<i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	Full Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1500 FILL sand trace gravel (limestone) - brown; 1500 - 1800 FILL sand; 1800 end of hole.

APPROXIMATE BOREHOLE LOCATIONS



Nerang rd

NOTE 1 Explanatory Notes & Standard Recommendations

This site classification report must be read in conjunction with the applicable Explanatory Notes & Standard Recommendations. For A Class sites, refer to the Explanatory Notes and Standard Recommendations for Stable (A Class) Sites, version 1.0 July 2018. For S, M, H1, H2 & E Class sites, refer to the Explanatory Notes and Standard Recommendations for Reactive (S, M, H1, H2 & E Class) Sites version 1.0 July 2018. For Equivalent Class sites, refer to the Explanatory Notes and Standard Recommendations for Equivalent Class Sites, version 1.0 July 2018.

NOTE 2 Bushfire - Prone Area

The Site may be situated in a bush fire prone area in accordance with the Department of Fire and Emergency Services (DFES) Bushfire Prone Area Map (Reference: <http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/>) the current version at the time of this assessment. A Bushfire Attack Level (BAL) assessment may be required for this site, please confirm with the local authority. Should you require an assessment, please contact this Office.

ADDITIONAL NOTES / REQUIREMENTS

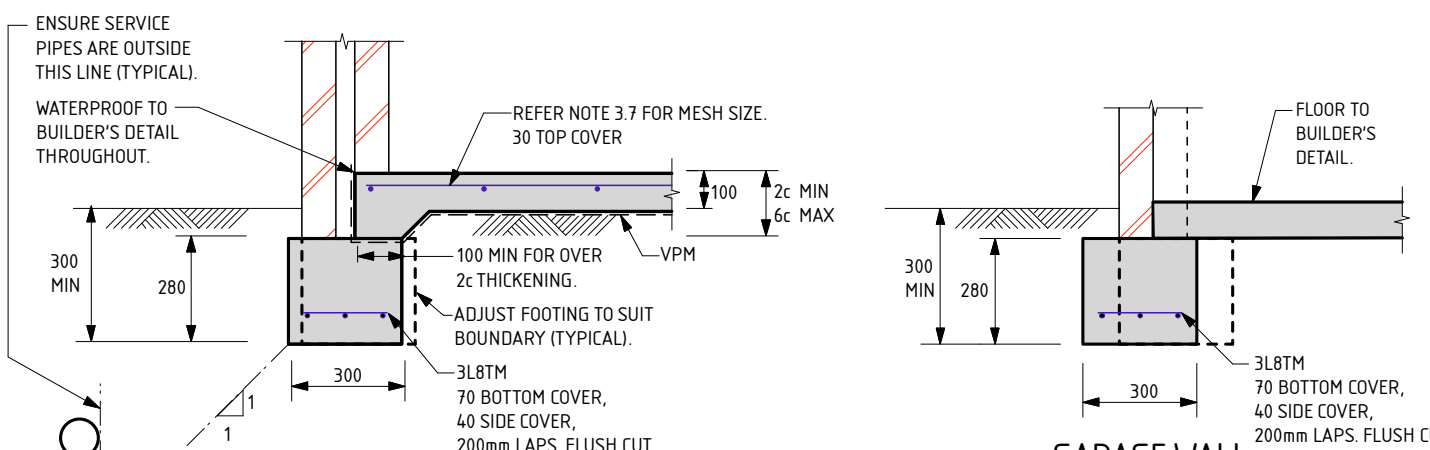
Site Condition

At the time of inspection the site was considered to be level and cleared. For specific levels of this site or topographical features, please refer to a professional site survey.

Structerre Geotech Reference

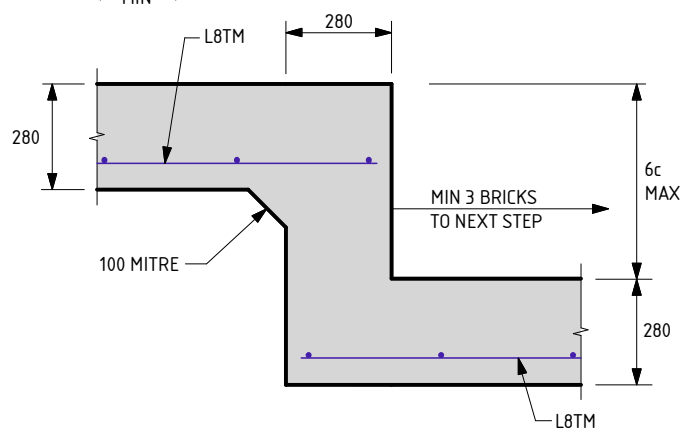
The Site Classification is based on any remedial works being successfully completed as outlined in the Structerre Geotechnical Report J414449 dated 01/08/2022. The footing details are subject to the recommendations being completed to an acceptable level as outlined in this report, if applicable.

-- END OF REPORT --

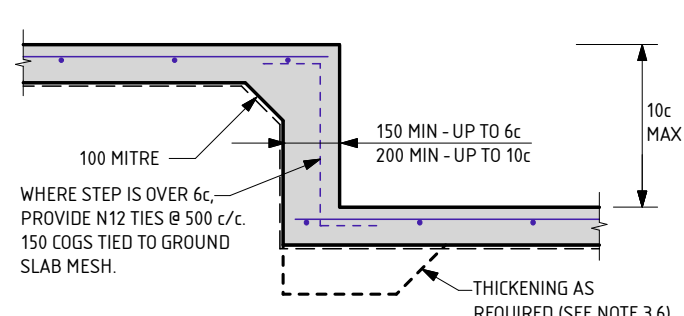


EXTERNAL WALLS

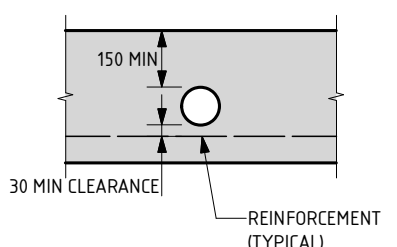
GARAGE WALL



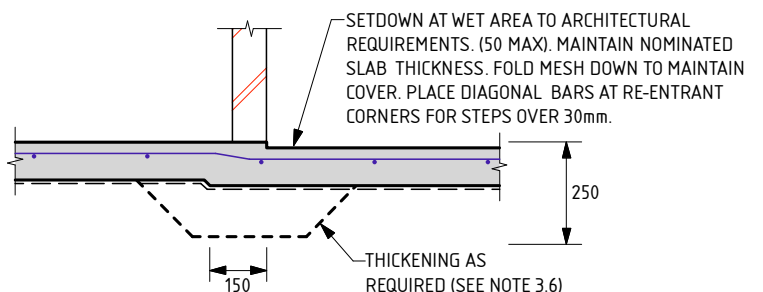
FOOTING STEP



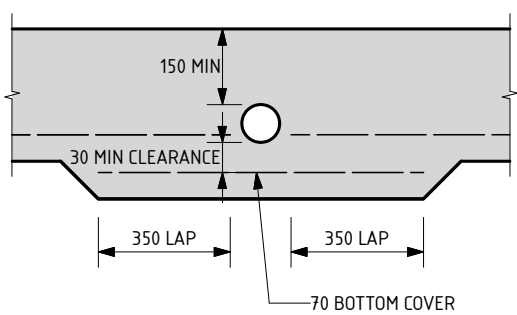
SLAB STEP



**OPTION A
PENETRATION CLEAR OF REINFORCEMENT**



WET AREA STEP



**OPTION B
PENETRATION INTERRUPTS REINFORCEMENT**

SERVICE PIPE DIAGRAM

- MAXIMUM PENETRATION SIZE TO BE Ø150.

THE APPROVED SIGNATURE ON THIS FOOTING AND SLAB DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS.
DATE LAST MODIFIED - 23/11/21

B1

SHEET 1 OF 2



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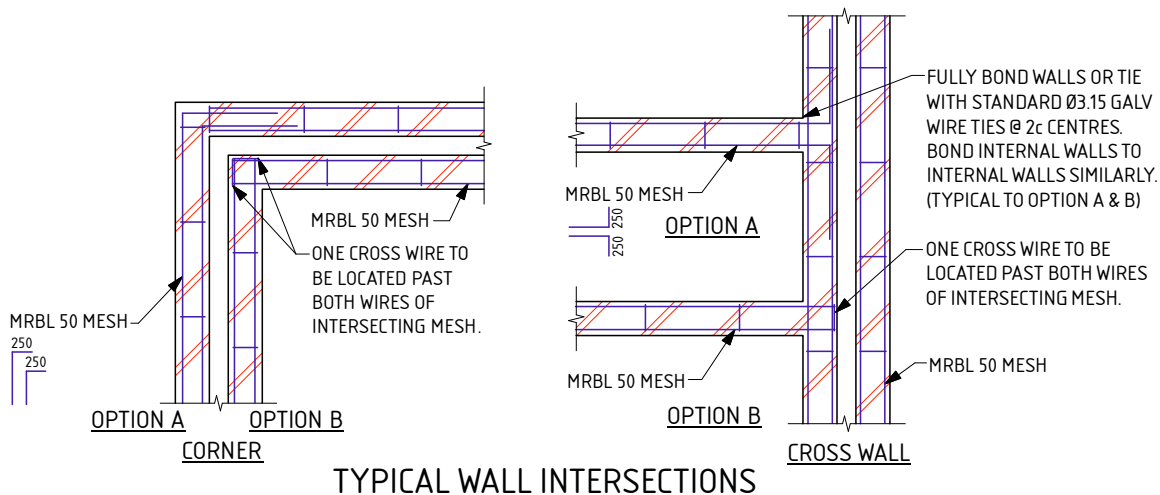
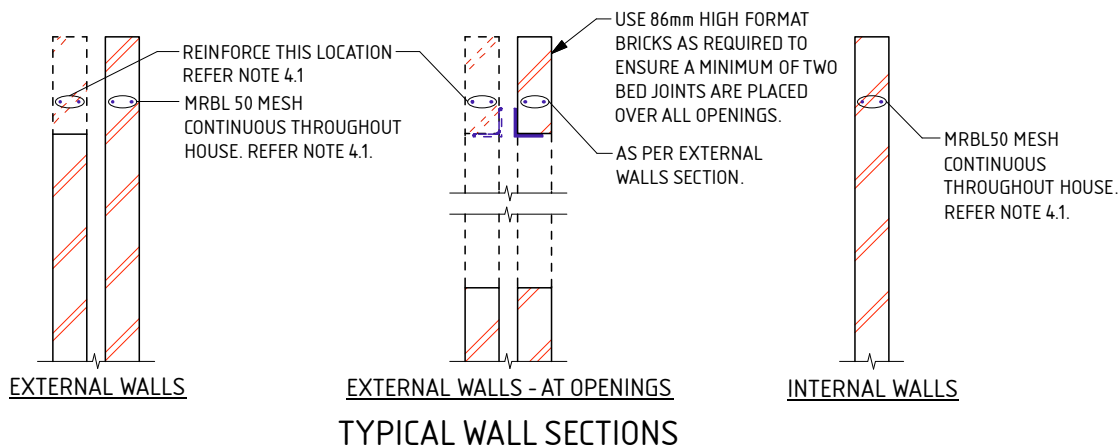
PROJECT: LOT 1134 NERANG RD YANCHEP

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SCALE 1:20

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NOTES FOR B1 FOOTING

THESE NOTES ARE TO BE READ IN CONJUNCTION WITH THE ATTACHED FOOTING DETAILS.

1.0 SITE CLASSIFICATION

1.1 THE SITE CLASSIFICATION NOTED IN THE SITE CLASSIFICATION REPORT IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS AS DETERMINED BY AN ASSESSMENT OF THE SITE. REFER TO THE ATTACHED REPORT FOR ANY SPECIAL REQUIREMENTS.

2.0 EARTHWORKS

- 2.1 SAND PAD, IF APPLICABLE, TO BE AS PER SITE INSPECTION REPORT.
- 2.2 EARTHWORKS SHALL INCLUDE, BUT NOT BE LIMITED TO:
 - a) REMOVE ALL ORGANIC MATERIAL FROM THE BUILDING AREA.
 - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL FROM THE PAD AREA.
 - c) GRUB OUT ANY TREES WHERE NECESSARY AND ENSURE THE REMAINING HOLES ARE FILLED AND COMPACTED SATISFACTORILY WITH SAND.
 - d) NOTIFY THE ENGINEER OF ANY UNUSUAL FEATURES OR DISCREPANCIES WHICH MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING.
- 2.3 ANY PREDOMINANT ROCK IN THE HOUSE PAD AREAS IS TO BE INSPECTED BY THE ENGINEER.
- 2.4 IF CLAY ON SITE, AN ENGINEER TO BE CONSULTED.
- 2.5 SAND FILL TO BE CLEAN WELL DRAINED, WITH MAX FINES (PARTICLES UP TO 0.075mm) CONTENT OF 5%. SAND TO BE COMPACTED TO A MIN 6 BLOWS/300mm FOR 750mm OR THE DEPTH OF THE PAD.

3.0 FOOTINGS & SLABS

- 3.1 A MINIMUM OF 150mm OF SAND REQUIRED UNDER FOOTINGS.
- 3.2 ROOF AND SURFACE WATER TO BE TAKEN AWAY FROM FOUNDATION AREA.
- 3.3 EXCAVATIONS FOR ALL SERVICE PIPES NOT TO UNDERMINE FOOTINGS. IF UNDERMINING IS LIKELY TO OCCUR, CONTACT THE ENGINEER PRIOR TO PROCEEDING.
- 3.4 WHERE PLUMBING PIPES PASS THROUGH FOOTINGS OR SLAB, SPECIFIED TOTAL THICKNESS OF ALL CONCRETE IS ALWAYS TO BE MAINTAINED.
- 3.5 SETDOWN AT WET AREA TO ARCHITECTURAL REQUIREMENT (50mm MAX). MAINTAIN 100mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12 x 1200 LONG.
- 3.6 PLACE SLAB THICKENINGS (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m.
- 3.7 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 1:3. 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.

3.8 FOR SLAB SPANS > 32m REFER TO ENGINEER FOR MESH SIZE.

3.9 REINFORCEMENT SHALL BE IN ACCORDANCE WITH THE FOLLOWING STANDARDS;

- L INDICATES PLAIN OR DEFORMED WIRE R500L OR D500L TO AS/NZS 4671.
- SL INDICATES DEFORMED SQUARE MESH D500L TO AS/NZS 4671.
- N INDICATES DEFORMED BARS D500N TO AS/NZS 4671.
- TM SUFFIX INDICATES TRENCH MESH USING DEFORMED BARS D500L TO AS/NZS 4671.

ALL STEELWORK TO BE TREATED IN ACCORDANCE WITH THE NATIONAL CONSTRUCTION CODE OR TO AS 3700, AS APPLICABLE.

3.10 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

3.11 CONCRETE TO CONFORM WITH AS 3600.

3.12 BLENDED CEMENT TO CONFORM WITH AS 3972.

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3.14 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.

3.15 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.

3.16 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.

3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.

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3.20 THE FOOTING DETAILS HAVE BEEN DESIGNED IN ACCORDANCE WITH AS3600 AND SECTION 4 OF AS2870.

4.0 MASONRY

- 4.1 PLACE MRBL50 MESH IN THE BED JOINT IMMEDIATELY OVER DOOR AND WINDOW HEAD LEVEL CONTINUOUS THROUGHOUT THE BUILDING IN BOTH INTERNAL AND EXTERNAL WALLS. MESH MAY STEP BED JOINTS UP TO A HEIGHT OF 1c, 500 LAP IS REQUIRED AT EACH STEP.
- 4.2 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.3 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.4 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1.
- 4.5 ALL PERPENDS TO BE FULLY MORTARED.
- 4.6 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.7 2L6 WIRES MAY BE USED AS AN ALTERNATIVE TO THE MRBL50 MESH. WHERE L6 WIRES ARE USED, ALL SPLICES AND COGS TO BE 500 LONG.

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SHEET 2 OF 2



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PROJECT :

LOT 1134 NERANG RD YANCHEP

CLIENT :

DENSFORD CIVIL

SCALE

1:20

APPROVED

DATE

21/11/22

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 1 of 2)

GENERAL

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3. THE PURPOSE OF THE SITE CLASSIFICATION REPORT IS TO CLASSIFY THE SITE IN ACCORDANCE WITH AS2870 "RESIDENTIAL SLABS AND FOOTING". IT IS NOT INTENDED FOR ANY OTHER PURPOSE, INCLUDING SOLE INFORMATION IN THE PROVISION OF A QUOTATION FOR SITE WORKS BY EARTH WORKERS. IT IS RECOMMENDED EARTH WORKERS PERFORM THEIR OWN INVESTIGATION FOR QUOTATION PURPOSES.
4. THE SITE CLASSIFICATION REPORT WILL INCLUDE BUT IS NOT LIMITED TO:
 - a. THE SITE CLASSIFICATION IN ACCORDANCE WITH AS2870 RESIDENTIAL SLABS AND FOOTING CONSTRUCTION,
 - b. A WIND RATING IN ACCORDANCE WITH AS 4055 WIND LOADS FOR HOUSING,
 - c. A COASTAL CORROSION CLASSIFICATION,
 - d. ADDITIONAL EARTHWORK RECOMMENDATION WHERE APPLICABLE,
 - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONDITIONS.
5. THE SITE CLASSIFICATION REPORT IS BASED ON THE SITE AS PRESENTED AT THE TIME OF ASSESSMENT. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
6. CLASS A SITES ARE STABLE SITES, GENERALLY SAND, LIMESTONE, GRAVEL OR A COMBINATION. CLASS P ARE PARTICULAR CLASSIFICATIONS SUCH AN UNUSUAL SITES OR SITES REQUIRING ADDITIONAL INVESTIGATION PRIOR TO PROVIDING DETAILS.
7. BOREHOLES EXCAVATED REVEAL THE SOIL PROFILE AT THE BOREHOLE LOCATION ONLY. FROM THIS, IT IS INFERRED THAT THESE ARE THE SOIL CONDITION OVER THE SITE. VARIATIONS CAN OCCUR WHICH MAY NOT HAVE BEEN DETECTED AT THE INVESTIGATION STAGE. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR REASSESSMENT.
8. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE IN ORDER TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
9. THIS REPORT IS FOR STRUCTERRE ONLY TO USE IN DESIGN. ANY DESIGN BY ANYONE ELSE FOR ANY STRUCTURE MUST BE SPECIFICALLY APPROVED BY STRUCTERRE. IF USED BY ANYONE ELSE FOR ANYTHING OTHER THAN A STRUCTERRE DESIGN OR STRUCTURE, STRUCTERRE TAKES NO RESPONSIBILITY.

SAND PAD

10. THE RECOMMENDED FOOTING DESIGN IS ONLY TO BE USED IN CONJUNCTION WITH THE RECOMMENDED SAND PAD AND EARTHWORKS AS OUTLINED IN THE SITE CLASSIFICATION REPORT.
11. THE RECOMMENDATIONS FOR THE SAND PAD IS FOR STRUCTURAL PURPOSES ONLY, AND DOES NOT PROVIDE THE MINIMUM FINISHED PAD LEVEL IN RELATION TO FLOOD LEVELS, OR DEPTH TO GROUNDWATER. SHOULD THE TEST BE LOCATED IN A LOW LYING OR FLOOD PRONE AREA, REFER TO THE LOCAL AUTHORITY FOR MINIMUM BUILDING HEIGHT.
12. IMPORTED FILL FOR USE AS A SAND PAD TO BE IN ACCORDANCE TO AS 3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS" WHICH INCLUDES BUT IS NOT LIMITED TO: BE FREE FROM ANY DELETERIOUS MATERIALS INCLUDING ORGANICS, (ROOTS, STUMPS, GRASSES, DECOMPOSED ORGANICS – PEAT, TIMBER, ETC), BUILDING RUBBLE, GLASS, PLASTICS OR WASTE MATERIAL. THE FINES CONTENT, (PERCENTAGE PASSING THE 0.075mm SIEVE) TO BE LESS THAN 5% BY MASS.
13. ON CLASS A SITES, A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 450mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
14. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
15. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

EARTHWORKS

16. RECOMMENDED EARTHWORKS TO BE CONDUCTED IN ACCORDANCE WITH AS3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS", AND TO INCLUDE BUT NOT BE LIMITED TO:
 - a. REMOVAL OF ALL VEGETATION, TOPSOILS, UNCONTROLLED FILLS AND OTHER DELETERIOUS MATERIALS FROM THE BUILDING AREA,
 - b. GRUBBING OUT OF ANY TREES ENSURING THE REMAINING HOLES ARE BACKFILLED WITH CLEAN COMPACTED SAND,
 - c. NOTIFYING THE ENGINEER OF ANY UNUSUAL FEATURE OR DISCREPANCY THAT MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING,
 - d. COMPACTING TO MEET THE REQUIREMENTS AS OUTLINED IN AS 3798 TABLE 5.1.
17. FILL MATERIAL (WHICH IS NOT ALWAYS APPARENT AT THE INITIAL INVESTIGATION STAGE) IS TO BE DEALT WITH AS FOLLOWS:
 - a. IF IT IS CERTIFIED BY OTHERS IT CAN REMAIN.
 - b. IF IT IS NOT CERTIFIED WILL REQUIRE REMOVAL DOWN TO NATURAL GROUND OR VERIFIED. ANY SAND CAN BE REUSED.
 - c. IF A PAD HAS ALREADY BEEN CONSTRUCTED, THE SITE CLASSIFICATION IS NOT CERTIFICATION OF THE PAD. CONTACT THIS OFFICE SHOULD A SAND PAD CERTIFICATION BE REQUIRED.
18. ANY ORGANIC MATTER OR ROOTS ENCOUNTERED, WHICH IS BEYOND WHAT IS NORMALLY CONSIDERED ACCEPTABLE IS TO BE REMOVED. THIS WILL NECESSITATE RAKING THE SITE TO REMOVE ORGANIC MATERIAL, TURNING THE SITE OVER AND RE- COMPACTING TO A MINIMUM.

RETAINING WALLS

19. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
20. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER TO THE RETAINING WALL THAN THE HEIGHT OF THE RETAINING WALL, THIS MAY PLACE ADDITIONAL LOADS ON THE WALL THAT WERE NOT INITIALLY DESIGNED FOR. AN INSPECTION OF THE STRUCTURAL INTEGRITY OF THE RETAINING WALL WILL BE REQUIRED TO PROVIDE CERTIFICATION AND/OR RECOMMENDATIONS PRIOR TO ANY CONSTRUCTION. PLEASE REFER BACK TO THIS OFFICE FOR ASSISTANCE.

STORMWATER DRAINAGE

21. ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF SOAKWELL AWAY FROM THE BUILDING AND SETBACK MINIMUM OF 1200mm, WHICHEVER IS GREATER. PLEASE REFER BACK TO THIS OFFICE IF REQUIRED THE SET-BACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



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PROJECT :
LOT 1134 NERANG RD YANCHEP

CLIENT : DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

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EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 2 of 2)

WIND CLASSIFICATION

22. WIND CLASSIFICATION IS GIVEN FOR THE EXPECTED CONDITION 5 YEARS HENCE. THIS CLASSIFICATION IS LIMITED TO BUILDINGS CLASSES 1 AND 10, WHICH HAVE THE FOLLOWING LIMITATION (AS PER AS4055):

- a. MAXIMUM DISTANCE FROM THE GROUND LEVEL TO THE UNDERSIDE OF EAVES SHALL NOT EXCEED 6.0m.
- b. MAXIMUM DISTANCE FROM GROUND LEVEL TO THE HIGHEST POINT OF THE ROOF, EXCLUDING CHIMNEYS, SHALL NOT EXCEED 8.5m.
- c. THE ROOF PITCH SHALL NOT EXCEED 35°.
- d. THE WIDTH, EXCLUDING EAVES, SHALL NOT EXCEED 16.0m AND THE LENGTH SHALL NOT EXCEED 5x THE WIDTH.

IF THE BUILDING FALLS OUTSIDE OF THESE LIMITATIONS, THE STATED WIND CLASSIFICATION DOES NOT APPLY. REFER BACK TO THIS OFFICE FOR A REVISED WIND CLASSIFICATION.

ENVIRONMENTAL

23. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, IT IS RECOMMENDED THAT AN ENVIRONMENTAL ENGINEER BE ENGAGED.

SEISMIC

24. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF ≤ 0.11 . RECOMMENDED FOOTING DETAILS PROVIDED FOR SITES WITH AN EARTHQUAKE HAZARD FACTOR OF > 0.11 , ARE NOT FOR CONSTRUCTION, BUT FOR COSTING PURPOSES ONLY. IT IS RECOMMENDED REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

CORROSION CLASSIFICATION

25. THE CORROSION CLASSIFICATION HAS BEEN ASSESSED IN ACCORDANCE WITH AS3700.

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A blue ink handwritten signature is written over the 'APPROVED' field.

SITE CLASSIFICATION REPORT
CERTIFICATE 2595277

CLIENT DENSFORD CIVIL
JOB ADDRESS LOT 1135 NERANG RD YANCHEP
CLIENT JOB NO.
OWNER
STRUCTERRE JOB NO. S1085309
DATE OF ASSESSMENT 17/11/22

SITE RECORD

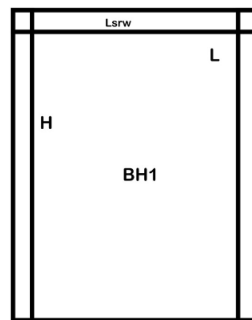


SITE CLASSIFICATION	A	<i>(in accordance with AS2870)</i>
FOOTING DETAIL	B1	
SAND PAD	No sand pad required structurally	
BUSHFIRE PRONE AREA	Yes	<i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	R3	<i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	N1	<i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	Full Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1500 FILL sand trace gravel (limestone) - brown; 1500 - 1800 FILL sand; 1800 end of hole.

APPROXIMATE BOREHOLE LOCATIONS



Nerang rd

NOTE 1 Explanatory Notes & Standard Recommendations

This site classification report must be read in conjunction with the applicable Explanatory Notes & Standard Recommendations. For A Class sites, refer to the Explanatory Notes and Standard Recommendations for Stable (A Class) Sites, version 1.0 July 2018. For S, M, H1, H2 & E Class sites, refer to the Explanatory Notes and Standard Recommendations for Reactive (S, M, H1, H2 & E Class) Sites version 1.0 July 2018. For Equivalent Class sites, refer to the Explanatory Notes and Standard Recommendations for Equivalent Class Sites, version 1.0 July 2018.

NOTE 2 Bushfire - Prone Area

The Site may be situated in a bush fire prone area in accordance with the Department of Fire and Emergency Services (DFES) Bushfire Prone Area Map (Reference: <http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/>) the current version at the time of this assessment. A Bushfire Attack Level (BAL) assessment may be required for this site, please confirm with the local authority. Should you require an assessment, please contact this Office.

ADDITIONAL NOTES / REQUIREMENTS

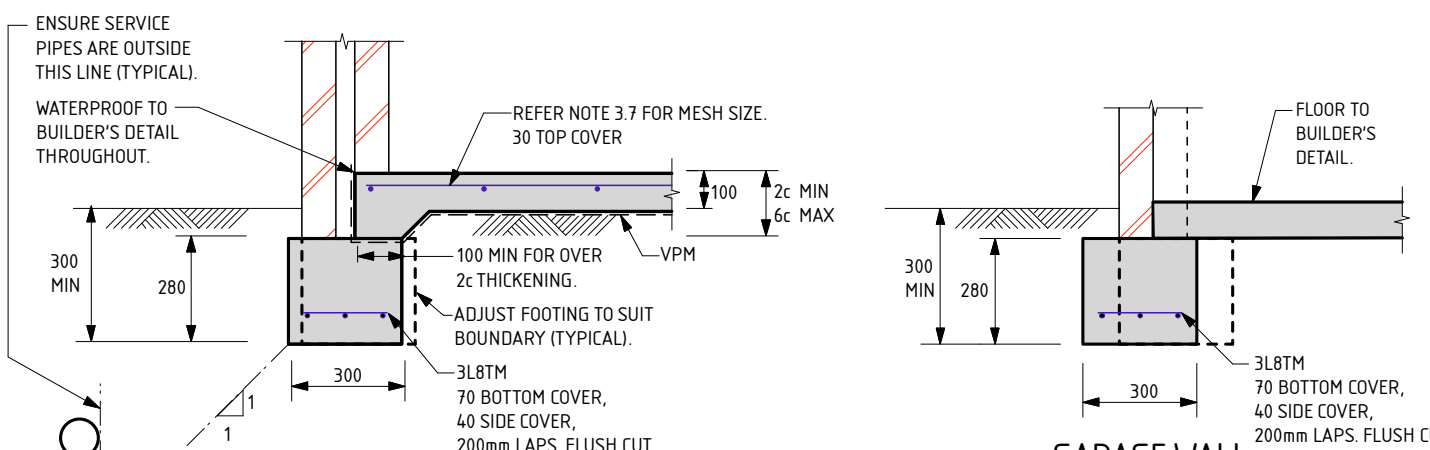
Site Condition

At the time of inspection the site was considered to be level and cleared. For specific levels of this site or topographical features, please refer to a professional site survey.

Structerre Geotech Reference

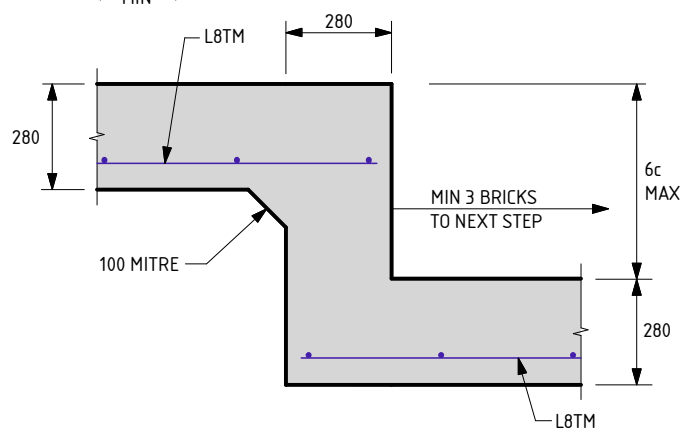
The Site Classification is based on any remedial works being successfully completed as outlined in the Structerre Geotechnical Report J414449 dated 01/08/2022. The footing details are subject to the recommendations being completed to an acceptable level as outlined in this report, if applicable.

-- END OF REPORT --

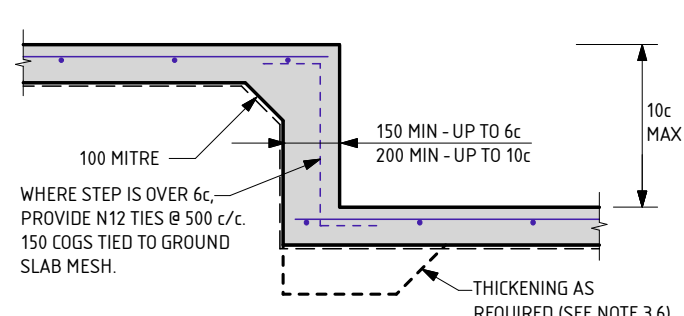


EXTERNAL WALLS

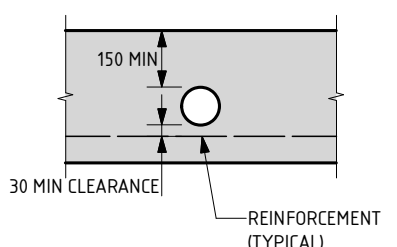
GARAGE WALL



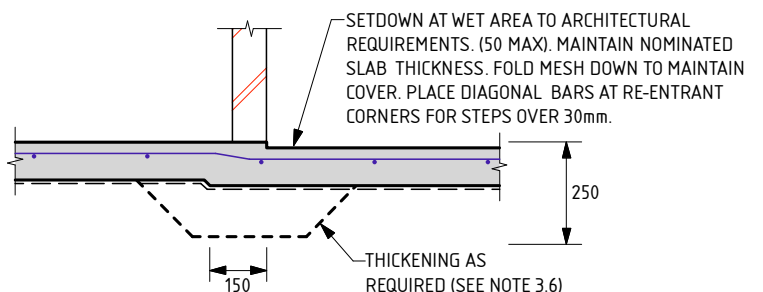
FOOTING STEP



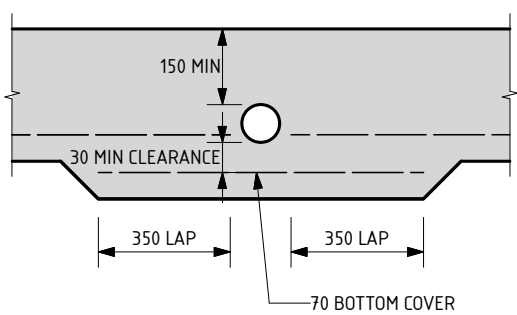
SLAB STEP



**OPTION A
PENETRATION CLEAR OF REINFORCEMENT**



WET AREA STEP



**OPTION B
PENETRATION INTERRUPTS REINFORCEMENT**

SERVICE PIPE DIAGRAM

- MAXIMUM PENETRATION SIZE TO BE Ø150.

THE APPROVED SIGNATURE ON THIS FOOTING AND SLAB DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS.
DATE LAST MODIFIED - 23/11/21

B1

SHEET 1 OF 2



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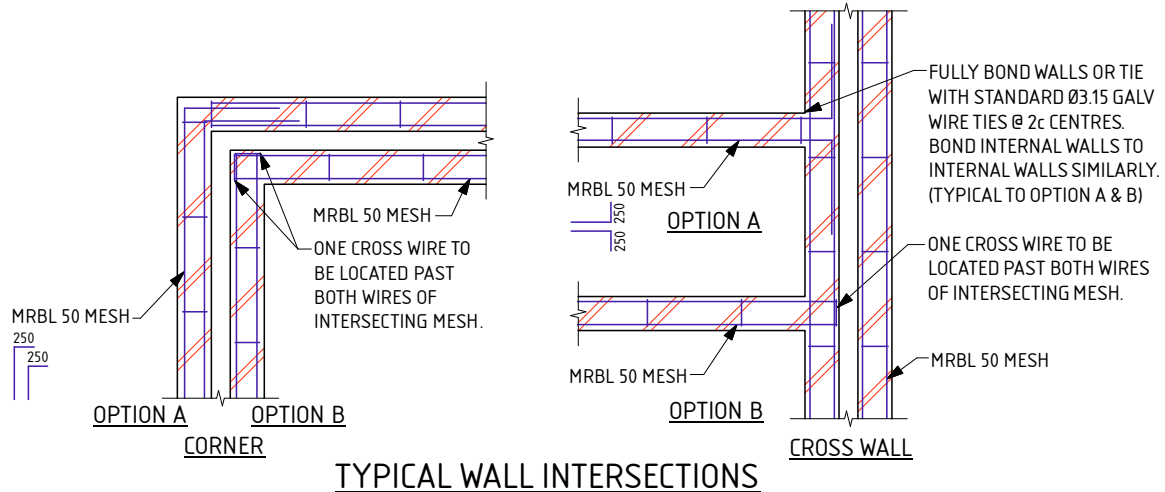
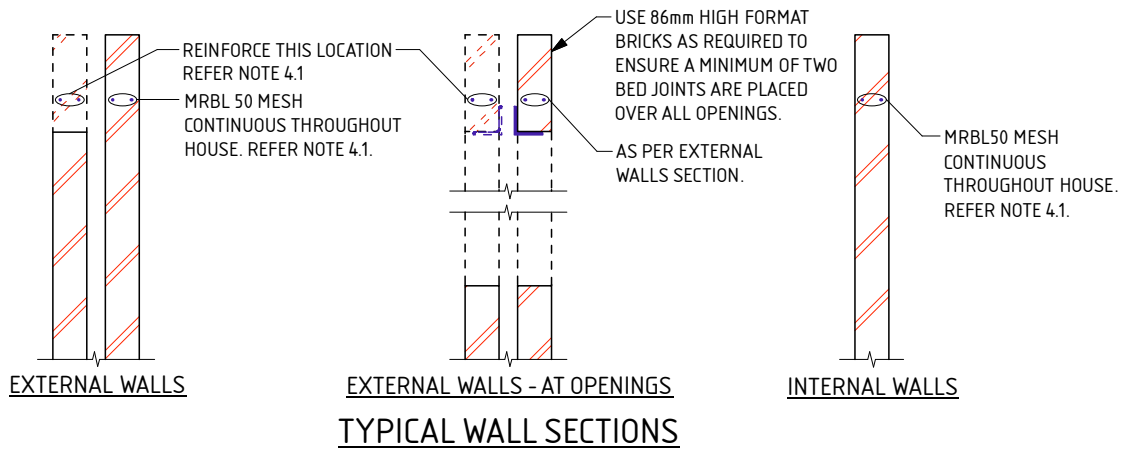
PROJECT: LOT 1135 NERANG RD YANCHEP

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NOTES FOR B1 FOOTING

THESE NOTES ARE TO BE READ IN CONJUNCTION WITH THE ATTACHED FOOTING DETAILS.

1.0 SITE CLASSIFICATION

1.1 THE SITE CLASSIFICATION NOTED IN THE SITE CLASSIFICATION REPORT IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS AS DETERMINED BY AN ASSESSMENT OF THE SITE. REFER TO THE ATTACHED REPORT FOR ANY SPECIAL REQUIREMENTS.

2.0 EARTHWORKS

- 2.1 SAND PAD, IF APPLICABLE, TO BE AS PER SITE INSPECTION REPORT.
- 2.2 EARTHWORKS SHALL INCLUDE, BUT NOT BE LIMITED TO:
 - a) REMOVE ALL ORGANIC MATERIAL FROM THE BUILDING AREA.
 - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL FROM THE PAD AREA.
 - c) GRUB OUT ANY TREES WHERE NECESSARY AND ENSURE THE REMAINING HOLES ARE FILLED AND COMPACTED SATISFACTORILY WITH SAND.
 - d) NOTIFY THE ENGINEER OF ANY UNUSUAL FEATURES OR DISCREPANCIES WHICH MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING.
- 2.3 ANY PREDOMINANT ROCK IN THE HOUSE PAD AREAS IS TO BE INSPECTED BY THE ENGINEER.
- 2.4 IF CLAY ON SITE, AN ENGINEER TO BE CONSULTED.
- 2.5 SAND FILL TO BE CLEAN WELL DRAINED, WITH MAX FINES (PARTICLES UP TO 0.075mm) CONTENT OF 5%. SAND TO BE COMPACTED TO A MIN 6 BLOWS/300mm FOR 750mm OR THE DEPTH OF THE PAD.

3.0 FOOTINGS & SLABS

- 3.1 A MINIMUM OF 150mm OF SAND REQUIRED UNDER FOOTINGS.
- 3.2 ROOF AND SURFACE WATER TO BE TAKEN AWAY FROM FOUNDATION AREA.
- 3.3 EXCAVATIONS FOR ALL SERVICE PIPES NOT TO UNDERMINE FOOTINGS. IF UNDERMINING IS LIKELY TO OCCUR, CONTACT THE ENGINEER PRIOR TO PROCEEDING.
- 3.4 WHERE PLUMBING PIPES PASS THROUGH FOOTINGS OR SLAB, SPECIFIED TOTAL THICKNESS OF ALL CONCRETE IS ALWAYS TO BE MAINTAINED.
- 3.5 SETDOWN AT WET AREA TO ARCHITECTURAL REQUIREMENT (50mm MAX). MAINTAIN 100mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12 x 1200 LONG.
- 3.6 PLACE SLAB THICKENINGS (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m.
- 3.7 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 1:3. 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.

- 3.8 FOR SLAB SPANS > 32m REFER TO ENGINEER FOR MESH SIZE.
- 3.9 REINFORCEMENT SHALL BE IN ACCORDANCE WITH THE FOLLOWING STANDARDS:
 - L INDICATES PLAIN OR DEFORMED WIRE R500L OR D500L TO AS/NZS 4671.
 - SL INDICATES DEFORMED SQUARE MESH D500L TO AS/NZS 4671.
 - N INDICATES DEFORMED BARS D500N TO AS/NZS 4671.
 - TM SUFFIX INDICATES TRENCH MESH USING DEFORMED BARS D500L TO AS/NZS 4671.
- ALL STEELWORK TO BE TREATED IN ACCORDANCE WITH THE NATIONAL CONSTRUCTION CODE OR TO AS 3700, AS APPLICABLE.
- 3.10 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.
- 3.11 CONCRETE TO CONFORM WITH AS 3600.
- 3.12 BLENDED CEMENT TO CONFORM WITH AS 3972.
- 3.13 ALL CONCRETE TO BE N20/20/100.
- 3.14 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.15 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.16 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.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 REFER BACK TO THE ENGINEER IF AGGRESSIVE SOILS ARE ENCOUNTERED (IN ACCORDANCE WITH AS2870).
- 3.19 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.20 THE FOOTING DETAILS HAVE BEEN DESIGNED IN ACCORDANCE WITH AS3600 AND SECTION 4 OF AS2870.

4.0 MASONRY

- 4.1 PLACE MRBL50 MESH IN THE BED JOINT IMMEDIATELY OVER DOOR AND WINDOW HEAD LEVEL CONTINUOUS THROUGHOUT THE BUILDING IN BOTH INTERNAL AND EXTERNAL WALLS. MESH MAY STEP BED JOINTS UP TO A HEIGHT OF 1c, 500 LAP IS REQUIRED AT EACH STEP.
- 4.2 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.3 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.4 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1.
- 4.5 ALL PERPENDS TO BE FULLY MORTARED.
- 4.6 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.7 2L6 WIRES MAY BE USED AS AN ALTERNATIVE TO THE MRBL50 MESH. WHERE L6 WIRES ARE USED, ALL SPLICES AND COGS TO BE 500 LONG.

DATE LAST MODIFIED - 23/11/21

SHEET 2 OF 2



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PROJECT :

LOT 1135 NERANG RD YANCHEP

CLIENT :

DENSFORD CIVIL

SCALE

1:20

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DATE

21/11/22

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 1 of 2)

GENERAL

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12. IMPORTED FILL FOR USE AS A SAND PAD TO BE IN ACCORDANCE TO AS 3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS" WHICH INCLUDES BUT IS NOT LIMITED TO: BE FREE FROM ANY DELETERIOUS MATERIALS INCLUDING ORGANICS, (ROOTS, STUMPS, GRASSES, DECOMPOSED ORGANICS – PEAT, TIMBER, ETC), BUILDING RUBBLE, GLASS, PLASTICS OR WASTE MATERIAL. THE FINES CONTENT, (PERCENTAGE PASSING THE 0.075mm SIEVE) TO BE LESS THAN 5% BY MASS.
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 - a. IF IT IS CERTIFIED BY OTHERS IT CAN REMAIN.
 - b. IF IT IS NOT CERTIFIED WILL REQUIRE REMOVAL DOWN TO NATURAL GROUND OR VERIFIED. ANY SAND CAN BE REUSED.
 - c. IF A PAD HAS ALREADY BEEN CONSTRUCTED, THE SITE CLASSIFICATION IS NOT CERTIFICATION OF THE PAD. CONTACT THIS OFFICE SHOULD A SAND PAD CERTIFICATION BE REQUIRED.
18. ANY ORGANIC MATTER OR ROOTS ENCOUNTERED, WHICH IS BEYOND WHAT IS NORMALLY CONSIDERED ACCEPTABLE IS TO BE REMOVED. THIS WILL NECESSITATE RAKING THE SITE TO REMOVE ORGANIC MATERIAL, TURNING THE SITE OVER AND RE- COMPACTING TO A MINIMUM.

RETAINING WALLS

19. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
20. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER TO THE RETAINING WALL THAN THE HEIGHT OF THE RETAINING WALL, THIS MAY PLACE ADDITIONAL LOADS ON THE WALL THAT WERE NOT INITIALLY DESIGNED FOR. AN INSPECTION OF THE STRUCTURAL INTEGRITY OF THE RETAINING WALL WILL BE REQUIRED TO PROVIDE CERTIFICATION AND/OR RECOMMENDATIONS PRIOR TO ANY CONSTRUCTION. PLEASE REFER BACK TO THIS OFFICE FOR ASSISTANCE.

STORMWATER DRAINAGE

21. ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF SOAKWELL AWAY FROM THE BUILDING AND SETBACK MINIMUM OF 1200mm, WHICHEVER IS GREATER. PLEASE REFER BACK TO THIS OFFICE IF REQUIRED THE SET-BACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



Zemia Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham
Unit Trust trading as StrucTerre Consulting Engineers
1 ERINDALE ROAD, BALCATT WA 6021
TEL (08) 9205 4500 FAX (08) 9205 4541 EMAIL: perth@strucTerre.com.au

PROJECT :
LOT 1135 NERANG RD YANCHEP

CLIENT : DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 2 of 2)

WIND CLASSIFICATION

22. WIND CLASSIFICATION IS GIVEN FOR THE EXPECTED CONDITION 5 YEARS HENCE. THIS CLASSIFICATION IS LIMITED TO BUILDINGS CLASSES 1 AND 10, WHICH HAVE THE FOLLOWING LIMITATION (AS PER AS4055):

- a. MAXIMUM DISTANCE FROM THE GROUND LEVEL TO THE UNDERSIDE OF EAVES SHALL NOT EXCEED 6.0m.
- b. MAXIMUM DISTANCE FROM GROUND LEVEL TO THE HIGHEST POINT OF THE ROOF, EXCLUDING CHIMNEYS, SHALL NOT EXCEED 8.5m.
- c. THE ROOF PITCH SHALL NOT EXCEED 35°.
- d. THE WIDTH, EXCLUDING EAVES, SHALL NOT EXCEED 16.0m AND THE LENGTH SHALL NOT EXCEED 5x THE WIDTH.

IF THE BUILDING FALLS OUTSIDE OF THESE LIMITATIONS, THE STATED WIND CLASSIFICATION DOES NOT APPLY. REFER BACK TO THIS OFFICE FOR A REVISED WIND CLASSIFICATION.

ENVIRONMENTAL

23. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, IT IS RECOMMENDED THAT AN ENVIRONMENTAL ENGINEER BE ENGAGED.

SEISMIC

24. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF ≤ 0.11 . RECOMMENDED FOOTING DETAILS PROVIDED FOR SITES WITH AN EARTHQUAKE HAZARD FACTOR OF > 0.11 , ARE NOT FOR CONSTRUCTION, BUT FOR COSTING PURPOSES ONLY. IT IS RECOMMENDED REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

CORROSION CLASSIFICATION

25. THE CORROSION CLASSIFICATION HAS BEEN ASSESSED IN ACCORDANCE WITH AS3700.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



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PROJECT:
LOT 1135 NERANG RD YANCHEP

CLIENT: DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

A blue ink handwritten signature is written over the 'APPROVED' field.

SITE CLASSIFICATION REPORT
CERTIFICATE 2595276

CLIENT DENSFORD CIVIL
JOB ADDRESS LOT 1136 NERANG RD YANCHEP
CLIENT JOB NO.
OWNER
STRUCTERRE JOB NO. S1085307
DATE OF ASSESSMENT 17/11/22

SITE RECORD

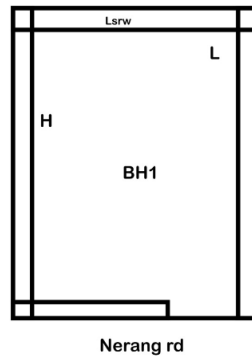


SITE CLASSIFICATION	A	<i>(in accordance with AS2870)</i>
FOOTING DETAIL	A	
SAND PAD	No sand pad required structurally	
BUSHFIRE PRONE AREA	Yes	<i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	R3	<i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	N1	<i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	Full Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1500 FILL sand trace gravel (limestone) - brown; 1500 - 1800 FILL sand; 1800 end of hole.

APPROXIMATE BOREHOLE LOCATIONS



NOTE 1 Explanatory Notes & Standard Recommendations

This site classification report must be read in conjunction with the applicable Explanatory Notes & Standard Recommendations. For A Class sites, refer to the Explanatory Notes and Standard Recommendations for Stable (A Class) Sites, version 1.0 July 2018. For S, M, H1, H2 & E Class sites, refer to the Explanatory Notes and Standard Recommendations for Reactive (S, M, H1, H2 & E Class) Sites version 1.0 July 2018. For Equivalent Class sites, refer to the Explanatory Notes and Standard Recommendations for Equivalent Class Sites, version 1.0 July 2018.

NOTE 2 Bushfire - Prone Area

The Site may be situated in a bush fire prone area in accordance with the Department of Fire and Emergency Services (DFES) Bushfire Prone Area Map (Reference: <http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/>) the current version at the time of this assessment. A Bushfire Attack Level (BAL) assessment may be required for this site, please confirm with the local authority. Should you require an assessment, please contact this Office.

ADDITIONAL NOTES / REQUIREMENTS

Site Condition

At the time of inspection the site was considered to be level and cleared. For specific levels of this site or topographical features, please refer to a professional site survey.

Structerre Geotech Reference

The Site Classification is based on any remedial works being successfully completed as outlined in the Structerre Geotechnical Report J414449 dated 01/08/2022. The footing details are subject to the recommendations being completed to an acceptable level as outlined in this report, if applicable.

-- END OF REPORT --

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 1 of 2)

GENERAL

1. THE EXPLANATORY NOTES AND THE STANDARD RECOMMENDATIONS ARE TO BE READ IN CONJUNCTION WITH THE SITE CLASSIFICATION REPORT.
2. ALL REFERRED STANDARDS TO BE THE CURRENT VERSION AT THE TIME OF THE CONSTRUCTION.
3. THE PURPOSE OF THE SITE CLASSIFICATION REPORT IS TO CLASSIFY THE SITE IN ACCORDANCE WITH AS2870 "RESIDENTIAL SLABS AND FOOTING". IT IS NOT INTENDED FOR ANY OTHER PURPOSE, INCLUDING SOLE INFORMATION IN THE PROVISION OF A QUOTATION FOR SITE WORKS BY EARTH WORKERS. IT IS RECOMMENDED EARTH WORKERS PERFORM THEIR OWN INVESTIGATION FOR QUOTATION PURPOSES.
4. THE SITE CLASSIFICATION REPORT WILL INCLUDE BUT IS NOT LIMITED TO:
 - a. THE SITE CLASSIFICATION IN ACCORDANCE WITH AS2870 RESIDENTIAL SLABS AND FOOTING CONSTRUCTION,
 - b. A WIND RATING IN ACCORDANCE WITH AS 4055 WIND LOADS FOR HOUSING,
 - c. A COASTAL CORROSION CLASSIFICATION,
 - d. ADDITIONAL EARTHWORK RECOMMENDATION WHERE APPLICABLE,
 - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONDITIONS.
5. THE SITE CLASSIFICATION REPORT IS BASED ON THE SITE AS PRESENTED AT THE TIME OF ASSESSMENT. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
6. CLASS A SITES ARE STABLE SITES, GENERALLY SAND, LIMESTONE, GRAVEL OR A COMBINATION. CLASS P ARE PARTICULAR CLASSIFICATIONS SUCH AN UNUSUAL SITES OR SITES REQUIRING ADDITIONAL INVESTIGATION PRIOR TO PROVIDING DETAILS.
7. BOREHOLES EXCAVATED REVEAL THE SOIL PROFILE AT THE BOREHOLE LOCATION ONLY. FROM THIS, IT IS INFERRED THAT THESE ARE THE SOIL CONDITION OVER THE SITE. VARIATIONS CAN OCCUR WHICH MAY NOT HAVE BEEN DETECTED AT THE INVESTIGATION STAGE. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR REASSESSMENT.
8. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE IN ORDER TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
9. THIS REPORT IS FOR STRUCTERRE ONLY TO USE IN DESIGN. ANY DESIGN BY ANYONE ELSE FOR ANY STRUCTURE MUST BE SPECIFICALLY APPROVED BY STRUCTERRE. IF USED BY ANYONE ELSE FOR ANYTHING OTHER THAN A STRUCTERRE DESIGN OR STRUCTURE, STRUCTERRE TAKES NO RESPONSIBILITY.

SAND PAD

10. THE RECOMMENDED FOOTING DESIGN IS ONLY TO BE USED IN CONJUNCTION WITH THE RECOMMENDED SAND PAD AND EARTHWORKS AS OUTLINED IN THE SITE CLASSIFICATION REPORT.
11. THE RECOMMENDATIONS FOR THE SAND PAD IS FOR STRUCTURAL PURPOSES ONLY, AND DOES NOT PROVIDE THE MINIMUM FINISHED PAD LEVEL IN RELATION TO FLOOD LEVELS, OR DEPTH TO GROUNDWATER. SHOULD THE TEST BE LOCATED IN A LOW LYING OR FLOOD PRONE AREA, REFER TO THE LOCAL AUTHORITY FOR MINIMUM BUILDING HEIGHT.
12. IMPORTED FILL FOR USE AS A SAND PAD TO BE IN ACCORDANCE TO AS 3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS" WHICH INCLUDES BUT IS NOT LIMITED TO: BE FREE FROM ANY DELETERIOUS MATERIALS INCLUDING ORGANICS, (ROOTS, STUMPS, GRASSES, DECOMPOSED ORGANICS – PEAT, TIMBER, ETC), BUILDING RUBBLE, GLASS, PLASTICS OR WASTE MATERIAL. THE FINES CONTENT, (PERCENTAGE PASSING THE 0.075mm SIEVE) TO BE LESS THAN 5% BY MASS.
13. ON CLASS A SITES, A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 450mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
14. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
15. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

EARTHWORKS

16. RECOMMENDED EARTHWORKS TO BE CONDUCTED IN ACCORDANCE WITH AS3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS", AND TO INCLUDE BUT NOT BE LIMITED TO:
 - a. REMOVAL OF ALL VEGETATION, TOPSOILS, UNCONTROLLED FILLS AND OTHER DELETERIOUS MATERIALS FROM THE BUILDING AREA,
 - b. GRUBBING OUT OF ANY TREES ENSURING THE REMAINING HOLES ARE BACKFILLED WITH CLEAN COMPACTED SAND,
 - c. NOTIFYING THE ENGINEER OF ANY UNUSUAL FEATURE OR DISCREPANCY THAT MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING,
 - d. COMPACTING TO MEET THE REQUIREMENTS AS OUTLINED IN AS 3798 TABLE 5.1.
17. FILL MATERIAL (WHICH IS NOT ALWAYS APPARENT AT THE INITIAL INVESTIGATION STAGE) IS TO BE DEALT WITH AS FOLLOWS:
 - a. IF IT IS CERTIFIED BY OTHERS IT CAN REMAIN.
 - b. IF IT IS NOT CERTIFIED WILL REQUIRE REMOVAL DOWN TO NATURAL GROUND OR VERIFIED. ANY SAND CAN BE REUSED.
 - c. IF A PAD HAS ALREADY BEEN CONSTRUCTED, THE SITE CLASSIFICATION IS NOT CERTIFICATION OF THE PAD. CONTACT THIS OFFICE SHOULD A SAND PAD CERTIFICATION BE REQUIRED.
18. ANY ORGANIC MATTER OR ROOTS ENCOUNTERED, WHICH IS BEYOND WHAT IS NORMALLY CONSIDERED ACCEPTABLE IS TO BE REMOVED. THIS WILL NECESSITATE RAKING THE SITE TO REMOVE ORGANIC MATERIAL, TURNING THE SITE OVER AND RE- COMPACTING TO A MINIMUM.

RETAINING WALLS

19. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
20. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER TO THE RETAINING WALL THAN THE HEIGHT OF THE RETAINING WALL, THIS MAY PLACE ADDITIONAL LOADS ON THE WALL THAT WERE NOT INITIALLY DESIGNED FOR. AN INSPECTION OF THE STRUCTURAL INTEGRITY OF THE RETAINING WALL WILL BE REQUIRED TO PROVIDE CERTIFICATION AND/OR RECOMMENDATIONS PRIOR TO ANY CONSTRUCTION. PLEASE REFER BACK TO THIS OFFICE FOR ASSISTANCE.

STORMWATER DRAINAGE

21. ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF SOAKWELL AWAY FROM THE BUILDING AND SETBACK MINIMUM OF 1200mm, WHICHEVER IS GREATER. PLEASE REFER BACK TO THIS OFFICE IF REQUIRED THE SET-BACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



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TEL (08) 9205 4500 FAX (08) 9205 4541 EMAIL: perth@strucTerre.com.au

PROJECT :
LOT 1136 NERANG RD YANCHEP

CLIENT : DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 2 of 2)

WIND CLASSIFICATION

22. WIND CLASSIFICATION IS GIVEN FOR THE EXPECTED CONDITION 5 YEARS HENCE. THIS CLASSIFICATION IS LIMITED TO BUILDINGS CLASSES 1 AND 10, WHICH HAVE THE FOLLOWING LIMITATION (AS PER AS4055):

- a. MAXIMUM DISTANCE FROM THE GROUND LEVEL TO THE UNDERSIDE OF EAVES SHALL NOT EXCEED 6.0m.
- b. MAXIMUM DISTANCE FROM GROUND LEVEL TO THE HIGHEST POINT OF THE ROOF, EXCLUDING CHIMNEYS, SHALL NOT EXCEED 8.5m.
- c. THE ROOF PITCH SHALL NOT EXCEED 35°.
- d. THE WIDTH, EXCLUDING EAVES, SHALL NOT EXCEED 16.0m AND THE LENGTH SHALL NOT EXCEED 5x THE WIDTH.

IF THE BUILDING FALLS OUTSIDE OF THESE LIMITATIONS, THE STATED WIND CLASSIFICATION DOES NOT APPLY. REFER BACK TO THIS OFFICE FOR A REVISED WIND CLASSIFICATION.

ENVIRONMENTAL

23. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, IT IS RECOMMENDED THAT AN ENVIRONMENTAL ENGINEER BE ENGAGED.

SEISMIC

24. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF ≤ 0.11 . RECOMMENDED FOOTING DETAILS PROVIDED FOR SITES WITH AN EARTHQUAKE HAZARD FACTOR OF > 0.11 , ARE NOT FOR CONSTRUCTION, BUT FOR COSTING PURPOSES ONLY. IT IS RECOMMENDED REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

CORROSION CLASSIFICATION

25. THE CORROSION CLASSIFICATION HAS BEEN ASSESSED IN ACCORDANCE WITH AS3700.

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PROJECT:
LOT 1136 NERANG RD YANCHEP

CLIENT: DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

A blue ink handwritten signature is written over the 'APPROVED' field.

SITE CLASSIFICATION REPORT
CERTIFICATE 2595275

CLIENT DENSFORD CIVIL
JOB ADDRESS LOT 1137 NERANG RD YANCHEP
CLIENT JOB NO.
OWNER
STRUCTERRE JOB NO. S1085305
DATE OF ASSESSMENT 17/11/22

SITE RECORD

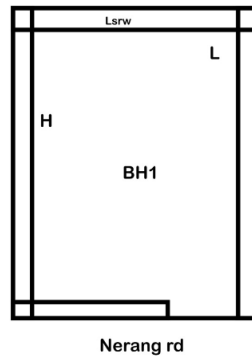


SITE CLASSIFICATION	A	<i>(in accordance with AS2870)</i>
FOOTING DETAIL	A	
SAND PAD	No sand pad required structurally	
BUSHFIRE PRONE AREA	Yes	<i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	R3	<i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	N1	<i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	Full Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1500 FILL sand trace gravel (limestone) - brown; 1500 - 1800 FILL sand; 1800 end of hole.

APPROXIMATE BOREHOLE LOCATIONS



NOTE 1 Explanatory Notes & Standard Recommendations

This site classification report must be read in conjunction with the applicable Explanatory Notes & Standard Recommendations. For A Class sites, refer to the Explanatory Notes and Standard Recommendations for Stable (A Class) Sites, version 1.0 July 2018. For S, M, H1, H2 & E Class sites, refer to the Explanatory Notes and Standard Recommendations for Reactive (S, M, H1, H2 & E Class) Sites version 1.0 July 2018. For Equivalent Class sites, refer to the Explanatory Notes and Standard Recommendations for Equivalent Class Sites, version 1.0 July 2018.

NOTE 2 Bushfire - Prone Area

The Site may be situated in a bush fire prone area in accordance with the Department of Fire and Emergency Services (DFES) Bushfire Prone Area Map (Reference: <http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/>) the current version at the time of this assessment. A Bushfire Attack Level (BAL) assessment may be required for this site, please confirm with the local authority. Should you require an assessment, please contact this Office.

ADDITIONAL NOTES / REQUIREMENTS

Site Condition

At the time of inspection the site was considered to be level and cleared. For specific levels of this site or topographical features, please refer to a professional site survey.

Structerre Geotech Reference

The Site Classification is based on any remedial works being successfully completed as outlined in the Structerre Geotechnical Report J414449 dated 01/08/2022. The footing details are subject to the recommendations being completed to an acceptable level as outlined in this report, if applicable.

-- END OF REPORT --

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 1 of 2)

GENERAL

1. THE EXPLANATORY NOTES AND THE STANDARD RECOMMENDATIONS ARE TO BE READ IN CONJUNCTION WITH THE SITE CLASSIFICATION REPORT.
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SAND PAD

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12. IMPORTED FILL FOR USE AS A SAND PAD TO BE IN ACCORDANCE TO AS 3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS" WHICH INCLUDES BUT IS NOT LIMITED TO: BE FREE FROM ANY DELETERIOUS MATERIALS INCLUDING ORGANICS, (ROOTS, STUMPS, GRASSES, DECOMPOSED ORGANICS – PEAT, TIMBER, ETC), BUILDING RUBBLE, GLASS, PLASTICS OR WASTE MATERIAL. THE FINES CONTENT, (PERCENTAGE PASSING THE 0.075mm SIEVE) TO BE LESS THAN 5% BY MASS.
13. ON CLASS A SITES, A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 450mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
14. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
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EARTHWORKS

16. RECOMMENDED EARTHWORKS TO BE CONDUCTED IN ACCORDANCE WITH AS3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS", AND TO INCLUDE BUT NOT BE LIMITED TO:
 - a. REMOVAL OF ALL VEGETATION, TOPSOILS, UNCONTROLLED FILLS AND OTHER DELETERIOUS MATERIALS FROM THE BUILDING AREA,
 - b. GRUBBING OUT OF ANY TREES ENSURING THE REMAINING HOLES ARE BACKFILLED WITH CLEAN COMPACTED SAND,
 - c. NOTIFYING THE ENGINEER OF ANY UNUSUAL FEATURE OR DISCREPANCY THAT MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING,
 - d. COMPACTING TO MEET THE REQUIREMENTS AS OUTLINED IN AS 3798 TABLE 5.1.
17. FILL MATERIAL (WHICH IS NOT ALWAYS APPARENT AT THE INITIAL INVESTIGATION STAGE) IS TO BE DEALT WITH AS FOLLOWS:
 - a. IF IT IS CERTIFIED BY OTHERS IT CAN REMAIN.
 - b. IF IT IS NOT CERTIFIED WILL REQUIRE REMOVAL DOWN TO NATURAL GROUND OR VERIFIED. ANY SAND CAN BE REUSED.
 - c. IF A PAD HAS ALREADY BEEN CONSTRUCTED, THE SITE CLASSIFICATION IS NOT CERTIFICATION OF THE PAD. CONTACT THIS OFFICE SHOULD A SAND PAD CERTIFICATION BE REQUIRED.
18. ANY ORGANIC MATTER OR ROOTS ENCOUNTERED, WHICH IS BEYOND WHAT IS NORMALLY CONSIDERED ACCEPTABLE IS TO BE REMOVED. THIS WILL NECESSITATE RAKING THE SITE TO REMOVE ORGANIC MATERIAL, TURNING THE SITE OVER AND RE- COMPACTING TO A MINIMUM.

RETAINING WALLS

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20. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER TO THE RETAINING WALL THAN THE HEIGHT OF THE RETAINING WALL, THIS MAY PLACE ADDITIONAL LOADS ON THE WALL THAT WERE NOT INITIALLY DESIGNED FOR. AN INSPECTION OF THE STRUCTURAL INTEGRITY OF THE RETAINING WALL WILL BE REQUIRED TO PROVIDE CERTIFICATION AND/OR RECOMMENDATIONS PRIOR TO ANY CONSTRUCTION. PLEASE REFER BACK TO THIS OFFICE FOR ASSISTANCE.

STORMWATER DRAINAGE

21. ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF SOAKWELL AWAY FROM THE BUILDING AND SETBACK MINIMUM OF 1200mm, WHICHEVER IS GREATER. PLEASE REFER BACK TO THIS OFFICE IF REQUIRED THE SET-BACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



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Unit Trust trading as StrucTerre Consulting Engineers
1 ERINDALE ROAD, BALCATT WA 6021
TEL (08) 9205 4500 FAX (08) 9205 4541 EMAIL: perth@strucTerre.com.au

PROJECT :
LOT 1137 NERANG RD YANCHEP

CLIENT : DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 2 of 2)

WIND CLASSIFICATION

22. WIND CLASSIFICATION IS GIVEN FOR THE EXPECTED CONDITION 5 YEARS HENCE. THIS CLASSIFICATION IS LIMITED TO BUILDINGS CLASSES 1 AND 10, WHICH HAVE THE FOLLOWING LIMITATION (AS PER AS4055):

- a. MAXIMUM DISTANCE FROM THE GROUND LEVEL TO THE UNDERSIDE OF EAVES SHALL NOT EXCEED 6.0m.
- b. MAXIMUM DISTANCE FROM GROUND LEVEL TO THE HIGHEST POINT OF THE ROOF, EXCLUDING CHIMNEYS, SHALL NOT EXCEED 8.5m.
- c. THE ROOF PITCH SHALL NOT EXCEED 35°.
- d. THE WIDTH, EXCLUDING EAVES, SHALL NOT EXCEED 16.0m AND THE LENGTH SHALL NOT EXCEED 5x THE WIDTH.

IF THE BUILDING FALLS OUTSIDE OF THESE LIMITATIONS, THE STATED WIND CLASSIFICATION DOES NOT APPLY. REFER BACK TO THIS OFFICE FOR A REVISED WIND CLASSIFICATION.

ENVIRONMENTAL

23. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, IT IS RECOMMENDED THAT AN ENVIRONMENTAL ENGINEER BE ENGAGED.

SEISMIC

24. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF ≤ 0.11 . RECOMMENDED FOOTING DETAILS PROVIDED FOR SITES WITH AN EARTHQUAKE HAZARD FACTOR OF > 0.11 , ARE NOT FOR CONSTRUCTION, BUT FOR COSTING PURPOSES ONLY. IT IS RECOMMENDED REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

CORROSION CLASSIFICATION

25. THE CORROSION CLASSIFICATION HAS BEEN ASSESSED IN ACCORDANCE WITH AS3700.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham
Unit Trust trading as StrucTerre Consulting Engineers
1 ERINDALE ROAD, BALCATTA W.A. 6021
TEL (08) 9205 4500 FAX (08) 9205 4541 EMAIL: perth@strucTerre.com.au

PROJECT:
LOT 1137 NERANG RD YANCHEP

CLIENT: DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

A blue ink handwritten signature is written over the 'APPROVED' field.

SITE CLASSIFICATION REPORT
CERTIFICATE 2595952

CLIENT DENSFORD CIVIL
JOB ADDRESS LOT 1142 HASTIES RD YANCHEP
CLIENT JOB NO.
OWNER
STRUCTERRE JOB NO. S1085333
DATE OF ASSESSMENT 12/12/22

SITE RECORD

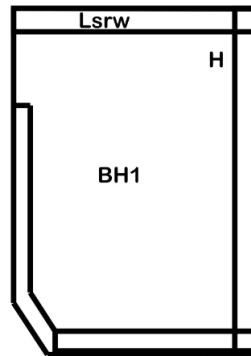


SITE CLASSIFICATION	A	<i>(in accordance with AS2870)</i>
FOOTING DETAIL	A	
SAND PAD	No sand pad required structurally	
BUSHFIRE PRONE AREA	Yes	<i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	R3	<i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	N1	<i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	Full Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1800 SAND with gravel (limestone) - brown; 1800 end of hole.

APPROXIMATE BOREHOLE LOCATIONS



NOTE 1 Explanatory Notes & Standard Recommendations

This site classification report must be read in conjunction with the applicable Explanatory Notes & Standard Recommendations. For A Class sites, refer to the Explanatory Notes and Standard Recommendations for Stable (A Class) Sites, version 1.0 July 2018. For S, M, H1, H2 & E Class sites, refer to the Explanatory Notes and Standard Recommendations for Reactive (S, M, H1, H2 & E Class) Sites version 1.0 July 2018. For Equivalent Class sites, refer to the Explanatory Notes and Standard Recommendations for Equivalent Class Sites, version 1.0 July 2018.

NOTE 2 Bushfire - Prone Area

The Site may be situated in a bush fire prone area in accordance with the Department of Fire and Emergency Services (DFES) Bushfire Prone Area Map (Reference: <http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/>) the current version at the time of this assessment. A Bushfire Attack Level (BAL) assessment may be required for this site, please confirm with the local authority. Should you require an assessment, please contact this Office.

ADDITIONAL NOTES / REQUIREMENTS

Site Condition

At the time of inspection the site was considered to be level and cleared. For specific levels of this site or topographical features, please refer to a professional site survey.

Structerre Geotech Reference

The Site Classification is based on any remedial works being successfully completed as outlined in the Structerre Geotechnical Report J414449 dated 01/08/2022. The footing details are subject to the recommendations being completed to an acceptable level as outlined in this report, if applicable.

-- END OF REPORT --

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 1 of 2)

GENERAL

1. THE EXPLANATORY NOTES AND THE STANDARD RECOMMENDATIONS ARE TO BE READ IN CONJUNCTION WITH THE SITE CLASSIFICATION REPORT.
2. ALL REFERRED STANDARDS TO BE THE CURRENT VERSION AT THE TIME OF THE CONSTRUCTION.
3. THE PURPOSE OF THE SITE CLASSIFICATION REPORT IS TO CLASSIFY THE SITE IN ACCORDANCE WITH AS2870 "RESIDENTIAL SLABS AND FOOTING". IT IS NOT INTENDED FOR ANY OTHER PURPOSE, INCLUDING SOLE INFORMATION IN THE PROVISION OF A QUOTATION FOR SITE WORKS BY EARTH WORKERS. IT IS RECOMMENDED EARTH WORKERS PERFORM THEIR OWN INVESTIGATION FOR QUOTATION PURPOSES.
4. THE SITE CLASSIFICATION REPORT WILL INCLUDE BUT IS NOT LIMITED TO:
 - a. THE SITE CLASSIFICATION IN ACCORDANCE WITH AS2870 RESIDENTIAL SLABS AND FOOTING CONSTRUCTION,
 - b. A WIND RATING IN ACCORDANCE WITH AS 4055 WIND LOADS FOR HOUSING,
 - c. A COASTAL CORROSION CLASSIFICATION,
 - d. ADDITIONAL EARTHWORK RECOMMENDATION WHERE APPLICABLE,
 - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONDITIONS.
5. THE SITE CLASSIFICATION REPORT IS BASED ON THE SITE AS PRESENTED AT THE TIME OF ASSESSMENT. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
6. CLASS A SITES ARE STABLE SITES, GENERALLY SAND, LIMESTONE, GRAVEL OR A COMBINATION. CLASS P ARE PARTICULAR CLASSIFICATIONS SUCH AN UNUSUAL SITES OR SITES REQUIRING ADDITIONAL INVESTIGATION PRIOR TO PROVIDING DETAILS.
7. BOREHOLES EXCAVATED REVEAL THE SOIL PROFILE AT THE BOREHOLE LOCATION ONLY. FROM THIS, IT IS INFERRED THAT THESE ARE THE SOIL CONDITION OVER THE SITE. VARIATIONS CAN OCCUR WHICH MAY NOT HAVE BEEN DETECTED AT THE INVESTIGATION STAGE. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR REASSESSMENT.
8. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE IN ORDER TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
9. THIS REPORT IS FOR STRUCTERRE ONLY TO USE IN DESIGN. ANY DESIGN BY ANYONE ELSE FOR ANY STRUCTURE MUST BE SPECIFICALLY APPROVED BY STRUCTERRE. IF USED BY ANYONE ELSE FOR ANYTHING OTHER THAN A STRUCTERRE DESIGN OR STRUCTURE, STRUCTERRE TAKES NO RESPONSIBILITY.

SAND PAD

10. THE RECOMMENDED FOOTING DESIGN IS ONLY TO BE USED IN CONJUNCTION WITH THE RECOMMENDED SAND PAD AND EARTHWORKS AS OUTLINED IN THE SITE CLASSIFICATION REPORT.
11. THE RECOMMENDATIONS FOR THE SAND PAD IS FOR STRUCTURAL PURPOSES ONLY, AND DOES NOT PROVIDE THE MINIMUM FINISHED PAD LEVEL IN RELATION TO FLOOD LEVELS, OR DEPTH TO GROUNDWATER. SHOULD THE TEST BE LOCATED IN A LOW LYING OR FLOOD PRONE AREA, REFER TO THE LOCAL AUTHORITY FOR MINIMUM BUILDING HEIGHT.
12. IMPORTED FILL FOR USE AS A SAND PAD TO BE IN ACCORDANCE TO AS 3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS" WHICH INCLUDES BUT IS NOT LIMITED TO: BE FREE FROM ANY DELETERIOUS MATERIALS INCLUDING ORGANICS, (ROOTS, STUMPS, GRASSES, DECOMPOSED ORGANICS – PEAT, TIMBER, ETC), BUILDING RUBBLE, GLASS, PLASTICS OR WASTE MATERIAL. THE FINES CONTENT, (PERCENTAGE PASSING THE 0.075mm SIEVE) TO BE LESS THAN 5% BY MASS.
13. ON CLASS A SITES, A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 450mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
14. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
15. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

EARTHWORKS

16. RECOMMENDED EARTHWORKS TO BE CONDUCTED IN ACCORDANCE WITH AS3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS", AND TO INCLUDE BUT NOT BE LIMITED TO:
 - a. REMOVAL OF ALL VEGETATION, TOPSOILS, UNCONTROLLED FILLS AND OTHER DELETERIOUS MATERIALS FROM THE BUILDING AREA,
 - b. GRUBBING OUT OF ANY TREES ENSURING THE REMAINING HOLES ARE BACKFILLED WITH CLEAN COMPACTED SAND,
 - c. NOTIFYING THE ENGINEER OF ANY UNUSUAL FEATURE OR DISCREPANCY THAT MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING,
 - d. COMPACTING TO MEET THE REQUIREMENTS AS OUTLINED IN AS 3798 TABLE 5.1.
17. FILL MATERIAL (WHICH IS NOT ALWAYS APPARENT AT THE INITIAL INVESTIGATION STAGE) IS TO BE DEALT WITH AS FOLLOWS:
 - a. IF IT IS CERTIFIED BY OTHERS IT CAN REMAIN.
 - b. IF IT IS NOT CERTIFIED WILL REQUIRE REMOVAL DOWN TO NATURAL GROUND OR VERIFIED. ANY SAND CAN BE REUSED.
 - c. IF A PAD HAS ALREADY BEEN CONSTRUCTED, THE SITE CLASSIFICATION IS NOT CERTIFICATION OF THE PAD. CONTACT THIS OFFICE SHOULD A SAND PAD CERTIFICATION BE REQUIRED.
18. ANY ORGANIC MATTER OR ROOTS ENCOUNTERED, WHICH IS BEYOND WHAT IS NORMALLY CONSIDERED ACCEPTABLE IS TO BE REMOVED. THIS WILL NECESSITATE RAKING THE SITE TO REMOVE ORGANIC MATERIAL, TURNING THE SITE OVER AND RE- COMPACTING TO A MINIMUM.

RETAINING WALLS

19. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
20. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER TO THE RETAINING WALL THAN THE HEIGHT OF THE RETAINING WALL, THIS MAY PLACE ADDITIONAL LOADS ON THE WALL THAT WERE NOT INITIALLY DESIGNED FOR. AN INSPECTION OF THE STRUCTURAL INTEGRITY OF THE RETAINING WALL WILL BE REQUIRED TO PROVIDE CERTIFICATION AND/OR RECOMMENDATIONS PRIOR TO ANY CONSTRUCTION. PLEASE REFER BACK TO THIS OFFICE FOR ASSISTANCE.

STORMWATER DRAINAGE

21. ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF SOAKWELL AWAY FROM THE BUILDING AND SETBACK MINIMUM OF 1200mm, WHICHEVER IS GREATER. PLEASE REFER BACK TO THIS OFFICE IF REQUIRED THE SET-BACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham
Unit Trust trading as StrucTerre Consulting Engineers
1 ERINDALE ROAD, BALEATTA W.A. 6021

TEL (08) 9205 4500 FAX (08) 9205 4541 EMAIL: perth@strucTerre.com.au

PROJECT:
LOT 1142 HASTIES RD YANCHEP

CLIENT: DENSFORD CIVIL

SCALE 1:20

DATE 13/12/22

APPROVED

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 2 of 2)

WIND CLASSIFICATION

22. WIND CLASSIFICATION IS GIVEN FOR THE EXPECTED CONDITION 5 YEARS HENCE. THIS CLASSIFICATION IS LIMITED TO BUILDINGS CLASSES 1 AND 10, WHICH HAVE THE FOLLOWING LIMITATION (AS PER AS4055):

- a. MAXIMUM DISTANCE FROM THE GROUND LEVEL TO THE UNDERSIDE OF EAVES SHALL NOT EXCEED 6.0m.
- b. MAXIMUM DISTANCE FROM GROUND LEVEL TO THE HIGHEST POINT OF THE ROOF, EXCLUDING CHIMNEYS, SHALL NOT EXCEED 8.5m.
- c. THE ROOF PITCH SHALL NOT EXCEED 35°.
- d. THE WIDTH, EXCLUDING EAVES, SHALL NOT EXCEED 16.0m AND THE LENGTH SHALL NOT EXCEED 5x THE WIDTH.

IF THE BUILDING FALLS OUTSIDE OF THESE LIMITATIONS, THE STATED WIND CLASSIFICATION DOES NOT APPLY. REFER BACK TO THIS OFFICE FOR A REVISED WIND CLASSIFICATION.

ENVIRONMENTAL

23. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, IT IS RECOMMENDED THAT AN ENVIRONMENTAL ENGINEER BE ENGAGED.

SEISMIC

24. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF ≤ 0.11 . RECOMMENDED FOOTING DETAILS PROVIDED FOR SITES WITH AN EARTHQUAKE HAZARD FACTOR OF > 0.11 , ARE NOT FOR CONSTRUCTION, BUT FOR COSTING PURPOSES ONLY. IT IS RECOMMENDED REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

CORROSION CLASSIFICATION

25. THE CORROSION CLASSIFICATION HAS BEEN ASSESSED IN ACCORDANCE WITH AS3700.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



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TEL (08) 9205 4500 FAX (08) 9205 4541 EMAIL: perth@strucTerre.com.au

PROJECT:
LOT 1142 HASTIES RD YANCHEP

CLIENT: DENSFORD CIVIL

SCALE 1:20

DATE 13/12/22

APPROVED

A blue ink handwritten signature is written over the 'APPROVED' field.

SITE CLASSIFICATION REPORT
CERTIFICATE 2595280

CLIENT DENSFORD CIVIL
JOB ADDRESS LOT 1143 NERANG RD YANCHEP
CLIENT JOB NO.
OWNER
STRUCTERRE JOB NO. S1085301
DATE OF ASSESSMENT 17/11/22

SITE RECORD

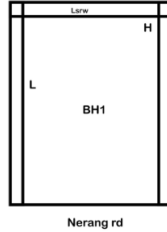


SITE CLASSIFICATION	A	<i>(in accordance with AS2870)</i>
FOOTING DETAIL	A	
SAND PAD	No sand pad required structurally	
BUSHFIRE PRONE AREA	Yes	<i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	R3	<i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	N2	<i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	Partial Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1500 FILL sand trace gravel (limestone) - brown; 1500 - 1800 FILL sand; 1800 end of hole.

APPROXIMATE BOREHOLE LOCATIONS



NOTE 1 Explanatory Notes & Standard Recommendations

This site classification report must be read in conjunction with the applicable Explanatory Notes & Standard Recommendations. For A Class sites, refer to the Explanatory Notes and Standard Recommendations for Stable (A Class) Sites, version 1.0 July 2018. For S, M, H1, H2 & E Class sites, refer to the Explanatory Notes and Standard Recommendations for Reactive (S, M, H1, H2 & E Class) Sites version 1.0 July 2018. For Equivalent Class sites, refer to the Explanatory Notes and Standard Recommendations for Equivalent Class Sites, version 1.0 July 2018.

NOTE 2 Bushfire - Prone Area

The Site may be situated in a bush fire prone area in accordance with the Department of Fire and Emergency Services (DFES) Bushfire Prone Area Map (Reference: <http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/>) the current version at the time of this assessment. A Bushfire Attack Level (BAL) assessment may be required for this site, please confirm with the local authority. Should you require an assessment, please contact this Office.

ADDITIONAL NOTES / REQUIREMENTS

Site Condition

At the time of inspection the site was considered to be level and cleared. For specific levels of this site or topographical features, please refer to a professional site survey.

Structerre Geotech Reference

The Site Classification is based on any remedial works being successfully completed as outlined in the Structerre Geotechnical Report J414449 dated 01/08/2022. The footing details are subject to the recommendations being completed to an acceptable level as outlined in this report, if applicable.

-- END OF REPORT --

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 1 of 2)

GENERAL

1. THE EXPLANATORY NOTES AND THE STANDARD RECOMMENDATIONS ARE TO BE READ IN CONJUNCTION WITH THE SITE CLASSIFICATION REPORT.
2. ALL REFERRED STANDARDS TO BE THE CURRENT VERSION AT THE TIME OF THE CONSTRUCTION.
3. THE PURPOSE OF THE SITE CLASSIFICATION REPORT IS TO CLASSIFY THE SITE IN ACCORDANCE WITH AS2870 "RESIDENTIAL SLABS AND FOOTING". IT IS NOT INTENDED FOR ANY OTHER PURPOSE, INCLUDING SOLE INFORMATION IN THE PROVISION OF A QUOTATION FOR SITE WORKS BY EARTH WORKERS. IT IS RECOMMENDED EARTH WORKERS PERFORM THEIR OWN INVESTIGATION FOR QUOTATION PURPOSES.
4. THE SITE CLASSIFICATION REPORT WILL INCLUDE BUT IS NOT LIMITED TO:
 - a. THE SITE CLASSIFICATION IN ACCORDANCE WITH AS2870 RESIDENTIAL SLABS AND FOOTING CONSTRUCTION,
 - b. A WIND RATING IN ACCORDANCE WITH AS 4055 WIND LOADS FOR HOUSING,
 - c. A COASTAL CORROSION CLASSIFICATION,
 - d. ADDITIONAL EARTHWORK RECOMMENDATION WHERE APPLICABLE,
 - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONDITIONS.
5. THE SITE CLASSIFICATION REPORT IS BASED ON THE SITE AS PRESENTED AT THE TIME OF ASSESSMENT. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
6. CLASS A SITES ARE STABLE SITES, GENERALLY SAND, LIMESTONE, GRAVEL OR A COMBINATION. CLASS P ARE PARTICULAR CLASSIFICATIONS SUCH AN UNUSUAL SITES OR SITES REQUIRING ADDITIONAL INVESTIGATION PRIOR TO PROVIDING DETAILS.
7. BOREHOLES EXCAVATED REVEAL THE SOIL PROFILE AT THE BOREHOLE LOCATION ONLY. FROM THIS, IT IS INFERRED THAT THESE ARE THE SOIL CONDITION OVER THE SITE. VARIATIONS CAN OCCUR WHICH MAY NOT HAVE BEEN DETECTED AT THE INVESTIGATION STAGE. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR REASSESSMENT.
8. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE IN ORDER TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
9. THIS REPORT IS FOR STRUCTERRE ONLY TO USE IN DESIGN. ANY DESIGN BY ANYONE ELSE FOR ANY STRUCTURE MUST BE SPECIFICALLY APPROVED BY STRUCTERRE. IF USED BY ANYONE ELSE FOR ANYTHING OTHER THAN A STRUCTERRE DESIGN OR STRUCTURE, STRUCTERRE TAKES NO RESPONSIBILITY.

SAND PAD

10. THE RECOMMENDED FOOTING DESIGN IS ONLY TO BE USED IN CONJUNCTION WITH THE RECOMMENDED SAND PAD AND EARTHWORKS AS OUTLINED IN THE SITE CLASSIFICATION REPORT.
11. THE RECOMMENDATIONS FOR THE SAND PAD IS FOR STRUCTURAL PURPOSES ONLY, AND DOES NOT PROVIDE THE MINIMUM FINISHED PAD LEVEL IN RELATION TO FLOOD LEVELS, OR DEPTH TO GROUNDWATER. SHOULD THE TEST BE LOCATED IN A LOW LYING OR FLOOD PRONE AREA, REFER TO THE LOCAL AUTHORITY FOR MINIMUM BUILDING HEIGHT.
12. IMPORTED FILL FOR USE AS A SAND PAD TO BE IN ACCORDANCE TO AS 3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS" WHICH INCLUDES BUT IS NOT LIMITED TO: BE FREE FROM ANY DELETERIOUS MATERIALS INCLUDING ORGANICS, (ROOTS, STUMPS, GRASSES, DECOMPOSED ORGANICS – PEAT, TIMBER, ETC), BUILDING RUBBLE, GLASS, PLASTICS OR WASTE MATERIAL. THE FINES CONTENT, (PERCENTAGE PASSING THE 0.075mm SIEVE) TO BE LESS THAN 5% BY MASS.
13. ON CLASS A SITES, A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 450mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
14. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
15. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

EARTHWORKS

16. RECOMMENDED EARTHWORKS TO BE CONDUCTED IN ACCORDANCE WITH AS3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS", AND TO INCLUDE BUT NOT BE LIMITED TO:
 - a. REMOVAL OF ALL VEGETATION, TOPSOILS, UNCONTROLLED FILLS AND OTHER DELETERIOUS MATERIALS FROM THE BUILDING AREA,
 - b. GRUBBING OUT OF ANY TREES ENSURING THE REMAINING HOLES ARE BACKFILLED WITH CLEAN COMPACTED SAND,
 - c. NOTIFYING THE ENGINEER OF ANY UNUSUAL FEATURE OR DISCREPANCY THAT MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING,
 - d. COMPACTING TO MEET THE REQUIREMENTS AS OUTLINED IN AS 3798 TABLE 5.1.
17. FILL MATERIAL (WHICH IS NOT ALWAYS APPARENT AT THE INITIAL INVESTIGATION STAGE) IS TO BE DEALT WITH AS FOLLOWS:
 - a. IF IT IS CERTIFIED BY OTHERS IT CAN REMAIN.
 - b. IF IT IS NOT CERTIFIED WILL REQUIRE REMOVAL DOWN TO NATURAL GROUND OR VERIFIED. ANY SAND CAN BE REUSED.
 - c. IF A PAD HAS ALREADY BEEN CONSTRUCTED, THE SITE CLASSIFICATION IS NOT CERTIFICATION OF THE PAD. CONTACT THIS OFFICE SHOULD A SAND PAD CERTIFICATION BE REQUIRED.
18. ANY ORGANIC MATTER OR ROOTS ENCOUNTERED, WHICH IS BEYOND WHAT IS NORMALLY CONSIDERED ACCEPTABLE IS TO BE REMOVED. THIS WILL NECESSITATE RAKING THE SITE TO REMOVE ORGANIC MATERIAL, TURNING THE SITE OVER AND RE- COMPACTING TO A MINIMUM.

RETAINING WALLS

19. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
20. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER TO THE RETAINING WALL THAN THE HEIGHT OF THE RETAINING WALL, THIS MAY PLACE ADDITIONAL LOADS ON THE WALL THAT WERE NOT INITIALLY DESIGNED FOR. AN INSPECTION OF THE STRUCTURAL INTEGRITY OF THE RETAINING WALL WILL BE REQUIRED TO PROVIDE CERTIFICATION AND/OR RECOMMENDATIONS PRIOR TO ANY CONSTRUCTION. PLEASE REFER BACK TO THIS OFFICE FOR ASSISTANCE.

STORMWATER DRAINAGE

21. ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF SOAKWELL AWAY FROM THE BUILDING AND SETBACK MINIMUM OF 1200mm, WHICHEVER IS GREATER. PLEASE REFER BACK TO THIS OFFICE IF REQUIRED THE SET-BACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham
Unit Trust trading as StrucTerre Consulting Engineers
1 ERINDALE ROAD, BALCATT WA 6021
TEL (08) 9205 4500 FAX (08) 9205 4541 EMAIL: perth@strucTerre.com.au

PROJECT :
LOT 1143 NERANG RD YANCHEP

CLIENT : DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 2 of 2)

WIND CLASSIFICATION

22. WIND CLASSIFICATION IS GIVEN FOR THE EXPECTED CONDITION 5 YEARS HENCE. THIS CLASSIFICATION IS LIMITED TO BUILDINGS CLASSES 1 AND 10, WHICH HAVE THE FOLLOWING LIMITATION (AS PER AS4055):

- a. MAXIMUM DISTANCE FROM THE GROUND LEVEL TO THE UNDERSIDE OF EAVES SHALL NOT EXCEED 6.0m.
- b. MAXIMUM DISTANCE FROM GROUND LEVEL TO THE HIGHEST POINT OF THE ROOF, EXCLUDING CHIMNEYS, SHALL NOT EXCEED 8.5m.
- c. THE ROOF PITCH SHALL NOT EXCEED 35°.
- d. THE WIDTH, EXCLUDING EAVES, SHALL NOT EXCEED 16.0m AND THE LENGTH SHALL NOT EXCEED 5x THE WIDTH.

IF THE BUILDING FALLS OUTSIDE OF THESE LIMITATIONS, THE STATED WIND CLASSIFICATION DOES NOT APPLY. REFER BACK TO THIS OFFICE FOR A REVISED WIND CLASSIFICATION.

ENVIRONMENTAL

23. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, IT IS RECOMMENDED THAT AN ENVIRONMENTAL ENGINEER BE ENGAGED.

SEISMIC

24. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF ≤ 0.11 . RECOMMENDED FOOTING DETAILS PROVIDED FOR SITES WITH AN EARTHQUAKE HAZARD FACTOR OF > 0.11 , ARE NOT FOR CONSTRUCTION, BUT FOR COSTING PURPOSES ONLY. IT IS RECOMMENDED REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

CORROSION CLASSIFICATION

25. THE CORROSION CLASSIFICATION HAS BEEN ASSESSED IN ACCORDANCE WITH AS3700.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham
Unit Trust trading as StrucTerre Consulting Engineers
1 ERINDALE ROAD, BALCATTA W.A. 6021
TEL (08) 9205 4500 FAX (08) 9205 4541 EMAIL: perth@strucTerre.com.au

PROJECT:
LOT 1143 NERANG RD YANCHEP

CLIENT: DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

A blue ink handwritten signature is written over the 'APPROVED' field.

SITE CLASSIFICATION REPORT
CERTIFICATE 2595281

CLIENT DENSFORD CIVIL
JOB ADDRESS LOT 1144 NERANG RD YANCHEP
CLIENT JOB NO.
OWNER
STRUCTERRE JOB NO. S1085298
DATE OF ASSESSMENT 17/11/22

SITE RECORD

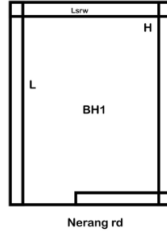


SITE CLASSIFICATION	A	<i>(in accordance with AS2870)</i>
FOOTING DETAIL	A	
SAND PAD	No sand pad required structurally	
BUSHFIRE PRONE AREA	Yes	<i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	R3	<i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	N2	<i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	Partial Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1500 FILL sand trace gravel (limestone) - brown; 1500 - 1800 FILL sand; 1800 end of hole.

APPROXIMATE BOREHOLE LOCATIONS



NOTE 1 Explanatory Notes & Standard Recommendations

This site classification report must be read in conjunction with the applicable Explanatory Notes & Standard Recommendations. For A Class sites, refer to the Explanatory Notes and Standard Recommendations for Stable (A Class) Sites, version 1.0 July 2018. For S, M, H1, H2 & E Class sites, refer to the Explanatory Notes and Standard Recommendations for Reactive (S, M, H1, H2 & E Class) Sites version 1.0 July 2018. For Equivalent Class sites, refer to the Explanatory Notes and Standard Recommendations for Equivalent Class Sites, version 1.0 July 2018.

NOTE 2 Bushfire - Prone Area

The Site may be situated in a bush fire prone area in accordance with the Department of Fire and Emergency Services (DFES) Bushfire Prone Area Map (Reference: <http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/>) the current version at the time of this assessment. A Bushfire Attack Level (BAL) assessment may be required for this site, please confirm with the local authority. Should you require an assessment, please contact this Office.

ADDITIONAL NOTES / REQUIREMENTS

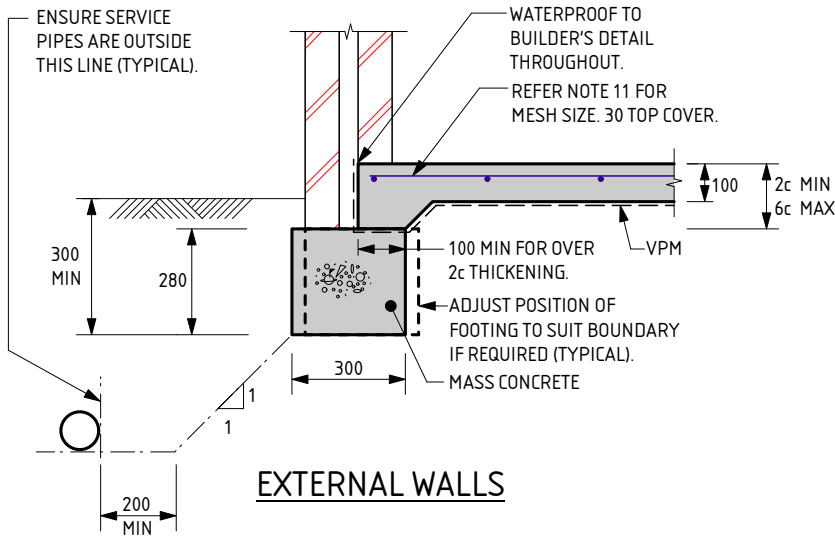
Site Condition

At the time of inspection the site was considered to be level and cleared. For specific levels of this site or topographical features, please refer to a professional site survey.

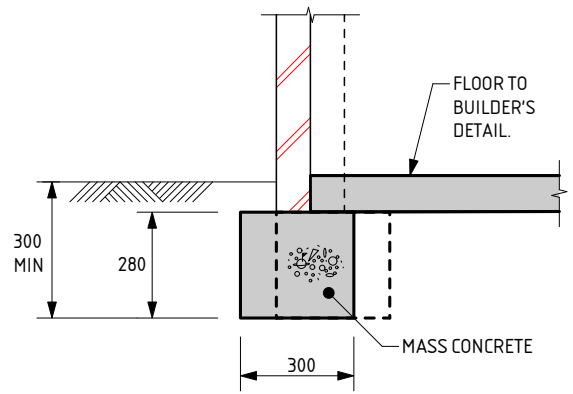
Structerre Geotech Reference

The Site Classification is based on any remedial works being successfully completed as outlined in the Structerre Geotechnical Report J414449 dated 01/08/2022. The footing details are subject to the recommendations being completed to an acceptable level as outlined in this report, if applicable.

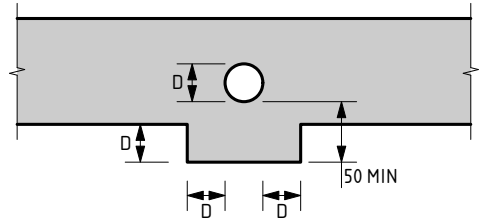
-- END OF REPORT --



EXTERNAL WALLS

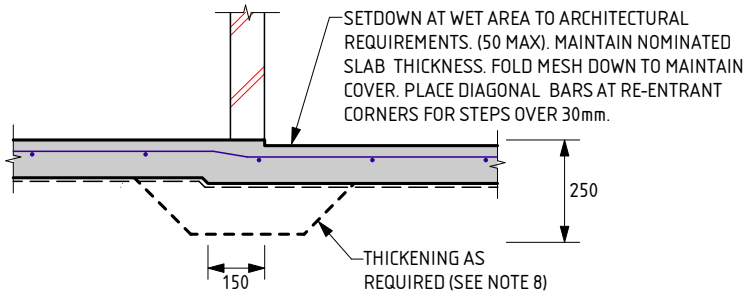


GARAGE WALL

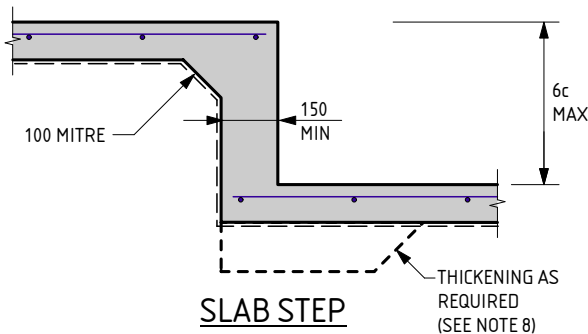


SERVICE PIPE DIAGRAM

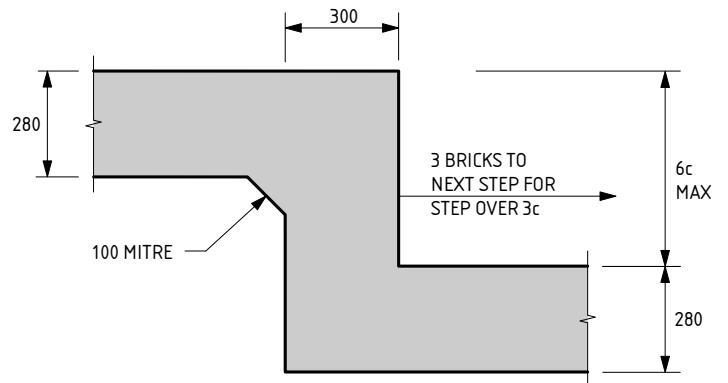
- MINIMUM HORIZONTAL DISTANCE BETWEEN 2 PENETRATIONS TO BE 2 x DIAMETER OF THE LARGER PIPE.
- MAXIMUM PENETRATION SIZE TO BE Ø150.



WET AREA STEP



SLAB STEP



FOOTING STEP

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 0.075mm) 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. THE FOOTING DETAILS HAVE BEEN DESIGNED IN ACCORDANCE WITH AS3600 AND SECTION 4 OF AS2870.
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 IS ALLOWABLE.
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 - 03/09/21



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham
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PROJECT : LOT 1144 NERANG RD YANCHEP	
CLIENT : DENSFORD CIVIL	
SCALE : 1:20	APPROVED
DATE : 21/11/22	

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 1 of 2)

GENERAL

1. THE EXPLANATORY NOTES AND THE STANDARD RECOMMENDATIONS ARE TO BE READ IN CONJUNCTION WITH THE SITE CLASSIFICATION REPORT.
2. ALL REFERRED STANDARDS TO BE THE CURRENT VERSION AT THE TIME OF THE CONSTRUCTION.
3. THE PURPOSE OF THE SITE CLASSIFICATION REPORT IS TO CLASSIFY THE SITE IN ACCORDANCE WITH AS2870 "RESIDENTIAL SLABS AND FOOTING". IT IS NOT INTENDED FOR ANY OTHER PURPOSE, INCLUDING SOLE INFORMATION IN THE PROVISION OF A QUOTATION FOR SITE WORKS BY EARTH WORKERS. IT IS RECOMMENDED EARTH WORKERS PERFORM THEIR OWN INVESTIGATION FOR QUOTATION PURPOSES.
4. THE SITE CLASSIFICATION REPORT WILL INCLUDE BUT IS NOT LIMITED TO:
 - a. THE SITE CLASSIFICATION IN ACCORDANCE WITH AS2870 RESIDENTIAL SLABS AND FOOTING CONSTRUCTION,
 - b. A WIND RATING IN ACCORDANCE WITH AS 4055 WIND LOADS FOR HOUSING,
 - c. A COASTAL CORROSION CLASSIFICATION,
 - d. ADDITIONAL EARTHWORK RECOMMENDATION WHERE APPLICABLE,
 - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONDITIONS.
5. THE SITE CLASSIFICATION REPORT IS BASED ON THE SITE AS PRESENTED AT THE TIME OF ASSESSMENT. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
6. CLASS A SITES ARE STABLE SITES, GENERALLY SAND, LIMESTONE, GRAVEL OR A COMBINATION. CLASS P ARE PARTICULAR CLASSIFICATIONS SUCH AN UNUSUAL SITES OR SITES REQUIRING ADDITIONAL INVESTIGATION PRIOR TO PROVIDING DETAILS.
7. BOREHOLES EXCAVATED REVEAL THE SOIL PROFILE AT THE BOREHOLE LOCATION ONLY. FROM THIS, IT IS INFERRED THAT THESE ARE THE SOIL CONDITION OVER THE SITE. VARIATIONS CAN OCCUR WHICH MAY NOT HAVE BEEN DETECTED AT THE INVESTIGATION STAGE. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR REASSESSMENT.
8. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE IN ORDER TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
9. THIS REPORT IS FOR STRUCTERRE ONLY TO USE IN DESIGN. ANY DESIGN BY ANYONE ELSE FOR ANY STRUCTURE MUST BE SPECIFICALLY APPROVED BY STRUCTERRE. IF USED BY ANYONE ELSE FOR ANYTHING OTHER THAN A STRUCTERRE DESIGN OR STRUCTURE, STRUCTERRE TAKES NO RESPONSIBILITY.

SAND PAD

10. THE RECOMMENDED FOOTING DESIGN IS ONLY TO BE USED IN CONJUNCTION WITH THE RECOMMENDED SAND PAD AND EARTHWORKS AS OUTLINED IN THE SITE CLASSIFICATION REPORT.
11. THE RECOMMENDATIONS FOR THE SAND PAD IS FOR STRUCTURAL PURPOSES ONLY, AND DOES NOT PROVIDE THE MINIMUM FINISHED PAD LEVEL IN RELATION TO FLOOD LEVELS, OR DEPTH TO GROUNDWATER. SHOULD THE TEST BE LOCATED IN A LOW LYING OR FLOOD PRONE AREA, REFER TO THE LOCAL AUTHORITY FOR MINIMUM BUILDING HEIGHT.
12. IMPORTED FILL FOR USE AS A SAND PAD TO BE IN ACCORDANCE TO AS 3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS" WHICH INCLUDES BUT IS NOT LIMITED TO: BE FREE FROM ANY DELETERIOUS MATERIALS INCLUDING ORGANICS, (ROOTS, STUMPS, GRASSES, DECOMPOSED ORGANICS – PEAT, TIMBER, ETC), BUILDING RUBBLE, GLASS, PLASTICS OR WASTE MATERIAL. THE FINES CONTENT, (PERCENTAGE PASSING THE 0.075mm SIEVE) TO BE LESS THAN 5% BY MASS.
13. ON CLASS A SITES, A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 450mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
14. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
15. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

EARTHWORKS

16. RECOMMENDED EARTHWORKS TO BE CONDUCTED IN ACCORDANCE WITH AS3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS", AND TO INCLUDE BUT NOT BE LIMITED TO:
 - a. REMOVAL OF ALL VEGETATION, TOPSOILS, UNCONTROLLED FILLS AND OTHER DELETERIOUS MATERIALS FROM THE BUILDING AREA,
 - b. GRUBBING OUT OF ANY TREES ENSURING THE REMAINING HOLES ARE BACKFILLED WITH CLEAN COMPACTED SAND,
 - c. NOTIFYING THE ENGINEER OF ANY UNUSUAL FEATURE OR DISCREPANCY THAT MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING,
 - d. COMPACTING TO MEET THE REQUIREMENTS AS OUTLINED IN AS 3798 TABLE 5.1.
17. FILL MATERIAL (WHICH IS NOT ALWAYS APPARENT AT THE INITIAL INVESTIGATION STAGE) IS TO BE DEALT WITH AS FOLLOWS:
 - a. IF IT IS CERTIFIED BY OTHERS IT CAN REMAIN.
 - b. IF IT IS NOT CERTIFIED WILL REQUIRE REMOVAL DOWN TO NATURAL GROUND OR VERIFIED. ANY SAND CAN BE REUSED.
 - c. IF A PAD HAS ALREADY BEEN CONSTRUCTED, THE SITE CLASSIFICATION IS NOT CERTIFICATION OF THE PAD. CONTACT THIS OFFICE SHOULD A SAND PAD CERTIFICATION BE REQUIRED.
18. ANY ORGANIC MATTER OR ROOTS ENCOUNTERED, WHICH IS BEYOND WHAT IS NORMALLY CONSIDERED ACCEPTABLE IS TO BE REMOVED. THIS WILL NECESSITATE RAKING THE SITE TO REMOVE ORGANIC MATERIAL, TURNING THE SITE OVER AND RE- COMPACTING TO A MINIMUM.

RETAINING WALLS

19. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
20. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER TO THE RETAINING WALL THAN THE HEIGHT OF THE RETAINING WALL, THIS MAY PLACE ADDITIONAL LOADS ON THE WALL THAT WERE NOT INITIALLY DESIGNED FOR. AN INSPECTION OF THE STRUCTURAL INTEGRITY OF THE RETAINING WALL WILL BE REQUIRED TO PROVIDE CERTIFICATION AND/OR RECOMMENDATIONS PRIOR TO ANY CONSTRUCTION. PLEASE REFER BACK TO THIS OFFICE FOR ASSISTANCE.

STORMWATER DRAINAGE

21. ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF SOAKWELL AWAY FROM THE BUILDING AND SETBACK MINIMUM OF 1200mm, WHICHEVER IS GREATER. PLEASE REFER BACK TO THIS OFFICE IF REQUIRED THE SET-BACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham
Unit Trust trading as StrucTerre Consulting Engineers
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TEL (08) 9205 4500 FAX (08) 9205 4541 EMAIL: perth@strucTerre.com.au

PROJECT :
LOT 1144 NERANG RD YANCHEP

CLIENT : DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 2 of 2)

WIND CLASSIFICATION

22. WIND CLASSIFICATION IS GIVEN FOR THE EXPECTED CONDITION 5 YEARS HENCE. THIS CLASSIFICATION IS LIMITED TO BUILDINGS CLASSES 1 AND 10, WHICH HAVE THE FOLLOWING LIMITATION (AS PER AS4055):

- a. MAXIMUM DISTANCE FROM THE GROUND LEVEL TO THE UNDERSIDE OF EAVES SHALL NOT EXCEED 6.0m.
- b. MAXIMUM DISTANCE FROM GROUND LEVEL TO THE HIGHEST POINT OF THE ROOF, EXCLUDING CHIMNEYS, SHALL NOT EXCEED 8.5m.
- c. THE ROOF PITCH SHALL NOT EXCEED 35°.
- d. THE WIDTH, EXCLUDING EAVES, SHALL NOT EXCEED 16.0m AND THE LENGTH SHALL NOT EXCEED 5x THE WIDTH.

IF THE BUILDING FALLS OUTSIDE OF THESE LIMITATIONS, THE STATED WIND CLASSIFICATION DOES NOT APPLY. REFER BACK TO THIS OFFICE FOR A REVISED WIND CLASSIFICATION.

ENVIRONMENTAL

23. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, IT IS RECOMMENDED THAT AN ENVIRONMENTAL ENGINEER BE ENGAGED.

SEISMIC

24. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF ≤ 0.11 . RECOMMENDED FOOTING DETAILS PROVIDED FOR SITES WITH AN EARTHQUAKE HAZARD FACTOR OF > 0.11 , ARE NOT FOR CONSTRUCTION, BUT FOR COSTING PURPOSES ONLY. IT IS RECOMMENDED REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

CORROSION CLASSIFICATION

25. THE CORROSION CLASSIFICATION HAS BEEN ASSESSED IN ACCORDANCE WITH AS3700.

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LOT 1144 NERANG RD YANCHEP

CLIENT: DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

A blue ink handwritten signature is written over the 'APPROVED' field.

SITE CLASSIFICATION REPORT
CERTIFICATE 2595282

CLIENT DENSFORD CIVIL
JOB ADDRESS LOT 1145 NERANG RD YANCHEP
CLIENT JOB NO.
OWNER
STRUCTERRE JOB NO. S1085296
DATE OF ASSESSMENT 17/11/22

SITE RECORD

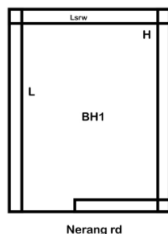


SITE CLASSIFICATION	A	<i>(in accordance with AS2870)</i>
FOOTING DETAIL	A	
SAND PAD	No sand pad required structurally	
BUSHFIRE PRONE AREA	Yes	<i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	R3	<i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	N2	<i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	Partial Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1500 FILL sand trace gravel (limestone) - brown; 1500 - 1800 FILL sand; 1800 end of hole.

APPROXIMATE BOREHOLE LOCATIONS



NOTE 1 Explanatory Notes & Standard Recommendations

This site classification report must be read in conjunction with the applicable Explanatory Notes & Standard Recommendations. For A Class sites, refer to the Explanatory Notes and Standard Recommendations for Stable (A Class) Sites, version 1.0 July 2018. For S, M, H1, H2 & E Class sites, refer to the Explanatory Notes and Standard Recommendations for Reactive (S, M, H1, H2 & E Class) Sites version 1.0 July 2018. For Equivalent Class sites, refer to the Explanatory Notes and Standard Recommendations for Equivalent Class Sites, version 1.0 July 2018.

NOTE 2 Bushfire - Prone Area

The Site may be situated in a bush fire prone area in accordance with the Department of Fire and Emergency Services (DFES) Bushfire Prone Area Map (Reference: <http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/>) the current version at the time of this assessment. A Bushfire Attack Level (BAL) assessment may be required for this site, please confirm with the local authority. Should you require an assessment, please contact this Office.

ADDITIONAL NOTES / REQUIREMENTS

Site Condition

At the time of inspection the site was considered to be level and cleared. For specific levels of this site or topographical features, please refer to a professional site survey.

Structerre Geotech Reference

The Site Classification is based on any remedial works being successfully completed as outlined in the Structerre Geotechnical Report J414449 dated 01/08/2022. The footing details are subject to the recommendations being completed to an acceptable level as outlined in this report, if applicable.

-- END OF REPORT --

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 1 of 2)

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6. CLASS A SITES ARE STABLE SITES, GENERALLY SAND, LIMESTONE, GRAVEL OR A COMBINATION. CLASS P ARE PARTICULAR CLASSIFICATIONS SUCH AN UNUSUAL SITES OR SITES REQUIRING ADDITIONAL INVESTIGATION PRIOR TO PROVIDING DETAILS.
7. BOREHOLES EXCAVATED REVEAL THE SOIL PROFILE AT THE BOREHOLE LOCATION ONLY. FROM THIS, IT IS INFERRED THAT THESE ARE THE SOIL CONDITION OVER THE SITE. VARIATIONS CAN OCCUR WHICH MAY NOT HAVE BEEN DETECTED AT THE INVESTIGATION STAGE. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR REASSESSMENT.
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SAND PAD

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13. ON CLASS A SITES, A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 450mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
14. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
15. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

EARTHWORKS

16. RECOMMENDED EARTHWORKS TO BE CONDUCTED IN ACCORDANCE WITH AS3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS", AND TO INCLUDE BUT NOT BE LIMITED TO:
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 - b. GRUBBING OUT OF ANY TREES ENSURING THE REMAINING HOLES ARE BACKFILLED WITH CLEAN COMPACTED SAND,
 - c. NOTIFYING THE ENGINEER OF ANY UNUSUAL FEATURE OR DISCREPANCY THAT MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING,
 - d. COMPACTING TO MEET THE REQUIREMENTS AS OUTLINED IN AS 3798 TABLE 5.1.
17. FILL MATERIAL (WHICH IS NOT ALWAYS APPARENT AT THE INITIAL INVESTIGATION STAGE) IS TO BE DEALT WITH AS FOLLOWS:
 - a. IF IT IS CERTIFIED BY OTHERS IT CAN REMAIN.
 - b. IF IT IS NOT CERTIFIED WILL REQUIRE REMOVAL DOWN TO NATURAL GROUND OR VERIFIED. ANY SAND CAN BE REUSED.
 - c. IF A PAD HAS ALREADY BEEN CONSTRUCTED, THE SITE CLASSIFICATION IS NOT CERTIFICATION OF THE PAD. CONTACT THIS OFFICE SHOULD A SAND PAD CERTIFICATION BE REQUIRED.
18. ANY ORGANIC MATTER OR ROOTS ENCOUNTERED, WHICH IS BEYOND WHAT IS NORMALLY CONSIDERED ACCEPTABLE IS TO BE REMOVED. THIS WILL NECESSITATE RAKING THE SITE TO REMOVE ORGANIC MATERIAL, TURNING THE SITE OVER AND RE- COMPACTING TO A MINIMUM.

RETAINING WALLS

19. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
20. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER TO THE RETAINING WALL THAN THE HEIGHT OF THE RETAINING WALL, THIS MAY PLACE ADDITIONAL LOADS ON THE WALL THAT WERE NOT INITIALLY DESIGNED FOR. AN INSPECTION OF THE STRUCTURAL INTEGRITY OF THE RETAINING WALL WILL BE REQUIRED TO PROVIDE CERTIFICATION AND/OR RECOMMENDATIONS PRIOR TO ANY CONSTRUCTION. PLEASE REFER BACK TO THIS OFFICE FOR ASSISTANCE.

STORMWATER DRAINAGE

21. ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF SOAKWELL AWAY FROM THE BUILDING AND SETBACK MINIMUM OF 1200mm, WHICHEVER IS GREATER. PLEASE REFER BACK TO THIS OFFICE IF REQUIRED THE SET-BACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



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LOT 1145 NERANG RD YANCHEP

CLIENT : DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 2 of 2)

WIND CLASSIFICATION

22. WIND CLASSIFICATION IS GIVEN FOR THE EXPECTED CONDITION 5 YEARS HENCE. THIS CLASSIFICATION IS LIMITED TO BUILDINGS CLASSES 1 AND 10, WHICH HAVE THE FOLLOWING LIMITATION (AS PER AS4055):

- a. MAXIMUM DISTANCE FROM THE GROUND LEVEL TO THE UNDERSIDE OF EAVES SHALL NOT EXCEED 6.0m.
- b. MAXIMUM DISTANCE FROM GROUND LEVEL TO THE HIGHEST POINT OF THE ROOF, EXCLUDING CHIMNEYS, SHALL NOT EXCEED 8.5m.
- c. THE ROOF PITCH SHALL NOT EXCEED 35°.
- d. THE WIDTH, EXCLUDING EAVES, SHALL NOT EXCEED 16.0m AND THE LENGTH SHALL NOT EXCEED 5x THE WIDTH.

IF THE BUILDING FALLS OUTSIDE OF THESE LIMITATIONS, THE STATED WIND CLASSIFICATION DOES NOT APPLY. REFER BACK TO THIS OFFICE FOR A REVISED WIND CLASSIFICATION.

ENVIRONMENTAL

23. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, IT IS RECOMMENDED THAT AN ENVIRONMENTAL ENGINEER BE ENGAGED.

SEISMIC

24. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF ≤ 0.11 . RECOMMENDED FOOTING DETAILS PROVIDED FOR SITES WITH AN EARTHQUAKE HAZARD FACTOR OF > 0.11 , ARE NOT FOR CONSTRUCTION, BUT FOR COSTING PURPOSES ONLY. IT IS RECOMMENDED REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

CORROSION CLASSIFICATION

25. THE CORROSION CLASSIFICATION HAS BEEN ASSESSED IN ACCORDANCE WITH AS3700.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham
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TEL (08) 9205 4500 FAX (08) 9205 4541 EMAIL: perth@strucTerre.com.au

PROJECT:
LOT 1145 NERANG RD YANCHEP

CLIENT: DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

A blue ink handwritten signature is written over the 'APPROVED' field.

SITE CLASSIFICATION REPORT
CERTIFICATE 2595283

CLIENT DENSFORD CIVIL
JOB ADDRESS LOT 1146 NERANG RD YANCHEP
CLIENT JOB NO.
OWNER
STRUCTERRE JOB NO. S1085295
DATE OF ASSESSMENT 17/11/22

SITE RECORD

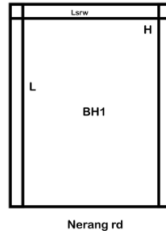


SITE CLASSIFICATION	A	<i>(in accordance with AS2870)</i>
FOOTING DETAIL	A	
SAND PAD	No sand pad required structurally	
BUSHFIRE PRONE AREA	Yes	<i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	R3	<i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	N2	<i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	Partial Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1500 FILL sand trace gravel (limestone) - brown; 1500 - 1800 FILL sand; 1800 end of hole.

APPROXIMATE BOREHOLE LOCATIONS



NOTE 1 Explanatory Notes & Standard Recommendations

This site classification report must be read in conjunction with the applicable Explanatory Notes & Standard Recommendations. For A Class sites, refer to the Explanatory Notes and Standard Recommendations for Stable (A Class) Sites, version 1.0 July 2018. For S, M, H1, H2 & E Class sites, refer to the Explanatory Notes and Standard Recommendations for Reactive (S, M, H1, H2 & E Class) Sites version 1.0 July 2018. For Equivalent Class sites, refer to the Explanatory Notes and Standard Recommendations for Equivalent Class Sites, version 1.0 July 2018.

NOTE 2 Bushfire - Prone Area

The Site may be situated in a bush fire prone area in accordance with the Department of Fire and Emergency Services (DFES) Bushfire Prone Area Map (Reference: <http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/>) the current version at the time of this assessment. A Bushfire Attack Level (BAL) assessment may be required for this site, please confirm with the local authority. Should you require an assessment, please contact this Office.

ADDITIONAL NOTES / REQUIREMENTS

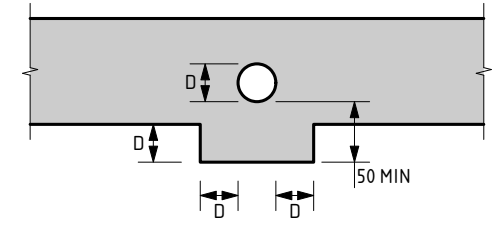
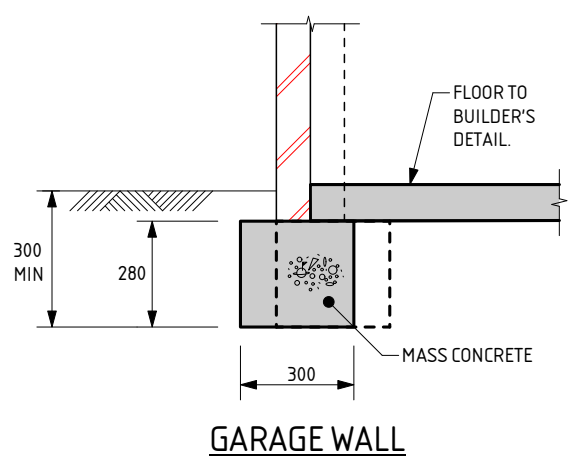
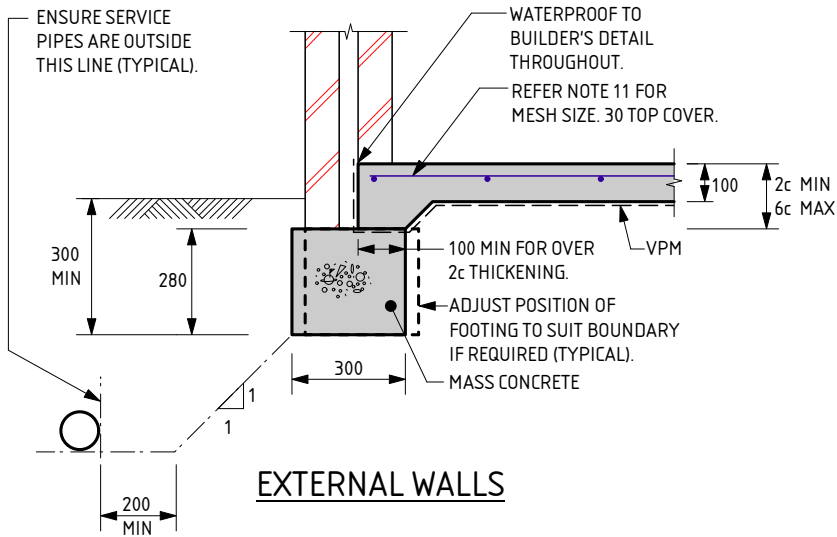
Site Condition

At the time of inspection the site was considered to be level and cleared. For specific levels of this site or topographical features, please refer to a professional site survey.

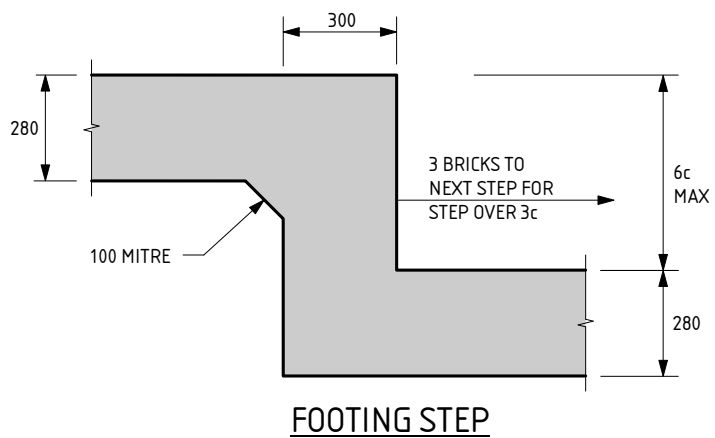
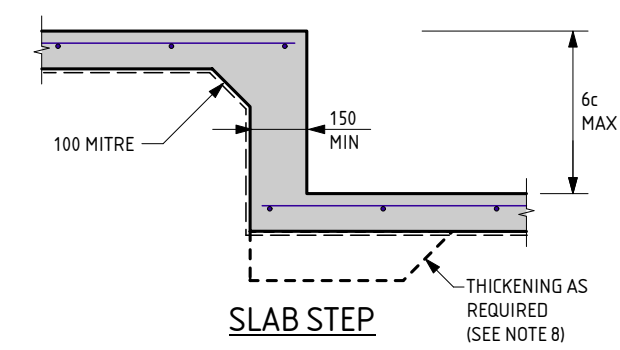
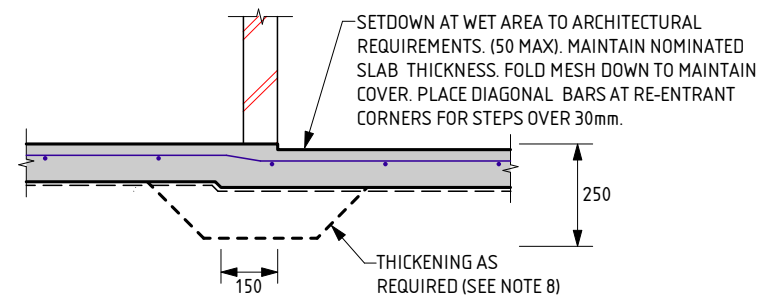
Structerre Geotech Reference

The Site Classification is based on any remedial works being successfully completed as outlined in the Structerre Geotechnical Report J414449 dated 01/08/2022. The footing details are subject to the recommendations being completed to an acceptable level as outlined in this report, if applicable.

-- END OF REPORT --



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:

- REMOVE ALL TOPSOIL, VEGETATION AND DELETERIOUS FILL MATERIAL FROM THE BUILDING AREA.
- SAND FILL TO BE CLEAN WELL DRAINED, WITH MAX FINES (PARTICLES UP TO 0.075mm) CONTENT OF 5%. SAND TO BE COMPACTED TO A MIN 6 BLOWS/300mm FOR 750mm OR DEPTH OF PAD.
- A MIN OF 150mm OF SAND REQUIRED UNDER FOOTINGS.
- IF CLAY ON SITE AN ENGINEER TO BE CONSULTED.
- ROOF AND SURFACE WATER TO BE TAKEN AWAY FROM FOUNDATION AREA.
- EXCAVATIONS FOR PLUMBING NOT TO UNDERMINE FOOTINGS. IF UNDERMINING IS LIKELY TO OCCUR, CONTACT THE ENGINEER.
- WHERE PLUMBING PIPES PASS THROUGH FOOTINGS OR SLAB, SPECIFIED DEPTH OF ALL CONCRETE IS ALWAYS TO BE MAINTAINED.
- PLACE SLAB THICKENINGS (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m.
- 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.
- LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.
- 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.
- CONCRETE TO CONFORM WITH AS 3600.
- BLENDED CEMENT TO CONFORM WITH AS 3972.
- ALL CONCRETE TO BE N20/20/100.
- CURE SLAB AS DETERMINED BY ENGINEER.
- THE FOOTING DETAILS HAVE BEEN DESIGNED IN ACCORDANCE WITH AS3600 AND SECTION 4 OF AS2870.
- A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 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.
- PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 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 - 03/09/21



Zemia Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham
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PROJECT : LOT 1146 NERANG RD YANCHEP	
CLIENT : DENSFORD CIVIL	
SCALE : 1:20	APPROVED
DATE : 21/11/22	

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 1 of 2)

GENERAL

1. THE EXPLANATORY NOTES AND THE STANDARD RECOMMENDATIONS ARE TO BE READ IN CONJUNCTION WITH THE SITE CLASSIFICATION REPORT.
2. ALL REFERRED STANDARDS TO BE THE CURRENT VERSION AT THE TIME OF THE CONSTRUCTION.
3. THE PURPOSE OF THE SITE CLASSIFICATION REPORT IS TO CLASSIFY THE SITE IN ACCORDANCE WITH AS2870 "RESIDENTIAL SLABS AND FOOTING". IT IS NOT INTENDED FOR ANY OTHER PURPOSE, INCLUDING SOLE INFORMATION IN THE PROVISION OF A QUOTATION FOR SITE WORKS BY EARTH WORKERS. IT IS RECOMMENDED EARTH WORKERS PERFORM THEIR OWN INVESTIGATION FOR QUOTATION PURPOSES.
4. THE SITE CLASSIFICATION REPORT WILL INCLUDE BUT IS NOT LIMITED TO:
 - a. THE SITE CLASSIFICATION IN ACCORDANCE WITH AS2870 RESIDENTIAL SLABS AND FOOTING CONSTRUCTION,
 - b. A WIND RATING IN ACCORDANCE WITH AS 4055 WIND LOADS FOR HOUSING,
 - c. A COASTAL CORROSION CLASSIFICATION,
 - d. ADDITIONAL EARTHWORK RECOMMENDATION WHERE APPLICABLE,
 - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONDITIONS.
5. THE SITE CLASSIFICATION REPORT IS BASED ON THE SITE AS PRESENTED AT THE TIME OF ASSESSMENT. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
6. CLASS A SITES ARE STABLE SITES, GENERALLY SAND, LIMESTONE, GRAVEL OR A COMBINATION. CLASS P ARE PARTICULAR CLASSIFICATIONS SUCH AN UNUSUAL SITES OR SITES REQUIRING ADDITIONAL INVESTIGATION PRIOR TO PROVIDING DETAILS.
7. BOREHOLES EXCAVATED REVEAL THE SOIL PROFILE AT THE BOREHOLE LOCATION ONLY. FROM THIS, IT IS INFERRED THAT THESE ARE THE SOIL CONDITION OVER THE SITE. VARIATIONS CAN OCCUR WHICH MAY NOT HAVE BEEN DETECTED AT THE INVESTIGATION STAGE. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR REASSESSMENT.
8. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE IN ORDER TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
9. THIS REPORT IS FOR STRUCTERRE ONLY TO USE IN DESIGN. ANY DESIGN BY ANYONE ELSE FOR ANY STRUCTURE MUST BE SPECIFICALLY APPROVED BY STRUCTERRE. IF USED BY ANYONE ELSE FOR ANYTHING OTHER THAN A STRUCTERRE DESIGN OR STRUCTURE, STRUCTERRE TAKES NO RESPONSIBILITY.

SAND PAD

10. THE RECOMMENDED FOOTING DESIGN IS ONLY TO BE USED IN CONJUNCTION WITH THE RECOMMENDED SAND PAD AND EARTHWORKS AS OUTLINED IN THE SITE CLASSIFICATION REPORT.
11. THE RECOMMENDATIONS FOR THE SAND PAD IS FOR STRUCTURAL PURPOSES ONLY, AND DOES NOT PROVIDE THE MINIMUM FINISHED PAD LEVEL IN RELATION TO FLOOD LEVELS, OR DEPTH TO GROUNDWATER. SHOULD THE TEST BE LOCATED IN A LOW LYING OR FLOOD PRONE AREA, REFER TO THE LOCAL AUTHORITY FOR MINIMUM BUILDING HEIGHT.
12. IMPORTED FILL FOR USE AS A SAND PAD TO BE IN ACCORDANCE TO AS 3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS" WHICH INCLUDES BUT IS NOT LIMITED TO: BE FREE FROM ANY DELETERIOUS MATERIALS INCLUDING ORGANICS, (ROOTS, STUMPS, GRASSES, DECOMPOSED ORGANICS – PEAT, TIMBER, ETC), BUILDING RUBBLE, GLASS, PLASTICS OR WASTE MATERIAL. THE FINES CONTENT, (PERCENTAGE PASSING THE 0.075mm SIEVE) TO BE LESS THAN 5% BY MASS.
13. ON CLASS A SITES, A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 450mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
14. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
15. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

EARTHWORKS

16. RECOMMENDED EARTHWORKS TO BE CONDUCTED IN ACCORDANCE WITH AS3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS", AND TO INCLUDE BUT NOT BE LIMITED TO:
 - a. REMOVAL OF ALL VEGETATION, TOPSOILS, UNCONTROLLED FILLS AND OTHER DELETERIOUS MATERIALS FROM THE BUILDING AREA,
 - b. GRUBBING OUT OF ANY TREES ENSURING THE REMAINING HOLES ARE BACKFILLED WITH CLEAN COMPACTED SAND,
 - c. NOTIFYING THE ENGINEER OF ANY UNUSUAL FEATURE OR DISCREPANCY THAT MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING,
 - d. COMPACTING TO MEET THE REQUIREMENTS AS OUTLINED IN AS 3798 TABLE 5.1.
17. FILL MATERIAL (WHICH IS NOT ALWAYS APPARENT AT THE INITIAL INVESTIGATION STAGE) IS TO BE DEALT WITH AS FOLLOWS:
 - a. IF IT IS CERTIFIED BY OTHERS IT CAN REMAIN.
 - b. IF IT IS NOT CERTIFIED WILL REQUIRE REMOVAL DOWN TO NATURAL GROUND OR VERIFIED. ANY SAND CAN BE REUSED.
 - c. IF A PAD HAS ALREADY BEEN CONSTRUCTED, THE SITE CLASSIFICATION IS NOT CERTIFICATION OF THE PAD. CONTACT THIS OFFICE SHOULD A SAND PAD CERTIFICATION BE REQUIRED.
18. ANY ORGANIC MATTER OR ROOTS ENCOUNTERED, WHICH IS BEYOND WHAT IS NORMALLY CONSIDERED ACCEPTABLE IS TO BE REMOVED. THIS WILL NECESSITATE RAKING THE SITE TO REMOVE ORGANIC MATERIAL, TURNING THE SITE OVER AND RE- COMPACTING TO A MINIMUM.

RETAINING WALLS

19. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
20. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER TO THE RETAINING WALL THAN THE HEIGHT OF THE RETAINING WALL, THIS MAY PLACE ADDITIONAL LOADS ON THE WALL THAT WERE NOT INITIALLY DESIGNED FOR. AN INSPECTION OF THE STRUCTURAL INTEGRITY OF THE RETAINING WALL WILL BE REQUIRED TO PROVIDE CERTIFICATION AND/OR RECOMMENDATIONS PRIOR TO ANY CONSTRUCTION. PLEASE REFER BACK TO THIS OFFICE FOR ASSISTANCE.

STORMWATER DRAINAGE

21. ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF SOAKWELL AWAY FROM THE BUILDING AND SETBACK MINIMUM OF 1200mm, WHICHEVER IS GREATER. PLEASE REFER BACK TO THIS OFFICE IF REQUIRED THE SET-BACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham
Unit Trust trading as StrucTerre Consulting Engineers
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TEL (08) 9205 4500 FAX (08) 9205 4541 EMAIL: perth@strucTerre.com.au

PROJECT :
LOT 1146 NERANG RD YANCHEP

CLIENT : DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 2 of 2)

WIND CLASSIFICATION

22. WIND CLASSIFICATION IS GIVEN FOR THE EXPECTED CONDITION 5 YEARS HENCE. THIS CLASSIFICATION IS LIMITED TO BUILDINGS CLASSES 1 AND 10, WHICH HAVE THE FOLLOWING LIMITATION (AS PER AS4055):

- a. MAXIMUM DISTANCE FROM THE GROUND LEVEL TO THE UNDERSIDE OF EAVES SHALL NOT EXCEED 6.0m.
- b. MAXIMUM DISTANCE FROM GROUND LEVEL TO THE HIGHEST POINT OF THE ROOF, EXCLUDING CHIMNEYS, SHALL NOT EXCEED 8.5m.
- c. THE ROOF PITCH SHALL NOT EXCEED 35°.
- d. THE WIDTH, EXCLUDING EAVES, SHALL NOT EXCEED 16.0m AND THE LENGTH SHALL NOT EXCEED 5x THE WIDTH.

IF THE BUILDING FALLS OUTSIDE OF THESE LIMITATIONS, THE STATED WIND CLASSIFICATION DOES NOT APPLY. REFER BACK TO THIS OFFICE FOR A REVISED WIND CLASSIFICATION.

ENVIRONMENTAL

23. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, IT IS RECOMMENDED THAT AN ENVIRONMENTAL ENGINEER BE ENGAGED.

SEISMIC

24. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF ≤ 0.11 . RECOMMENDED FOOTING DETAILS PROVIDED FOR SITES WITH AN EARTHQUAKE HAZARD FACTOR OF > 0.11 , ARE NOT FOR CONSTRUCTION, BUT FOR COSTING PURPOSES ONLY. IT IS RECOMMENDED REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

CORROSION CLASSIFICATION

25. THE CORROSION CLASSIFICATION HAS BEEN ASSESSED IN ACCORDANCE WITH AS3700.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



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PROJECT:
LOT 1146 NERANG RD YANCHEP

CLIENT: DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

A blue ink handwritten signature is written over the 'APPROVED' field.

SITE CLASSIFICATION REPORT
CERTIFICATE 2595284

CLIENT DENSFORD CIVIL
JOB ADDRESS LOT 1147 NERANG RD YANCHEP
CLIENT JOB NO.
OWNER
STRUCTERRE JOB NO. S1085293
DATE OF ASSESSMENT 17/11/22

SITE RECORD

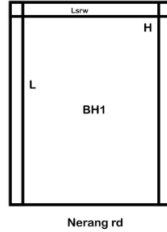


SITE CLASSIFICATION	A	<i>(in accordance with AS2870)</i>
FOOTING DETAIL	A	
SAND PAD	No sand pad required structurally	
BUSHFIRE PRONE AREA	Yes	<i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	R3	<i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	N2	<i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	Partial Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1500 FILL sand trace gravel (limestone) - brown; 1500 - 1800 FILL sand; 1800 end of hole.

APPROXIMATE BOREHOLE LOCATIONS



NOTE 1 Explanatory Notes & Standard Recommendations

This site classification report must be read in conjunction with the applicable Explanatory Notes & Standard Recommendations. For A Class sites, refer to the Explanatory Notes and Standard Recommendations for Stable (A Class) Sites, version 1.0 July 2018. For S, M, H1, H2 & E Class sites, refer to the Explanatory Notes and Standard Recommendations for Reactive (S, M, H1, H2 & E Class) Sites version 1.0 July 2018. For Equivalent Class sites, refer to the Explanatory Notes and Standard Recommendations for Equivalent Class Sites, version 1.0 July 2018.

NOTE 2 Bushfire - Prone Area

The Site may be situated in a bush fire prone area in accordance with the Department of Fire and Emergency Services (DFES) Bushfire Prone Area Map (Reference: <http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/>) the current version at the time of this assessment. A Bushfire Attack Level (BAL) assessment may be required for this site, please confirm with the local authority. Should you require an assessment, please contact this Office.

ADDITIONAL NOTES / REQUIREMENTS

Site Condition

At the time of inspection the site was considered to be level and cleared. For specific levels of this site or topographical features, please refer to a professional site survey.

Structerre Geotech Reference

The Site Classification is based on any remedial works being successfully completed as outlined in the Structerre Geotechnical Report J414449 dated 01/08/2022. The footing details are subject to the recommendations being completed to an acceptable level as outlined in this report, if applicable.

-- END OF REPORT --

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 1 of 2)

GENERAL

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3. THE PURPOSE OF THE SITE CLASSIFICATION REPORT IS TO CLASSIFY THE SITE IN ACCORDANCE WITH AS2870 "RESIDENTIAL SLABS AND FOOTING". IT IS NOT INTENDED FOR ANY OTHER PURPOSE, INCLUDING SOLE INFORMATION IN THE PROVISION OF A QUOTATION FOR SITE WORKS BY EARTH WORKERS. IT IS RECOMMENDED EARTH WORKERS PERFORM THEIR OWN INVESTIGATION FOR QUOTATION PURPOSES.
4. THE SITE CLASSIFICATION REPORT WILL INCLUDE BUT IS NOT LIMITED TO:
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 - c. A COASTAL CORROSION CLASSIFICATION,
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 - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONDITIONS.
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6. CLASS A SITES ARE STABLE SITES, GENERALLY SAND, LIMESTONE, GRAVEL OR A COMBINATION. CLASS P ARE PARTICULAR CLASSIFICATIONS SUCH AN UNUSUAL SITES OR SITES REQUIRING ADDITIONAL INVESTIGATION PRIOR TO PROVIDING DETAILS.
7. BOREHOLES EXCAVATED REVEAL THE SOIL PROFILE AT THE BOREHOLE LOCATION ONLY. FROM THIS, IT IS INFERRED THAT THESE ARE THE SOIL CONDITION OVER THE SITE. VARIATIONS CAN OCCUR WHICH MAY NOT HAVE BEEN DETECTED AT THE INVESTIGATION STAGE. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR REASSESSMENT.
8. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE IN ORDER TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
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SAND PAD

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12. IMPORTED FILL FOR USE AS A SAND PAD TO BE IN ACCORDANCE TO AS 3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS" WHICH INCLUDES BUT IS NOT LIMITED TO: BE FREE FROM ANY DELETERIOUS MATERIALS INCLUDING ORGANICS, (ROOTS, STUMPS, GRASSES, DECOMPOSED ORGANICS – PEAT, TIMBER, ETC), BUILDING RUBBLE, GLASS, PLASTICS OR WASTE MATERIAL. THE FINES CONTENT, (PERCENTAGE PASSING THE 0.075mm SIEVE) TO BE LESS THAN 5% BY MASS.
13. ON CLASS A SITES, A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 450mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
14. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
15. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

EARTHWORKS

16. RECOMMENDED EARTHWORKS TO BE CONDUCTED IN ACCORDANCE WITH AS3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS", AND TO INCLUDE BUT NOT BE LIMITED TO:
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 - b. GRUBBING OUT OF ANY TREES ENSURING THE REMAINING HOLES ARE BACKFILLED WITH CLEAN COMPACTED SAND,
 - c. NOTIFYING THE ENGINEER OF ANY UNUSUAL FEATURE OR DISCREPANCY THAT MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING,
 - d. COMPACTING TO MEET THE REQUIREMENTS AS OUTLINED IN AS 3798 TABLE 5.1.
17. FILL MATERIAL (WHICH IS NOT ALWAYS APPARENT AT THE INITIAL INVESTIGATION STAGE) IS TO BE DEALT WITH AS FOLLOWS:
 - a. IF IT IS CERTIFIED BY OTHERS IT CAN REMAIN.
 - b. IF IT IS NOT CERTIFIED WILL REQUIRE REMOVAL DOWN TO NATURAL GROUND OR VERIFIED. ANY SAND CAN BE REUSED.
 - c. IF A PAD HAS ALREADY BEEN CONSTRUCTED, THE SITE CLASSIFICATION IS NOT CERTIFICATION OF THE PAD. CONTACT THIS OFFICE SHOULD A SAND PAD CERTIFICATION BE REQUIRED.
18. ANY ORGANIC MATTER OR ROOTS ENCOUNTERED, WHICH IS BEYOND WHAT IS NORMALLY CONSIDERED ACCEPTABLE IS TO BE REMOVED. THIS WILL NECESSITATE RAKING THE SITE TO REMOVE ORGANIC MATERIAL, TURNING THE SITE OVER AND RE- COMPACTING TO A MINIMUM.

RETAINING WALLS

19. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
20. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER TO THE RETAINING WALL THAN THE HEIGHT OF THE RETAINING WALL, THIS MAY PLACE ADDITIONAL LOADS ON THE WALL THAT WERE NOT INITIALLY DESIGNED FOR. AN INSPECTION OF THE STRUCTURAL INTEGRITY OF THE RETAINING WALL WILL BE REQUIRED TO PROVIDE CERTIFICATION AND/OR RECOMMENDATIONS PRIOR TO ANY CONSTRUCTION. PLEASE REFER BACK TO THIS OFFICE FOR ASSISTANCE.

STORMWATER DRAINAGE

21. ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF SOAKWELL AWAY FROM THE BUILDING AND SETBACK MINIMUM OF 1200mm, WHICHEVER IS GREATER. PLEASE REFER BACK TO THIS OFFICE IF REQUIRED THE SET-BACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham
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PROJECT :
LOT 1147 NERANG RD YANCHEP

CLIENT : DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 2 of 2)

WIND CLASSIFICATION

22. WIND CLASSIFICATION IS GIVEN FOR THE EXPECTED CONDITION 5 YEARS HENCE. THIS CLASSIFICATION IS LIMITED TO BUILDINGS CLASSES 1 AND 10, WHICH HAVE THE FOLLOWING LIMITATION (AS PER AS4055):

- a. MAXIMUM DISTANCE FROM THE GROUND LEVEL TO THE UNDERSIDE OF EAVES SHALL NOT EXCEED 6.0m.
- b. MAXIMUM DISTANCE FROM GROUND LEVEL TO THE HIGHEST POINT OF THE ROOF, EXCLUDING CHIMNEYS, SHALL NOT EXCEED 8.5m.
- c. THE ROOF PITCH SHALL NOT EXCEED 35°.
- d. THE WIDTH, EXCLUDING EAVES, SHALL NOT EXCEED 16.0m AND THE LENGTH SHALL NOT EXCEED 5x THE WIDTH.

IF THE BUILDING FALLS OUTSIDE OF THESE LIMITATIONS, THE STATED WIND CLASSIFICATION DOES NOT APPLY. REFER BACK TO THIS OFFICE FOR A REVISED WIND CLASSIFICATION.

ENVIRONMENTAL

23. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, IT IS RECOMMENDED THAT AN ENVIRONMENTAL ENGINEER BE ENGAGED.

SEISMIC

24. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF ≤ 0.11 . RECOMMENDED FOOTING DETAILS PROVIDED FOR SITES WITH AN EARTHQUAKE HAZARD FACTOR OF > 0.11 , ARE NOT FOR CONSTRUCTION, BUT FOR COSTING PURPOSES ONLY. IT IS RECOMMENDED REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

CORROSION CLASSIFICATION

25. THE CORROSION CLASSIFICATION HAS BEEN ASSESSED IN ACCORDANCE WITH AS3700.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



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PROJECT:
LOT 1147 NERANG RD YANCHEP

CLIENT: DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

A blue ink handwritten signature is written over the 'APPROVED' field.

GEOTECHNICAL KARST ASSESSMENT

For: Densford Civil

Project Address: Jindowie Stage 23
Yanchep Beach Road, Yanchep WA

Project Number: D297513

Job Number: J414449

Revision Number: 0

Date: 01/08/2022

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1. PROJECT DETAILS

1.1. Introduction

At the request of Densford Civil (Densford), Structerre Consulting (Structerre) have conducted a Geotechnical Karst assessment at the proposed Jindowie Stage 23 subdivision located at Yanchep Beach Road, Yanchep, WA. The purpose of the investigation was to provide the following:

- A desk top study, including a summary of site history, underlying geology, topography, groundwater and review of historical site investigations and reports; and
- An assessment of the subsurface soil profile, potential Karst formation and associated risk/s and groundwater conditions across the proposed area.

This report details the scope of the geotechnical investigation, presents an interpretation of underlying ground conditions and material properties across the site. Interpretation of site conditions is based on the subsurface lithology revealed during the investigation programme, visual assessments of the in-situ materials and the results of the desktop and in situ field testing.

1.2. Site Description & Proposed Development

The site is located to the south of Yanchep Beach Road and east of the existing Jindowie subdivision, within City of Wanneroo, Western Australia. The subject site (Stage 23) consists of a residential subdivision including 48 residential Lots.

A copy of the site plans outlining the area of assessment is included in Appendix 1 of this report.

1.3. Investigation – Scope of Works

The scope of works was defined on previous mapping of potential Karst zones within Stage 23 to further refine these areas and subject Lots and assist with recommendations for structural foundations for the proposed residential construction.

The investigation was carried out in July 2022 and comprised of the following works:

- Desktop assessment of the site including natural geology of the site and surrounds, review of published ground water information and a review of history site history via mapping and historical photography.
- Walk over site and visual assessment of existing ground conditions and any exposed excavations within the area including logging of the natural soil and rock profiles exposed at the time of the assessment.
- Seven (7) Electric Friction Cone Probes at selected location over the site to a maximum depth of 8.1m.

Suitably qualified geotechnical personnel from Structerre supervised the fieldwork and all fieldwork, interpretation and terminology used in this report are in accordance with the guidelines presented in AS1726-2017 Geotechnical Site Investigations.

2. DESK STUDY

2.1. Geological Setting

The Muchea sheet 1: 50,000 Environmental Geology Series (Sheet 2034 I and Part of 2134 IV, 1986) prepared by the Geological Survey of Western Australia indicates that the following geological layer underlies the stage:

- SAND (S7) – pale and olive yellow, medium to coarse-grained, sub-angular to sub-rounded quartz, trace of feldspar, moderately sorted of residual origin (Sand derived from Tamala Limestone Qts).

2.2. Ground Surface and Groundwater Level

The Perth Groundwater Atlas (Waters & Rivers Commission) and supplied survey information indicates the ground surface level at this site was approximately between 25m to the north rising to 34m to the south of the stage, Australian Height Datum (AHD).

The May 2003 groundwater level at the site was approximately 2.0m AHD providing a separation of approximately <23m from the surface to groundwater. It should be noted that the groundwater levels can vary significantly due to seasonal variation and the data from the recorded maximum levels should be used only as a guide.

2.3. Acid Sulfate Soils

Information from publicly available Perth Groundwater website indicates that the site lies within a zone of no known risk of ASS occurring within 3m of natural surface.

2.4. Karst Study

Karst is typically defined as terrain usually characterized by barren, rocky ground, caves, sinkholes, underground rivers, and the absence of surface streams and lakes.

It results from the excavating effects of underground water on massive soluble limestone. The term originally applied to the Karst (or Kras) physiographic region, a limestone area northeast of the Gulf of Trieste in Slovenia, but has been extended to mean all areas with similar features.

The local geology of the subject area being Tamala Sands derived from the solution of carbonates from the Tamala Limestone formation can provide a potential for loose sands or underground caves (voids) at depth, commonly described as Karst.

Information contained in The City of Wanneroo Planning and Sustainability - Local Planning Policy Framework - Planning Policy 4.13: “Caves and Karstic Features” document indicates the site is located within a low-Risk Karst Zone with a medium to high-risk area to the east of this site.

Previous assessments conducted by Coffey and GBGMaps have identified two potential areas of concern identifying loose zones / voids and possible sinkhole zones within the stage, in particular an area to the south of the stage and along the eastern boundary of Stage 23 adjoining stage 24.

2.5. Site History

Historical aerial photographs dating back to 1965 are publicly available through Landgate Map Viewer were assessed and a summary is presented in Table 1, below.

Table 1 – Historical Site Information

Date	Description
1965	The site was previously cleared for pastoral use.
1977	Yanchep Airstrip constructed within the subject area.
2014	Subdivisional development constructed to the west of the site.
2015	Bulk earthworks with fill placed directly to the west of Stage 23.
2020	Sand borrow extraction conducted in north portion Stage 23.
January 2022	Bulk earthworks including stripping and filling conducted onsite.
July 2022	Earthworks and civil works continuing.

3. RESULTS OF THE INVESTIGATION

3.1. Subsurface Soil Profile

The subsurface soil profile as presented in the previous investigations conducted by Coffey and GBGMAPS and the additional EFCP testing conducted by Structerre indicate the underlying ground conditions typically consist of sand over limestone (rock).

Visual observations conducted are consistent with the referenced geological mapping of the site providing a layer of Tamala sand of variable thickness overlying intact Tamala Limestone to depth.

Limestone outcropping was identified approximately 150m to the east of the Stage.

Based on the information provided from the CPT traces, the thickness of the (natural and fill) sand profile varies from approximately a minimum of 2.4m to in excess of 8m below the current surface levels.

Seven (7) EFCP tests were conducted in the potential karst areas as defined in the previous geotechnical reports for the site.

Loose sand was intersected at test locations CPT3 at -4.1m to -5.7m, CPT 4 at -4.2m to -4.8m and CPT6 at -2.3m to -3.1m.

A site plan outlining the EFCP test locations are included in Appendix 1 with traces included in Appendix 2 of this report.

Table 2 – Electric Friction Cone Probe Test Results

Test Location	Sand Thickness From Surface (m)	Inferred Loose Zone (m)	Termination
CPT1	8.1	-	Target Depth
CPT2	5.7	-	Refusal @ 5.9m
CPT3	6.5	-4.1 – 5.7	Refusal @ 6.6m
CPT4	5.3	-4.2 – 4.8	Refusal @ 5.4m
CPT5	2.4	-	Refusal @ 2.5m
CPT6	3.4	-2.3 – 3.1	Refusal @ 3.5m
CPT7	7.4	-	Refusal @ 7.5m

3.2. Groundwater

Groundwater was not observed in any of the CPT test holes over the site and based on information obtained from the Perth Groundwater Atlas is expected to be approximately >20m from the current surface levels.

4. GEOTECHNICAL CONSIDERATIONS

4.1. Site Classification (AS2870)

AS 2870-2011 Residential Slabs and Footings provides guidance on site classification for residential slabs and footing design based on the expected ground surface movement and depth of expected moisture changes.

Based on the information obtained from previous investigations conducted on the site, the appropriate classification in accordance with AS2870 is Class “P” due to the potential for loose sands, collapsing soils and soils subject to erosion, requiring further analysis for re-classification based on potential estimated vertical surface movements (settlements) within the developed Lots for the proposed design life of the residential structures.

Based on the inferred depth of the loose sands in conjunction with improvement of the ground conditions including from general earthworks including clearing of topsoils and vegetation, cutting and proof compaction of all cut bases and controlled structural filling and compaction, can improve the structural capacity of the upper profile and significantly reduce the potential for settlement from the looser sands at depth to provide Equivalent Class “A” Lots as defined in AS2870.

Table 3 – Classification Based on Site Reactivity

AS 2870-2011 Residential Slabs and Footings - Clause 2.1.2 Table 2.1	
Class	Foundation
A	Most sand and rock sites with little or no ground movement from moisture changes
S	Slightly reactive clay sites, which may experience only slight ground movement from moisture changes ($0 < y_s \leq 20\text{mm}$)
M	Moderately reactive clay or silt sites, which may experience moderate ground movement from moisture changes ($20 < y_s \leq 40\text{mm}$)
H1	Highly reactive clay sites, which may experience high ground movement from moisture changes ($40 < y_s \leq 60\text{mm}$)
H2	Highly reactive clay sites, which may experience very high ground movement from moisture changes ($60 < y_s \leq 75\text{mm}$)
E	Extremely reactive sites, which may experience extreme ground movement from moisture changes ($y_s > 75\text{mm}$)
Clause 2.1.3 Classification of other Sites	
P	Sites which include soft or unstable foundations such as soft clay or silt or loose sands, landslip, mine subsidence, collapsing soils and soils subject to erosion, reactive sites subject to abnormal moisture conditions and site that cannot be classified in accordance to Table 2.1

Based on results of this investigation, and subject to satisfactory completion of the proposed earthworks as outlined in the plans and technical specifications (provided by the JDSi Consulting Engineers) for the proposed development, the developed Lots within Stage 23 can be classified “Equivalent Class A” subject to satisfactory remedial earthworks being completed for the areas containing the residential Lots of the stage.

Based on the EFCP data and subject to lot specific Site Classification assessments for each Lot, we expect all the Lots will all be able to meet the requirements of Equivalent Class “A” as outlined in AS2870, however would not recommend the use of the West Australian Light Weight footing and slab (Structerre D10) over the stage, recommending the AS2870 standard Class A footing (typical to the Structerre A detail).

In the areas where potential Karst was identified and subsequent loose sand at depth was intersected within CPT traces, we recommend upgrading the footing and slab to a Structerre “B1” detail which is similar in design as the Structerre A detail, however incorporates a single layer of trench mesh (steel reinforcing) within the edge beam and masonry reinforcement within the brickwork.

The Lots where the Structerre B1 detail is recommended consist of Lots 921 to 925, 930 to 935 and 1125 to 1135.

4.2. Drainage Considerations

The geological formation identified from the site assessment can be prone to differential settlement (sinkholes) from the solution of carbonate leaving loose sand zones, or in extreme cases voids (caves) within the upper soil layers, which can be accelerated with concentrated water flows from localised drainage providing migration and settlement of the underlying sands at depth.

Based on the above, it is recommended that onsite stormwater drainage via soakwells be located as far as practical from any structural foundations to reduce the risk of additional settlements. Soakwells should be positioned a minimum of 2m, or the depth of soakwell, (whichever is greater) away from any existing or proposed structural foundations to reduce potential of increased settlement/s.

5. CONCLUSIONS

An investigation was carried out at the site to assess the geotechnical conditions and potential for Karst over the site. The following conclusions have been drawn from the site investigation:

- The subsurface soil profile encountered comprised of varying thickness of structural FILL, overlying the natural ground consisting of sand over limestone.
- No groundwater or perched water was encountered across the site during the investigation.
- The previous site is classified “Class P” in accordance with AS 2870-2011 based on the presence of loose sands at depth however can be upgraded to Equivalent Class “A” at completion of the appropriate earthworks.
- West Australian light weight footing and slab detail (Structerre D10) is not recommended for this site.
- Onsite stormwater water drainage via soakwells to be located a minimum of 2m or depth of soakwell (which ever is greater) away from existing or proposed structural foundations.

6. LIMITATION OF FIELD INVESTIGATIONS

This report has been prepared in accordance with generally accepted consulting practice for Densford Civil using information supplied at the time and for the project specific requirements as understood by Structerre. To the best of our knowledge the information contained in this report is accurate at the date of issue, however it should be emphasised that any changes to ground conditions and/or the proposed structures may invalidate the recommendations given herein.

The conclusions and recommendations in this report are based on the site conditions revealed through selective point sampling, representing the conditions of the site in total, although the area investigated represents only a small portion of the site. The actual characteristics may vary significantly between successive test locations and sample intervals other than where observations, explorations and investigations have been made.

The materials and their geotechnical properties presented in this report may not represent the full range of materials and strengths that actually exist on site and the recommendations should be regarded as preliminary in nature. Allowances should be made for variability in ground conditions and any consequent impact on the development. Structerre accepts no responsibility and shall not be liable for any consequence of variations in ground conditions.

If ground conditions encountered during construction are different to that described in this report, this office should be notified immediately.

For and behalf of

STRUCTERRE CONSULTING



Mel Castle
 Division Manager - Geotechnical

Disclaimer

This report is at the request of the addressee and no liability is accepted by Structerre Consulting to any third person reading or relying upon the report, notwithstanding any rule of law and/or equity to the contrary and that this report is strictly confidential and intended to be read and relied upon only by the addressee.

Job #	Revision	Authored	Checked	Authorised
J414449	0	MEC	DH	MEC

7. REFERENCES

Department of Water – Perth Groundwater Atlas

Geological Survey of Western Australia 1:50,000 Environmental Geology Series

City of Wanneroo - Planning and Sustainability – Local Planning Policy Framework – Local Planning Policy 4.13: Caves and Karstic Features

AS 1726-2017 Geotechnical site investigations

AS 2870-2011 Residential slabs and footings

APPENDIX 1 – SITE PLAN



Note: Showing approximate test locations only

LEGEND

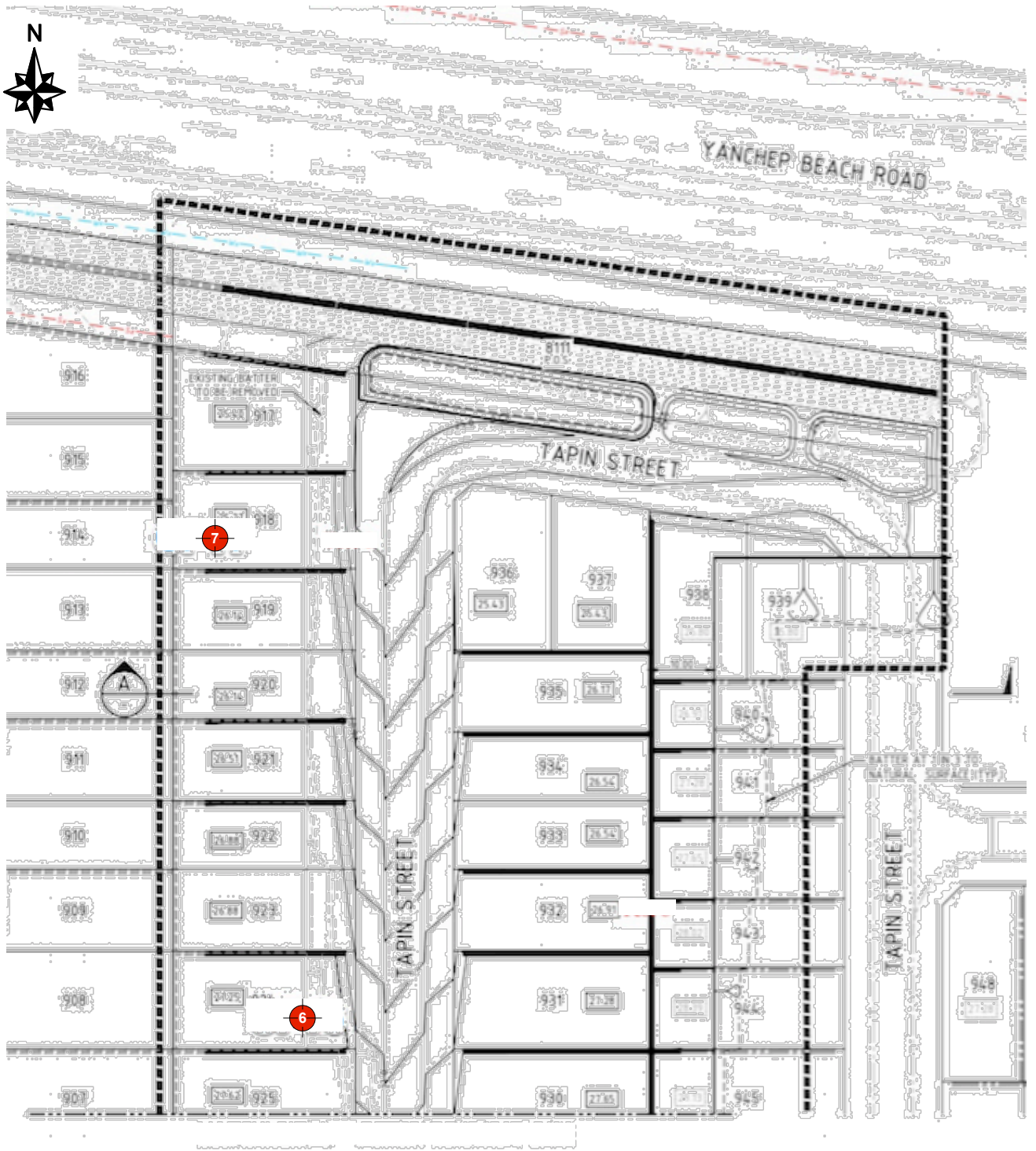
 EFCPT Electric Friction Cone Penetrometer Test



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PROJECT #: D297513	CLIENT: Densford Civil	
JOB #: J414449		
SCALE: NTS	TITLE: Geotechnical Investigation Site Plan	
DATE: 12 & 13 Jul '22	DRAWN BY: MM	CHECKED BY: DH



Note: Showing approximate test locations only

LEGEND

 EFCPT Electric Friction Cone Pentrometer Test



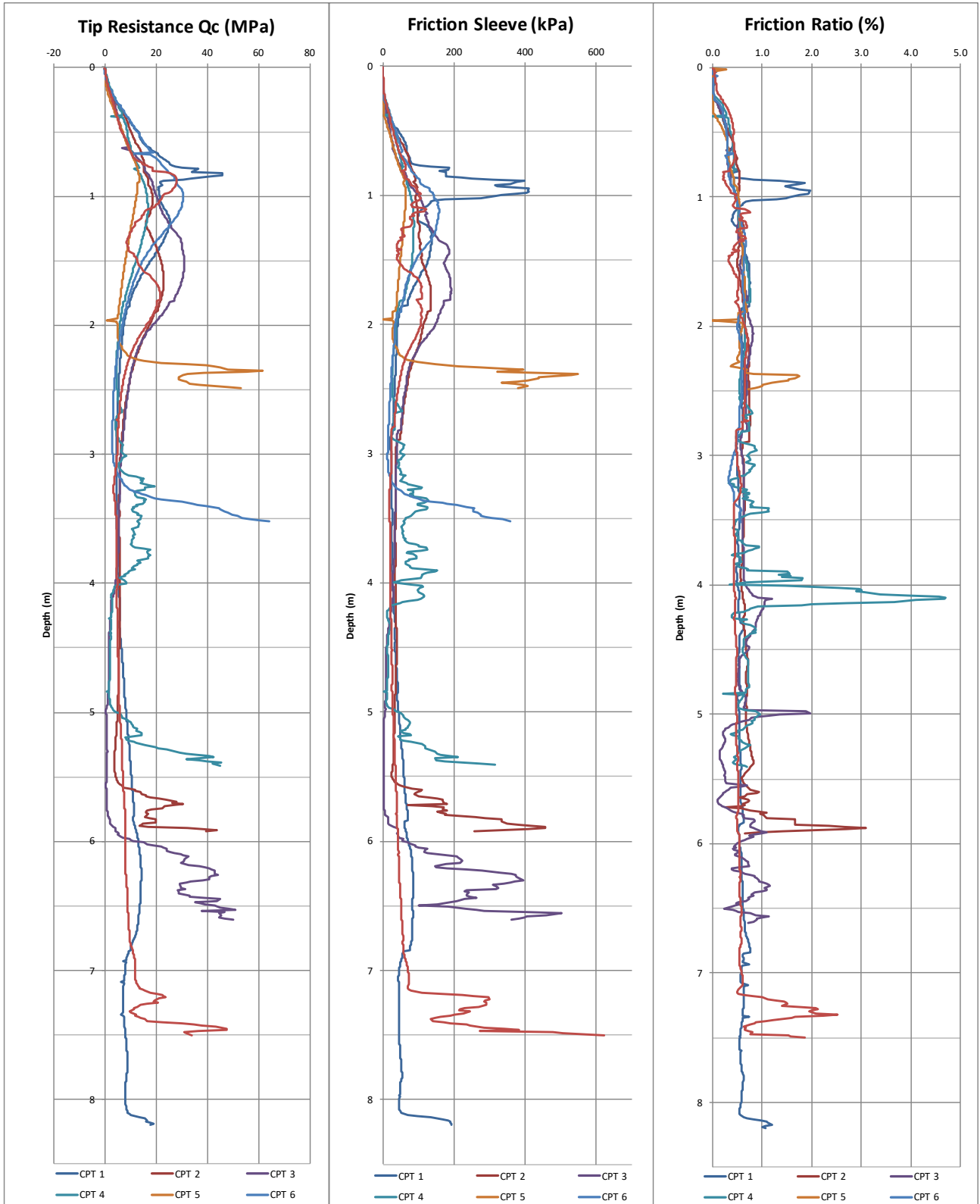
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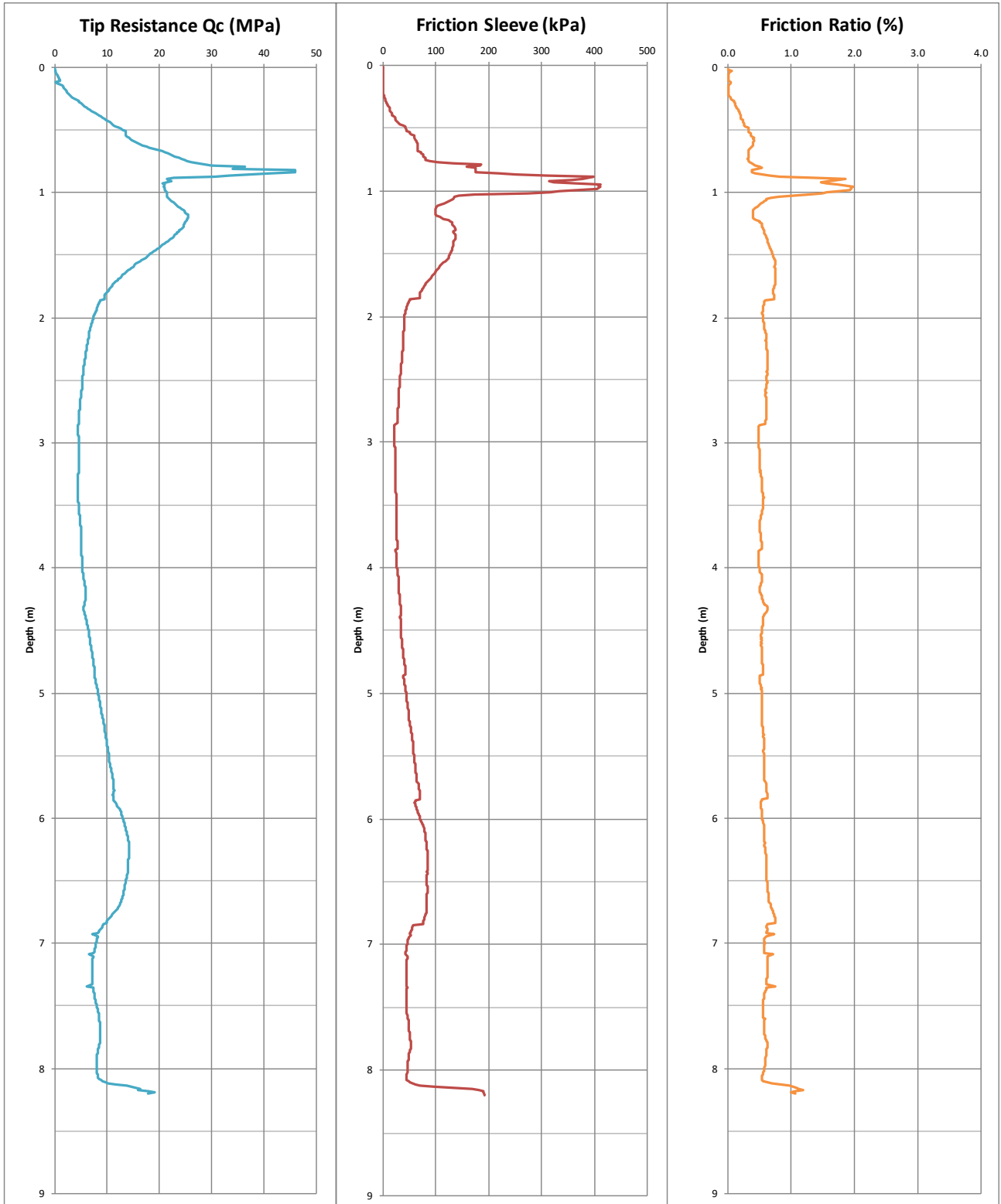
APPENDIX 2 – EFCP TRACES

Client: Densford Civil	Project: D297513/J414449
Project: Jindowie Stage 23 - Yanchep Beach Rd, Yanchep	GPS: Lat.: Lon.:
Probe No: ALL	Test Date: 12/7/2022 & 13
	Tested By: NS



WA | QLD | NSW | VIC

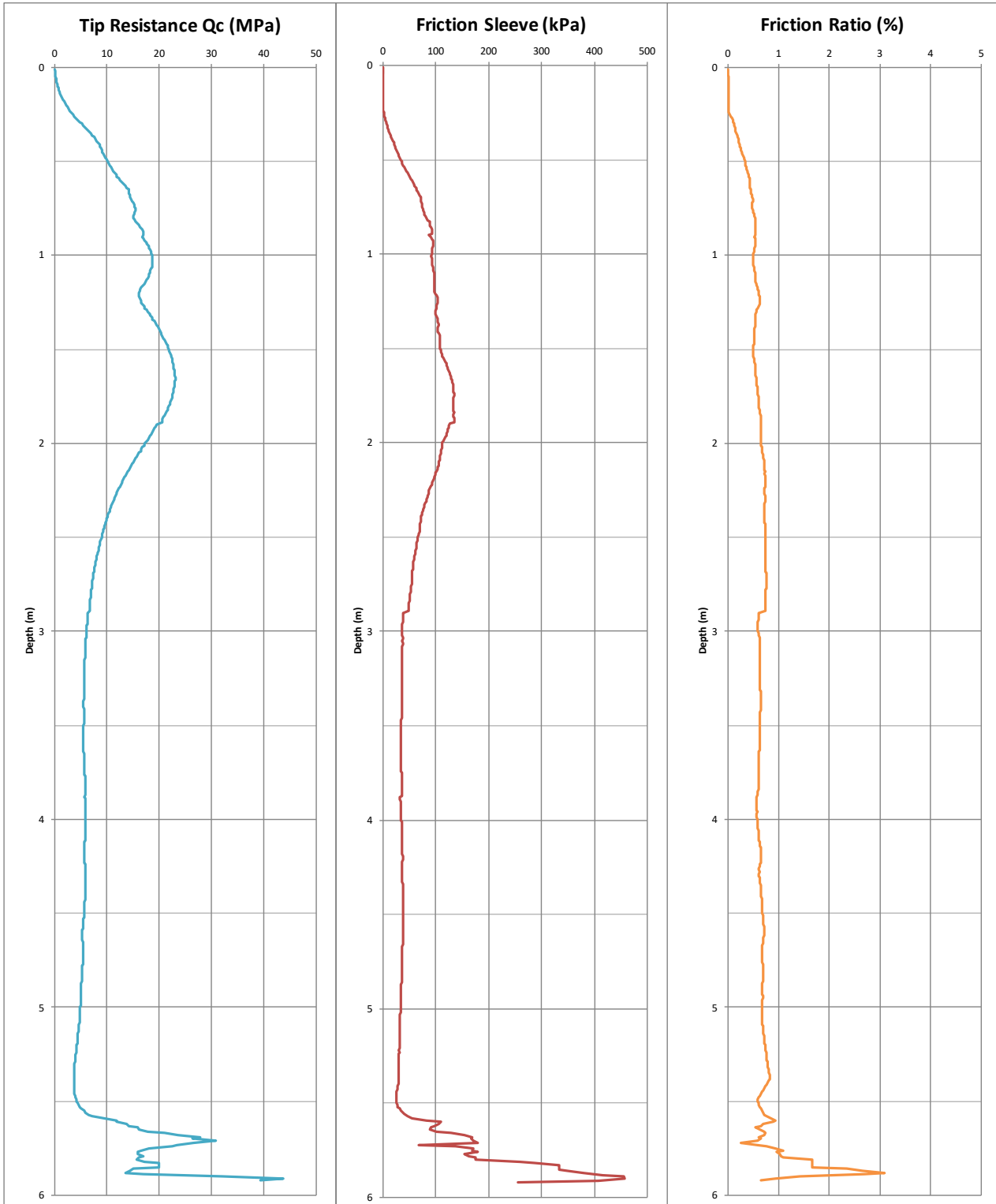
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Project:	Jindowie Stage 23 - Yanchep Beach Rd, Yanche	GPS:	Lat.: -31.551984 Lon.: 115.657183
Probe No:	CPT1	Test Date:	12/7/2022 & 13
		Tested By:	NS



Water (m)	Max Depth	8.2	Termination Reason	Target Depth
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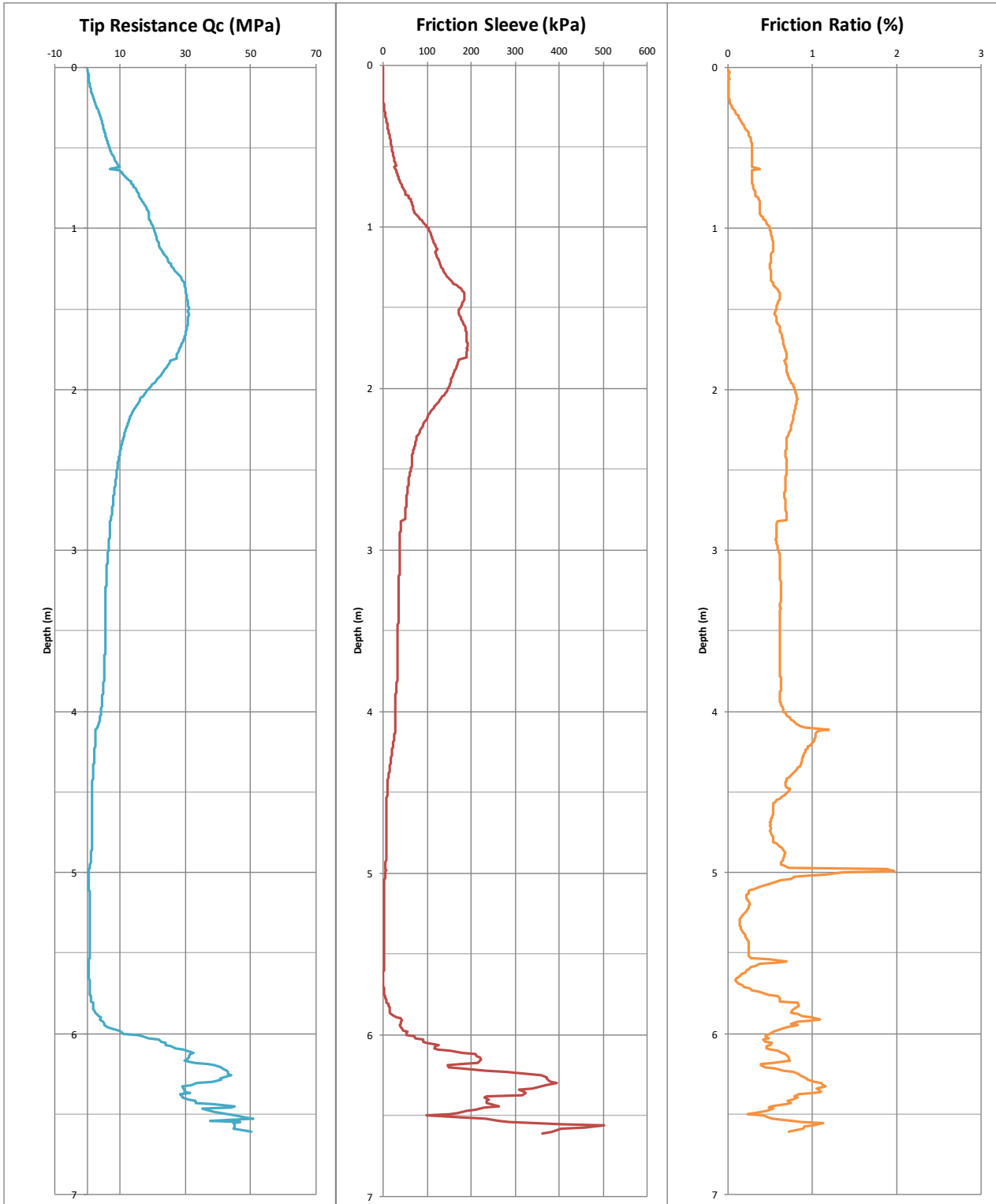
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Probe No:	CPT2	Test Date:	12/7/2022 & 13
		Tested By:	NS



Water (m)	Max Depth	5.92	Termination Reason	Refusal Pull-Out
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WA | QLD | NSW | VIC

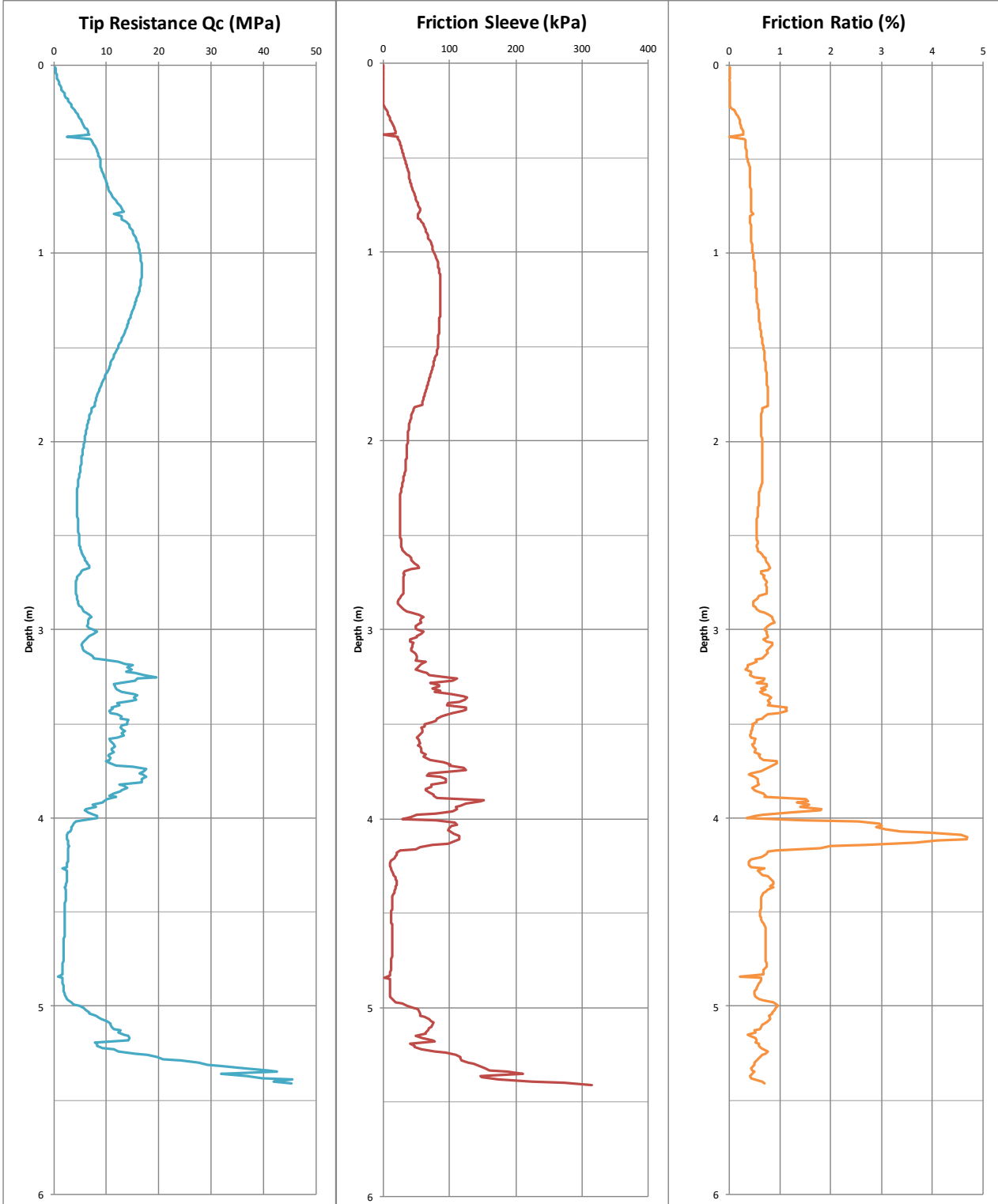
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Probe No:	CPT3	Test Date:	12/07/2022
		Tested By:	NS



Water (m)	Max Depth	6.61	Termination Reason	Refusal Pull-Out
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WA | QLD | NSW | VIC

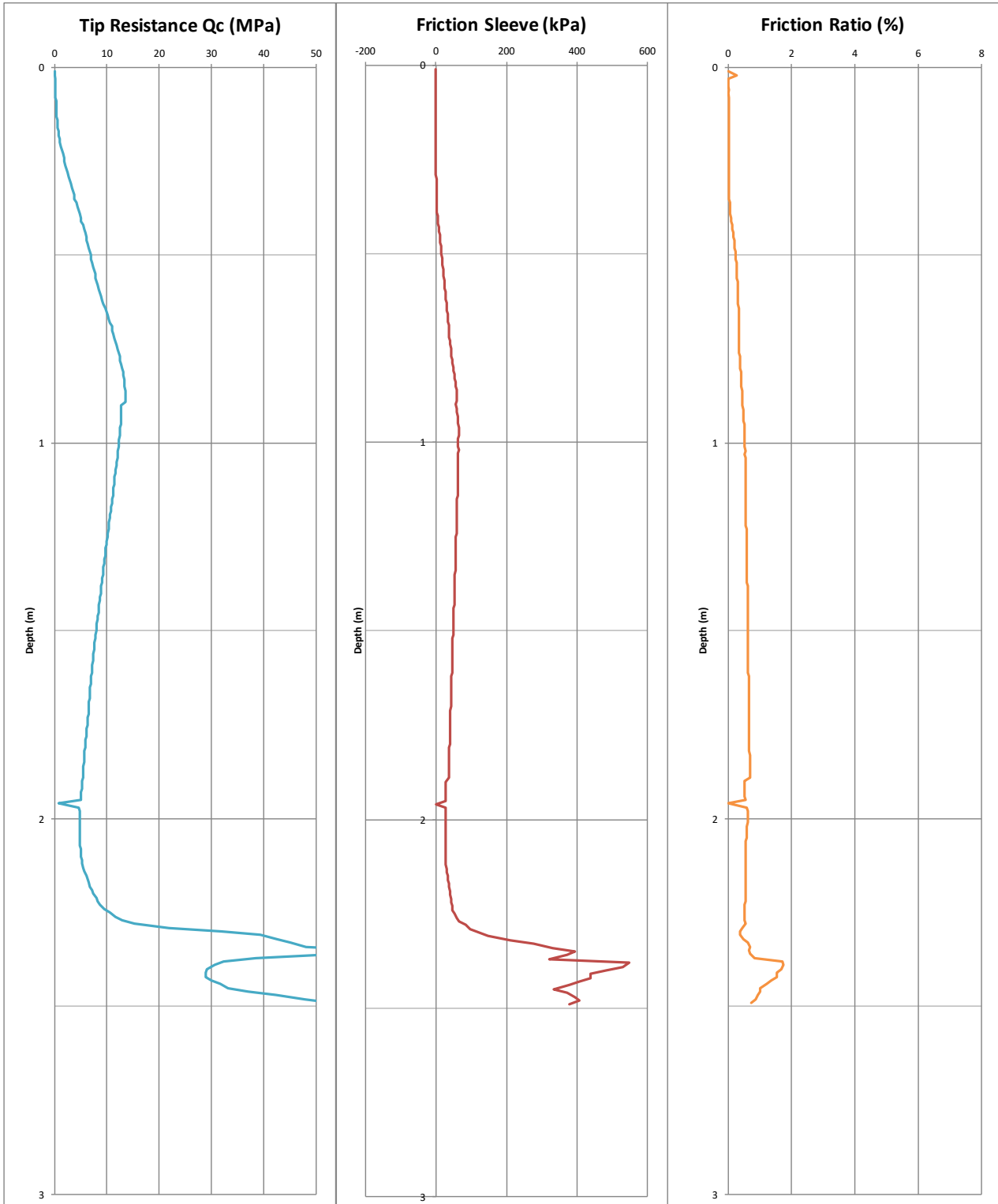
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Project:	Jindowie Stage 23 - Yanchep Beach Rd, Yanche	GPS:	Lat.: -31.552194 Lon.: 115.658456
Probe No:	CPT4	Test Date:	12/7/2022 & 13
		Tested By:	NS



Water (m)	Max Depth	5.41	Termination Reason	Refusal Pull-Out
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WA | QLD | NSW | VIC

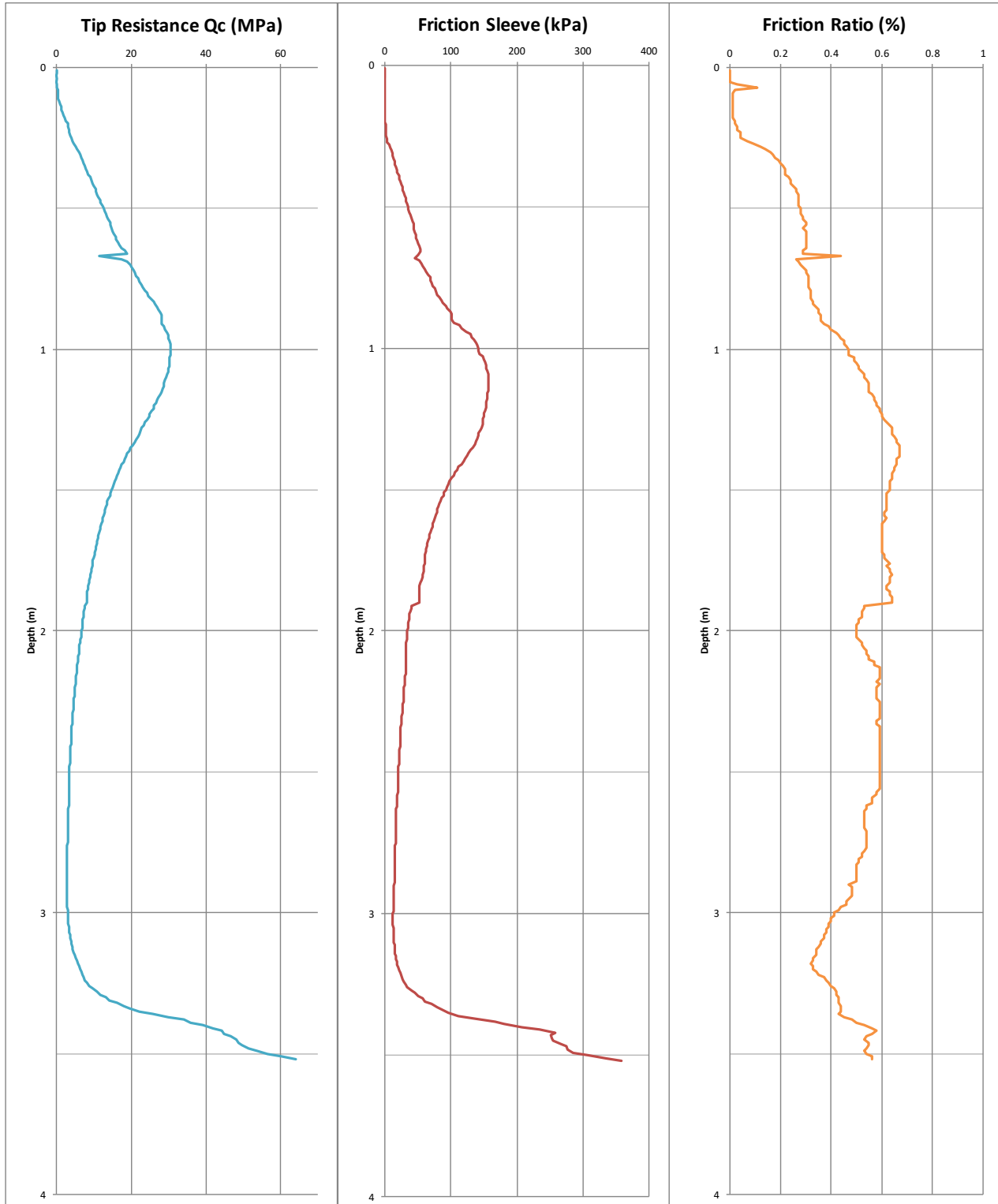
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Project: Jindowie Stage 23 - Yanchep Beach Rd, Yanchep		GPS: Lat.: -31.551390	Lon.: 15.568763
Probe No: CPT5	Test Date: 13/07/2022	Tested By: NS	



Water (m)	Max Depth	2.49	Termination Reason	Refusal Pull-Out
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WA | QLD | NSW | VIC

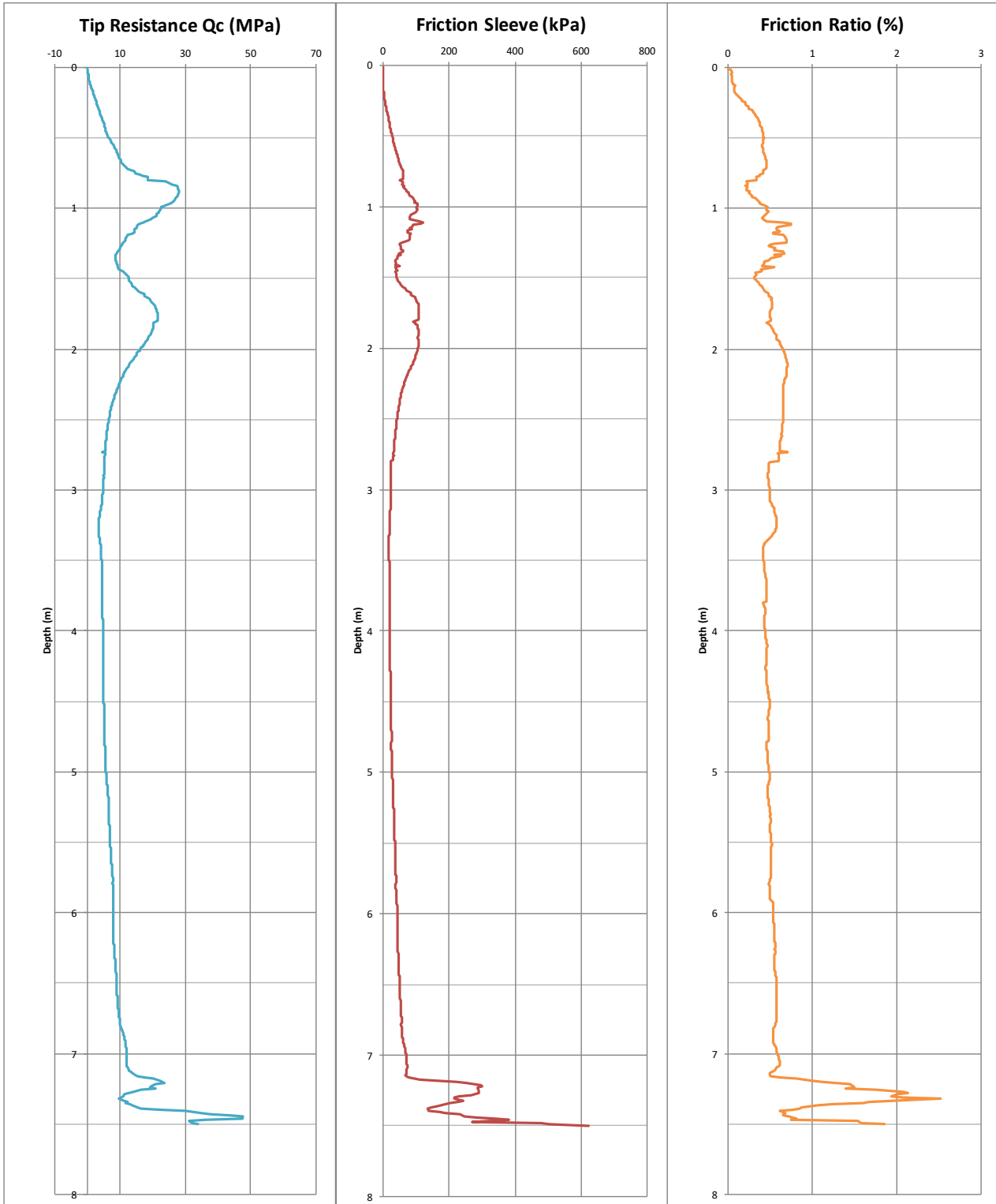
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Probe No: CPT6	Test Date: 13/07/2022	Tested By: NS	



Water (m)	Max Depth	3.52	Termination Reason	Refusal Pull-Out
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WA | QLD | NSW | VIC

Client: Densford Civil	Project: D297513/J414449
Project: Jindowie Stage 23 - Yanchep Beach Rd, Yanchep	GPS: -31.550067 115.658344
Probe No: CPT7	Test Date: 13/07/2022
	Tested By: NS



Water (m)	Max Depth	7.5	Termination Reason	Target Depth
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WA | QLD | NSW | VIC

SITE CLASSIFICATION REPORT
CERTIFICATE 2595296

CLIENT DENSFORD CIVIL
JOB ADDRESS LOT 1149 BUTTERLEAF AV YANCHEP
CLIENT JOB NO.
OWNER
STRUCTERRE JOB NO. S1085288
DATE OF ASSESSMENT 17/11/22

SITE RECORD

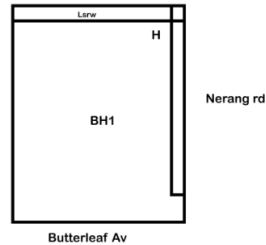


SITE CLASSIFICATION	A	<i>(in accordance with AS2870)</i>
FOOTING DETAIL	A	
SAND PAD	No sand pad required structurally	
BUSHFIRE PRONE AREA	Yes	<i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	R3	<i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	N2	<i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	No Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1500 FILL sand trace gravel (limestone) - brown; 1500 - 1800 FILL sand; 1800 end of hole.

APPROXIMATE BOREHOLE LOCATIONS



NOTE 1 Explanatory Notes & Standard Recommendations

This site classification report must be read in conjunction with the applicable Explanatory Notes & Standard Recommendations. For A Class sites, refer to the Explanatory Notes and Standard Recommendations for Stable (A Class) Sites, version 1.0 July 2018. For S, M, H1, H2 & E Class sites, refer to the Explanatory Notes and Standard Recommendations for Reactive (S, M, H1, H2 & E Class) Sites version 1.0 July 2018. For Equivalent Class sites, refer to the Explanatory Notes and Standard Recommendations for Equivalent Class Sites, version 1.0 July 2018.

NOTE 2 Bushfire - Prone Area

The Site may be situated in a bush fire prone area in accordance with the Department of Fire and Emergency Services (DFES) Bushfire Prone Area Map (Reference: <http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/>) the current version at the time of this assessment. A Bushfire Attack Level (BAL) assessment may be required for this site, please confirm with the local authority. Should you require an assessment, please contact this Office.

ADDITIONAL NOTES / REQUIREMENTS

Site Condition

At the time of inspection the site was considered to be level and cleared. For specific levels of this site or topographical features, please refer to a professional site survey.

-- END OF REPORT --

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 1 of 2)

GENERAL

1. THE EXPLANATORY NOTES AND THE STANDARD RECOMMENDATIONS ARE TO BE READ IN CONJUNCTION WITH THE SITE CLASSIFICATION REPORT.
2. ALL REFERRED STANDARDS TO BE THE CURRENT VERSION AT THE TIME OF THE CONSTRUCTION.
3. THE PURPOSE OF THE SITE CLASSIFICATION REPORT IS TO CLASSIFY THE SITE IN ACCORDANCE WITH AS2870 "RESIDENTIAL SLABS AND FOOTING". IT IS NOT INTENDED FOR ANY OTHER PURPOSE, INCLUDING SOLE INFORMATION IN THE PROVISION OF A QUOTATION FOR SITE WORKS BY EARTH WORKERS. IT IS RECOMMENDED EARTH WORKERS PERFORM THEIR OWN INVESTIGATION FOR QUOTATION PURPOSES.
4. THE SITE CLASSIFICATION REPORT WILL INCLUDE BUT IS NOT LIMITED TO:
 - a. THE SITE CLASSIFICATION IN ACCORDANCE WITH AS2870 RESIDENTIAL SLABS AND FOOTING CONSTRUCTION,
 - b. A WIND RATING IN ACCORDANCE WITH AS 4055 WIND LOADS FOR HOUSING,
 - c. A COASTAL CORROSION CLASSIFICATION,
 - d. ADDITIONAL EARTHWORK RECOMMENDATION WHERE APPLICABLE,
 - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONDITIONS.
5. THE SITE CLASSIFICATION REPORT IS BASED ON THE SITE AS PRESENTED AT THE TIME OF ASSESSMENT. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
6. CLASS A SITES ARE STABLE SITES, GENERALLY SAND, LIMESTONE, GRAVEL OR A COMBINATION. CLASS P ARE PARTICULAR CLASSIFICATIONS SUCH AN UNUSUAL SITES OR SITES REQUIRING ADDITIONAL INVESTIGATION PRIOR TO PROVIDING DETAILS.
7. BOREHOLES EXCAVATED REVEAL THE SOIL PROFILE AT THE BOREHOLE LOCATION ONLY. FROM THIS, IT IS INFERRED THAT THESE ARE THE SOIL CONDITION OVER THE SITE. VARIATIONS CAN OCCUR WHICH MAY NOT HAVE BEEN DETECTED AT THE INVESTIGATION STAGE. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR REASSESSMENT.
8. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE IN ORDER TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
9. THIS REPORT IS FOR STRUCTERRE ONLY TO USE IN DESIGN. ANY DESIGN BY ANYONE ELSE FOR ANY STRUCTURE MUST BE SPECIFICALLY APPROVED BY STRUCTERRE. IF USED BY ANYONE ELSE FOR ANYTHING OTHER THAN A STRUCTERRE DESIGN OR STRUCTURE, STRUCTERRE TAKES NO RESPONSIBILITY.

SAND PAD

10. THE RECOMMENDED FOOTING DESIGN IS ONLY TO BE USED IN CONJUNCTION WITH THE RECOMMENDED SAND PAD AND EARTHWORKS AS OUTLINED IN THE SITE CLASSIFICATION REPORT.
11. THE RECOMMENDATIONS FOR THE SAND PAD IS FOR STRUCTURAL PURPOSES ONLY, AND DOES NOT PROVIDE THE MINIMUM FINISHED PAD LEVEL IN RELATION TO FLOOD LEVELS, OR DEPTH TO GROUNDWATER. SHOULD THE TEST BE LOCATED IN A LOW LYING OR FLOOD PRONE AREA, REFER TO THE LOCAL AUTHORITY FOR MINIMUM BUILDING HEIGHT.
12. IMPORTED FILL FOR USE AS A SAND PAD TO BE IN ACCORDANCE TO AS 3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS" WHICH INCLUDES BUT IS NOT LIMITED TO: BE FREE FROM ANY DELETERIOUS MATERIALS INCLUDING ORGANICS, (ROOTS, STUMPS, GRASSES, DECOMPOSED ORGANICS – PEAT, TIMBER, ETC), BUILDING RUBBLE, GLASS, PLASTICS OR WASTE MATERIAL. THE FINES CONTENT, (PERCENTAGE PASSING THE 0.075mm SIEVE) TO BE LESS THAN 5% BY MASS.
13. ON CLASS A SITES, A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 450mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
14. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
15. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

EARTHWORKS

16. RECOMMENDED EARTHWORKS TO BE CONDUCTED IN ACCORDANCE WITH AS3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS", AND TO INCLUDE BUT NOT BE LIMITED TO:
 - a. REMOVAL OF ALL VEGETATION, TOPSOILS, UNCONTROLLED FILLS AND OTHER DELETERIOUS MATERIALS FROM THE BUILDING AREA,
 - b. GRUBBING OUT OF ANY TREES ENSURING THE REMAINING HOLES ARE BACKFILLED WITH CLEAN COMPACTED SAND,
 - c. NOTIFYING THE ENGINEER OF ANY UNUSUAL FEATURE OR DISCREPANCY THAT MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING,
 - d. COMPACTING TO MEET THE REQUIREMENTS AS OUTLINED IN AS 3798 TABLE 5.1.
17. FILL MATERIAL (WHICH IS NOT ALWAYS APPARENT AT THE INITIAL INVESTIGATION STAGE) IS TO BE DEALT WITH AS FOLLOWS:
 - a. IF IT IS CERTIFIED BY OTHERS IT CAN REMAIN.
 - b. IF IT IS NOT CERTIFIED WILL REQUIRE REMOVAL DOWN TO NATURAL GROUND OR VERIFIED. ANY SAND CAN BE REUSED.
 - c. IF A PAD HAS ALREADY BEEN CONSTRUCTED, THE SITE CLASSIFICATION IS NOT CERTIFICATION OF THE PAD. CONTACT THIS OFFICE SHOULD A SAND PAD CERTIFICATION BE REQUIRED.
18. ANY ORGANIC MATTER OR ROOTS ENCOUNTERED, WHICH IS BEYOND WHAT IS NORMALLY CONSIDERED ACCEPTABLE IS TO BE REMOVED. THIS WILL NECESSITATE RAKING THE SITE TO REMOVE ORGANIC MATERIAL, TURNING THE SITE OVER AND RE- COMPACTING TO A MINIMUM.

RETAINING WALLS

19. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
20. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER TO THE RETAINING WALL THAN THE HEIGHT OF THE RETAINING WALL, THIS MAY PLACE ADDITIONAL LOADS ON THE WALL THAT WERE NOT INITIALLY DESIGNED FOR. AN INSPECTION OF THE STRUCTURAL INTEGRITY OF THE RETAINING WALL WILL BE REQUIRED TO PROVIDE CERTIFICATION AND/OR RECOMMENDATIONS PRIOR TO ANY CONSTRUCTION. PLEASE REFER BACK TO THIS OFFICE FOR ASSISTANCE.

STORMWATER DRAINAGE

21. ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF SOAKWELL AWAY FROM THE BUILDING AND SETBACK MINIMUM OF 1200mm, WHICHEVER IS GREATER. PLEASE REFER BACK TO THIS OFFICE IF REQUIRED THE SET-BACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham
Unit Trust trading as StrucTerre Consulting Engineers
1 ERINDALE ROAD, BALEATTA W.A. 6021
TEL (08) 9205 4500 FAX (08) 9205 4541 EMAIL: perth@strucTerre.com.au

PROJECT :
LOT 1149 BUTTERLEAF AV YANCHEP

CLIENT : DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 2 of 2)

WIND CLASSIFICATION

22. WIND CLASSIFICATION IS GIVEN FOR THE EXPECTED CONDITION 5 YEARS HENCE. THIS CLASSIFICATION IS LIMITED TO BUILDINGS CLASSES 1 AND 10, WHICH HAVE THE FOLLOWING LIMITATION (AS PER AS4055):

- a. MAXIMUM DISTANCE FROM THE GROUND LEVEL TO THE UNDERSIDE OF EAVES SHALL NOT EXCEED 6.0m.
- b. MAXIMUM DISTANCE FROM GROUND LEVEL TO THE HIGHEST POINT OF THE ROOF, EXCLUDING CHIMNEYS, SHALL NOT EXCEED 8.5m.
- c. THE ROOF PITCH SHALL NOT EXCEED 35°.
- d. THE WIDTH, EXCLUDING EAVES, SHALL NOT EXCEED 16.0m AND THE LENGTH SHALL NOT EXCEED 5x THE WIDTH.

IF THE BUILDING FALLS OUTSIDE OF THESE LIMITATIONS, THE STATED WIND CLASSIFICATION DOES NOT APPLY. REFER BACK TO THIS OFFICE FOR A REVISED WIND CLASSIFICATION.

ENVIRONMENTAL

23. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, IT IS RECOMMENDED THAT AN ENVIRONMENTAL ENGINEER BE ENGAGED.

SEISMIC

24. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF ≤ 0.11 . RECOMMENDED FOOTING DETAILS PROVIDED FOR SITES WITH AN EARTHQUAKE HAZARD FACTOR OF > 0.11 , ARE NOT FOR CONSTRUCTION, BUT FOR COSTING PURPOSES ONLY. IT IS RECOMMENDED REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

CORROSION CLASSIFICATION

25. THE CORROSION CLASSIFICATION HAS BEEN ASSESSED IN ACCORDANCE WITH AS3700.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



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1 ERINDALE ROAD, BALCATTA W.A. 6021
TEL (08) 9205 4500 FAX (08) 9205 4541 EMAIL: perth@strucTerre.com.au

PROJECT:
LOT 1149 BUTTERLEAF AV YANCHEP

CLIENT: DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

A blue ink handwritten signature is written over the 'APPROVED' field.

SITE CLASSIFICATION REPORT
CERTIFICATE 2595274

CLIENT DENSFORD CIVIL
JOB ADDRESS LOT 1150 BUTTERLEAF AV YANCHEP
CLIENT JOB NO.
OWNER
STRUCTERRE JOB NO. S1085287
DATE OF ASSESSMENT 17/11/22

SITE RECORD

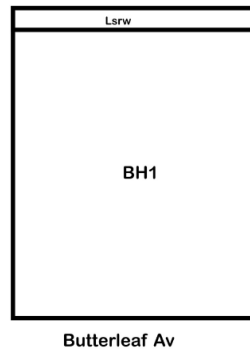


SITE CLASSIFICATION	A	<i>(in accordance with AS2870)</i>
FOOTING DETAIL	A	
SAND PAD	No sand pad required structurally	
BUSHFIRE PRONE AREA	Yes	<i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	R3	<i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	N2	<i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	No Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1500 FILL sand trace gravel (limestone) - brown; 1500 - 1800 FILL sand; 1800 end of hole.

APPROXIMATE BOREHOLE LOCATIONS



NOTE 1 Explanatory Notes & Standard Recommendations

This site classification report must be read in conjunction with the applicable Explanatory Notes & Standard Recommendations. For A Class sites, refer to the Explanatory Notes and Standard Recommendations for Stable (A Class) Sites, version 1.0 July 2018. For S, M, H1, H2 & E Class sites, refer to the Explanatory Notes and Standard Recommendations for Reactive (S, M, H1, H2 & E Class) Sites version 1.0 July 2018. For Equivalent Class sites, refer to the Explanatory Notes and Standard Recommendations for Equivalent Class Sites, version 1.0 July 2018.

NOTE 2 Bushfire - Prone Area

The Site may be situated in a bush fire prone area in accordance with the Department of Fire and Emergency Services (DFES) Bushfire Prone Area Map (Reference: <http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/>) the current version at the time of this assessment. A Bushfire Attack Level (BAL) assessment may be required for this site, please confirm with the local authority. Should you require an assessment, please contact this Office.

ADDITIONAL NOTES / REQUIREMENTS

Site Condition

At the time of inspection the site was considered to be level and cleared. For specific levels of this site or topographical features, please refer to a professional site survey.

Structerre Geotech Reference

The Site Classification is based on any remedial works being successfully completed as outlined in the Structerre Geotechnical Report J414449 dated 01/08/2022. The footing details are subject to the recommendations being completed to an acceptable level as outlined in this report, if applicable.

-- END OF REPORT --

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 1 of 2)

GENERAL

1. THE EXPLANATORY NOTES AND THE STANDARD RECOMMENDATIONS ARE TO BE READ IN CONJUNCTION WITH THE SITE CLASSIFICATION REPORT.
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4. THE SITE CLASSIFICATION REPORT WILL INCLUDE BUT IS NOT LIMITED TO:
 - a. THE SITE CLASSIFICATION IN ACCORDANCE WITH AS2870 RESIDENTIAL SLABS AND FOOTING CONSTRUCTION,
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 - c. A COASTAL CORROSION CLASSIFICATION,
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 - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONDITIONS.
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7. BOREHOLES EXCAVATED REVEAL THE SOIL PROFILE AT THE BOREHOLE LOCATION ONLY. FROM THIS, IT IS INFERRED THAT THESE ARE THE SOIL CONDITION OVER THE SITE. VARIATIONS CAN OCCUR WHICH MAY NOT HAVE BEEN DETECTED AT THE INVESTIGATION STAGE. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR REASSESSMENT.
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SAND PAD

10. THE RECOMMENDED FOOTING DESIGN IS ONLY TO BE USED IN CONJUNCTION WITH THE RECOMMENDED SAND PAD AND EARTHWORKS AS OUTLINED IN THE SITE CLASSIFICATION REPORT.
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14. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
15. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

EARTHWORKS

16. RECOMMENDED EARTHWORKS TO BE CONDUCTED IN ACCORDANCE WITH AS3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS", AND TO INCLUDE BUT NOT BE LIMITED TO:
 - a. REMOVAL OF ALL VEGETATION, TOPSOILS, UNCONTROLLED FILLS AND OTHER DELETERIOUS MATERIALS FROM THE BUILDING AREA,
 - b. GRUBBING OUT OF ANY TREES ENSURING THE REMAINING HOLES ARE BACKFILLED WITH CLEAN COMPACTED SAND,
 - c. NOTIFYING THE ENGINEER OF ANY UNUSUAL FEATURE OR DISCREPANCY THAT MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING,
 - d. COMPACTING TO MEET THE REQUIREMENTS AS OUTLINED IN AS 3798 TABLE 5.1.
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 - b. IF IT IS NOT CERTIFIED WILL REQUIRE REMOVAL DOWN TO NATURAL GROUND OR VERIFIED. ANY SAND CAN BE REUSED.
 - c. IF A PAD HAS ALREADY BEEN CONSTRUCTED, THE SITE CLASSIFICATION IS NOT CERTIFICATION OF THE PAD. CONTACT THIS OFFICE SHOULD A SAND PAD CERTIFICATION BE REQUIRED.
18. ANY ORGANIC MATTER OR ROOTS ENCOUNTERED, WHICH IS BEYOND WHAT IS NORMALLY CONSIDERED ACCEPTABLE IS TO BE REMOVED. THIS WILL NECESSITATE RAKING THE SITE TO REMOVE ORGANIC MATERIAL, TURNING THE SITE OVER AND RE- COMPACTING TO A MINIMUM.

RETAINING WALLS

19. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
20. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER TO THE RETAINING WALL THAN THE HEIGHT OF THE RETAINING WALL, THIS MAY PLACE ADDITIONAL LOADS ON THE WALL THAT WERE NOT INITIALLY DESIGNED FOR. AN INSPECTION OF THE STRUCTURAL INTEGRITY OF THE RETAINING WALL WILL BE REQUIRED TO PROVIDE CERTIFICATION AND/OR RECOMMENDATIONS PRIOR TO ANY CONSTRUCTION. PLEASE REFER BACK TO THIS OFFICE FOR ASSISTANCE.

STORMWATER DRAINAGE

21. ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF SOAKWELL AWAY FROM THE BUILDING AND SETBACK MINIMUM OF 1200mm, WHICHEVER IS GREATER. PLEASE REFER BACK TO THIS OFFICE IF REQUIRED THE SET-BACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham
Unit Trust trading as StrucTerre Consulting Engineers
1 ERINDALE ROAD, BALCATT WA 6021

TEL (08) 9205 4500 FAX (08) 9205 4541 EMAIL: perth@strucTerre.com.au

PROJECT :
LOT 1150 BUTTERLEAF AV YANCHEP

CLIENT : DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 2 of 2)

WIND CLASSIFICATION

22. WIND CLASSIFICATION IS GIVEN FOR THE EXPECTED CONDITION 5 YEARS HENCE. THIS CLASSIFICATION IS LIMITED TO BUILDINGS CLASSES 1 AND 10, WHICH HAVE THE FOLLOWING LIMITATION (AS PER AS4055):

- a. MAXIMUM DISTANCE FROM THE GROUND LEVEL TO THE UNDERSIDE OF EAVES SHALL NOT EXCEED 6.0m.
- b. MAXIMUM DISTANCE FROM GROUND LEVEL TO THE HIGHEST POINT OF THE ROOF, EXCLUDING CHIMNEYS, SHALL NOT EXCEED 8.5m.
- c. THE ROOF PITCH SHALL NOT EXCEED 35°.
- d. THE WIDTH, EXCLUDING EAVES, SHALL NOT EXCEED 16.0m AND THE LENGTH SHALL NOT EXCEED 5x THE WIDTH.

IF THE BUILDING FALLS OUTSIDE OF THESE LIMITATIONS, THE STATED WIND CLASSIFICATION DOES NOT APPLY. REFER BACK TO THIS OFFICE FOR A REVISED WIND CLASSIFICATION.

ENVIRONMENTAL

23. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, IT IS RECOMMENDED THAT AN ENVIRONMENTAL ENGINEER BE ENGAGED.

SEISMIC

24. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF ≤ 0.11 . RECOMMENDED FOOTING DETAILS PROVIDED FOR SITES WITH AN EARTHQUAKE HAZARD FACTOR OF > 0.11 , ARE NOT FOR CONSTRUCTION, BUT FOR COSTING PURPOSES ONLY. IT IS RECOMMENDED REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

CORROSION CLASSIFICATION

25. THE CORROSION CLASSIFICATION HAS BEEN ASSESSED IN ACCORDANCE WITH AS3700.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



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1 ERINDALE ROAD, BALCATTA W.A. 6021
TEL (08) 9205 4500 FAX (08) 9205 4541 EMAIL: perth@strucTerre.com.au

PROJECT:
LOT 1150 BUTTERLEAF AV YANCHEP

CLIENT: DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

A blue ink handwritten signature is written over the 'APPROVED' field.

SITE CLASSIFICATION REPORT
CERTIFICATE 2595295

CLIENT DENSFORD CIVIL
JOB ADDRESS LOT 1151 BUTTERLEAF AV YANCHEP
CLIENT JOB NO.
OWNER
STRUCTERRE JOB NO. S1085286
DATE OF ASSESSMENT 17/11/22

SITE RECORD

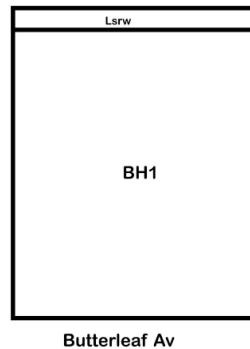


SITE CLASSIFICATION	A	<i>(in accordance with AS2870)</i>
FOOTING DETAIL	A	
SAND PAD	No sand pad required structurally	
BUSHFIRE PRONE AREA	Yes	<i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	R3	<i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	N2	<i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	No Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1500 FILL sand trace gravel (limestone) - brown; 1500 - 1800 FILL sand; 1800 end of hole.

APPROXIMATE BOREHOLE LOCATIONS



NOTE 1 Explanatory Notes & Standard Recommendations

This site classification report must be read in conjunction with the applicable Explanatory Notes & Standard Recommendations. For A Class sites, refer to the Explanatory Notes and Standard Recommendations for Stable (A Class) Sites, version 1.0 July 2018. For S, M, H1, H2 & E Class sites, refer to the Explanatory Notes and Standard Recommendations for Reactive (S, M, H1, H2 & E Class) Sites version 1.0 July 2018. For Equivalent Class sites, refer to the Explanatory Notes and Standard Recommendations for Equivalent Class Sites, version 1.0 July 2018.

NOTE 2 Bushfire - Prone Area

The Site may be situated in a bush fire prone area in accordance with the Department of Fire and Emergency Services (DFES) Bushfire Prone Area Map (Reference: <http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/>) the current version at the time of this assessment. A Bushfire Attack Level (BAL) assessment may be required for this site, please confirm with the local authority. Should you require an assessment, please contact this Office.

ADDITIONAL NOTES / REQUIREMENTS

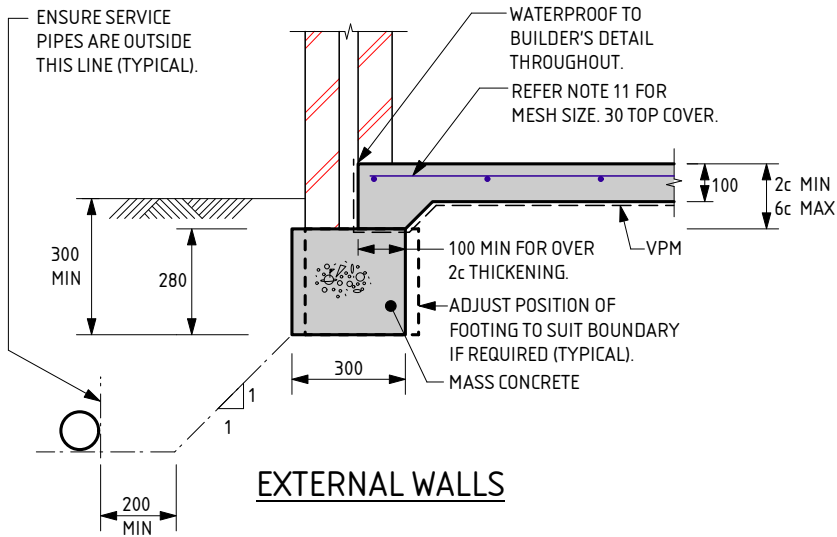
Site Condition

At the time of inspection the site was considered to be level and cleared. For specific levels of this site or topographical features, please refer to a professional site survey.

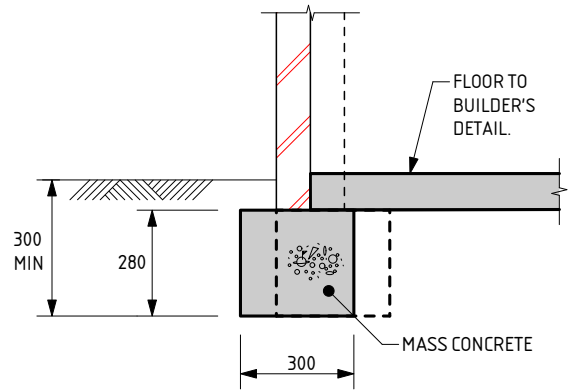
Structerre Geotech Reference

The Site Classification is based on any remedial works being successfully completed as outlined in the Structerre Geotechnical Report J414449 dated 01/08/2022. The footing details are subject to the recommendations being completed to an acceptable level as outlined in this report, if applicable.

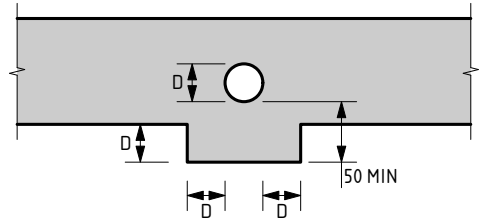
-- END OF REPORT --



EXTERNAL WALLS

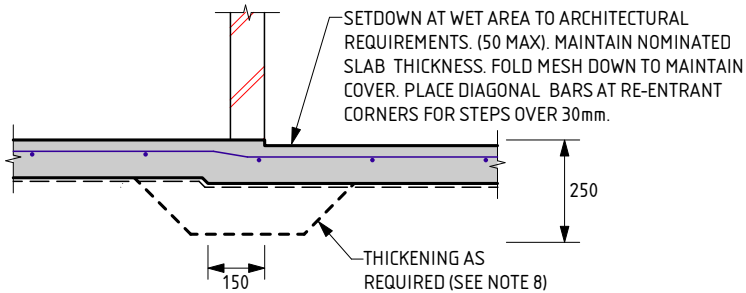


GARAGE WALL

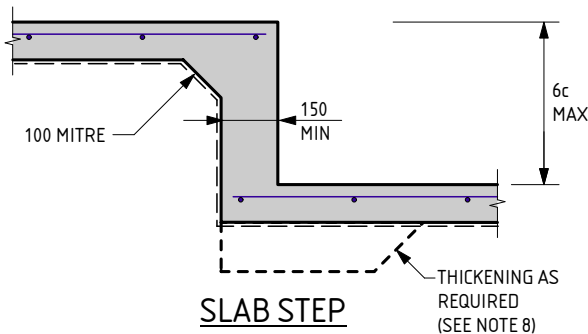


SERVICE PIPE DIAGRAM

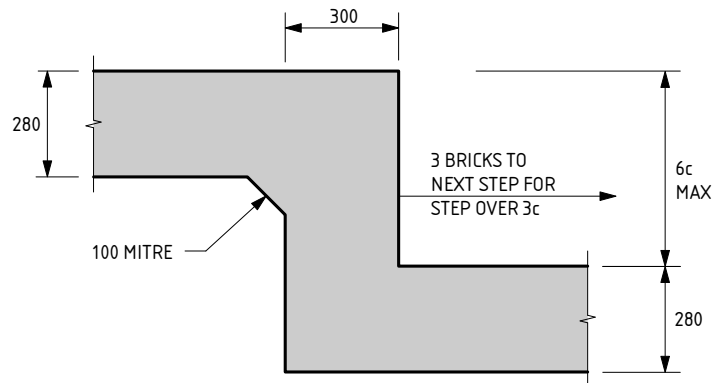
- MINIMUM HORIZONTAL DISTANCE BETWEEN 2 PENETRATIONS TO BE 2 x DIAMETER OF THE LARGER PIPE.
- MAXIMUM PENETRATION SIZE TO BE Ø150.



WET AREA STEP



SLAB STEP



FOOTING STEP

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 0.075mm) 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. THE FOOTING DETAILS HAVE BEEN DESIGNED IN ACCORDANCE WITH AS3600 AND SECTION 4 OF AS2870.
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 IS ALLOWABLE.
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 - 03/09/21



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham
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PROJECT: LOT 1151 BUTTERLEAF AV YANCHEP

CLIENT: DENSFORD CIVIL

SCALE 1:20

APPROVED

DATE 21/11/22

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 1 of 2)

GENERAL

1. THE EXPLANATORY NOTES AND THE STANDARD RECOMMENDATIONS ARE TO BE READ IN CONJUNCTION WITH THE SITE CLASSIFICATION REPORT.
2. ALL REFERRED STANDARDS TO BE THE CURRENT VERSION AT THE TIME OF THE CONSTRUCTION.
3. THE PURPOSE OF THE SITE CLASSIFICATION REPORT IS TO CLASSIFY THE SITE IN ACCORDANCE WITH AS2870 "RESIDENTIAL SLABS AND FOOTING". IT IS NOT INTENDED FOR ANY OTHER PURPOSE, INCLUDING SOLE INFORMATION IN THE PROVISION OF A QUOTATION FOR SITE WORKS BY EARTH WORKERS. IT IS RECOMMENDED EARTH WORKERS PERFORM THEIR OWN INVESTIGATION FOR QUOTATION PURPOSES.
4. THE SITE CLASSIFICATION REPORT WILL INCLUDE BUT IS NOT LIMITED TO:
 - a. THE SITE CLASSIFICATION IN ACCORDANCE WITH AS2870 RESIDENTIAL SLABS AND FOOTING CONSTRUCTION,
 - b. A WIND RATING IN ACCORDANCE WITH AS 4055 WIND LOADS FOR HOUSING,
 - c. A COASTAL CORROSION CLASSIFICATION,
 - d. ADDITIONAL EARTHWORK RECOMMENDATION WHERE APPLICABLE,
 - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONDITIONS.
5. THE SITE CLASSIFICATION REPORT IS BASED ON THE SITE AS PRESENTED AT THE TIME OF ASSESSMENT. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
6. CLASS A SITES ARE STABLE SITES, GENERALLY SAND, LIMESTONE, GRAVEL OR A COMBINATION. CLASS P ARE PARTICULAR CLASSIFICATIONS SUCH AN UNUSUAL SITES OR SITES REQUIRING ADDITIONAL INVESTIGATION PRIOR TO PROVIDING DETAILS.
7. BOREHOLES EXCAVATED REVEAL THE SOIL PROFILE AT THE BOREHOLE LOCATION ONLY. FROM THIS, IT IS INFERRED THAT THESE ARE THE SOIL CONDITION OVER THE SITE. VARIATIONS CAN OCCUR WHICH MAY NOT HAVE BEEN DETECTED AT THE INVESTIGATION STAGE. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR REASSESSMENT.
8. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE IN ORDER TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
9. THIS REPORT IS FOR STRUCTERRE ONLY TO USE IN DESIGN. ANY DESIGN BY ANYONE ELSE FOR ANY STRUCTURE MUST BE SPECIFICALLY APPROVED BY STRUCTERRE. IF USED BY ANYONE ELSE FOR ANYTHING OTHER THAN A STRUCTERRE DESIGN OR STRUCTURE, STRUCTERRE TAKES NO RESPONSIBILITY.

SAND PAD

10. THE RECOMMENDED FOOTING DESIGN IS ONLY TO BE USED IN CONJUNCTION WITH THE RECOMMENDED SAND PAD AND EARTHWORKS AS OUTLINED IN THE SITE CLASSIFICATION REPORT.
11. THE RECOMMENDATIONS FOR THE SAND PAD IS FOR STRUCTURAL PURPOSES ONLY, AND DOES NOT PROVIDE THE MINIMUM FINISHED PAD LEVEL IN RELATION TO FLOOD LEVELS, OR DEPTH TO GROUNDWATER. SHOULD THE TEST BE LOCATED IN A LOW LYING OR FLOOD PRONE AREA, REFER TO THE LOCAL AUTHORITY FOR MINIMUM BUILDING HEIGHT.
12. IMPORTED FILL FOR USE AS A SAND PAD TO BE IN ACCORDANCE TO AS 3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS" WHICH INCLUDES BUT IS NOT LIMITED TO: BE FREE FROM ANY DELETERIOUS MATERIALS INCLUDING ORGANICS, (ROOTS, STUMPS, GRASSES, DECOMPOSED ORGANICS – PEAT, TIMBER, ETC), BUILDING RUBBLE, GLASS, PLASTICS OR WASTE MATERIAL. THE FINES CONTENT, (PERCENTAGE PASSING THE 0.075mm SIEVE) TO BE LESS THAN 5% BY MASS.
13. ON CLASS A SITES, A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 450mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
14. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
15. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

EARTHWORKS

16. RECOMMENDED EARTHWORKS TO BE CONDUCTED IN ACCORDANCE WITH AS3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS", AND TO INCLUDE BUT NOT BE LIMITED TO:
 - a. REMOVAL OF ALL VEGETATION, TOPSOILS, UNCONTROLLED FILLS AND OTHER DELETERIOUS MATERIALS FROM THE BUILDING AREA,
 - b. GRUBBING OUT OF ANY TREES ENSURING THE REMAINING HOLES ARE BACKFILLED WITH CLEAN COMPACTED SAND,
 - c. NOTIFYING THE ENGINEER OF ANY UNUSUAL FEATURE OR DISCREPANCY THAT MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING,
 - d. COMPACTING TO MEET THE REQUIREMENTS AS OUTLINED IN AS 3798 TABLE 5.1.
17. FILL MATERIAL (WHICH IS NOT ALWAYS APPARENT AT THE INITIAL INVESTIGATION STAGE) IS TO BE DEALT WITH AS FOLLOWS:
 - a. IF IT IS CERTIFIED BY OTHERS IT CAN REMAIN.
 - b. IF IT IS NOT CERTIFIED WILL REQUIRE REMOVAL DOWN TO NATURAL GROUND OR VERIFIED. ANY SAND CAN BE REUSED.
 - c. IF A PAD HAS ALREADY BEEN CONSTRUCTED, THE SITE CLASSIFICATION IS NOT CERTIFICATION OF THE PAD. CONTACT THIS OFFICE SHOULD A SAND PAD CERTIFICATION BE REQUIRED.
18. ANY ORGANIC MATTER OR ROOTS ENCOUNTERED, WHICH IS BEYOND WHAT IS NORMALLY CONSIDERED ACCEPTABLE IS TO BE REMOVED. THIS WILL NECESSITATE RAKING THE SITE TO REMOVE ORGANIC MATERIAL, TURNING THE SITE OVER AND RE- COMPACTING TO A MINIMUM.

RETAINING WALLS

19. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
20. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER TO THE RETAINING WALL THAN THE HEIGHT OF THE RETAINING WALL, THIS MAY PLACE ADDITIONAL LOADS ON THE WALL THAT WERE NOT INITIALLY DESIGNED FOR. AN INSPECTION OF THE STRUCTURAL INTEGRITY OF THE RETAINING WALL WILL BE REQUIRED TO PROVIDE CERTIFICATION AND/OR RECOMMENDATIONS PRIOR TO ANY CONSTRUCTION. PLEASE REFER BACK TO THIS OFFICE FOR ASSISTANCE.

STORMWATER DRAINAGE

21. ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF SOAKWELL AWAY FROM THE BUILDING AND SETBACK MINIMUM OF 1200mm, WHICHEVER IS GREATER. PLEASE REFER BACK TO THIS OFFICE IF REQUIRED THE SET-BACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



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TEL (08) 9205 4500 FAX (08) 9205 4541 EMAIL: perth@strucTerre.com.au

PROJECT :
LOT 1151 BUTTERLEAF AV YANCHEP

CLIENT : DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 2 of 2)

WIND CLASSIFICATION

22. WIND CLASSIFICATION IS GIVEN FOR THE EXPECTED CONDITION 5 YEARS HENCE. THIS CLASSIFICATION IS LIMITED TO BUILDINGS CLASSES 1 AND 10, WHICH HAVE THE FOLLOWING LIMITATION (AS PER AS4055):

- a. MAXIMUM DISTANCE FROM THE GROUND LEVEL TO THE UNDERSIDE OF EAVES SHALL NOT EXCEED 6.0m.
- b. MAXIMUM DISTANCE FROM GROUND LEVEL TO THE HIGHEST POINT OF THE ROOF, EXCLUDING CHIMNEYS, SHALL NOT EXCEED 8.5m.
- c. THE ROOF PITCH SHALL NOT EXCEED 35°.
- d. THE WIDTH, EXCLUDING EAVES, SHALL NOT EXCEED 16.0m AND THE LENGTH SHALL NOT EXCEED 5x THE WIDTH.

IF THE BUILDING FALLS OUTSIDE OF THESE LIMITATIONS, THE STATED WIND CLASSIFICATION DOES NOT APPLY. REFER BACK TO THIS OFFICE FOR A REVISED WIND CLASSIFICATION.

ENVIRONMENTAL

23. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, IT IS RECOMMENDED THAT AN ENVIRONMENTAL ENGINEER BE ENGAGED.

SEISMIC

24. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF ≤ 0.11 . RECOMMENDED FOOTING DETAILS PROVIDED FOR SITES WITH AN EARTHQUAKE HAZARD FACTOR OF > 0.11 , ARE NOT FOR CONSTRUCTION, BUT FOR COSTING PURPOSES ONLY. IT IS RECOMMENDED REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

CORROSION CLASSIFICATION

25. THE CORROSION CLASSIFICATION HAS BEEN ASSESSED IN ACCORDANCE WITH AS3700.

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PROJECT:
LOT 1151 BUTTERLEAF AV YANCHEP

CLIENT: DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

A blue ink handwritten signature is written over the 'APPROVED' field.

SITE CLASSIFICATION REPORT
CERTIFICATE 2595249

CLIENT DENSFORD CIVIL
JOB ADDRESS LOT 1152 BUTTERLEAF AV YANCHEP
CLIENT JOB NO.
OWNER
STRUCTERRE JOB NO. S1085285
DATE OF ASSESSMENT 17/11/22

SITE RECORD

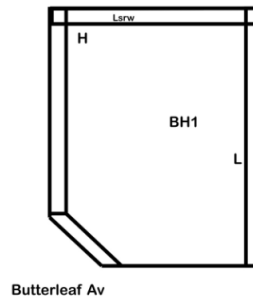


SITE CLASSIFICATION	A	<i>(in accordance with AS2870)</i>
FOOTING DETAIL	A	
SAND PAD	No sand pad required structurally	
BUSHFIRE PRONE AREA	Yes	<i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	R3	<i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	N2	<i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	No Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1500 FILL sand trace gravel (limestone) - brown; 1500 - 1800 FILL sand; 1800 end of hole.

APPROXIMATE BOREHOLE LOCATIONS



NOTE 1 Explanatory Notes & Standard Recommendations

This site classification report must be read in conjunction with the applicable Explanatory Notes & Standard Recommendations. For A Class sites, refer to the Explanatory Notes and Standard Recommendations for Stable (A Class) Sites, version 1.0 July 2018. For S, M, H1, H2 & E Class sites, refer to the Explanatory Notes and Standard Recommendations for Reactive (S, M, H1, H2 & E Class) Sites version 1.0 July 2018. For Equivalent Class sites, refer to the Explanatory Notes and Standard Recommendations for Equivalent Class Sites, version 1.0 July 2018.

NOTE 2 Bushfire - Prone Area

The Site may be situated in a bush fire prone area in accordance with the Department of Fire and Emergency Services (DFES) Bushfire Prone Area Map (Reference: <http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/>) the current version at the time of this assessment. A Bushfire Attack Level (BAL) assessment may be required for this site, please confirm with the local authority. Should you require an assessment, please contact this Office.

ADDITIONAL NOTES / REQUIREMENTS

Site Condition

At the time of inspection the site was considered to be level and cleared. For specific levels of this site or topographical features, please refer to a professional site survey.

Structerre Geotech Reference

The Site Classification is based on any remedial works being successfully completed as outlined in the Structerre Geotechnical Report J414449 dated 01/08/2022. The footing details are subject to the recommendations being completed to an acceptable level as outlined in this report, if applicable.

-- END OF REPORT --

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 1 of 2)

GENERAL

1. THE EXPLANATORY NOTES AND THE STANDARD RECOMMENDATIONS ARE TO BE READ IN CONJUNCTION WITH THE SITE CLASSIFICATION REPORT.
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3. THE PURPOSE OF THE SITE CLASSIFICATION REPORT IS TO CLASSIFY THE SITE IN ACCORDANCE WITH AS2870 "RESIDENTIAL SLABS AND FOOTING". IT IS NOT INTENDED FOR ANY OTHER PURPOSE, INCLUDING SOLE INFORMATION IN THE PROVISION OF A QUOTATION FOR SITE WORKS BY EARTH WORKERS. IT IS RECOMMENDED EARTH WORKERS PERFORM THEIR OWN INVESTIGATION FOR QUOTATION PURPOSES.
4. THE SITE CLASSIFICATION REPORT WILL INCLUDE BUT IS NOT LIMITED TO:
 - a. THE SITE CLASSIFICATION IN ACCORDANCE WITH AS2870 RESIDENTIAL SLABS AND FOOTING CONSTRUCTION,
 - b. A WIND RATING IN ACCORDANCE WITH AS 4055 WIND LOADS FOR HOUSING,
 - c. A COASTAL CORROSION CLASSIFICATION,
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 - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONDITIONS.
5. THE SITE CLASSIFICATION REPORT IS BASED ON THE SITE AS PRESENTED AT THE TIME OF ASSESSMENT. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
6. CLASS A SITES ARE STABLE SITES, GENERALLY SAND, LIMESTONE, GRAVEL OR A COMBINATION. CLASS P ARE PARTICULAR CLASSIFICATIONS SUCH AN UNUSUAL SITES OR SITES REQUIRING ADDITIONAL INVESTIGATION PRIOR TO PROVIDING DETAILS.
7. BOREHOLES EXCAVATED REVEAL THE SOIL PROFILE AT THE BOREHOLE LOCATION ONLY. FROM THIS, IT IS INFERRED THAT THESE ARE THE SOIL CONDITION OVER THE SITE. VARIATIONS CAN OCCUR WHICH MAY NOT HAVE BEEN DETECTED AT THE INVESTIGATION STAGE. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR REASSESSMENT.
8. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE IN ORDER TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
9. THIS REPORT IS FOR STRUCTERRE ONLY TO USE IN DESIGN. ANY DESIGN BY ANYONE ELSE FOR ANY STRUCTURE MUST BE SPECIFICALLY APPROVED BY STRUCTERRE. IF USED BY ANYONE ELSE FOR ANYTHING OTHER THAN A STRUCTERRE DESIGN OR STRUCTURE, STRUCTERRE TAKES NO RESPONSIBILITY.

SAND PAD

10. THE RECOMMENDED FOOTING DESIGN IS ONLY TO BE USED IN CONJUNCTION WITH THE RECOMMENDED SAND PAD AND EARTHWORKS AS OUTLINED IN THE SITE CLASSIFICATION REPORT.
11. THE RECOMMENDATIONS FOR THE SAND PAD IS FOR STRUCTURAL PURPOSES ONLY, AND DOES NOT PROVIDE THE MINIMUM FINISHED PAD LEVEL IN RELATION TO FLOOD LEVELS, OR DEPTH TO GROUNDWATER. SHOULD THE TEST BE LOCATED IN A LOW LYING OR FLOOD PRONE AREA, REFER TO THE LOCAL AUTHORITY FOR MINIMUM BUILDING HEIGHT.
12. IMPORTED FILL FOR USE AS A SAND PAD TO BE IN ACCORDANCE TO AS 3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS" WHICH INCLUDES BUT IS NOT LIMITED TO: BE FREE FROM ANY DELETERIOUS MATERIALS INCLUDING ORGANICS, (ROOTS, STUMPS, GRASSES, DECOMPOSED ORGANICS – PEAT, TIMBER, ETC), BUILDING RUBBLE, GLASS, PLASTICS OR WASTE MATERIAL. THE FINES CONTENT, (PERCENTAGE PASSING THE 0.075mm SIEVE) TO BE LESS THAN 5% BY MASS.
13. ON CLASS A SITES, A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 450mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
14. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
15. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

EARTHWORKS

16. RECOMMENDED EARTHWORKS TO BE CONDUCTED IN ACCORDANCE WITH AS3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS", AND TO INCLUDE BUT NOT BE LIMITED TO:
 - a. REMOVAL OF ALL VEGETATION, TOPSOILS, UNCONTROLLED FILLS AND OTHER DELETERIOUS MATERIALS FROM THE BUILDING AREA,
 - b. GRUBBING OUT OF ANY TREES ENSURING THE REMAINING HOLES ARE BACKFILLED WITH CLEAN COMPACTED SAND,
 - c. NOTIFYING THE ENGINEER OF ANY UNUSUAL FEATURE OR DISCREPANCY THAT MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING,
 - d. COMPACTING TO MEET THE REQUIREMENTS AS OUTLINED IN AS 3798 TABLE 5.1.
17. FILL MATERIAL (WHICH IS NOT ALWAYS APPARENT AT THE INITIAL INVESTIGATION STAGE) IS TO BE DEALT WITH AS FOLLOWS:
 - a. IF IT IS CERTIFIED BY OTHERS IT CAN REMAIN.
 - b. IF IT IS NOT CERTIFIED WILL REQUIRE REMOVAL DOWN TO NATURAL GROUND OR VERIFIED. ANY SAND CAN BE REUSED.
 - c. IF A PAD HAS ALREADY BEEN CONSTRUCTED, THE SITE CLASSIFICATION IS NOT CERTIFICATION OF THE PAD. CONTACT THIS OFFICE SHOULD A SAND PAD CERTIFICATION BE REQUIRED.
18. ANY ORGANIC MATTER OR ROOTS ENCOUNTERED, WHICH IS BEYOND WHAT IS NORMALLY CONSIDERED ACCEPTABLE IS TO BE REMOVED. THIS WILL NECESSITATE RAKING THE SITE TO REMOVE ORGANIC MATERIAL, TURNING THE SITE OVER AND RE- COMPACTING TO A MINIMUM.

RETAINING WALLS

19. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
20. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER TO THE RETAINING WALL THAN THE HEIGHT OF THE RETAINING WALL, THIS MAY PLACE ADDITIONAL LOADS ON THE WALL THAT WERE NOT INITIALLY DESIGNED FOR. AN INSPECTION OF THE STRUCTURAL INTEGRITY OF THE RETAINING WALL WILL BE REQUIRED TO PROVIDE CERTIFICATION AND/OR RECOMMENDATIONS PRIOR TO ANY CONSTRUCTION. PLEASE REFER BACK TO THIS OFFICE FOR ASSISTANCE.

STORMWATER DRAINAGE

21. ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF SOAKWELL AWAY FROM THE BUILDING AND SETBACK MINIMUM OF 1200mm, WHICHEVER IS GREATER. PLEASE REFER BACK TO THIS OFFICE IF REQUIRED THE SET-BACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



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PROJECT :
LOT 1152 BUTTERLEAF AV YANCHEP

CLIENT : DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 2 of 2)

WIND CLASSIFICATION

22. WIND CLASSIFICATION IS GIVEN FOR THE EXPECTED CONDITION 5 YEARS HENCE. THIS CLASSIFICATION IS LIMITED TO BUILDINGS CLASSES 1 AND 10, WHICH HAVE THE FOLLOWING LIMITATION (AS PER AS4055):

- a. MAXIMUM DISTANCE FROM THE GROUND LEVEL TO THE UNDERSIDE OF EAVES SHALL NOT EXCEED 6.0m.
- b. MAXIMUM DISTANCE FROM GROUND LEVEL TO THE HIGHEST POINT OF THE ROOF, EXCLUDING CHIMNEYS, SHALL NOT EXCEED 8.5m.
- c. THE ROOF PITCH SHALL NOT EXCEED 35°.
- d. THE WIDTH, EXCLUDING EAVES, SHALL NOT EXCEED 16.0m AND THE LENGTH SHALL NOT EXCEED 5x THE WIDTH.

IF THE BUILDING FALLS OUTSIDE OF THESE LIMITATIONS, THE STATED WIND CLASSIFICATION DOES NOT APPLY. REFER BACK TO THIS OFFICE FOR A REVISED WIND CLASSIFICATION.

ENVIRONMENTAL

23. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, IT IS RECOMMENDED THAT AN ENVIRONMENTAL ENGINEER BE ENGAGED.

SEISMIC

24. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF ≤ 0.11 . RECOMMENDED FOOTING DETAILS PROVIDED FOR SITES WITH AN EARTHQUAKE HAZARD FACTOR OF > 0.11 , ARE NOT FOR CONSTRUCTION, BUT FOR COSTING PURPOSES ONLY. IT IS RECOMMENDED REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

CORROSION CLASSIFICATION

25. THE CORROSION CLASSIFICATION HAS BEEN ASSESSED IN ACCORDANCE WITH AS3700.

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PROJECT:
LOT 1152 BUTTERLEAF AV YANCHEP

CLIENT: DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

A blue ink handwritten signature is written over the 'APPROVED' field.

SITE CLASSIFICATION REPORT
CERTIFICATE 2595272

CLIENT DENSFORD CIVIL
JOB ADDRESS LOT 1153 BUTTERLEAF AV YANCHEP
CLIENT JOB NO.
OWNER
STRUCTERRE JOB NO. S1085284
DATE OF ASSESSMENT 17/11/22

SITE RECORD

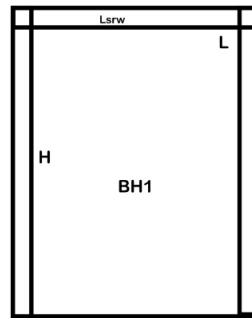


SITE CLASSIFICATION	A	<i>(in accordance with AS2870)</i>
FOOTING DETAIL	A	
SAND PAD	No sand pad required structurally	
BUSHFIRE PRONE AREA	Yes	<i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	R3	<i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	N2	<i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	No Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1500 FILL sand trace gravel (limestone) - brown; 1500 - 1800 FILL sand; 1800 end of hole.

APPROXIMATE BOREHOLE LOCATIONS



Butterleaf Av

NOTE 1 Explanatory Notes & Standard Recommendations

This site classification report must be read in conjunction with the applicable Explanatory Notes & Standard Recommendations. For A Class sites, refer to the Explanatory Notes and Standard Recommendations for Stable (A Class) Sites, version 1.0 July 2018. For S, M, H1, H2 & E Class sites, refer to the Explanatory Notes and Standard Recommendations for Reactive (S, M, H1, H2 & E Class) Sites version 1.0 July 2018. For Equivalent Class sites, refer to the Explanatory Notes and Standard Recommendations for Equivalent Class Sites, version 1.0 July 2018.

NOTE 2 Bushfire - Prone Area

The Site may be situated in a bush fire prone area in accordance with the Department of Fire and Emergency Services (DFES) Bushfire Prone Area Map (Reference: <http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/>) the current version at the time of this assessment. A Bushfire Attack Level (BAL) assessment may be required for this site, please confirm with the local authority. Should you require an assessment, please contact this Office.

ADDITIONAL NOTES / REQUIREMENTS

Site Condition

At the time of inspection the site was considered to be level and cleared. For specific levels of this site or topographical features, please refer to a professional site survey.

Structerre Geotech Reference

The Site Classification is based on any remedial works being successfully completed as outlined in the Structerre Geotechnical Report J414449 dated 01/08/2022. The footing details are subject to the recommendations being completed to an acceptable level as outlined in this report, if applicable.

-- END OF REPORT --

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 1 of 2)

GENERAL

1. THE EXPLANATORY NOTES AND THE STANDARD RECOMMENDATIONS ARE TO BE READ IN CONJUNCTION WITH THE SITE CLASSIFICATION REPORT.
2. ALL REFERRED STANDARDS TO BE THE CURRENT VERSION AT THE TIME OF THE CONSTRUCTION.
3. THE PURPOSE OF THE SITE CLASSIFICATION REPORT IS TO CLASSIFY THE SITE IN ACCORDANCE WITH AS2870 "RESIDENTIAL SLABS AND FOOTING". IT IS NOT INTENDED FOR ANY OTHER PURPOSE, INCLUDING SOLE INFORMATION IN THE PROVISION OF A QUOTATION FOR SITE WORKS BY EARTH WORKERS. IT IS RECOMMENDED EARTH WORKERS PERFORM THEIR OWN INVESTIGATION FOR QUOTATION PURPOSES.
4. THE SITE CLASSIFICATION REPORT WILL INCLUDE BUT IS NOT LIMITED TO:
 - a. THE SITE CLASSIFICATION IN ACCORDANCE WITH AS2870 RESIDENTIAL SLABS AND FOOTING CONSTRUCTION,
 - b. A WIND RATING IN ACCORDANCE WITH AS 4055 WIND LOADS FOR HOUSING,
 - c. A COASTAL CORROSION CLASSIFICATION,
 - d. ADDITIONAL EARTHWORK RECOMMENDATION WHERE APPLICABLE,
 - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONDITIONS.
5. THE SITE CLASSIFICATION REPORT IS BASED ON THE SITE AS PRESENTED AT THE TIME OF ASSESSMENT. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
6. CLASS A SITES ARE STABLE SITES, GENERALLY SAND, LIMESTONE, GRAVEL OR A COMBINATION. CLASS P ARE PARTICULAR CLASSIFICATIONS SUCH AN UNUSUAL SITES OR SITES REQUIRING ADDITIONAL INVESTIGATION PRIOR TO PROVIDING DETAILS.
7. BOREHOLES EXCAVATED REVEAL THE SOIL PROFILE AT THE BOREHOLE LOCATION ONLY. FROM THIS, IT IS INFERRED THAT THESE ARE THE SOIL CONDITION OVER THE SITE. VARIATIONS CAN OCCUR WHICH MAY NOT HAVE BEEN DETECTED AT THE INVESTIGATION STAGE. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR REASSESSMENT.
8. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE IN ORDER TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
9. THIS REPORT IS FOR STRUCTERRE ONLY TO USE IN DESIGN. ANY DESIGN BY ANYONE ELSE FOR ANY STRUCTURE MUST BE SPECIFICALLY APPROVED BY STRUCTERRE. IF USED BY ANYONE ELSE FOR ANYTHING OTHER THAN A STRUCTERRE DESIGN OR STRUCTURE, STRUCTERRE TAKES NO RESPONSIBILITY.

SAND PAD

10. THE RECOMMENDED FOOTING DESIGN IS ONLY TO BE USED IN CONJUNCTION WITH THE RECOMMENDED SAND PAD AND EARTHWORKS AS OUTLINED IN THE SITE CLASSIFICATION REPORT.
11. THE RECOMMENDATIONS FOR THE SAND PAD IS FOR STRUCTURAL PURPOSES ONLY, AND DOES NOT PROVIDE THE MINIMUM FINISHED PAD LEVEL IN RELATION TO FLOOD LEVELS, OR DEPTH TO GROUNDWATER. SHOULD THE TEST BE LOCATED IN A LOW LYING OR FLOOD PRONE AREA, REFER TO THE LOCAL AUTHORITY FOR MINIMUM BUILDING HEIGHT.
12. IMPORTED FILL FOR USE AS A SAND PAD TO BE IN ACCORDANCE TO AS 3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS" WHICH INCLUDES BUT IS NOT LIMITED TO: BE FREE FROM ANY DELETERIOUS MATERIALS INCLUDING ORGANICS, (ROOTS, STUMPS, GRASSES, DECOMPOSED ORGANICS – PEAT, TIMBER, ETC), BUILDING RUBBLE, GLASS, PLASTICS OR WASTE MATERIAL. THE FINES CONTENT, (PERCENTAGE PASSING THE 0.075mm SIEVE) TO BE LESS THAN 5% BY MASS.
13. ON CLASS A SITES, A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 450mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
14. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
15. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

EARTHWORKS

16. RECOMMENDED EARTHWORKS TO BE CONDUCTED IN ACCORDANCE WITH AS3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS", AND TO INCLUDE BUT NOT BE LIMITED TO:
 - a. REMOVAL OF ALL VEGETATION, TOPSOILS, UNCONTROLLED FILLS AND OTHER DELETERIOUS MATERIALS FROM THE BUILDING AREA,
 - b. GRUBBING OUT OF ANY TREES ENSURING THE REMAINING HOLES ARE BACKFILLED WITH CLEAN COMPACTED SAND,
 - c. NOTIFYING THE ENGINEER OF ANY UNUSUAL FEATURE OR DISCREPANCY THAT MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING,
 - d. COMPACTING TO MEET THE REQUIREMENTS AS OUTLINED IN AS 3798 TABLE 5.1.
17. FILL MATERIAL (WHICH IS NOT ALWAYS APPARENT AT THE INITIAL INVESTIGATION STAGE) IS TO BE DEALT WITH AS FOLLOWS:
 - a. IF IT IS CERTIFIED BY OTHERS IT CAN REMAIN.
 - b. IF IT IS NOT CERTIFIED WILL REQUIRE REMOVAL DOWN TO NATURAL GROUND OR VERIFIED. ANY SAND CAN BE REUSED.
 - c. IF A PAD HAS ALREADY BEEN CONSTRUCTED, THE SITE CLASSIFICATION IS NOT CERTIFICATION OF THE PAD. CONTACT THIS OFFICE SHOULD A SAND PAD CERTIFICATION BE REQUIRED.
18. ANY ORGANIC MATTER OR ROOTS ENCOUNTERED, WHICH IS BEYOND WHAT IS NORMALLY CONSIDERED ACCEPTABLE IS TO BE REMOVED. THIS WILL NECESSITATE RAKING THE SITE TO REMOVE ORGANIC MATERIAL, TURNING THE SITE OVER AND RE- COMPACTING TO A MINIMUM.

RETAINING WALLS

19. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
20. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER TO THE RETAINING WALL THAN THE HEIGHT OF THE RETAINING WALL, THIS MAY PLACE ADDITIONAL LOADS ON THE WALL THAT WERE NOT INITIALLY DESIGNED FOR. AN INSPECTION OF THE STRUCTURAL INTEGRITY OF THE RETAINING WALL WILL BE REQUIRED TO PROVIDE CERTIFICATION AND/OR RECOMMENDATIONS PRIOR TO ANY CONSTRUCTION. PLEASE REFER BACK TO THIS OFFICE FOR ASSISTANCE.

STORMWATER DRAINAGE

21. ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF SOAKWELL AWAY FROM THE BUILDING AND SETBACK MINIMUM OF 1200mm, WHICHEVER IS GREATER. PLEASE REFER BACK TO THIS OFFICE IF REQUIRED THE SET-BACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham
Unit Trust trading as StrucTerre Consulting Engineers
1 ERINDALE ROAD, BALCATT WA 6021
TEL (08) 9205 4500 FAX (08) 9205 4541 EMAIL: perth@strucTerre.com.au

PROJECT :
LOT 1153 BUTTERLEAF AV YANCHEP

CLIENT : DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 2 of 2)

WIND CLASSIFICATION

22. WIND CLASSIFICATION IS GIVEN FOR THE EXPECTED CONDITION 5 YEARS HENCE. THIS CLASSIFICATION IS LIMITED TO BUILDINGS CLASSES 1 AND 10, WHICH HAVE THE FOLLOWING LIMITATION (AS PER AS4055):

- a. MAXIMUM DISTANCE FROM THE GROUND LEVEL TO THE UNDERSIDE OF EAVES SHALL NOT EXCEED 6.0m.
- b. MAXIMUM DISTANCE FROM GROUND LEVEL TO THE HIGHEST POINT OF THE ROOF, EXCLUDING CHIMNEYS, SHALL NOT EXCEED 8.5m.
- c. THE ROOF PITCH SHALL NOT EXCEED 35°.
- d. THE WIDTH, EXCLUDING EAVES, SHALL NOT EXCEED 16.0m AND THE LENGTH SHALL NOT EXCEED 5x THE WIDTH.

IF THE BUILDING FALLS OUTSIDE OF THESE LIMITATIONS, THE STATED WIND CLASSIFICATION DOES NOT APPLY. REFER BACK TO THIS OFFICE FOR A REVISED WIND CLASSIFICATION.

ENVIRONMENTAL

23. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, IT IS RECOMMENDED THAT AN ENVIRONMENTAL ENGINEER BE ENGAGED.

SEISMIC

24. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF ≤ 0.11 . RECOMMENDED FOOTING DETAILS PROVIDED FOR SITES WITH AN EARTHQUAKE HAZARD FACTOR OF > 0.11 , ARE NOT FOR CONSTRUCTION, BUT FOR COSTING PURPOSES ONLY. IT IS RECOMMENDED REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

CORROSION CLASSIFICATION

25. THE CORROSION CLASSIFICATION HAS BEEN ASSESSED IN ACCORDANCE WITH AS3700.

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SCALE 1:20

DATE 21/11/22

APPROVED

A blue ink handwritten signature is written over the 'APPROVED' field.

SITE CLASSIFICATION REPORT
CERTIFICATE 2595271

CLIENT DENSFORD CIVIL
JOB ADDRESS LOT 1154 BUTTERLEAF AV YANCHEP
CLIENT JOB NO.
OWNER
STRUCTERRE JOB NO. S1085283
DATE OF ASSESSMENT 17/11/22

SITE RECORD

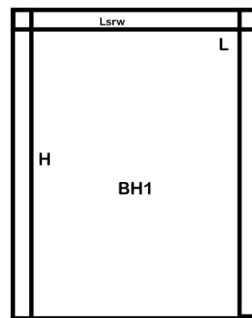


SITE CLASSIFICATION	A	<i>(in accordance with AS2870)</i>
FOOTING DETAIL	A	
SAND PAD	No sand pad required structurally	
BUSHFIRE PRONE AREA	Yes	<i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	R3	<i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	N2	<i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	No Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1500 FILL sand trace gravel (limestone) - brown; 1500 - 1800 FILL sand; 1800 end of hole.

APPROXIMATE BOREHOLE LOCATIONS



Butterleaf Av

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NOTE 2 Bushfire - Prone Area

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ADDITIONAL NOTES / REQUIREMENTS

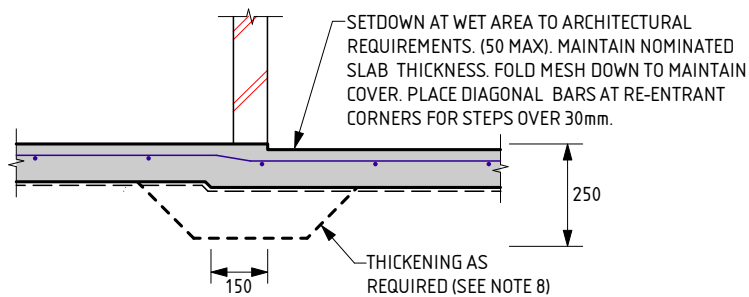
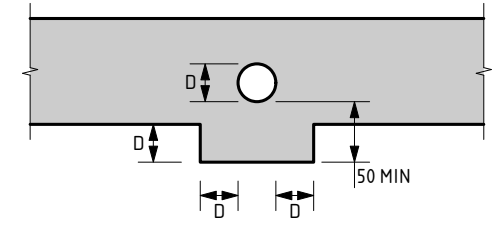
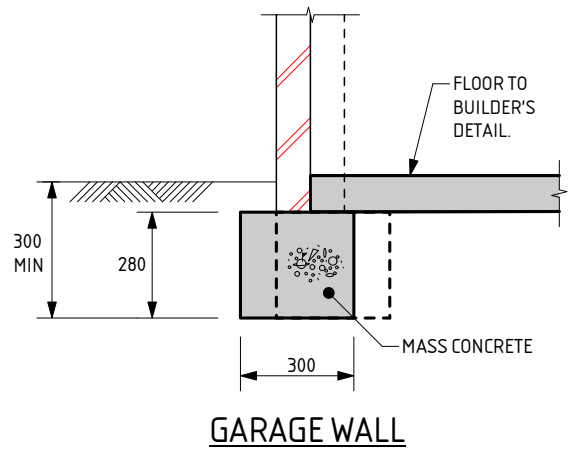
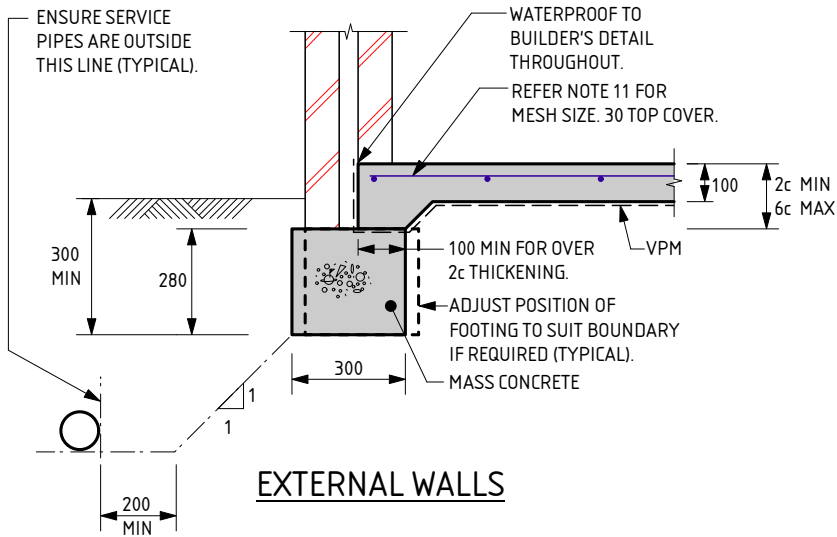
Site Condition

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Structerre Geotech Reference

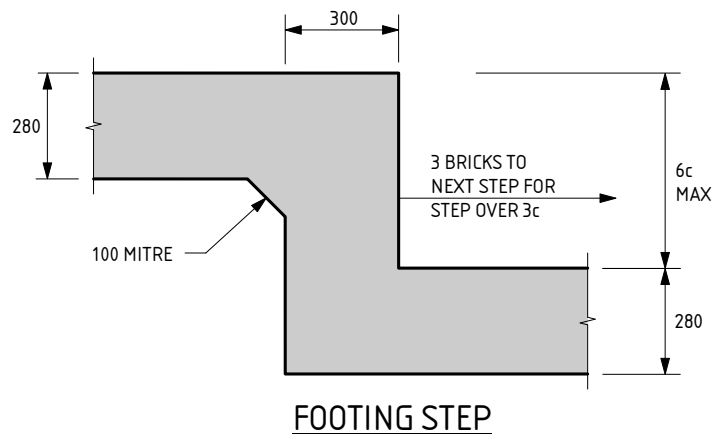
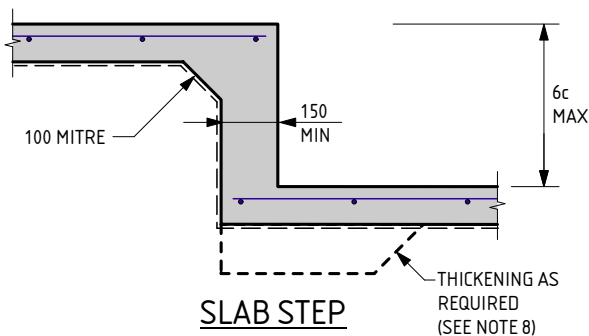
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-- END OF REPORT --



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:

- REMOVE ALL TOPSOIL, VEGETATION AND DELETERIOUS FILL MATERIAL FROM THE BUILDING AREA.
- SAND FILL TO BE CLEAN WELL DRAINED, WITH MAX FINES (PARTICLES UP TO 0.075mm) CONTENT OF 5%. SAND TO BE COMPACTED TO A MIN 6 BLOWS/300mm FOR 750mm OR DEPTH OF PAD.
- A MIN OF 150mm OF SAND REQUIRED UNDER FOOTINGS.
- IF CLAY ON SITE AN ENGINEER TO BE CONSULTED.
- ROOF AND SURFACE WATER TO BE TAKEN AWAY FROM FOUNDATION AREA.
- EXCAVATIONS FOR PLUMBING NOT TO UNDERMINE FOOTINGS. IF UNDERMINING IS LIKELY TO OCCUR, CONTACT THE ENGINEER.
- WHERE PLUMBING PIPES PASS THROUGH FOOTINGS OR SLAB, SPECIFIED DEPTH OF ALL CONCRETE IS ALWAYS TO BE MAINTAINED.
- PLACE SLAB THICKENINGS (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m.
- 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.
- LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.
- 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.
- CONCRETE TO CONFORM WITH AS 3600.
- BLENDED CEMENT TO CONFORM WITH AS 3972.
- ALL CONCRETE TO BE N20/20/100.
- CURE SLAB AS DETERMINED BY ENGINEER.
- THE FOOTING DETAILS HAVE BEEN DESIGNED IN ACCORDANCE WITH AS3600 AND SECTION 4 OF AS2870.
- A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 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.
- PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 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 - 03/09/21



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CLIENT: DENSFORD CIVIL

SCALE: 1:20

APPROVED

DATE: 21/11/22

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 1 of 2)

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APPROVED

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 2 of 2)

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22. WIND CLASSIFICATION IS GIVEN FOR THE EXPECTED CONDITION 5 YEARS HENCE. THIS CLASSIFICATION IS LIMITED TO BUILDINGS CLASSES 1 AND 10, WHICH HAVE THE FOLLOWING LIMITATION (AS PER AS4055):

- a. MAXIMUM DISTANCE FROM THE GROUND LEVEL TO THE UNDERSIDE OF EAVES SHALL NOT EXCEED 6.0m.
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IF THE BUILDING FALLS OUTSIDE OF THESE LIMITATIONS, THE STATED WIND CLASSIFICATION DOES NOT APPLY. REFER BACK TO THIS OFFICE FOR A REVISED WIND CLASSIFICATION.

ENVIRONMENTAL

23. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, IT IS RECOMMENDED THAT AN ENVIRONMENTAL ENGINEER BE ENGAGED.

SEISMIC

24. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF ≤ 0.11 . RECOMMENDED FOOTING DETAILS PROVIDED FOR SITES WITH AN EARTHQUAKE HAZARD FACTOR OF > 0.11 , ARE NOT FOR CONSTRUCTION, BUT FOR COSTING PURPOSES ONLY. IT IS RECOMMENDED REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

CORROSION CLASSIFICATION

25. THE CORROSION CLASSIFICATION HAS BEEN ASSESSED IN ACCORDANCE WITH AS3700.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham
Unit Trust trading as StrucTerre Consulting Engineers
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TEL (08) 9205 4500 FAX (08) 9205 4541 EMAIL: perth@strucTerre.com.au

PROJECT:
LOT 1154 BUTTERLEAF AV YANCHEP

CLIENT: DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

A blue ink handwritten signature is written over the 'APPROVED' field.

SITE CLASSIFICATION REPORT
CERTIFICATE 2595270

CLIENT DENSFORD CIVIL
JOB ADDRESS LOT 1155 BUTTERLEAF AV YANCHEP
CLIENT JOB NO.
OWNER
STRUCTERRE JOB NO. S1085280
DATE OF ASSESSMENT 17/11/22

SITE RECORD

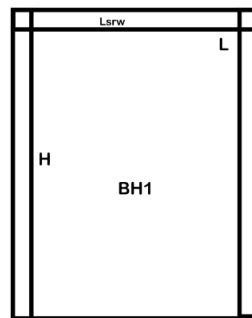


SITE CLASSIFICATION	A	<i>(in accordance with AS2870)</i>
FOOTING DETAIL	A	
SAND PAD	No sand pad required structurally	
BUSHFIRE PRONE AREA	Yes	<i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	R3	<i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	N2	<i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	No Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1500 FILL sand trace gravel (limestone) - brown; 1500 - 1800 FILL sand; 1800 end of hole.

APPROXIMATE BOREHOLE LOCATIONS



Butterleaf Av

NOTE 1 Explanatory Notes & Standard Recommendations

This site classification report must be read in conjunction with the applicable Explanatory Notes & Standard Recommendations. For A Class sites, refer to the Explanatory Notes and Standard Recommendations for Stable (A Class) Sites, version 1.0 July 2018. For S, M, H1, H2 & E Class sites, refer to the Explanatory Notes and Standard Recommendations for Reactive (S, M, H1, H2 & E Class) Sites version 1.0 July 2018. For Equivalent Class sites, refer to the Explanatory Notes and Standard Recommendations for Equivalent Class Sites, version 1.0 July 2018.

NOTE 2 Bushfire - Prone Area

The Site may be situated in a bush fire prone area in accordance with the Department of Fire and Emergency Services (DFES) Bushfire Prone Area Map (Reference: <http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/>) the current version at the time of this assessment. A Bushfire Attack Level (BAL) assessment may be required for this site, please confirm with the local authority. Should you require an assessment, please contact this Office.

ADDITIONAL NOTES / REQUIREMENTS

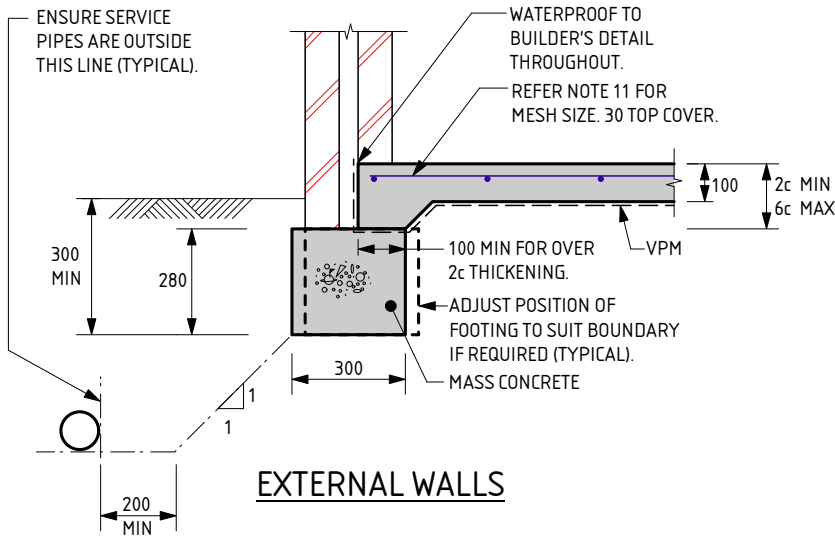
Site Condition

At the time of inspection the site was considered to be level and cleared. For specific levels of this site or topographical features, please refer to a professional site survey.

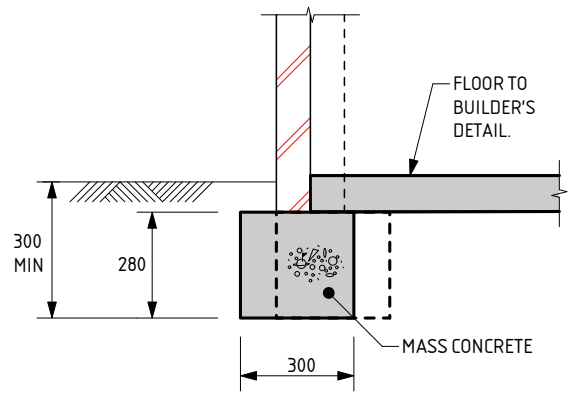
Structerre Geotech Reference

The Site Classification is based on any remedial works being successfully completed as outlined in the Structerre Geotechnical Report J414449 dated 01/08/2022. The footing details are subject to the recommendations being completed to an acceptable level as outlined in this report, if applicable.

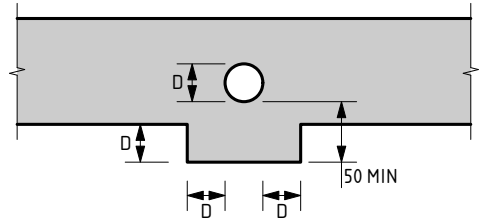
-- END OF REPORT --



EXTERNAL WALLS

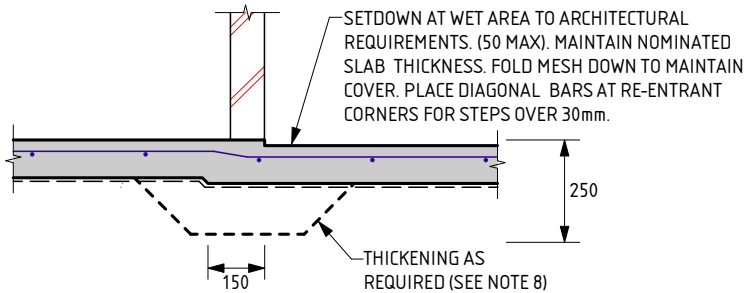


GARAGE WALL

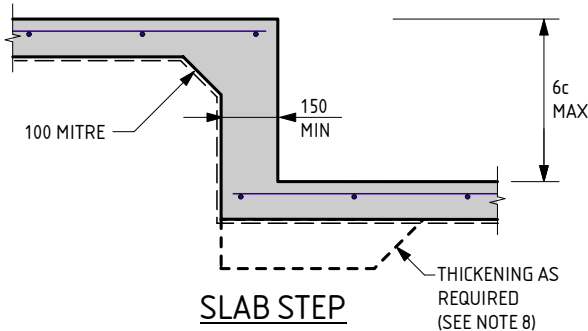


SERVICE PIPE DIAGRAM

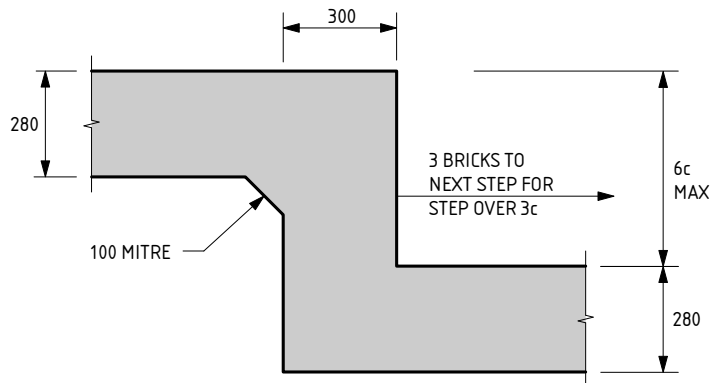
- MINIMUM HORIZONTAL DISTANCE BETWEEN 2 PENETRATIONS TO BE 2 x DIAMETER OF THE LARGER PIPE.
- MAXIMUM PENETRATION SIZE TO BE Ø150.



WET AREA STEP



SLAB STEP



FOOTING STEP

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 0.075mm) 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. THE FOOTING DETAILS HAVE BEEN DESIGNED IN ACCORDANCE WITH AS3600 AND SECTION 4 OF AS2870.
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 IS ALLOWABLE.
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 - 03/09/21



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PROJECT : LOT 1155 BUTTERLEAF AV YANCHEP	
CLIENT : DENSFORD CIVIL	
SCALE : 1:20	APPROVED
DATE : 21/11/22	

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 1 of 2)

GENERAL

1. THE EXPLANATORY NOTES AND THE STANDARD RECOMMENDATIONS ARE TO BE READ IN CONJUNCTION WITH THE SITE CLASSIFICATION REPORT.
2. ALL REFERRED STANDARDS TO BE THE CURRENT VERSION AT THE TIME OF THE CONSTRUCTION.
3. THE PURPOSE OF THE SITE CLASSIFICATION REPORT IS TO CLASSIFY THE SITE IN ACCORDANCE WITH AS2870 "RESIDENTIAL SLABS AND FOOTING". IT IS NOT INTENDED FOR ANY OTHER PURPOSE, INCLUDING SOLE INFORMATION IN THE PROVISION OF A QUOTATION FOR SITE WORKS BY EARTH WORKERS. IT IS RECOMMENDED EARTH WORKERS PERFORM THEIR OWN INVESTIGATION FOR QUOTATION PURPOSES.
4. THE SITE CLASSIFICATION REPORT WILL INCLUDE BUT IS NOT LIMITED TO:
 - a. THE SITE CLASSIFICATION IN ACCORDANCE WITH AS2870 RESIDENTIAL SLABS AND FOOTING CONSTRUCTION,
 - b. A WIND RATING IN ACCORDANCE WITH AS 4055 WIND LOADS FOR HOUSING,
 - c. A COASTAL CORROSION CLASSIFICATION,
 - d. ADDITIONAL EARTHWORK RECOMMENDATION WHERE APPLICABLE,
 - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONDITIONS.
5. THE SITE CLASSIFICATION REPORT IS BASED ON THE SITE AS PRESENTED AT THE TIME OF ASSESSMENT. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
6. CLASS A SITES ARE STABLE SITES, GENERALLY SAND, LIMESTONE, GRAVEL OR A COMBINATION. CLASS P ARE PARTICULAR CLASSIFICATIONS SUCH AN UNUSUAL SITES OR SITES REQUIRING ADDITIONAL INVESTIGATION PRIOR TO PROVIDING DETAILS.
7. BOREHOLES EXCAVATED REVEAL THE SOIL PROFILE AT THE BOREHOLE LOCATION ONLY. FROM THIS, IT IS INFERRED THAT THESE ARE THE SOIL CONDITION OVER THE SITE. VARIATIONS CAN OCCUR WHICH MAY NOT HAVE BEEN DETECTED AT THE INVESTIGATION STAGE. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR REASSESSMENT.
8. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE IN ORDER TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
9. THIS REPORT IS FOR STRUCTERRE ONLY TO USE IN DESIGN. ANY DESIGN BY ANYONE ELSE FOR ANY STRUCTURE MUST BE SPECIFICALLY APPROVED BY STRUCTERRE. IF USED BY ANYONE ELSE FOR ANYTHING OTHER THAN A STRUCTERRE DESIGN OR STRUCTURE, STRUCTERRE TAKES NO RESPONSIBILITY.

SAND PAD

10. THE RECOMMENDED FOOTING DESIGN IS ONLY TO BE USED IN CONJUNCTION WITH THE RECOMMENDED SAND PAD AND EARTHWORKS AS OUTLINED IN THE SITE CLASSIFICATION REPORT.
11. THE RECOMMENDATIONS FOR THE SAND PAD IS FOR STRUCTURAL PURPOSES ONLY, AND DOES NOT PROVIDE THE MINIMUM FINISHED PAD LEVEL IN RELATION TO FLOOD LEVELS, OR DEPTH TO GROUNDWATER. SHOULD THE TEST BE LOCATED IN A LOW LYING OR FLOOD PRONE AREA, REFER TO THE LOCAL AUTHORITY FOR MINIMUM BUILDING HEIGHT.
12. IMPORTED FILL FOR USE AS A SAND PAD TO BE IN ACCORDANCE TO AS 3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS" WHICH INCLUDES BUT IS NOT LIMITED TO: BE FREE FROM ANY DELETERIOUS MATERIALS INCLUDING ORGANICS, (ROOTS, STUMPS, GRASSES, DECOMPOSED ORGANICS – PEAT, TIMBER, ETC), BUILDING RUBBLE, GLASS, PLASTICS OR WASTE MATERIAL. THE FINES CONTENT, (PERCENTAGE PASSING THE 0.075mm SIEVE) TO BE LESS THAN 5% BY MASS.
13. ON CLASS A SITES, A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 450mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
14. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
15. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

EARTHWORKS

16. RECOMMENDED EARTHWORKS TO BE CONDUCTED IN ACCORDANCE WITH AS3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS", AND TO INCLUDE BUT NOT BE LIMITED TO:
 - a. REMOVAL OF ALL VEGETATION, TOPSOILS, UNCONTROLLED FILLS AND OTHER DELETERIOUS MATERIALS FROM THE BUILDING AREA,
 - b. GRUBBING OUT OF ANY TREES ENSURING THE REMAINING HOLES ARE BACKFILLED WITH CLEAN COMPACTED SAND,
 - c. NOTIFYING THE ENGINEER OF ANY UNUSUAL FEATURE OR DISCREPANCY THAT MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING,
 - d. COMPACTING TO MEET THE REQUIREMENTS AS OUTLINED IN AS 3798 TABLE 5.1.
17. FILL MATERIAL (WHICH IS NOT ALWAYS APPARENT AT THE INITIAL INVESTIGATION STAGE) IS TO BE DEALT WITH AS FOLLOWS:
 - a. IF IT IS CERTIFIED BY OTHERS IT CAN REMAIN.
 - b. IF IT IS NOT CERTIFIED WILL REQUIRE REMOVAL DOWN TO NATURAL GROUND OR VERIFIED. ANY SAND CAN BE REUSED.
 - c. IF A PAD HAS ALREADY BEEN CONSTRUCTED, THE SITE CLASSIFICATION IS NOT CERTIFICATION OF THE PAD. CONTACT THIS OFFICE SHOULD A SAND PAD CERTIFICATION BE REQUIRED.
18. ANY ORGANIC MATTER OR ROOTS ENCOUNTERED, WHICH IS BEYOND WHAT IS NORMALLY CONSIDERED ACCEPTABLE IS TO BE REMOVED. THIS WILL NECESSITATE RAKING THE SITE TO REMOVE ORGANIC MATERIAL, TURNING THE SITE OVER AND RE- COMPACTING TO A MINIMUM.

RETAINING WALLS

19. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
20. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER TO THE RETAINING WALL THAN THE HEIGHT OF THE RETAINING WALL, THIS MAY PLACE ADDITIONAL LOADS ON THE WALL THAT WERE NOT INITIALLY DESIGNED FOR. AN INSPECTION OF THE STRUCTURAL INTEGRITY OF THE RETAINING WALL WILL BE REQUIRED TO PROVIDE CERTIFICATION AND/OR RECOMMENDATIONS PRIOR TO ANY CONSTRUCTION. PLEASE REFER BACK TO THIS OFFICE FOR ASSISTANCE.

STORMWATER DRAINAGE

21. ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF SOAKWELL AWAY FROM THE BUILDING AND SETBACK MINIMUM OF 1200mm, WHICHEVER IS GREATER. PLEASE REFER BACK TO THIS OFFICE IF REQUIRED THE SET-BACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



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PROJECT :
LOT 1155 BUTTERLEAF AV YANCHEP

CLIENT : DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 2 of 2)

WIND CLASSIFICATION

22. WIND CLASSIFICATION IS GIVEN FOR THE EXPECTED CONDITION 5 YEARS HENCE. THIS CLASSIFICATION IS LIMITED TO BUILDINGS CLASSES 1 AND 10, WHICH HAVE THE FOLLOWING LIMITATION (AS PER AS4055):

- a. MAXIMUM DISTANCE FROM THE GROUND LEVEL TO THE UNDERSIDE OF EAVES SHALL NOT EXCEED 6.0m.
- b. MAXIMUM DISTANCE FROM GROUND LEVEL TO THE HIGHEST POINT OF THE ROOF, EXCLUDING CHIMNEYS, SHALL NOT EXCEED 8.5m.
- c. THE ROOF PITCH SHALL NOT EXCEED 35°.
- d. THE WIDTH, EXCLUDING EAVES, SHALL NOT EXCEED 16.0m AND THE LENGTH SHALL NOT EXCEED 5x THE WIDTH.

IF THE BUILDING FALLS OUTSIDE OF THESE LIMITATIONS, THE STATED WIND CLASSIFICATION DOES NOT APPLY. REFER BACK TO THIS OFFICE FOR A REVISED WIND CLASSIFICATION.

ENVIRONMENTAL

23. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, IT IS RECOMMENDED THAT AN ENVIRONMENTAL ENGINEER BE ENGAGED.

SEISMIC

24. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF ≤ 0.11 . RECOMMENDED FOOTING DETAILS PROVIDED FOR SITES WITH AN EARTHQUAKE HAZARD FACTOR OF > 0.11 , ARE NOT FOR CONSTRUCTION, BUT FOR COSTING PURPOSES ONLY. IT IS RECOMMENDED REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

CORROSION CLASSIFICATION

25. THE CORROSION CLASSIFICATION HAS BEEN ASSESSED IN ACCORDANCE WITH AS3700.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



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LOT 1155 BUTTERLEAF AV YANCHEP

CLIENT: DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

A blue ink handwritten signature is written over the 'APPROVED' field.

SITE CLASSIFICATION REPORT
CERTIFICATE 2595269

CLIENT DENSFORD CIVIL
JOB ADDRESS LOT 1156 BUTTERLEAF AV YANCHEP
CLIENT JOB NO.
OWNER
STRUCTERRE JOB NO. S1085278
DATE OF ASSESSMENT 17/11/22

SITE RECORD

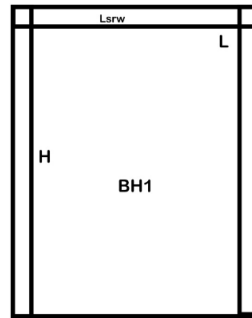


SITE CLASSIFICATION	A	<i>(in accordance with AS2870)</i>
FOOTING DETAIL	A	
SAND PAD	No sand pad required structurally	
BUSHFIRE PRONE AREA	Yes	<i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	R3	<i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	N2	<i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	No Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 750 FILL sand trace gravel (limestone) - brown; 750 GRAVEL (limestone) refusal.

APPROXIMATE BOREHOLE LOCATIONS



Butterleaf Av

NOTE 1 Explanatory Notes & Standard Recommendations

This site classification report must be read in conjunction with the applicable Explanatory Notes & Standard Recommendations. For A Class sites, refer to the Explanatory Notes and Standard Recommendations for Stable (A Class) Sites, version 1.0 July 2018. For S, M, H1, H2 & E Class sites, refer to the Explanatory Notes and Standard Recommendations for Reactive (S, M, H1, H2 & E Class) Sites version 1.0 July 2018. For Equivalent Class sites, refer to the Explanatory Notes and Standard Recommendations for Equivalent Class Sites, version 1.0 July 2018.

NOTE 2 Bushfire - Prone Area

The Site may be situated in a bush fire prone area in accordance with the Department of Fire and Emergency Services (DFES) Bushfire Prone Area Map (Reference: <http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/>) the current version at the time of this assessment. A Bushfire Attack Level (BAL) assessment may be required for this site, please confirm with the local authority. Should you require an assessment, please contact this Office.

ADDITIONAL NOTES / REQUIREMENTS

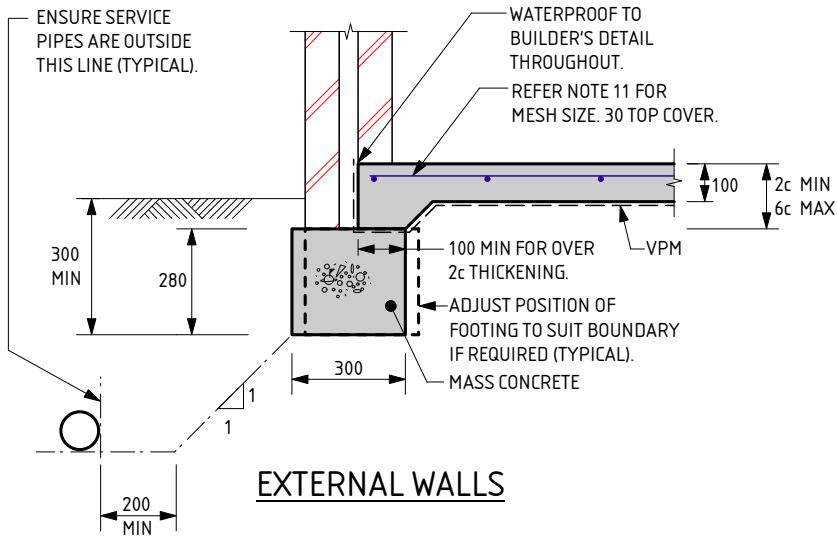
Site Condition

At the time of inspection the site was considered to be level and cleared. For specific levels of this site or topographical features, please refer to a professional site survey.

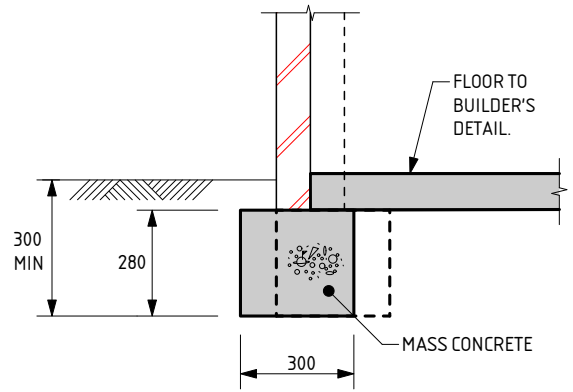
Structerre Geotech Reference

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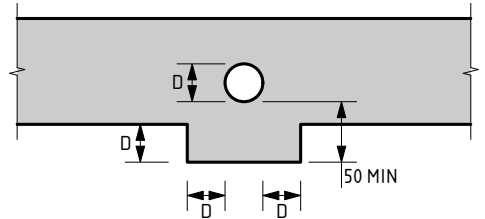
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EXTERNAL WALLS

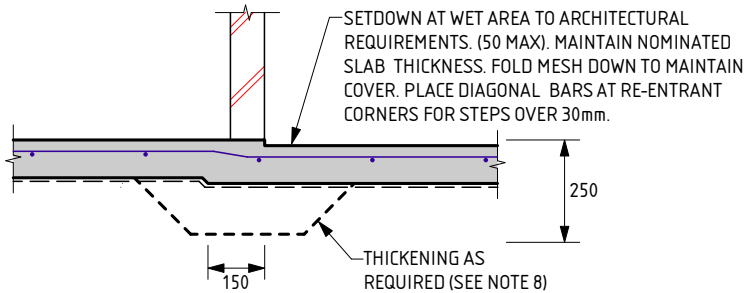


GARAGE WALL

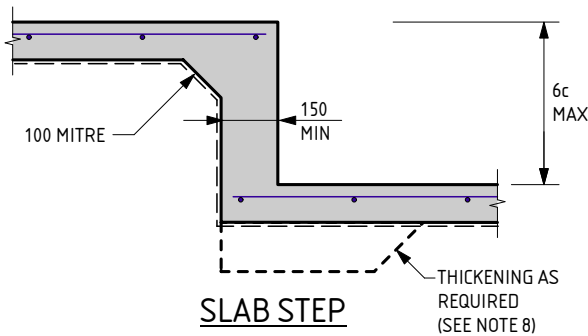


SERVICE PIPE DIAGRAM

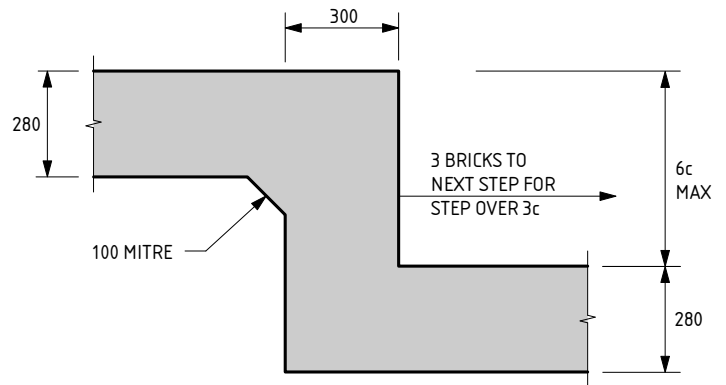
- MINIMUM HORIZONTAL DISTANCE BETWEEN 2 PENETRATIONS TO BE 2 x DIAMETER OF THE LARGER PIPE.
- MAXIMUM PENETRATION SIZE TO BE Ø150.



WET AREA STEP



SLAB STEP



FOOTING STEP

A FOOTING NOTES:

- REMOVE ALL TOPSOIL, VEGETATION AND DELETERIOUS FILL MATERIAL FROM THE BUILDING AREA.
- SAND FILL TO BE CLEAN WELL DRAINED, WITH MAX FINES (PARTICLES UP TO 0.075mm) CONTENT OF 5%. SAND TO BE COMPACTED TO A MIN 6 BLOWS/300mm FOR 750mm OR DEPTH OF PAD.
- A MIN OF 150mm OF SAND REQUIRED UNDER FOOTINGS.
- IF CLAY ON SITE AN ENGINEER TO BE CONSULTED.
- ROOF AND SURFACE WATER TO BE TAKEN AWAY FROM FOUNDATION AREA.
- EXCAVATIONS FOR PLUMBING NOT TO UNDERMINE FOOTINGS. IF UNDERMINING IS LIKELY TO OCCUR, CONTACT THE ENGINEER.
- WHERE PLUMBING PIPES PASS THROUGH FOOTINGS OR SLAB, SPECIFIED DEPTH OF ALL CONCRETE IS ALWAYS TO BE MAINTAINED.
- PLACE SLAB THICKENINGS (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m.
- 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.
- LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.
- 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:
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- CONCRETE TO CONFORM WITH AS 3600.
- BLENDED CEMENT TO CONFORM WITH AS 3972.
- ALL CONCRETE TO BE N20/20/100.
- CURE SLAB AS DETERMINED BY ENGINEER.
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- 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.
- PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 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 - 03/09/21



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PROJECT : LOT 1156 BUTTERLEAF AV YANCHEP	
CLIENT : DENSFORD CIVIL	
SCALE : 1:20	APPROVED
DATE : 21/11/22	

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 1 of 2)

GENERAL

1. THE EXPLANATORY NOTES AND THE STANDARD RECOMMENDATIONS ARE TO BE READ IN CONJUNCTION WITH THE SITE CLASSIFICATION REPORT.
2. ALL REFERRED STANDARDS TO BE THE CURRENT VERSION AT THE TIME OF THE CONSTRUCTION.
3. THE PURPOSE OF THE SITE CLASSIFICATION REPORT IS TO CLASSIFY THE SITE IN ACCORDANCE WITH AS2870 "RESIDENTIAL SLABS AND FOOTING". IT IS NOT INTENDED FOR ANY OTHER PURPOSE, INCLUDING SOLE INFORMATION IN THE PROVISION OF A QUOTATION FOR SITE WORKS BY EARTH WORKERS. IT IS RECOMMENDED EARTH WORKERS PERFORM THEIR OWN INVESTIGATION FOR QUOTATION PURPOSES.
4. THE SITE CLASSIFICATION REPORT WILL INCLUDE BUT IS NOT LIMITED TO:
 - a. THE SITE CLASSIFICATION IN ACCORDANCE WITH AS2870 RESIDENTIAL SLABS AND FOOTING CONSTRUCTION,
 - b. A WIND RATING IN ACCORDANCE WITH AS 4055 WIND LOADS FOR HOUSING,
 - c. A COASTAL CORROSION CLASSIFICATION,
 - d. ADDITIONAL EARTHWORK RECOMMENDATION WHERE APPLICABLE,
 - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONDITIONS.
5. THE SITE CLASSIFICATION REPORT IS BASED ON THE SITE AS PRESENTED AT THE TIME OF ASSESSMENT. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
6. CLASS A SITES ARE STABLE SITES, GENERALLY SAND, LIMESTONE, GRAVEL OR A COMBINATION. CLASS P ARE PARTICULAR CLASSIFICATIONS SUCH AN UNUSUAL SITES OR SITES REQUIRING ADDITIONAL INVESTIGATION PRIOR TO PROVIDING DETAILS.
7. BOREHOLES EXCAVATED REVEAL THE SOIL PROFILE AT THE BOREHOLE LOCATION ONLY. FROM THIS, IT IS INFERRED THAT THESE ARE THE SOIL CONDITION OVER THE SITE. VARIATIONS CAN OCCUR WHICH MAY NOT HAVE BEEN DETECTED AT THE INVESTIGATION STAGE. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR REASSESSMENT.
8. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE IN ORDER TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
9. THIS REPORT IS FOR STRUCTERRE ONLY TO USE IN DESIGN. ANY DESIGN BY ANYONE ELSE FOR ANY STRUCTURE MUST BE SPECIFICALLY APPROVED BY STRUCTERRE. IF USED BY ANYONE ELSE FOR ANYTHING OTHER THAN A STRUCTERRE DESIGN OR STRUCTURE, STRUCTERRE TAKES NO RESPONSIBILITY.

SAND PAD

10. THE RECOMMENDED FOOTING DESIGN IS ONLY TO BE USED IN CONJUNCTION WITH THE RECOMMENDED SAND PAD AND EARTHWORKS AS OUTLINED IN THE SITE CLASSIFICATION REPORT.
11. THE RECOMMENDATIONS FOR THE SAND PAD IS FOR STRUCTURAL PURPOSES ONLY, AND DOES NOT PROVIDE THE MINIMUM FINISHED PAD LEVEL IN RELATION TO FLOOD LEVELS, OR DEPTH TO GROUNDWATER. SHOULD THE TEST BE LOCATED IN A LOW LYING OR FLOOD PRONE AREA, REFER TO THE LOCAL AUTHORITY FOR MINIMUM BUILDING HEIGHT.
12. IMPORTED FILL FOR USE AS A SAND PAD TO BE IN ACCORDANCE TO AS 3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS" WHICH INCLUDES BUT IS NOT LIMITED TO: BE FREE FROM ANY DELETERIOUS MATERIALS INCLUDING ORGANICS, (ROOTS, STUMPS, GRASSES, DECOMPOSED ORGANICS – PEAT, TIMBER, ETC), BUILDING RUBBLE, GLASS, PLASTICS OR WASTE MATERIAL. THE FINES CONTENT, (PERCENTAGE PASSING THE 0.075mm SIEVE) TO BE LESS THAN 5% BY MASS.
13. ON CLASS A SITES, A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 450mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
14. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
15. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

EARTHWORKS

16. RECOMMENDED EARTHWORKS TO BE CONDUCTED IN ACCORDANCE WITH AS3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS", AND TO INCLUDE BUT NOT BE LIMITED TO:
 - a. REMOVAL OF ALL VEGETATION, TOPSOILS, UNCONTROLLED FILLS AND OTHER DELETERIOUS MATERIALS FROM THE BUILDING AREA,
 - b. GRUBBING OUT OF ANY TREES ENSURING THE REMAINING HOLES ARE BACKFILLED WITH CLEAN COMPACTED SAND,
 - c. NOTIFYING THE ENGINEER OF ANY UNUSUAL FEATURE OR DISCREPANCY THAT MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING,
 - d. COMPACTING TO MEET THE REQUIREMENTS AS OUTLINED IN AS 3798 TABLE 5.1.
17. FILL MATERIAL (WHICH IS NOT ALWAYS APPARENT AT THE INITIAL INVESTIGATION STAGE) IS TO BE DEALT WITH AS FOLLOWS:
 - a. IF IT IS CERTIFIED BY OTHERS IT CAN REMAIN.
 - b. IF IT IS NOT CERTIFIED WILL REQUIRE REMOVAL DOWN TO NATURAL GROUND OR VERIFIED. ANY SAND CAN BE REUSED.
 - c. IF A PAD HAS ALREADY BEEN CONSTRUCTED, THE SITE CLASSIFICATION IS NOT CERTIFICATION OF THE PAD. CONTACT THIS OFFICE SHOULD A SAND PAD CERTIFICATION BE REQUIRED.
18. ANY ORGANIC MATTER OR ROOTS ENCOUNTERED, WHICH IS BEYOND WHAT IS NORMALLY CONSIDERED ACCEPTABLE IS TO BE REMOVED. THIS WILL NECESSITATE RAKING THE SITE TO REMOVE ORGANIC MATERIAL, TURNING THE SITE OVER AND RE- COMPACTING TO A MINIMUM.

RETAINING WALLS

19. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
20. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER TO THE RETAINING WALL THAN THE HEIGHT OF THE RETAINING WALL, THIS MAY PLACE ADDITIONAL LOADS ON THE WALL THAT WERE NOT INITIALLY DESIGNED FOR. AN INSPECTION OF THE STRUCTURAL INTEGRITY OF THE RETAINING WALL WILL BE REQUIRED TO PROVIDE CERTIFICATION AND/OR RECOMMENDATIONS PRIOR TO ANY CONSTRUCTION. PLEASE REFER BACK TO THIS OFFICE FOR ASSISTANCE.

STORMWATER DRAINAGE

21. ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF SOAKWELL AWAY FROM THE BUILDING AND SETBACK MINIMUM OF 1200mm, WHICHEVER IS GREATER. PLEASE REFER BACK TO THIS OFFICE IF REQUIRED THE SET-BACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham
Unit Trust trading as StrucTerre Consulting Engineers
1 ERINDALE ROAD, BALCATT WA 6021
TEL (08) 9205 4500 FAX (08) 9205 4541 EMAIL: perth@strucTerre.com.au

PROJECT :
LOT 1156 BUTTERLEAF AV YANCHEP

CLIENT : DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 2 of 2)

WIND CLASSIFICATION

22. WIND CLASSIFICATION IS GIVEN FOR THE EXPECTED CONDITION 5 YEARS HENCE. THIS CLASSIFICATION IS LIMITED TO BUILDINGS CLASSES 1 AND 10, WHICH HAVE THE FOLLOWING LIMITATION (AS PER AS4055):

- a. MAXIMUM DISTANCE FROM THE GROUND LEVEL TO THE UNDERSIDE OF EAVES SHALL NOT EXCEED 6.0m.
- b. MAXIMUM DISTANCE FROM GROUND LEVEL TO THE HIGHEST POINT OF THE ROOF, EXCLUDING CHIMNEYS, SHALL NOT EXCEED 8.5m.
- c. THE ROOF PITCH SHALL NOT EXCEED 35°.
- d. THE WIDTH, EXCLUDING EAVES, SHALL NOT EXCEED 16.0m AND THE LENGTH SHALL NOT EXCEED 5x THE WIDTH.

IF THE BUILDING FALLS OUTSIDE OF THESE LIMITATIONS, THE STATED WIND CLASSIFICATION DOES NOT APPLY. REFER BACK TO THIS OFFICE FOR A REVISED WIND CLASSIFICATION.

ENVIRONMENTAL

23. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, IT IS RECOMMENDED THAT AN ENVIRONMENTAL ENGINEER BE ENGAGED.

SEISMIC

24. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF ≤ 0.11 . RECOMMENDED FOOTING DETAILS PROVIDED FOR SITES WITH AN EARTHQUAKE HAZARD FACTOR OF > 0.11 , ARE NOT FOR CONSTRUCTION, BUT FOR COSTING PURPOSES ONLY. IT IS RECOMMENDED REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

CORROSION CLASSIFICATION

25. THE CORROSION CLASSIFICATION HAS BEEN ASSESSED IN ACCORDANCE WITH AS3700.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



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PROJECT:
LOT 1156 BUTTERLEAF AV YANCHEP

CLIENT: DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

A blue ink handwritten signature is written over the 'APPROVED' field.

SITE CLASSIFICATION REPORT
CERTIFICATE 2595268

CLIENT DENSFORD CIVIL
JOB ADDRESS LOT 1157 BUTTERLEAF AV YANCHEP
CLIENT JOB NO.
OWNER
STRUCTERRE JOB NO. S1085277
DATE OF ASSESSMENT 17/11/22

SITE RECORD

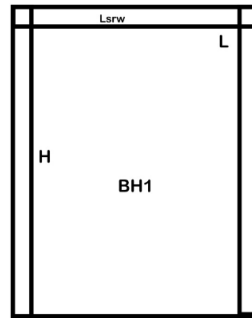


SITE CLASSIFICATION	A	<i>(in accordance with AS2870)</i>
FOOTING DETAIL	A	
SAND PAD	No sand pad required structurally	
BUSHFIRE PRONE AREA	Yes	<i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	R3	<i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	N2	<i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	No Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 800 FILL sand trace gravel (limestone) - brown; 800 GRAVEL (limestone) refusal.

APPROXIMATE BOREHOLE LOCATIONS



Butterleaf Av

NOTE 1 Explanatory Notes & Standard Recommendations

This site classification report must be read in conjunction with the applicable Explanatory Notes & Standard Recommendations. For A Class sites, refer to the Explanatory Notes and Standard Recommendations for Stable (A Class) Sites, version 1.0 July 2018. For S, M, H1, H2 & E Class sites, refer to the Explanatory Notes and Standard Recommendations for Reactive (S, M, H1, H2 & E Class) Sites version 1.0 July 2018. For Equivalent Class sites, refer to the Explanatory Notes and Standard Recommendations for Equivalent Class Sites, version 1.0 July 2018.

NOTE 2 Bushfire - Prone Area

The Site may be situated in a bush fire prone area in accordance with the Department of Fire and Emergency Services (DFES) Bushfire Prone Area Map (Reference: <http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/>) the current version at the time of this assessment. A Bushfire Attack Level (BAL) assessment may be required for this site, please confirm with the local authority. Should you require an assessment, please contact this Office.

ADDITIONAL NOTES / REQUIREMENTS

Site Condition

At the time of inspection the site was considered to be level and cleared. For specific levels of this site or topographical features, please refer to a professional site survey.

Structerre Geotech Reference

The Site Classification is based on any remedial works being successfully completed as outlined in the Structerre Geotechnical Report J414449 dated 01/08/2022. The footing details are subject to the recommendations being completed to an acceptable level as outlined in this report, if applicable.

-- END OF REPORT --

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 1 of 2)

GENERAL

1. THE EXPLANATORY NOTES AND THE STANDARD RECOMMENDATIONS ARE TO BE READ IN CONJUNCTION WITH THE SITE CLASSIFICATION REPORT.
2. ALL REFERRED STANDARDS TO BE THE CURRENT VERSION AT THE TIME OF THE CONSTRUCTION.
3. THE PURPOSE OF THE SITE CLASSIFICATION REPORT IS TO CLASSIFY THE SITE IN ACCORDANCE WITH AS2870 "RESIDENTIAL SLABS AND FOOTING". IT IS NOT INTENDED FOR ANY OTHER PURPOSE, INCLUDING SOLE INFORMATION IN THE PROVISION OF A QUOTATION FOR SITE WORKS BY EARTH WORKERS. IT IS RECOMMENDED EARTH WORKERS PERFORM THEIR OWN INVESTIGATION FOR QUOTATION PURPOSES.
4. THE SITE CLASSIFICATION REPORT WILL INCLUDE BUT IS NOT LIMITED TO:
 - a. THE SITE CLASSIFICATION IN ACCORDANCE WITH AS2870 RESIDENTIAL SLABS AND FOOTING CONSTRUCTION,
 - b. A WIND RATING IN ACCORDANCE WITH AS 4055 WIND LOADS FOR HOUSING,
 - c. A COASTAL CORROSION CLASSIFICATION,
 - d. ADDITIONAL EARTHWORK RECOMMENDATION WHERE APPLICABLE,
 - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONDITIONS.
5. THE SITE CLASSIFICATION REPORT IS BASED ON THE SITE AS PRESENTED AT THE TIME OF ASSESSMENT. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
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7. BOREHOLES EXCAVATED REVEAL THE SOIL PROFILE AT THE BOREHOLE LOCATION ONLY. FROM THIS, IT IS INFERRED THAT THESE ARE THE SOIL CONDITION OVER THE SITE. VARIATIONS CAN OCCUR WHICH MAY NOT HAVE BEEN DETECTED AT THE INVESTIGATION STAGE. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR REASSESSMENT.
8. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE IN ORDER TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
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SAND PAD

10. THE RECOMMENDED FOOTING DESIGN IS ONLY TO BE USED IN CONJUNCTION WITH THE RECOMMENDED SAND PAD AND EARTHWORKS AS OUTLINED IN THE SITE CLASSIFICATION REPORT.
11. THE RECOMMENDATIONS FOR THE SAND PAD IS FOR STRUCTURAL PURPOSES ONLY, AND DOES NOT PROVIDE THE MINIMUM FINISHED PAD LEVEL IN RELATION TO FLOOD LEVELS, OR DEPTH TO GROUNDWATER. SHOULD THE TEST BE LOCATED IN A LOW LYING OR FLOOD PRONE AREA, REFER TO THE LOCAL AUTHORITY FOR MINIMUM BUILDING HEIGHT.
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13. ON CLASS A SITES, A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 450mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
14. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
15. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

EARTHWORKS

16. RECOMMENDED EARTHWORKS TO BE CONDUCTED IN ACCORDANCE WITH AS3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS", AND TO INCLUDE BUT NOT BE LIMITED TO:
 - a. REMOVAL OF ALL VEGETATION, TOPSOILS, UNCONTROLLED FILLS AND OTHER DELETERIOUS MATERIALS FROM THE BUILDING AREA,
 - b. GRUBBING OUT OF ANY TREES ENSURING THE REMAINING HOLES ARE BACKFILLED WITH CLEAN COMPACTED SAND,
 - c. NOTIFYING THE ENGINEER OF ANY UNUSUAL FEATURE OR DISCREPANCY THAT MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING,
 - d. COMPACTING TO MEET THE REQUIREMENTS AS OUTLINED IN AS 3798 TABLE 5.1.
17. FILL MATERIAL (WHICH IS NOT ALWAYS APPARENT AT THE INITIAL INVESTIGATION STAGE) IS TO BE DEALT WITH AS FOLLOWS:
 - a. IF IT IS CERTIFIED BY OTHERS IT CAN REMAIN.
 - b. IF IT IS NOT CERTIFIED WILL REQUIRE REMOVAL DOWN TO NATURAL GROUND OR VERIFIED. ANY SAND CAN BE REUSED.
 - c. IF A PAD HAS ALREADY BEEN CONSTRUCTED, THE SITE CLASSIFICATION IS NOT CERTIFICATION OF THE PAD. CONTACT THIS OFFICE SHOULD A SAND PAD CERTIFICATION BE REQUIRED.
18. ANY ORGANIC MATTER OR ROOTS ENCOUNTERED, WHICH IS BEYOND WHAT IS NORMALLY CONSIDERED ACCEPTABLE IS TO BE REMOVED. THIS WILL NECESSITATE RAKING THE SITE TO REMOVE ORGANIC MATERIAL, TURNING THE SITE OVER AND RE- COMPACTING TO A MINIMUM.

RETAINING WALLS

19. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
20. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER TO THE RETAINING WALL THAN THE HEIGHT OF THE RETAINING WALL, THIS MAY PLACE ADDITIONAL LOADS ON THE WALL THAT WERE NOT INITIALLY DESIGNED FOR. AN INSPECTION OF THE STRUCTURAL INTEGRITY OF THE RETAINING WALL WILL BE REQUIRED TO PROVIDE CERTIFICATION AND/OR RECOMMENDATIONS PRIOR TO ANY CONSTRUCTION. PLEASE REFER BACK TO THIS OFFICE FOR ASSISTANCE.

STORMWATER DRAINAGE

21. ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF SOAKWELL AWAY FROM THE BUILDING AND SETBACK MINIMUM OF 1200mm, WHICHEVER IS GREATER. PLEASE REFER BACK TO THIS OFFICE IF REQUIRED THE SET-BACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham
Unit Trust trading as StrucTerre Consulting Engineers
1 ERINDALE ROAD, BALCATT WA 6021
TEL (08) 9205 4500 FAX (08) 9205 4541 EMAIL: perth@strucTerre.com.au

PROJECT :
LOT 1157 BUTTERLEAF AV YANCHEP

CLIENT : DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 2 of 2)

WIND CLASSIFICATION

22. WIND CLASSIFICATION IS GIVEN FOR THE EXPECTED CONDITION 5 YEARS HENCE. THIS CLASSIFICATION IS LIMITED TO BUILDINGS CLASSES 1 AND 10, WHICH HAVE THE FOLLOWING LIMITATION (AS PER AS4055):

- a. MAXIMUM DISTANCE FROM THE GROUND LEVEL TO THE UNDERSIDE OF EAVES SHALL NOT EXCEED 6.0m.
- b. MAXIMUM DISTANCE FROM GROUND LEVEL TO THE HIGHEST POINT OF THE ROOF, EXCLUDING CHIMNEYS, SHALL NOT EXCEED 8.5m.
- c. THE ROOF PITCH SHALL NOT EXCEED 35°.
- d. THE WIDTH, EXCLUDING EAVES, SHALL NOT EXCEED 16.0m AND THE LENGTH SHALL NOT EXCEED 5x THE WIDTH.

IF THE BUILDING FALLS OUTSIDE OF THESE LIMITATIONS, THE STATED WIND CLASSIFICATION DOES NOT APPLY. REFER BACK TO THIS OFFICE FOR A REVISED WIND CLASSIFICATION.

ENVIRONMENTAL

23. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, IT IS RECOMMENDED THAT AN ENVIRONMENTAL ENGINEER BE ENGAGED.

SEISMIC

24. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF ≤ 0.11 . RECOMMENDED FOOTING DETAILS PROVIDED FOR SITES WITH AN EARTHQUAKE HAZARD FACTOR OF > 0.11 , ARE NOT FOR CONSTRUCTION, BUT FOR COSTING PURPOSES ONLY. IT IS RECOMMENDED REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

CORROSION CLASSIFICATION

25. THE CORROSION CLASSIFICATION HAS BEEN ASSESSED IN ACCORDANCE WITH AS3700.

DOC# SS001 - 1.1.3 V1.1 - AUGUST 2021



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TEL (08) 9205 4500 FAX (08) 9205 4541 EMAIL: perth@strucTerre.com.au

PROJECT:
LOT 1157 BUTTERLEAF AV YANCHEP

CLIENT: DENSFORD CIVIL

SCALE 1:20

DATE 21/11/22

APPROVED

A blue ink handwritten signature is written over the 'APPROVED' field.

SITE CLASSIFICATION REPORT
CERTIFICATE 2595267

CLIENT DENSFORD CIVIL
JOB ADDRESS LOT 1158 BUTTERLEAF AV YANCHEP
CLIENT JOB NO.
OWNER
STRUCTERRE JOB NO. S1085275
DATE OF ASSESSMENT 17/11/22

SITE RECORD

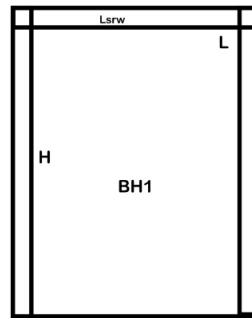


SITE CLASSIFICATION	A	<i>(in accordance with AS2870)</i>
FOOTING DETAIL	A	
SAND PAD	No sand pad required structurally	
BUSHFIRE PRONE AREA	Yes	<i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	R3	<i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	N2	<i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	No Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1500 FILL sand trace gravel (limestone) - brown; 1500 - 1800 FILL sand; 1800 end of hole.

APPROXIMATE BOREHOLE LOCATIONS



Butterleaf Av

NOTE 1 Explanatory Notes & Standard Recommendations

This site classification report must be read in conjunction with the applicable Explanatory Notes & Standard Recommendations. For A Class sites, refer to the Explanatory Notes and Standard Recommendations for Stable (A Class) Sites, version 1.0 July 2018. For S, M, H1, H2 & E Class sites, refer to the Explanatory Notes and Standard Recommendations for Reactive (S, M, H1, H2 & E Class) Sites version 1.0 July 2018. For Equivalent Class sites, refer to the Explanatory Notes and Standard Recommendations for Equivalent Class Sites, version 1.0 July 2018.

NOTE 2 Bushfire - Prone Area

The Site may be situated in a bush fire prone area in accordance with the Department of Fire and Emergency Services (DFES) Bushfire Prone Area Map (Reference: <http://www.dfes.wa.gov.au/regulationandcompliance/bushfireproneareas/>) the current version at the time of this assessment. A Bushfire Attack Level (BAL) assessment may be required for this site, please confirm with the local authority. Should you require an assessment, please contact this Office.

ADDITIONAL NOTES / REQUIREMENTS

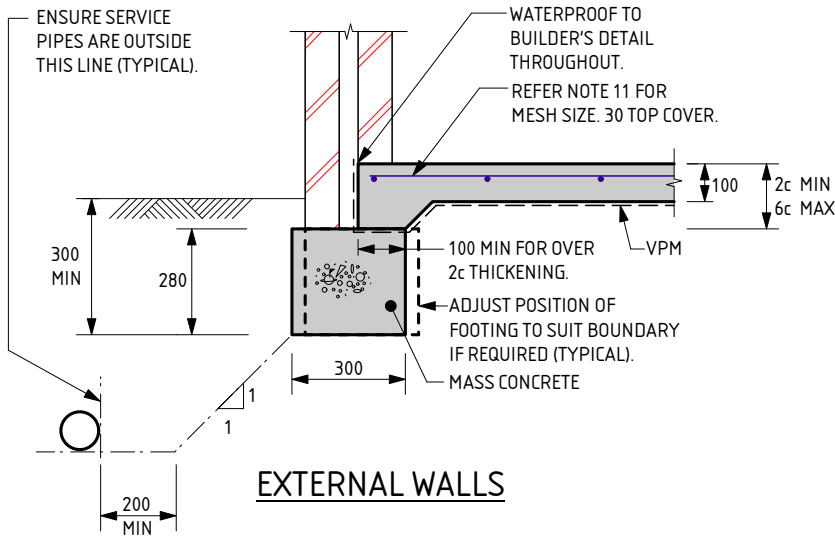
Site Condition

At the time of inspection the site was considered to be level and cleared. For specific levels of this site or topographical features, please refer to a professional site survey.

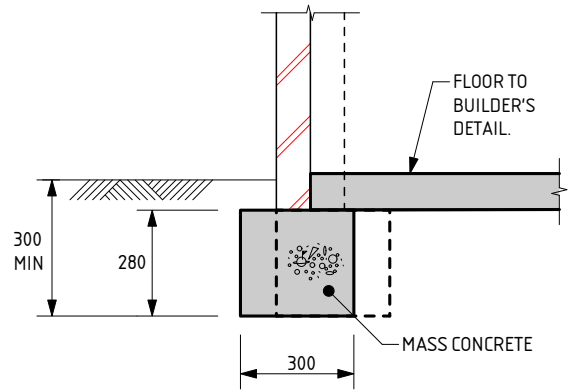
Structerre Geotech Reference

The Site Classification is based on any remedial works being successfully completed as outlined in the Structerre Geotechnical Report J414449 dated 01/08/2022. The footing details are subject to the recommendations being completed to an acceptable level as outlined in this report, if applicable.

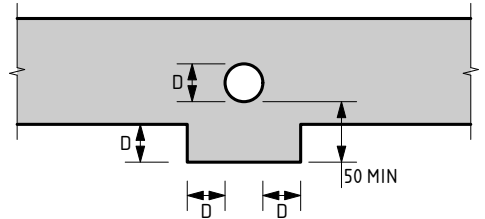
-- END OF REPORT --



EXTERNAL WALLS

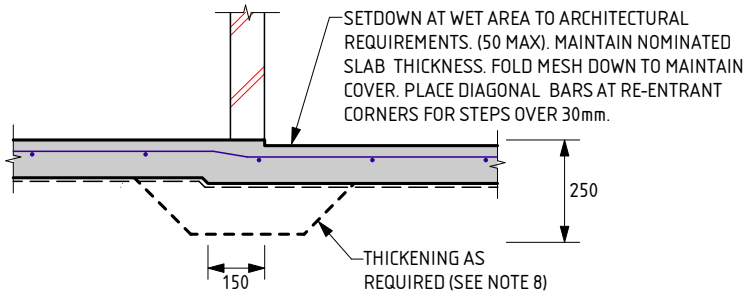


GARAGE WALL

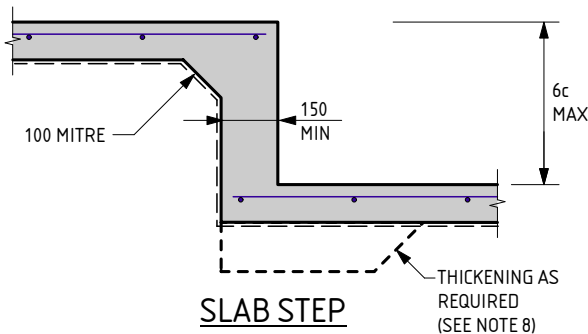


SERVICE PIPE DIAGRAM

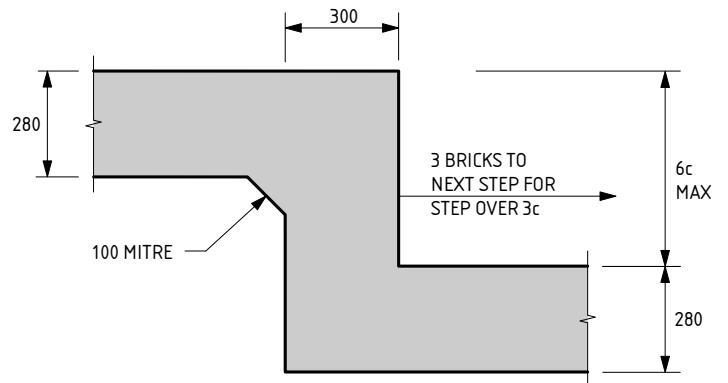
- MINIMUM HORIZONTAL DISTANCE BETWEEN 2 PENETRATIONS TO BE 2 x DIAMETER OF THE LARGER PIPE.
- MAXIMUM PENETRATION SIZE TO BE Ø150.



WET AREA STEP



SLAB STEP



FOOTING STEP

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 0.075mm) 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. THE FOOTING DETAILS HAVE BEEN DESIGNED IN ACCORDANCE WITH AS3600 AND SECTION 4 OF AS2870.
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 IS ALLOWABLE.
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.

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EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 1 of 2)

GENERAL

1. THE EXPLANATORY NOTES AND THE STANDARD RECOMMENDATIONS ARE TO BE READ IN CONJUNCTION WITH THE SITE CLASSIFICATION REPORT.
2. ALL REFERRED STANDARDS TO BE THE CURRENT VERSION AT THE TIME OF THE CONSTRUCTION.
3. THE PURPOSE OF THE SITE CLASSIFICATION REPORT IS TO CLASSIFY THE SITE IN ACCORDANCE WITH AS2870 "RESIDENTIAL SLABS AND FOOTING". IT IS NOT INTENDED FOR ANY OTHER PURPOSE, INCLUDING SOLE INFORMATION IN THE PROVISION OF A QUOTATION FOR SITE WORKS BY EARTH WORKERS. IT IS RECOMMENDED EARTH WORKERS PERFORM THEIR OWN INVESTIGATION FOR QUOTATION PURPOSES.
4. THE SITE CLASSIFICATION REPORT WILL INCLUDE BUT IS NOT LIMITED TO:
 - a. THE SITE CLASSIFICATION IN ACCORDANCE WITH AS2870 RESIDENTIAL SLABS AND FOOTING CONSTRUCTION,
 - b. A WIND RATING IN ACCORDANCE WITH AS 4055 WIND LOADS FOR HOUSING,
 - c. A COASTAL CORROSION CLASSIFICATION,
 - d. ADDITIONAL EARTHWORK RECOMMENDATION WHERE APPLICABLE,
 - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONDITIONS.
5. THE SITE CLASSIFICATION REPORT IS BASED ON THE SITE AS PRESENTED AT THE TIME OF ASSESSMENT. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
6. CLASS A SITES ARE STABLE SITES, GENERALLY SAND, LIMESTONE, GRAVEL OR A COMBINATION. CLASS P ARE PARTICULAR CLASSIFICATIONS SUCH AN UNUSUAL SITES OR SITES REQUIRING ADDITIONAL INVESTIGATION PRIOR TO PROVIDING DETAILS.
7. BOREHOLES EXCAVATED REVEAL THE SOIL PROFILE AT THE BOREHOLE LOCATION ONLY. FROM THIS, IT IS INFERRED THAT THESE ARE THE SOIL CONDITION OVER THE SITE. VARIATIONS CAN OCCUR WHICH MAY NOT HAVE BEEN DETECTED AT THE INVESTIGATION STAGE. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR REASSESSMENT.
8. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE IN ORDER TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
9. THIS REPORT IS FOR STRUCTERRE ONLY TO USE IN DESIGN. ANY DESIGN BY ANYONE ELSE FOR ANY STRUCTURE MUST BE SPECIFICALLY APPROVED BY STRUCTERRE. IF USED BY ANYONE ELSE FOR ANYTHING OTHER THAN A STRUCTERRE DESIGN OR STRUCTURE, STRUCTERRE TAKES NO RESPONSIBILITY.

SAND PAD

10. THE RECOMMENDED FOOTING DESIGN IS ONLY TO BE USED IN CONJUNCTION WITH THE RECOMMENDED SAND PAD AND EARTHWORKS AS OUTLINED IN THE SITE CLASSIFICATION REPORT.
11. THE RECOMMENDATIONS FOR THE SAND PAD IS FOR STRUCTURAL PURPOSES ONLY, AND DOES NOT PROVIDE THE MINIMUM FINISHED PAD LEVEL IN RELATION TO FLOOD LEVELS, OR DEPTH TO GROUNDWATER. SHOULD THE TEST BE LOCATED IN A LOW LYING OR FLOOD PRONE AREA, REFER TO THE LOCAL AUTHORITY FOR MINIMUM BUILDING HEIGHT.
12. IMPORTED FILL FOR USE AS A SAND PAD TO BE IN ACCORDANCE TO AS 3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS" WHICH INCLUDES BUT IS NOT LIMITED TO: BE FREE FROM ANY DELETERIOUS MATERIALS INCLUDING ORGANICS, (ROOTS, STUMPS, GRASSES, DECOMPOSED ORGANICS – PEAT, TIMBER, ETC), BUILDING RUBBLE, GLASS, PLASTICS OR WASTE MATERIAL. THE FINES CONTENT, (PERCENTAGE PASSING THE 0.075mm SIEVE) TO BE LESS THAN 5% BY MASS.
13. ON CLASS A SITES, A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 450mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
14. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
15. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

EARTHWORKS

16. RECOMMENDED EARTHWORKS TO BE CONDUCTED IN ACCORDANCE WITH AS3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS", AND TO INCLUDE BUT NOT BE LIMITED TO:
 - a. REMOVAL OF ALL VEGETATION, TOPSOILS, UNCONTROLLED FILLS AND OTHER DELETERIOUS MATERIALS FROM THE BUILDING AREA,
 - b. GRUBBING OUT OF ANY TREES ENSURING THE REMAINING HOLES ARE BACKFILLED WITH CLEAN COMPACTED SAND,
 - c. NOTIFYING THE ENGINEER OF ANY UNUSUAL FEATURE OR DISCREPANCY THAT MAY BECOME EVIDENT DURING EARTHWORKS, PRIOR TO PROCEEDING,
 - d. COMPACTING TO MEET THE REQUIREMENTS AS OUTLINED IN AS 3798 TABLE 5.1.
17. FILL MATERIAL (WHICH IS NOT ALWAYS APPARENT AT THE INITIAL INVESTIGATION STAGE) IS TO BE DEALT WITH AS FOLLOWS:
 - a. IF IT IS CERTIFIED BY OTHERS IT CAN REMAIN.
 - b. IF IT IS NOT CERTIFIED WILL REQUIRE REMOVAL DOWN TO NATURAL GROUND OR VERIFIED. ANY SAND CAN BE REUSED.
 - c. IF A PAD HAS ALREADY BEEN CONSTRUCTED, THE SITE CLASSIFICATION IS NOT CERTIFICATION OF THE PAD. CONTACT THIS OFFICE SHOULD A SAND PAD CERTIFICATION BE REQUIRED.
18. ANY ORGANIC MATTER OR ROOTS ENCOUNTERED, WHICH IS BEYOND WHAT IS NORMALLY CONSIDERED ACCEPTABLE IS TO BE REMOVED. THIS WILL NECESSITATE RAKING THE SITE TO REMOVE ORGANIC MATERIAL, TURNING THE SITE OVER AND RE- COMPACTING TO A MINIMUM.

RETAINING WALLS

19. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
20. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER TO THE RETAINING WALL THAN THE HEIGHT OF THE RETAINING WALL, THIS MAY PLACE ADDITIONAL LOADS ON THE WALL THAT WERE NOT INITIALLY DESIGNED FOR. AN INSPECTION OF THE STRUCTURAL INTEGRITY OF THE RETAINING WALL WILL BE REQUIRED TO PROVIDE CERTIFICATION AND/OR RECOMMENDATIONS PRIOR TO ANY CONSTRUCTION. PLEASE REFER BACK TO THIS OFFICE FOR ASSISTANCE.

STORMWATER DRAINAGE

21. ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF SOAKWELL AWAY FROM THE BUILDING AND SETBACK MINIMUM OF 1200mm, WHICHEVER IS GREATER. PLEASE REFER BACK TO THIS OFFICE IF REQUIRED THE SET-BACK CANNOT BE ACHIEVED.

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EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS – STABLE (A CLASS) SITES (Sheet 2 of 2)

WIND CLASSIFICATION

22. WIND CLASSIFICATION IS GIVEN FOR THE EXPECTED CONDITION 5 YEARS HENCE. THIS CLASSIFICATION IS LIMITED TO BUILDINGS CLASSES 1 AND 10, WHICH HAVE THE FOLLOWING LIMITATION (AS PER AS4055):

- a. MAXIMUM DISTANCE FROM THE GROUND LEVEL TO THE UNDERSIDE OF EAVES SHALL NOT EXCEED 6.0m.
- b. MAXIMUM DISTANCE FROM GROUND LEVEL TO THE HIGHEST POINT OF THE ROOF, EXCLUDING CHIMNEYS, SHALL NOT EXCEED 8.5m.
- c. THE ROOF PITCH SHALL NOT EXCEED 35°.
- d. THE WIDTH, EXCLUDING EAVES, SHALL NOT EXCEED 16.0m AND THE LENGTH SHALL NOT EXCEED 5x THE WIDTH.

IF THE BUILDING FALLS OUTSIDE OF THESE LIMITATIONS, THE STATED WIND CLASSIFICATION DOES NOT APPLY. REFER BACK TO THIS OFFICE FOR A REVISED WIND CLASSIFICATION.

ENVIRONMENTAL

23. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, IT IS RECOMMENDED THAT AN ENVIRONMENTAL ENGINEER BE ENGAGED.

SEISMIC

24. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF ≤ 0.11 . RECOMMENDED FOOTING DETAILS PROVIDED FOR SITES WITH AN EARTHQUAKE HAZARD FACTOR OF > 0.11 , ARE NOT FOR CONSTRUCTION, BUT FOR COSTING PURPOSES ONLY. IT IS RECOMMENDED REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

CORROSION CLASSIFICATION

25. THE CORROSION CLASSIFICATION HAS BEEN ASSESSED IN ACCORDANCE WITH AS3700.

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