SITE CLASSIFICATION REPORT

CERTIFICATE 2594908

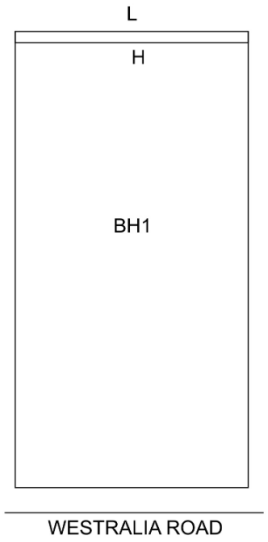
CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 436 WESTRALIA RD BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082876
DATE OF ASSESSMENT	3/11/22
SITE RECORD	

SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N1**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	Full Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1400 FILL - sand - pale brown; 1400 - 1500 SAND - grey; 1500 - 1700 SAND - pale grey; 1700 - 2500 sandy CLAY trace gravel (laterite) - pale grey mottled brown; 2500 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.

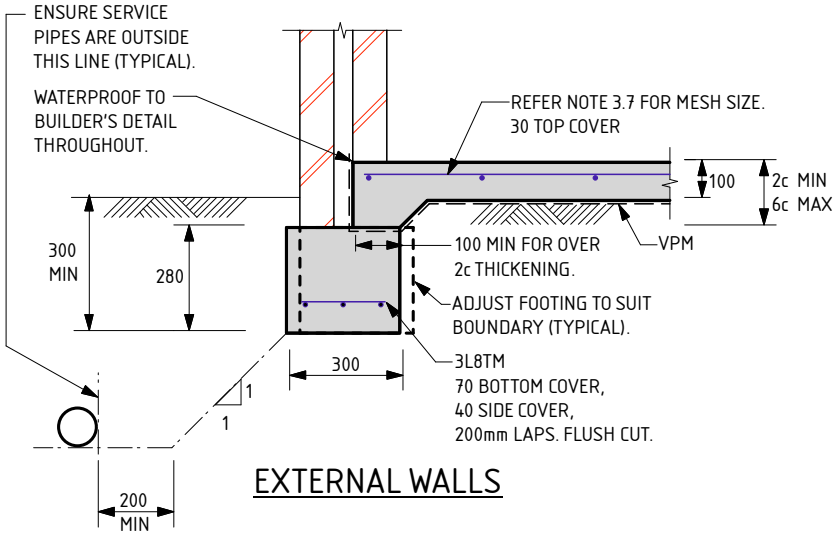
ADDITIONAL NOTES / REQUIREMENTS

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.

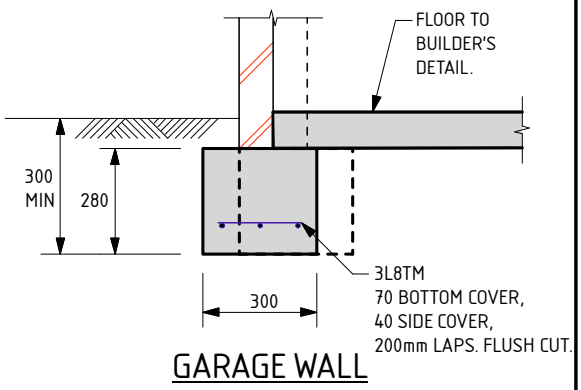
Stormwater Design
Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

-- END OF REPORT --

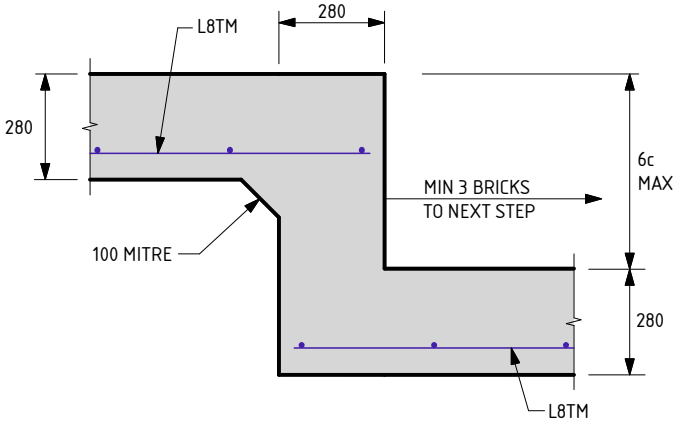
Signed:
Gervase Purich
Chief Executive Officer



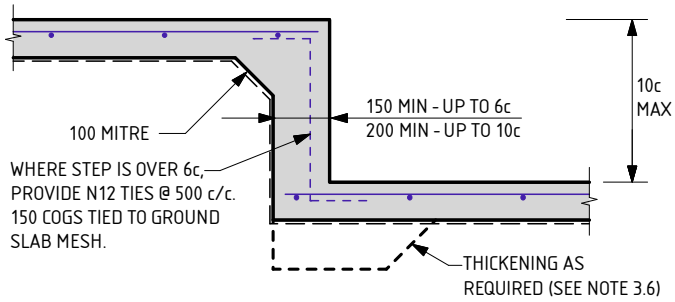
EXTERNAL WALLS



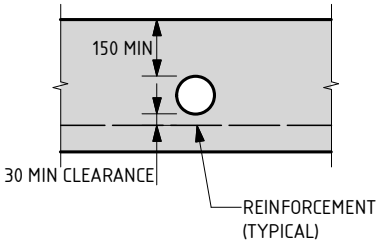
GARAGE WALL



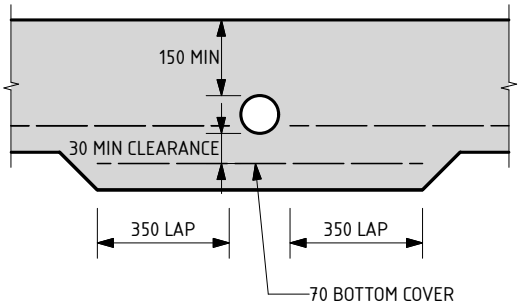
FOOTING STEP



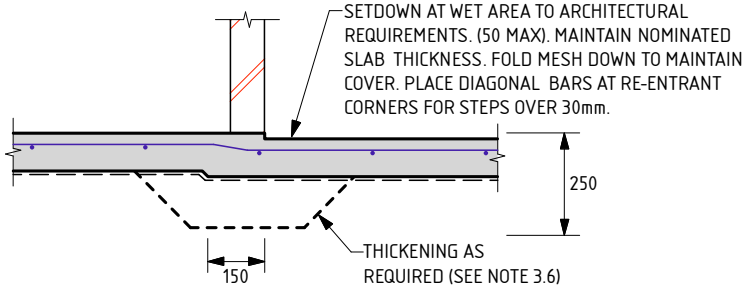
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

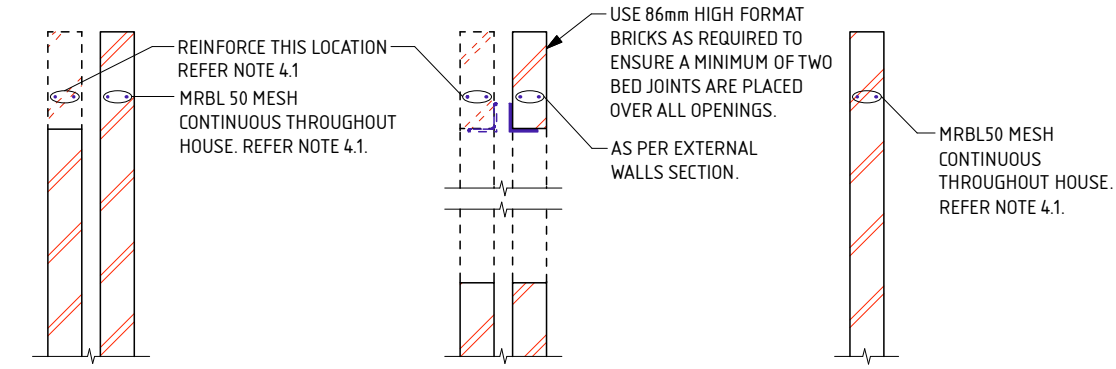
PROJECT: LOT 436 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

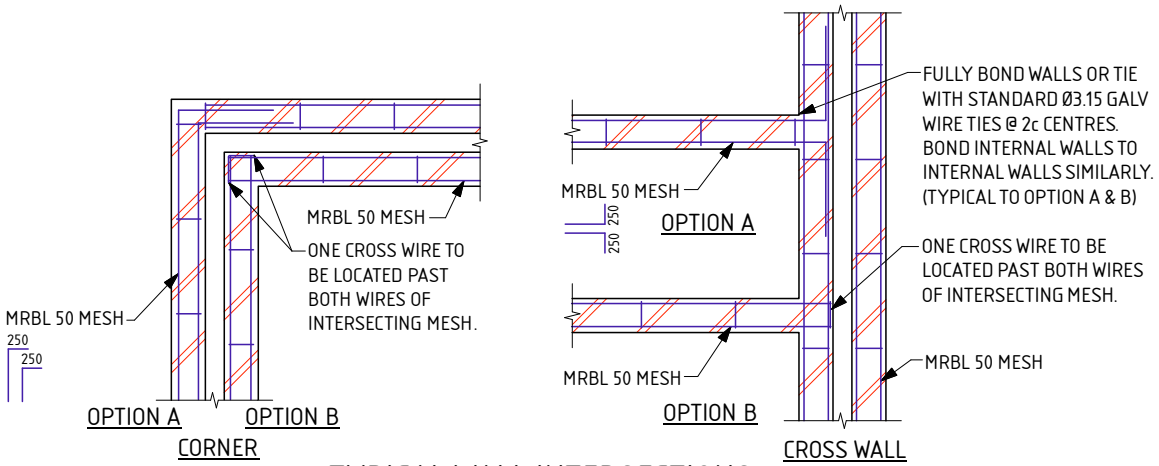
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 436 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 436 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 436 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED

SITE CLASSIFICATION REPORT

CERTIFICATE 2594907

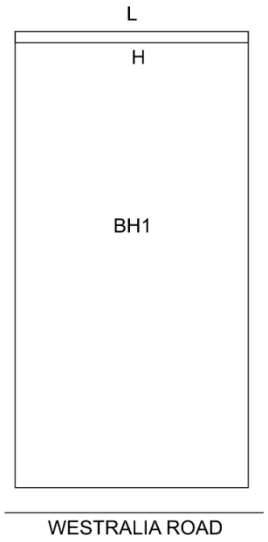
CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 437 WESTRALIA RD BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082879
DATE OF ASSESSMENT	3/11/22
SITE RECORD	

SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N1**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	Full Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1400 FILL - sand - pale brown; 1400 - 1500 SAND - grey; 1500 - 1700 SAND - pale grey; 1700 - 2500 sandy CLAY trace gravel (laterite) - pale brown / brown; 2500 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

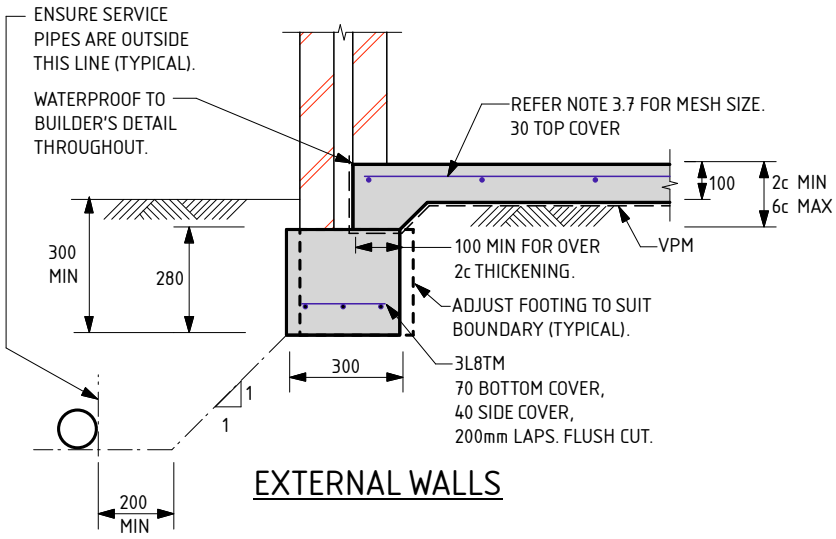
At the time of inspection the site was considered to be level and cleared. For specific levels of this site or topographical features, please refer to a professional site survey.

Stormwater Design

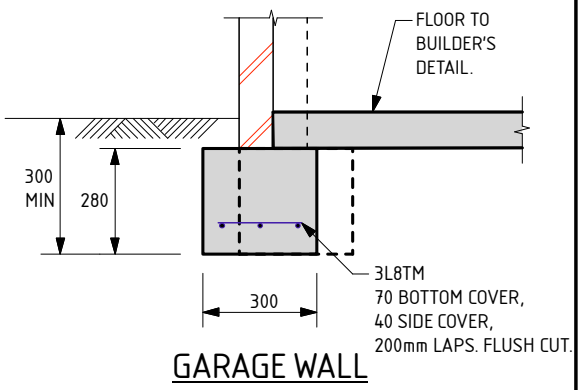
Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

-- END OF REPORT --

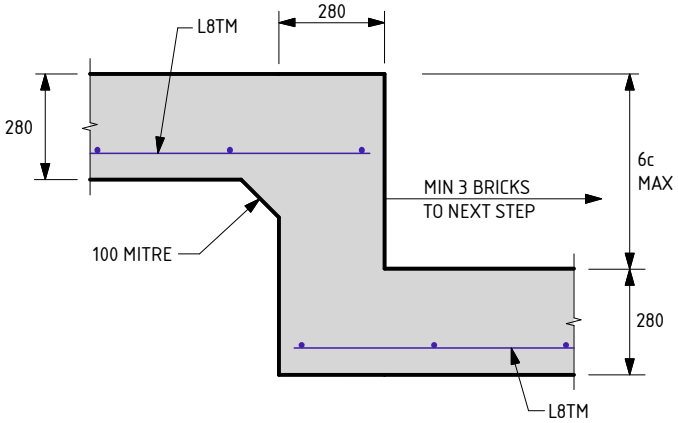
Signed:
Gervase Purich
Chief Executive Officer



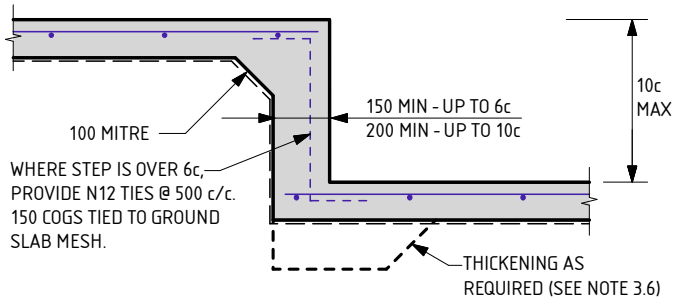
EXTERNAL WALLS



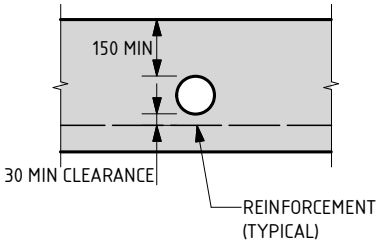
GARAGE WALL



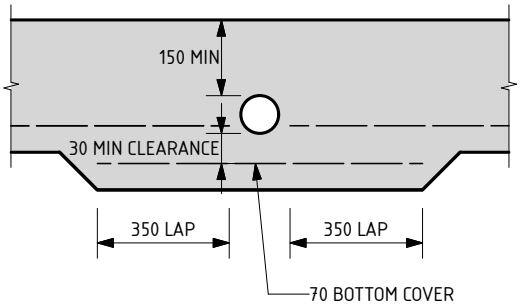
FOOTING STEP



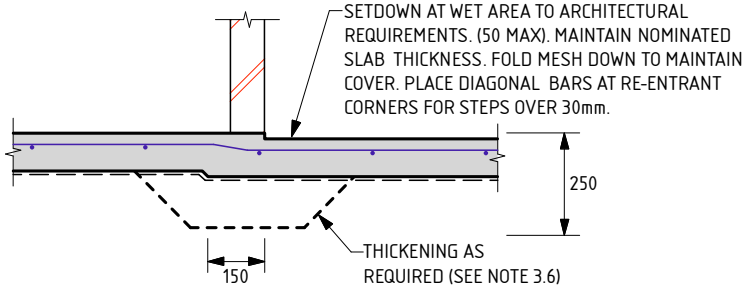
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

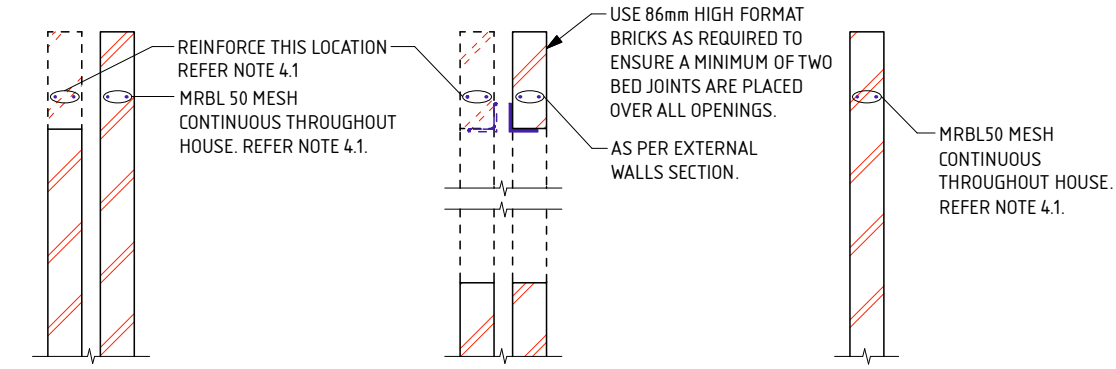
PROJECT: LOT 437 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

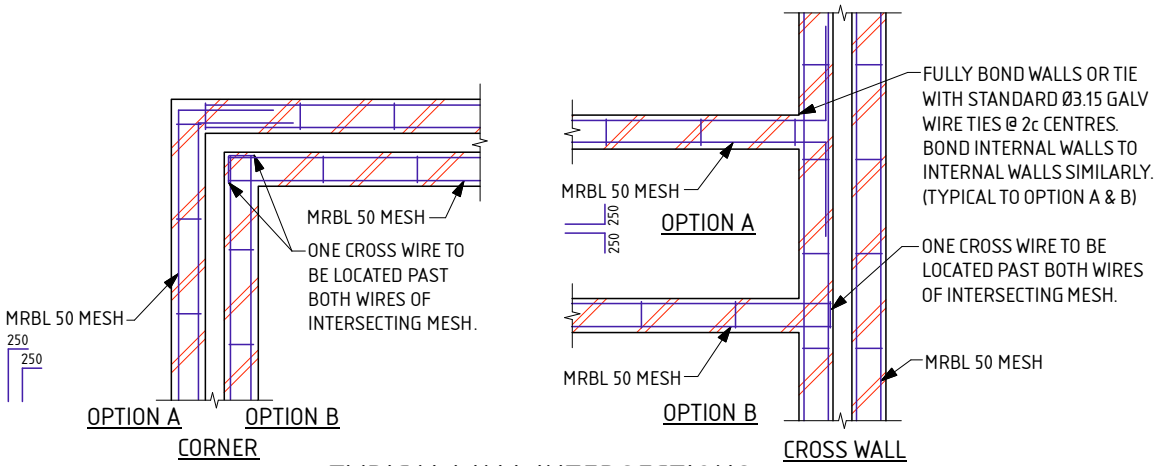
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 437 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 437 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 437 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED

SITE CLASSIFICATION REPORT

CERTIFICATE 2594906

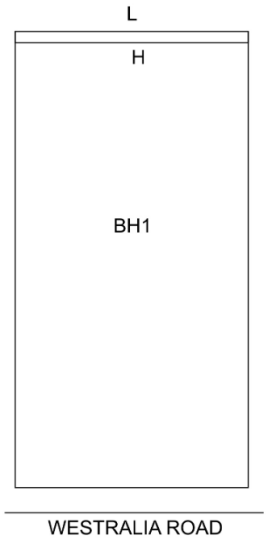
CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 438 WESTRALIA RD BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082881
DATE OF ASSESSMENT	3/11/22
SITE RECORD	

SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N1**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	Full Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1600 FILL - sand - pale brown; 1600 - 2500 sandy CLAY trace gravel (laterite) - pale brown / brown; 2500 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.

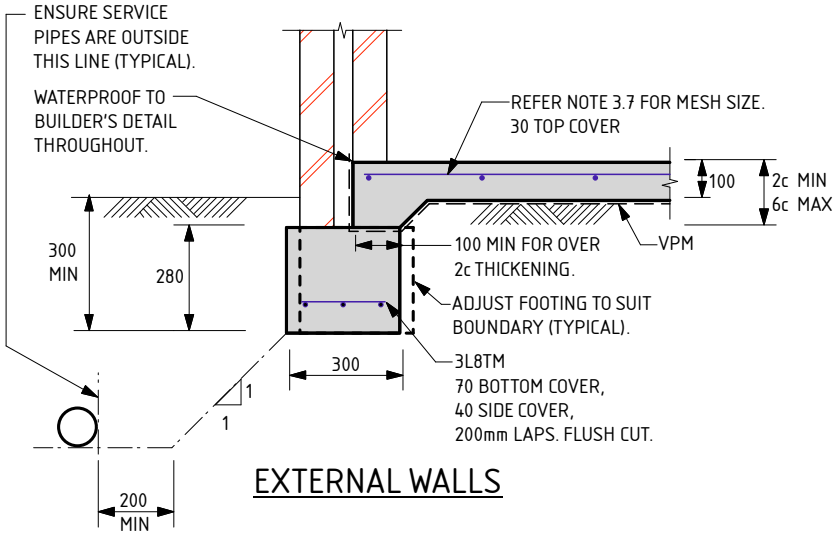
ADDITIONAL NOTES / REQUIREMENTS

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.

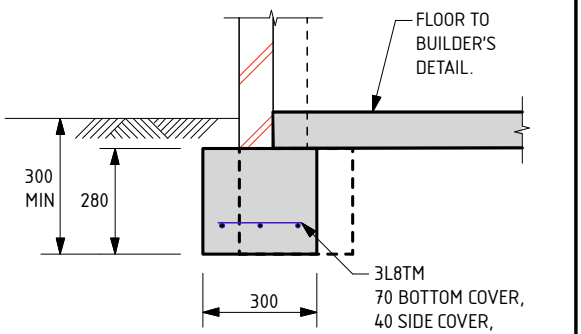
Stormwater Design
Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

-- END OF REPORT --

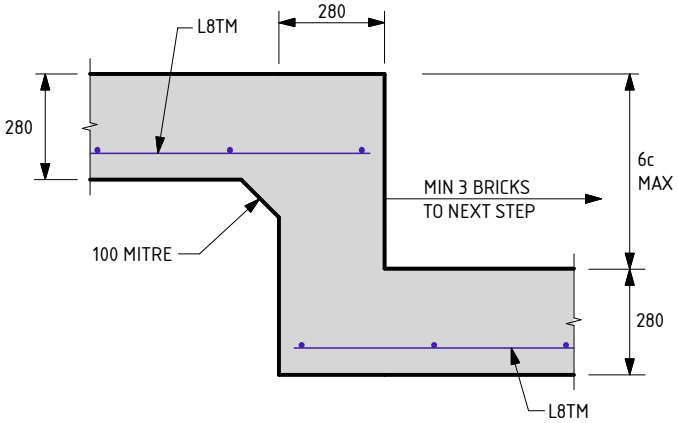
Signed:
Gervase Purich
Chief Executive Officer



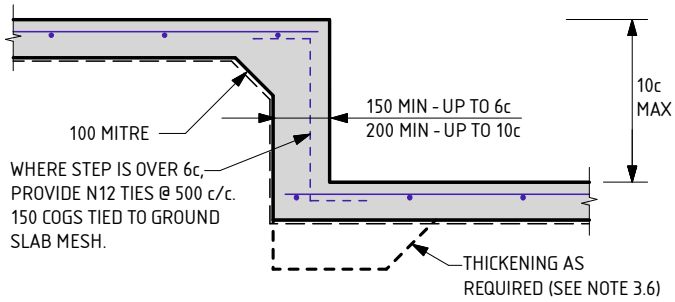
EXTERNAL WALLS



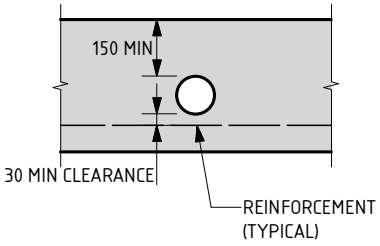
GARAGE WALL



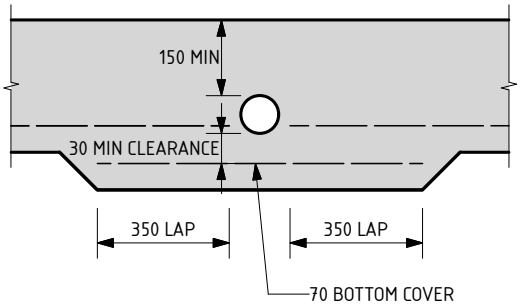
FOOTING STEP



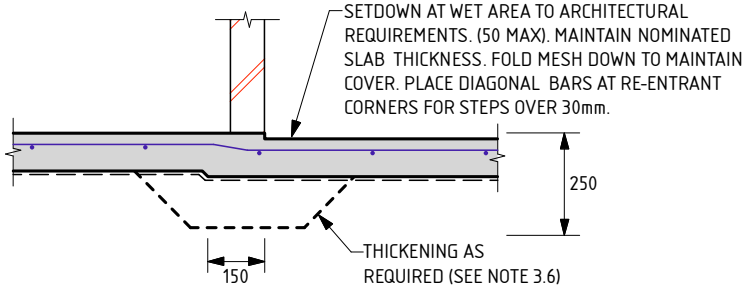
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

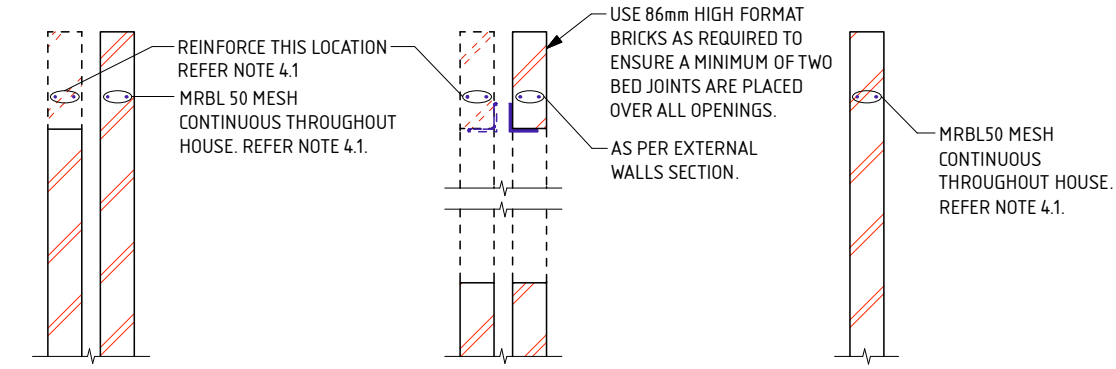
PROJECT: LOT 438 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

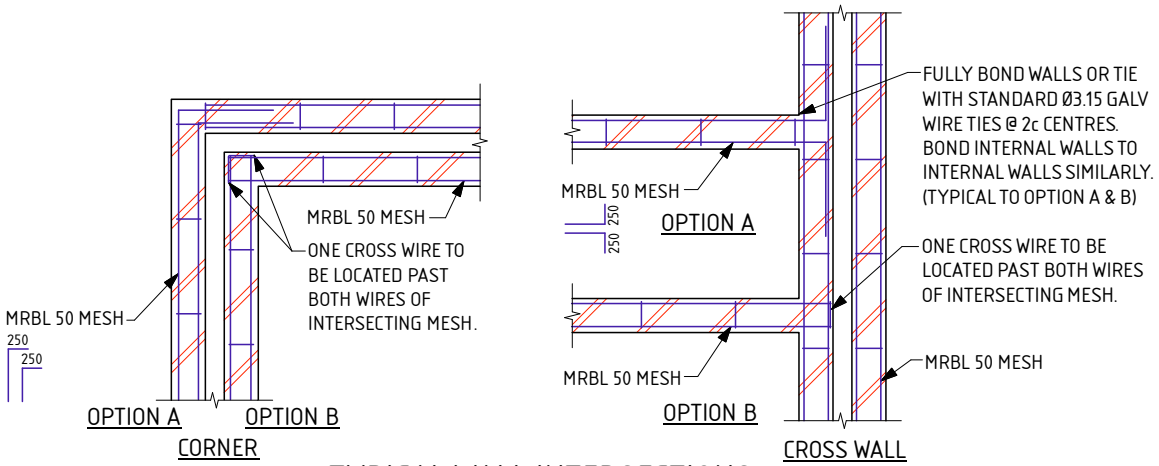
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 438 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 438 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 438 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED

SITE CLASSIFICATION REPORT

CERTIFICATE 2594880

CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 439 WESTRALIA RD BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082883
DATE OF ASSESSMENT	3/11/22
SITE RECORD	

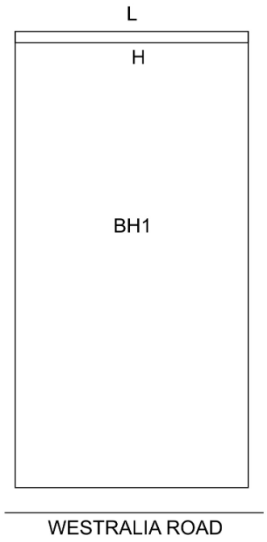
SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N2**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	Partial Shielding	

Issued Date: 9 November 2022

SOIL PROFILE

BOREHOLE 1: 0 - 1700 FILL - sand - pale brown; 1700 - 2300 (Sandy CLAY trace gravel with 14.5% linear shrinkage and 73% passing the 0.425mm sieve) - pale brown; 2300 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.

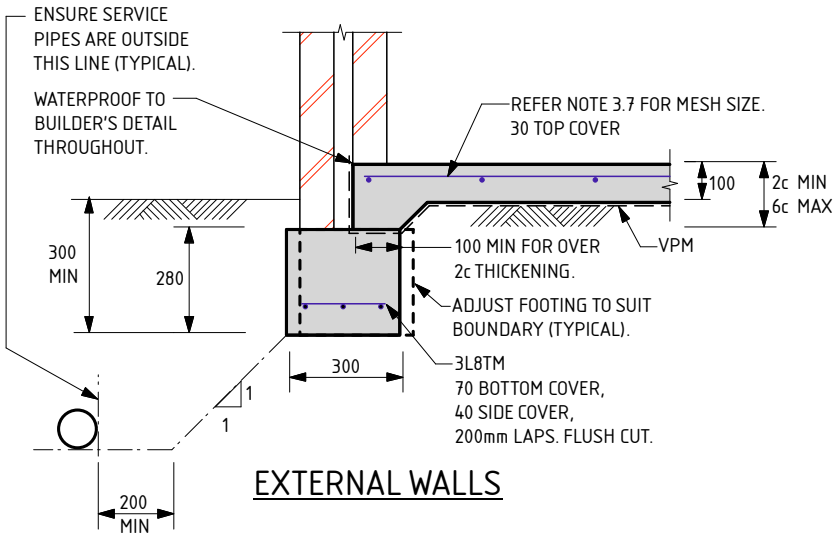
Stormwater Design

Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

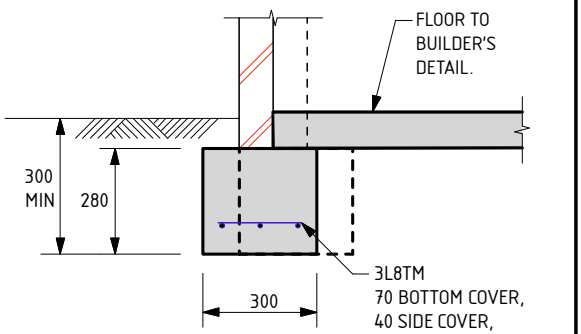
-- END OF REPORT --

Signed:

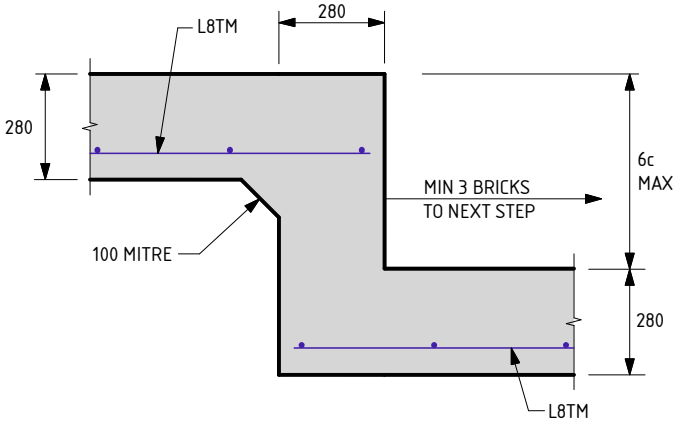
Gervase Purich
Chief Executive Officer



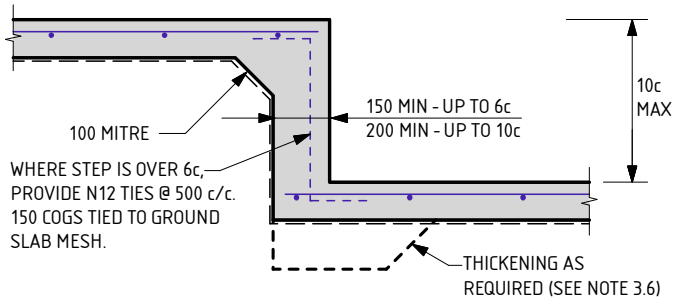
EXTERNAL WALLS



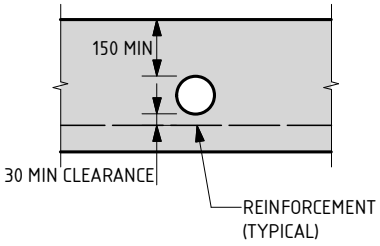
GARAGE WALL



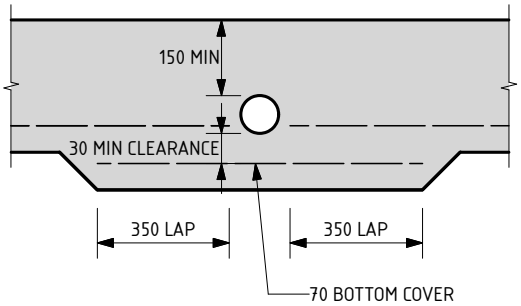
FOOTING STEP



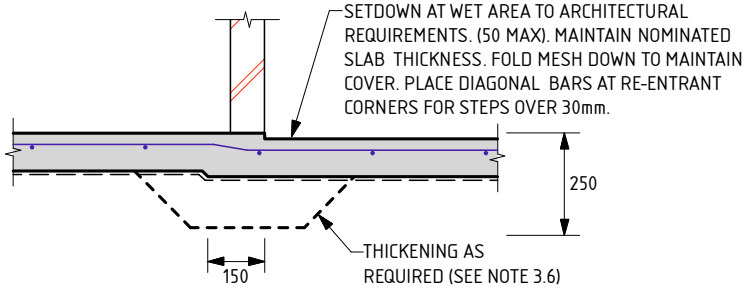
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

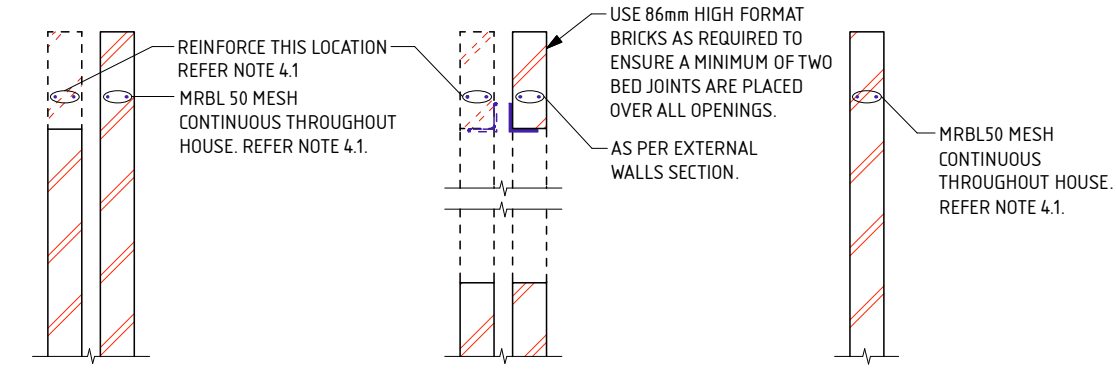
PROJECT: LOT 439 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

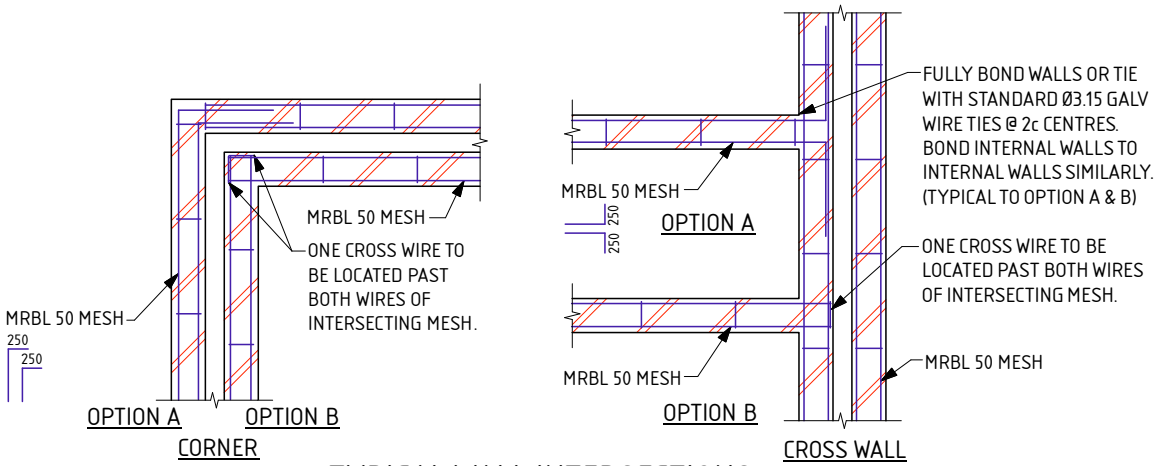
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 439 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 439 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 439 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED

SITE CLASSIFICATION REPORT

CERTIFICATE 2594905

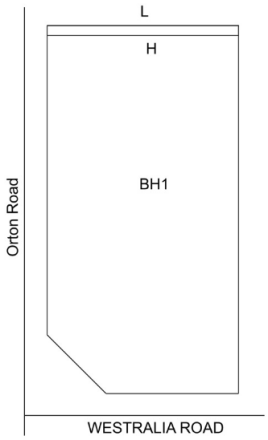
CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 440 WESTRALIA RD BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082885
DATE OF ASSESSMENT	3/11/22
SITE RECORD	

SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N2**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	No Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1700 FILL - sand - pale brown; 1700 - 2000 sandy CLAY trace gravel (laterite) - pale brown / brown; 2000 hard ground refusal.

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.

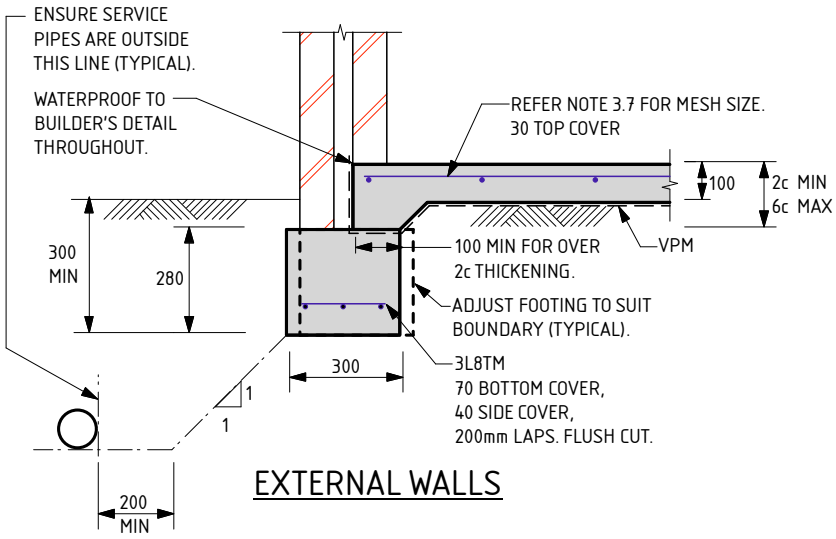
ADDITIONAL NOTES / REQUIREMENTS

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.

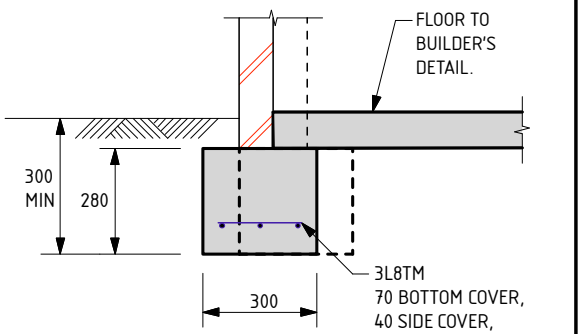
Stormwater Design
Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

-- END OF REPORT --

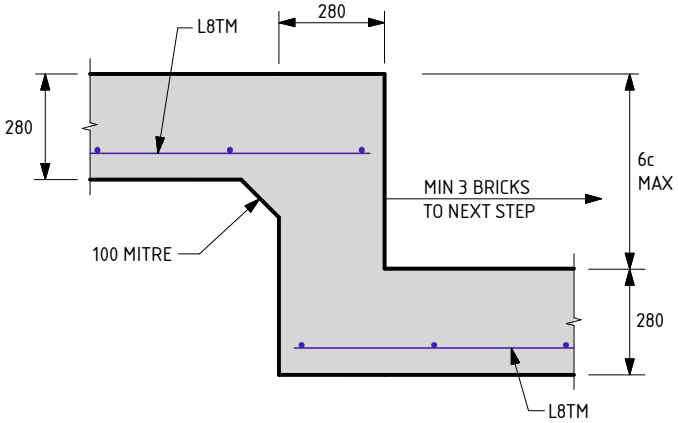
Signed:
Gervase Purich
Chief Executive Officer



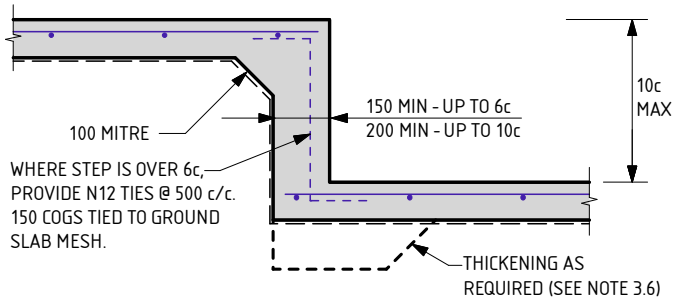
EXTERNAL WALLS



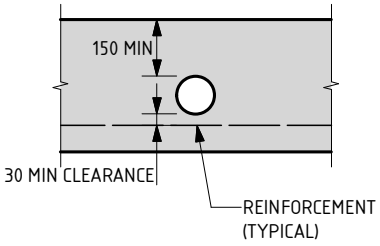
GARAGE WALL



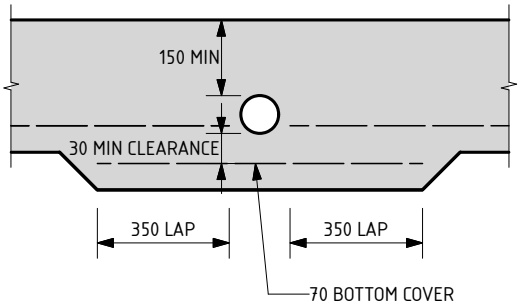
FOOTING STEP



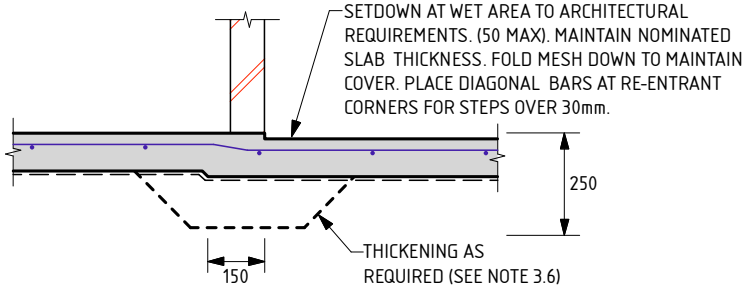
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

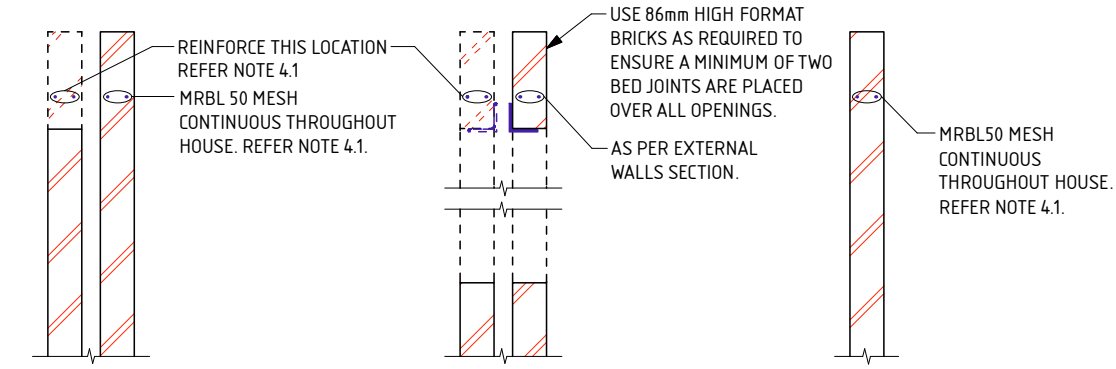
PROJECT: LOT 440 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

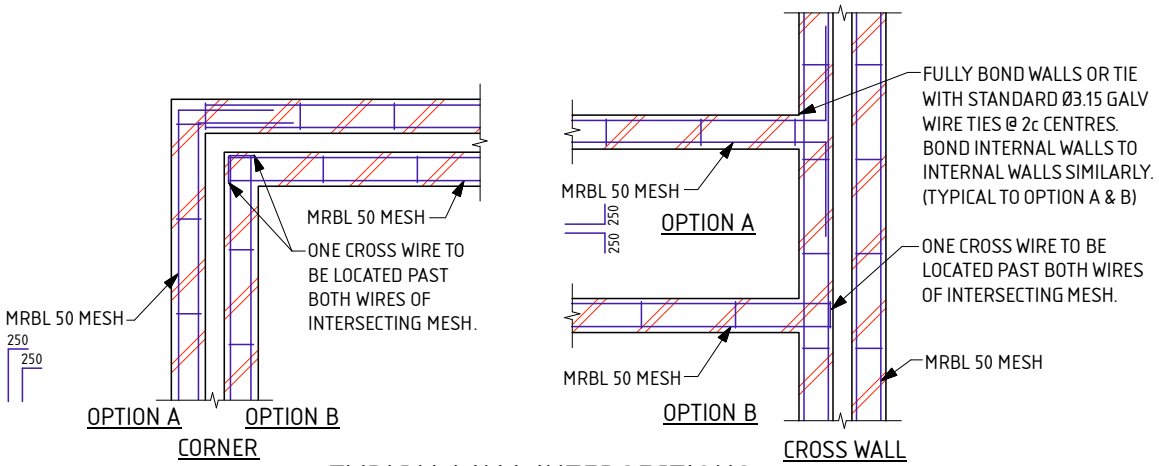
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 440 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 440 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 440 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED

SITE CLASSIFICATION REPORT

CERTIFICATE 2594895

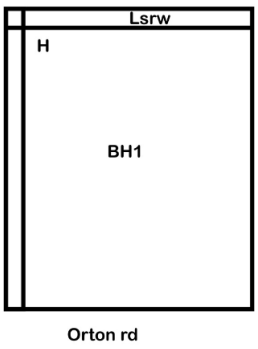
CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 441 ORTON RD BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082904
DATE OF ASSESSMENT	4/11/22
SITE RECORD	

SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N2**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	No Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1300 FILL - sand - brown; 1300 - 1600 FILL - sand trace gravel - grey; 1600 - 1800 clayey SAND with gravel - brown; 1800 hard ground refusal.

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.

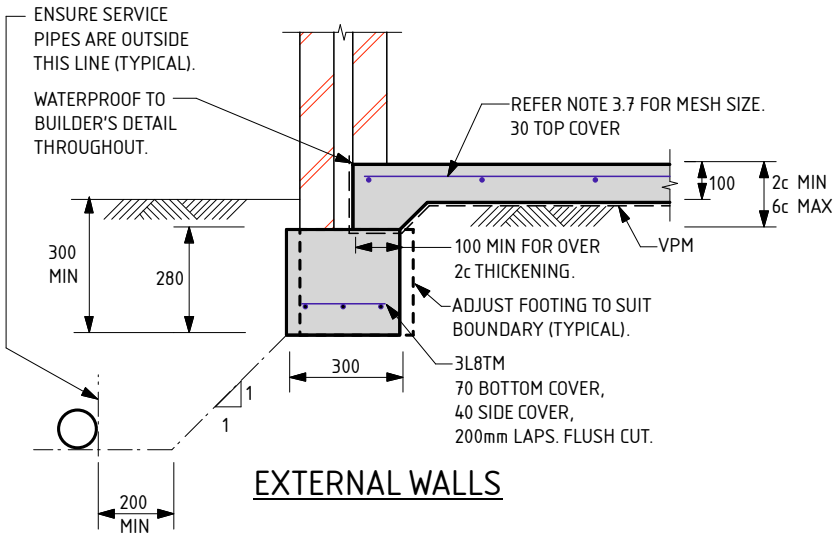
ADDITIONAL NOTES / REQUIREMENTS

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.

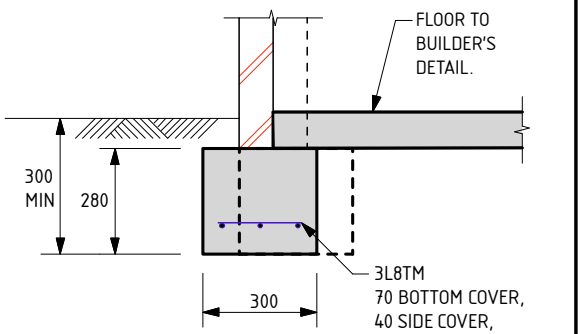
Stormwater Design
Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

-- END OF REPORT --

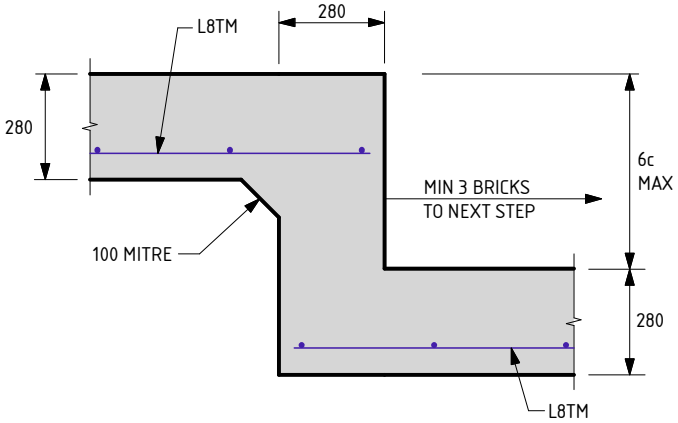
Signed:
Gervase Purich
Chief Executive Officer



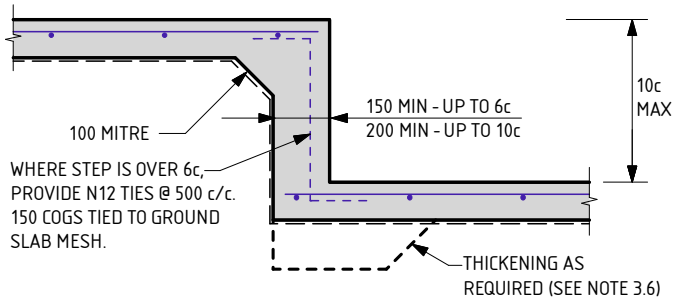
EXTERNAL WALLS



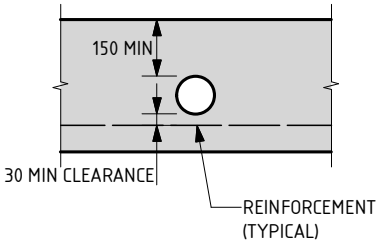
GARAGE WALL



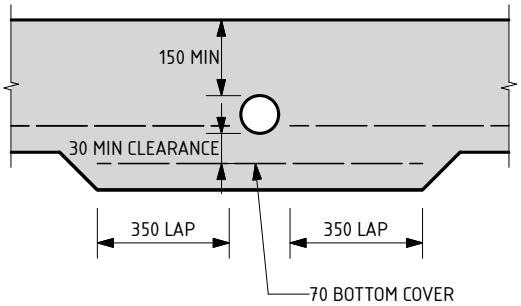
FOOTING STEP



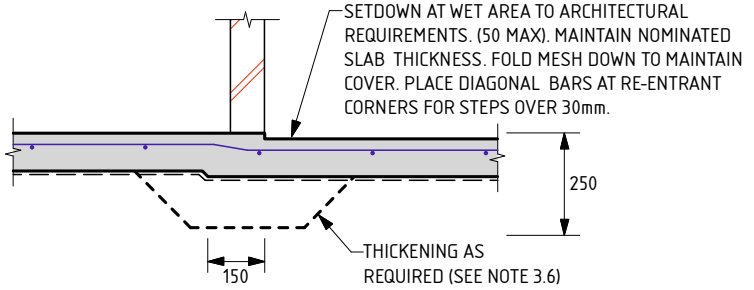
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

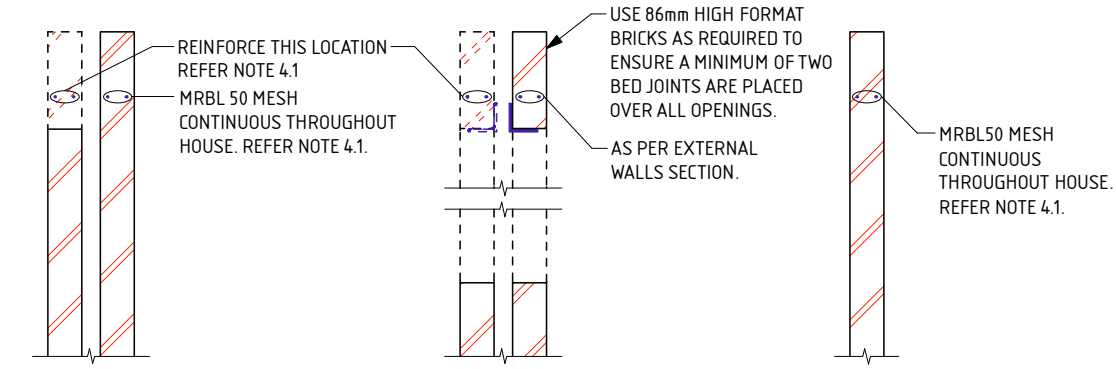
PROJECT: LOT 441 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

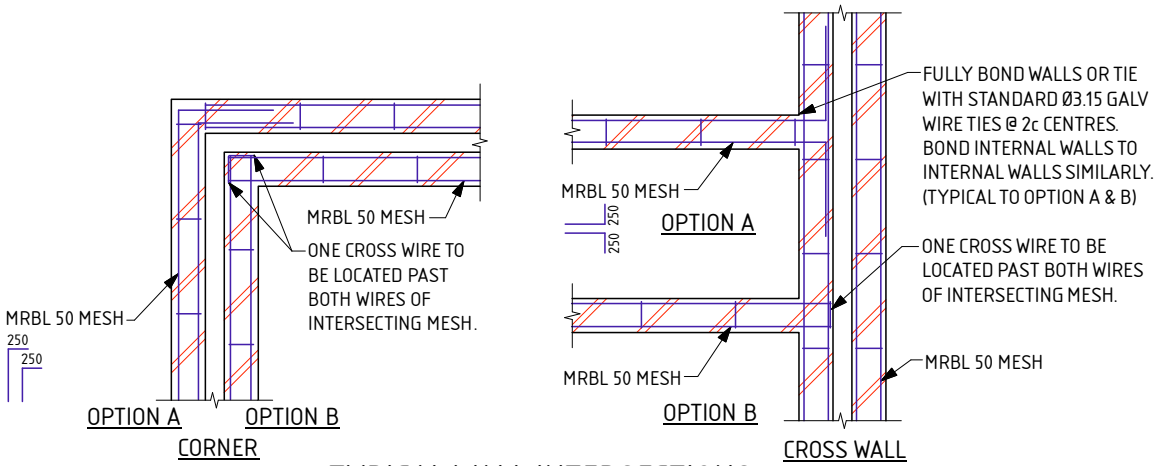
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 441 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 441 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 441 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED

SITE CLASSIFICATION REPORT

CERTIFICATE 2594894

CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 442 ORTON RD BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082903
DATE OF ASSESSMENT	4/11/22
SITE RECORD	

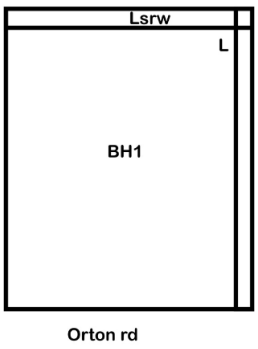
SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N2**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	No Shielding	

WA | QLD | NSW | VIC
1 Erindale Road, Balcatta, Western Australia 6021 | PO Box 792, Balcatta, Western Australia 6914
Phone (+618) 9205 4500 | Fax (+618) 9205 4501 | Email wageotechsite@structerre.com.au | Web www.structerre.com.au
ABN 71 349 772 837 Zemla Pty Ltd ACN 008 966 283 as trustee for the Young Purich and Higham Unit Trust trading as Structerre Consulting Engineers

SOIL PROFILE

BOREHOLE 1: 0 - 1300 FILL - sand - brown; 1300 - 1600 FILL - sand trace gravel - grey; 1600 - 1800 clayey SAND with gravel - brown; 1800 hard ground refusal.

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.

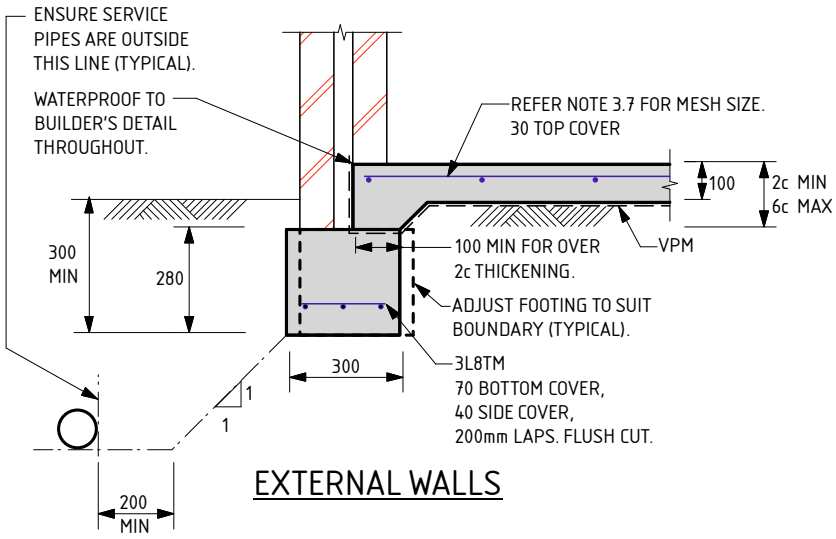
ADDITIONAL NOTES / REQUIREMENTS

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.

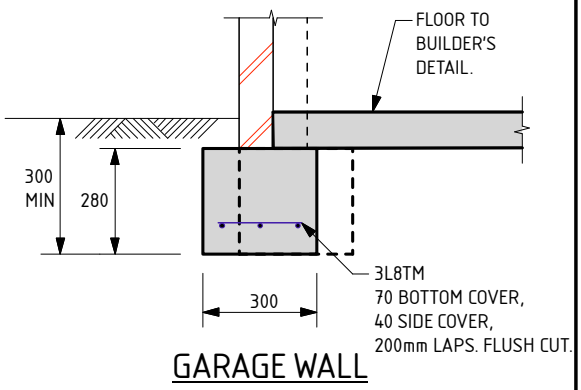
Stormwater Design
Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

-- END OF REPORT --

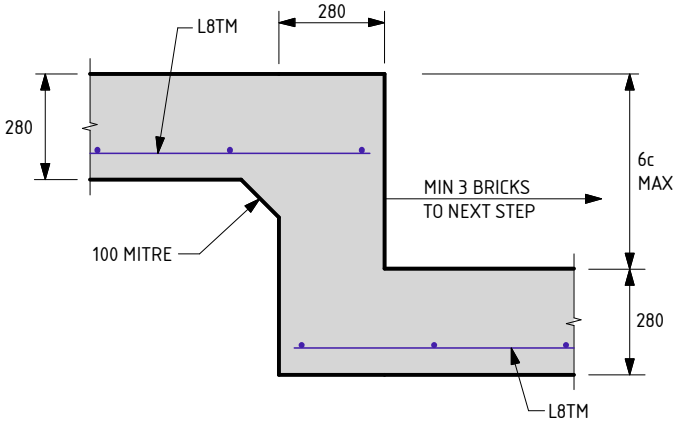
Signed:
Gervase Purich
Chief Executive Officer



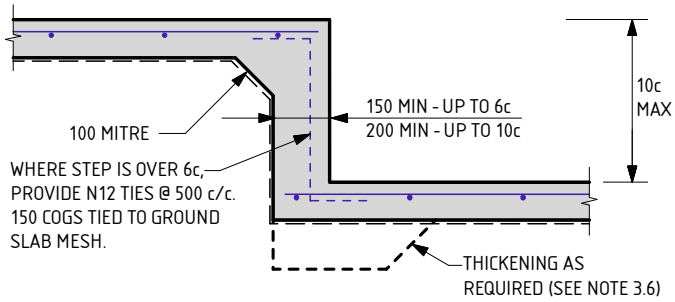
EXTERNAL WALLS



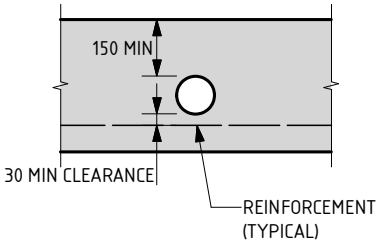
GARAGE WALL



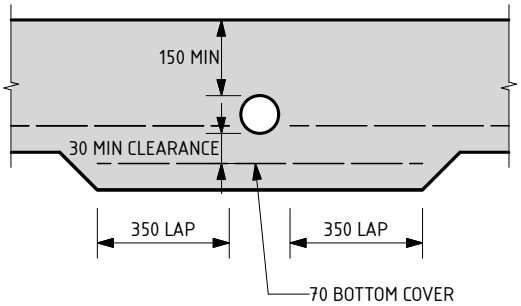
FOOTING STEP



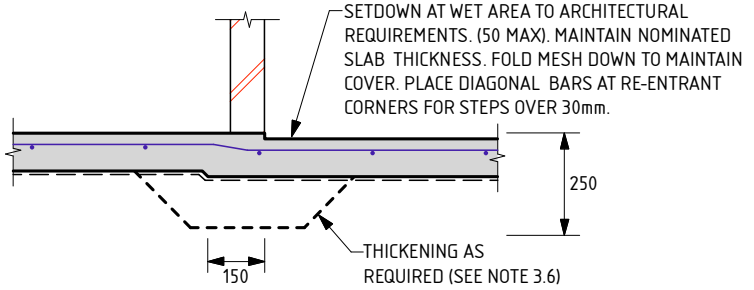
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

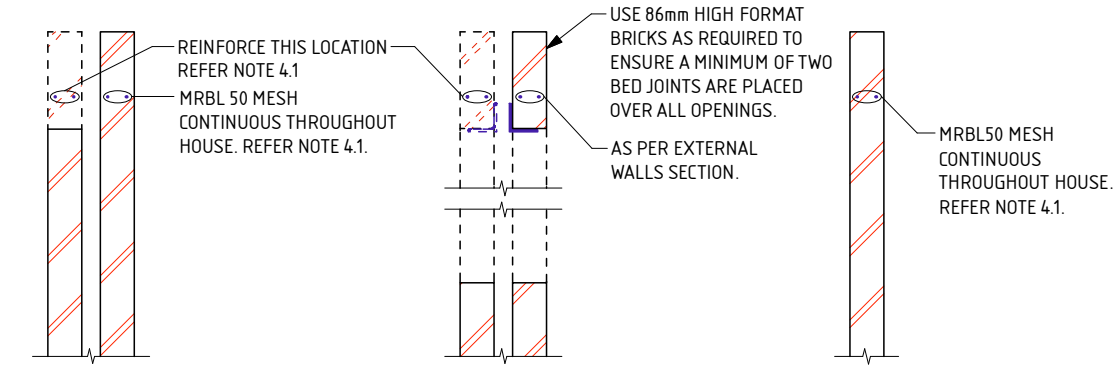
PROJECT: LOT 442 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

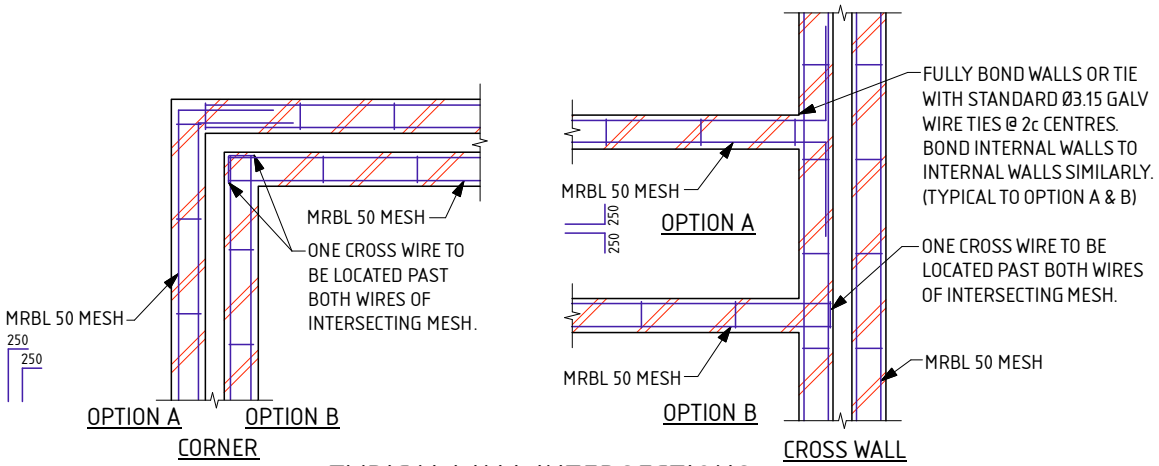
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 442 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 442 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 442 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED

SITE CLASSIFICATION REPORT

CERTIFICATE 2594893

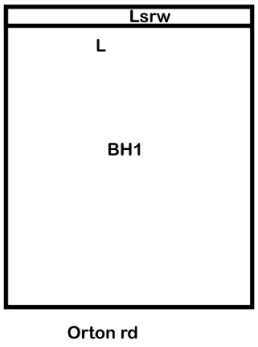
CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 443 ORTON RD BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082902
DATE OF ASSESSMENT	4/11/22
SITE RECORD	

SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N2**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	No Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1300 FILL - sand - brown; 1300 - 1600 FILL - sand trace gravel - grey; 1600 - 1800 clayey SAND with gravel - brown; 1800 hard ground refusal.

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.

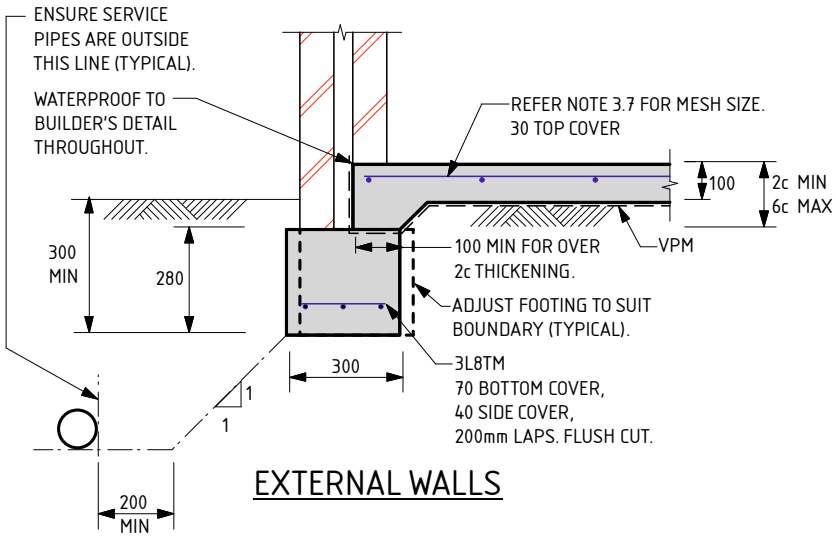
ADDITIONAL NOTES / REQUIREMENTS

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.

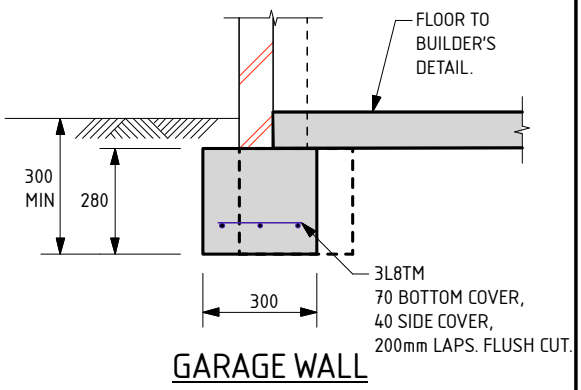
Stormwater Design
Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

-- END OF REPORT --

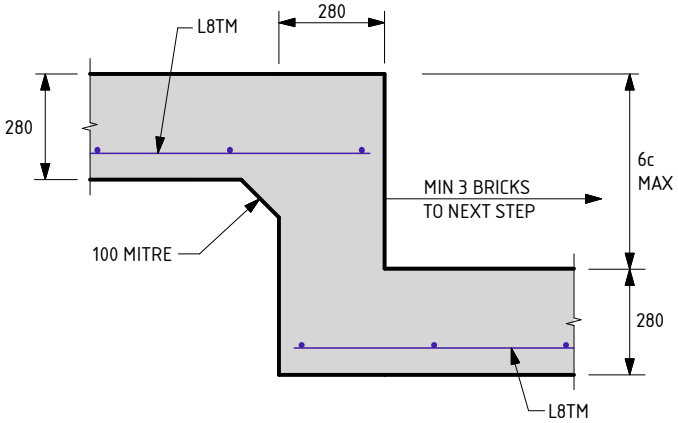
Signed:
Gervase Purich
Chief Executive Officer



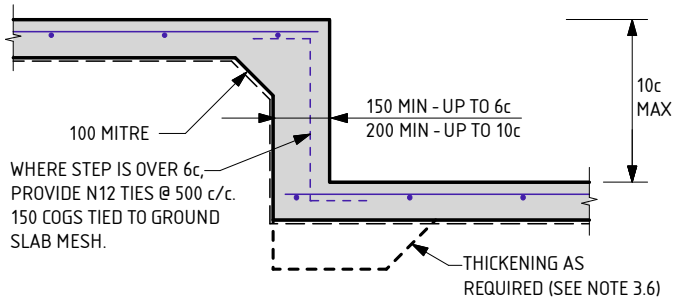
EXTERNAL WALLS



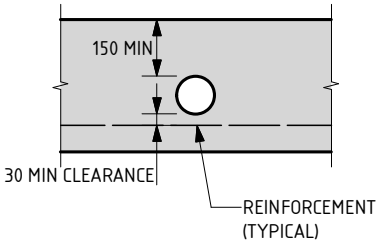
GARAGE WALL



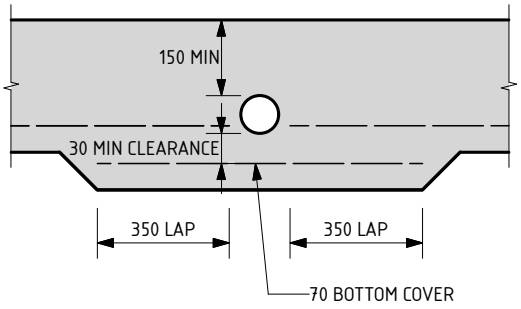
FOOTING STEP



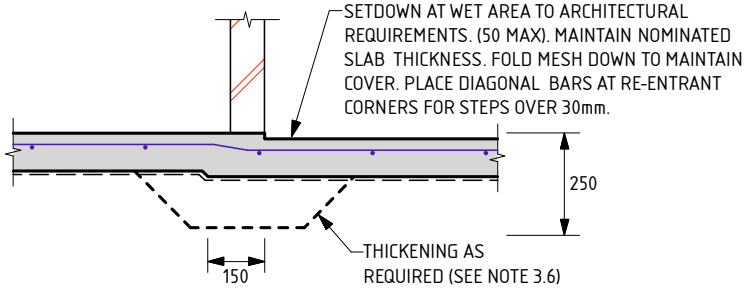
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

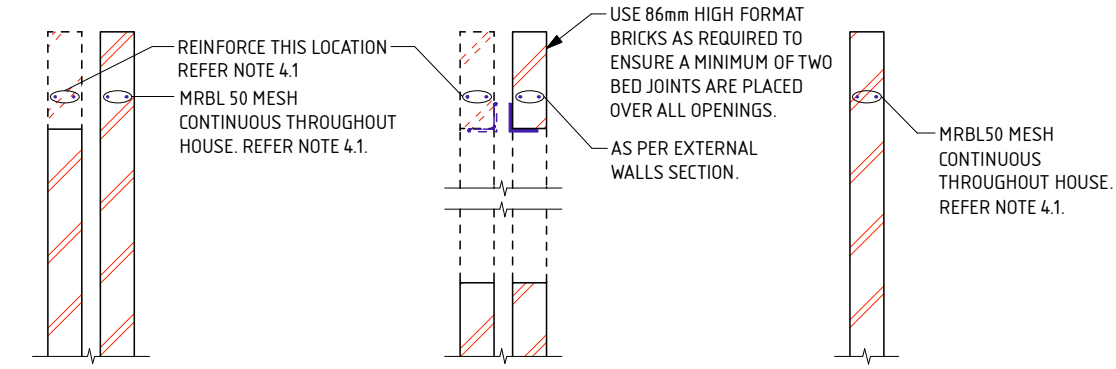
PROJECT: LOT 443 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

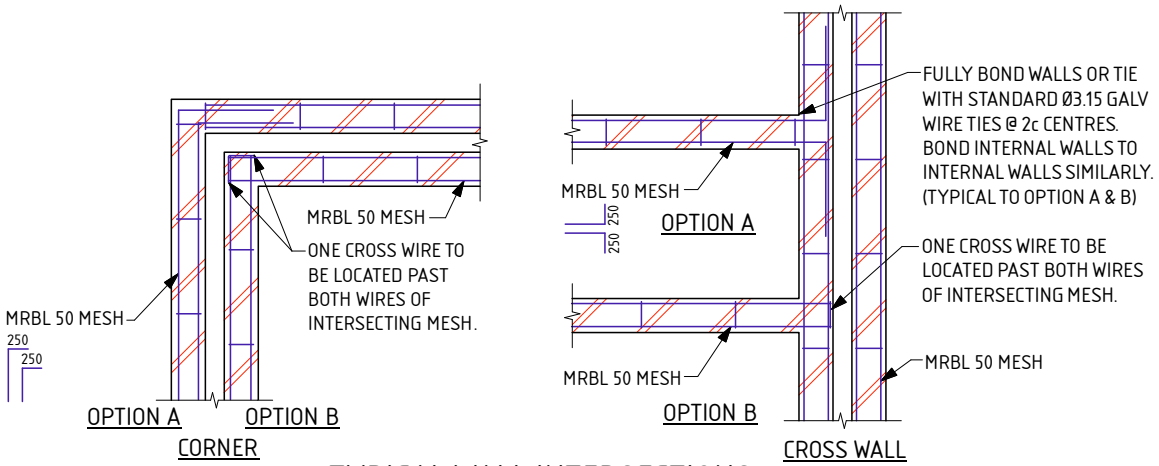
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 443 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 443 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 443 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED

SITE CLASSIFICATION REPORT

CERTIFICATE 2594892

CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 444 ORTON RD BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082901
DATE OF ASSESSMENT	4/11/22

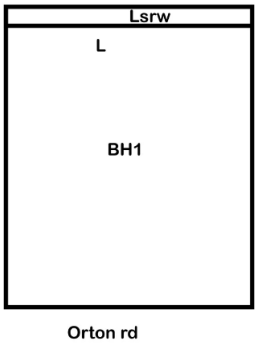
SITE RECORD

SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N2**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	No Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1300 FILL - sand - brown; 1300 - 1600 FILL - sand trace gravel - grey; 1600 - 1800 clayey SAND with gravel - brown; 1800 hard ground refusal.

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.

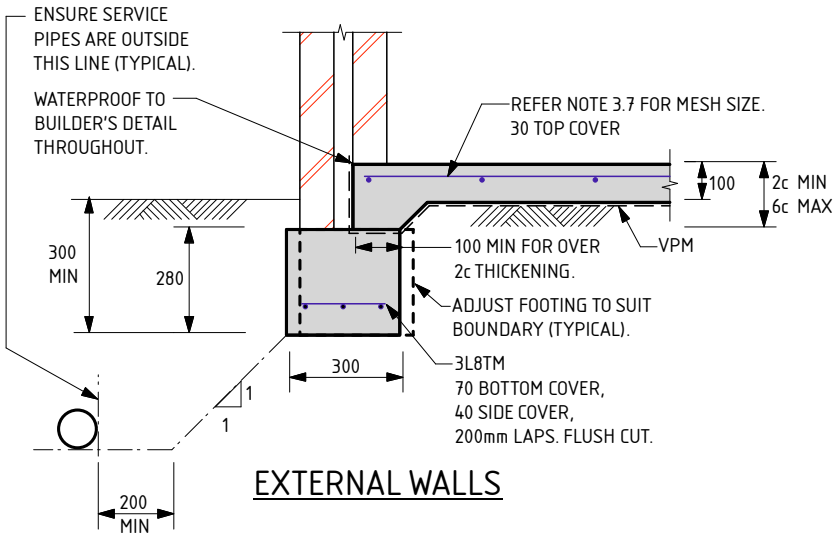
ADDITIONAL NOTES / REQUIREMENTS

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.

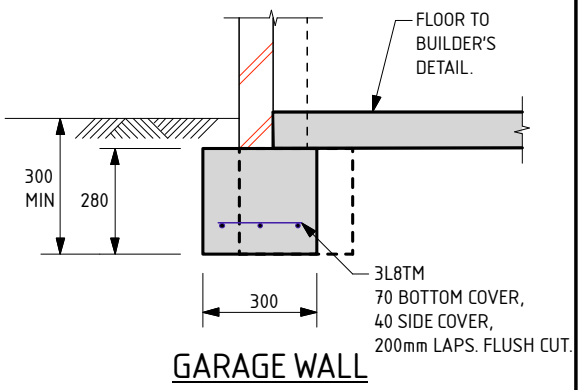
Stormwater Design
Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

-- END OF REPORT --

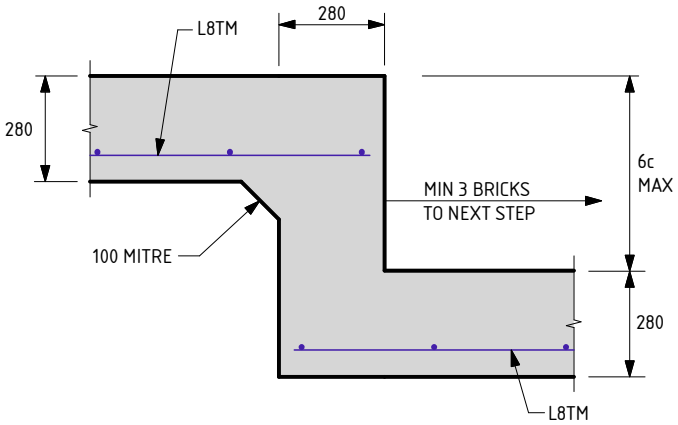
Signed:
Gervase Purich
Chief Executive Officer



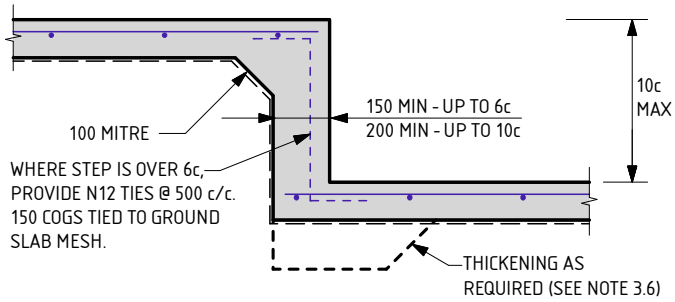
EXTERNAL WALLS



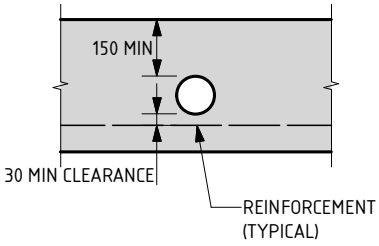
GARAGE WALL



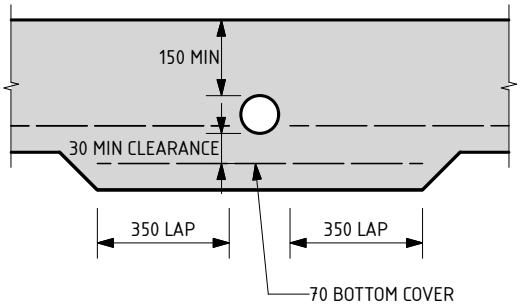
FOOTING STEP



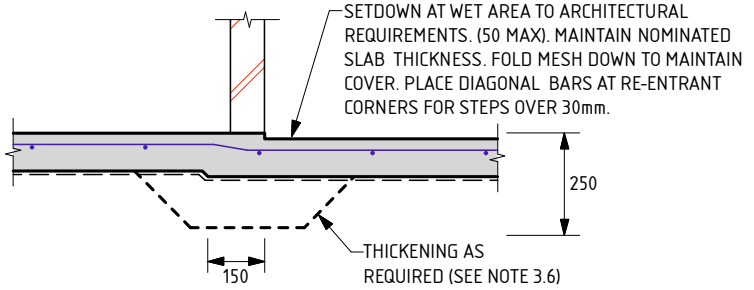
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

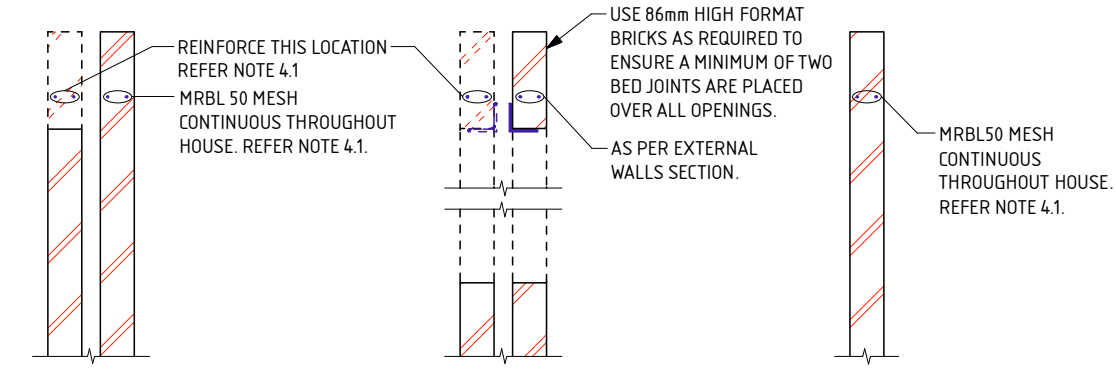
PROJECT: LOT 444 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

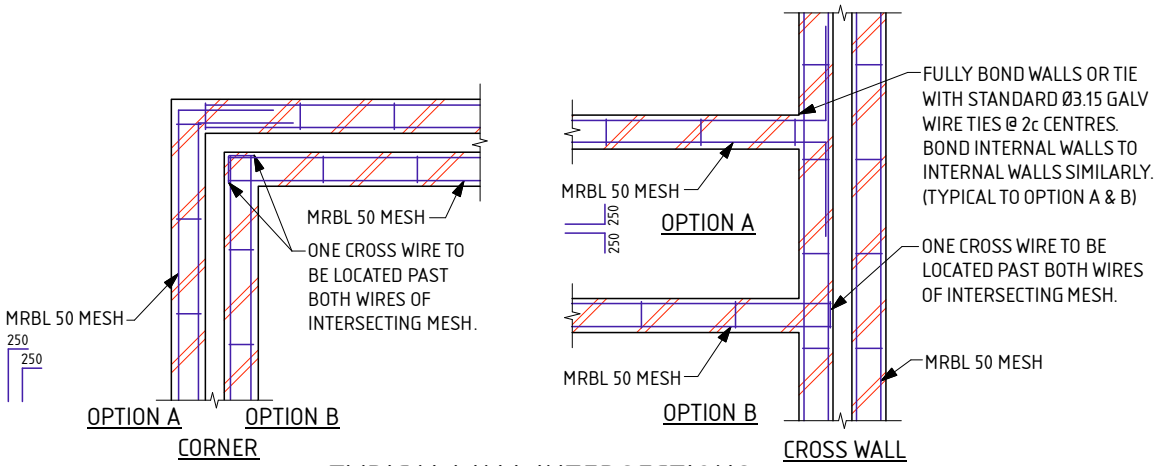
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 444 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 444 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 444 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED

SITE CLASSIFICATION REPORT

CERTIFICATE 2594915

CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 445 ORTON RD BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082897
DATE OF ASSESSMENT	4/11/22

SITE RECORD

SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N2**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	No Shielding	

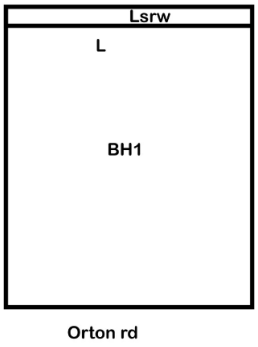
WA | QLD | NSW | VIC
1 Erindale Road, Balcatta, Western Australia 6021 | PO Box 792, Balcatta, Western Australia 6914
Phone (+618) 9205 4500 | Fax (+618) 9205 4501 | Email wageotechsite@structerre.com.au | Web www.structerre.com.au
ABN 71 349 772 837 Zemla Pty Ltd ACN 008 966 283 as trustee for the Young Purich and Higham Unit Trust trading as Structerre Consulting Engineers

Issued Date: 9 November 2022

SOIL PROFILE

BOREHOLE 1: 0 - 1300 FILL - sand - brown; 1300 - 1600 FILL - sand trace gravel - grey; 1600 - 1800 clayey SAND with gravel - brown; 1800 hard ground refusal.

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.

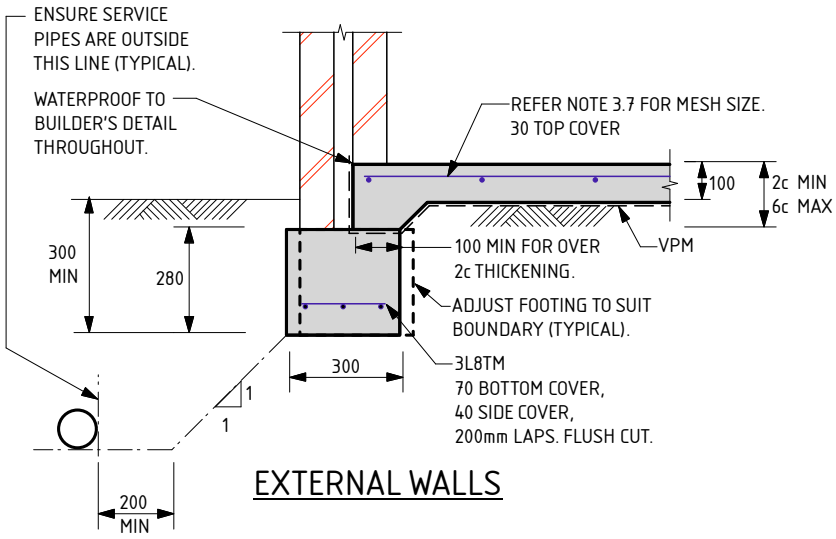
ADDITIONAL NOTES / REQUIREMENTS

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.

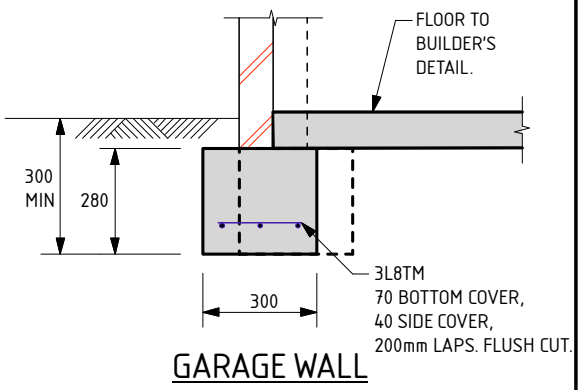
Stormwater Design
Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

-- END OF REPORT --

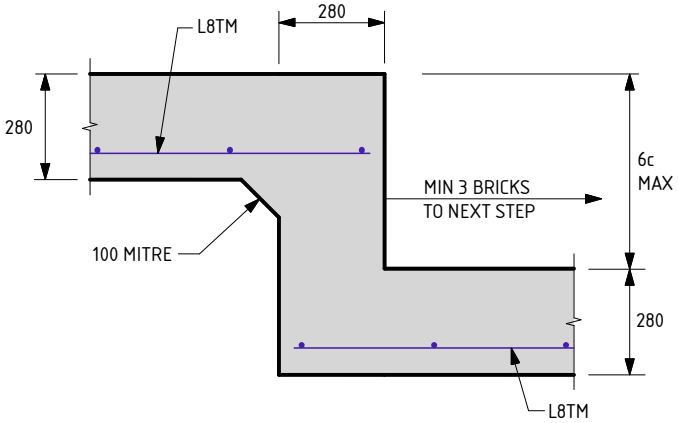
Signed:
Gervase Purich
Chief Executive Officer



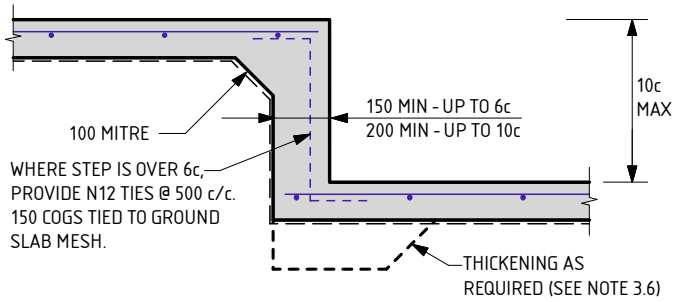
EXTERNAL WALLS



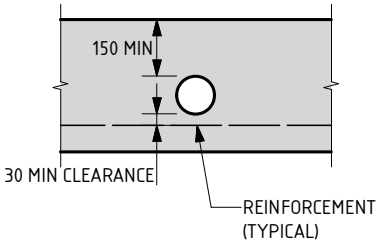
GARAGE WALL



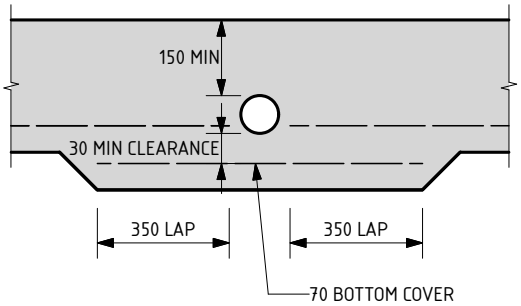
FOOTING STEP



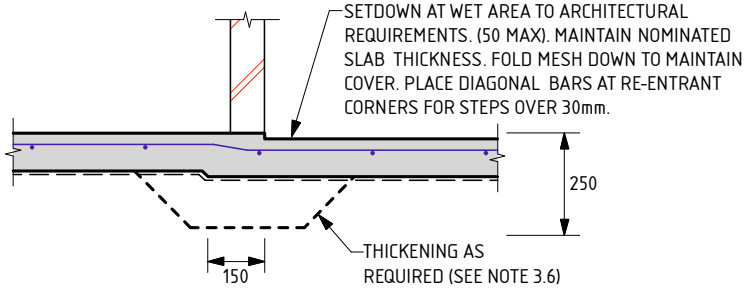
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

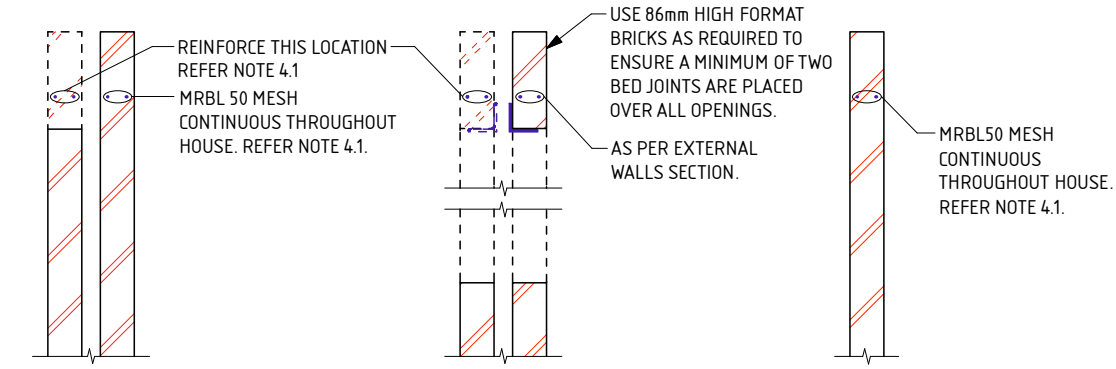
PROJECT: LOT 445 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

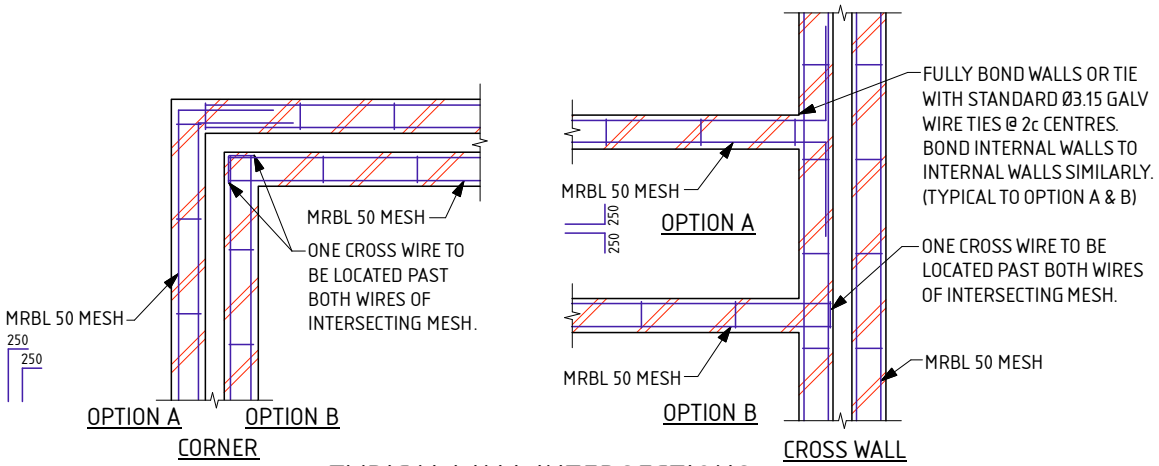
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 445 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 445 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 445 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED

SITE CLASSIFICATION REPORT

CERTIFICATE 2594896

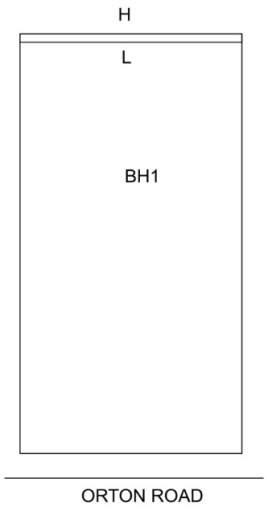
CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 446 ORTON RD BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082896
DATE OF ASSESSMENT	3/11/22
SITE RECORD	

SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N2**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	No Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1700 FILL - sand - brown; 1700 - 1900 clayey SAND with gravel (laterite) - brown; 1900 hard ground refusal.

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.

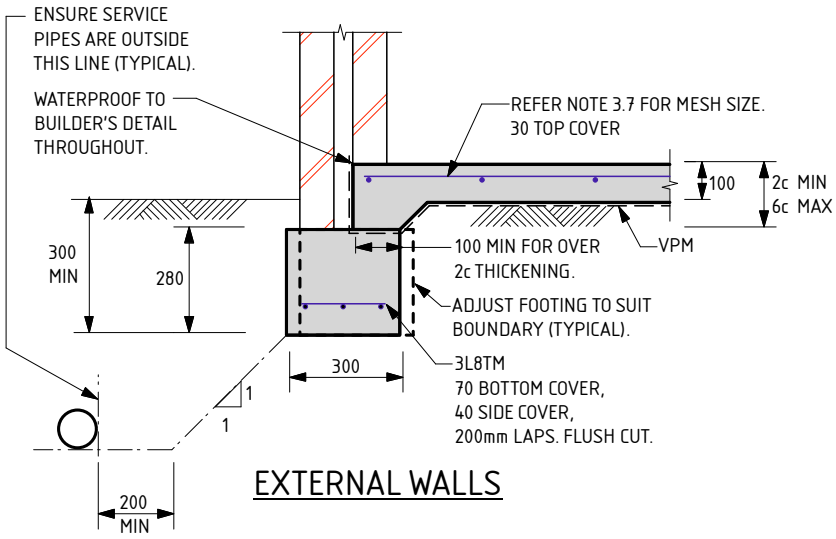
ADDITIONAL NOTES / REQUIREMENTS

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.

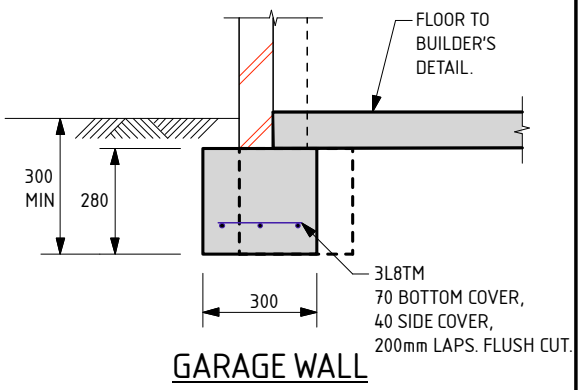
Stormwater Design
Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

-- END OF REPORT --

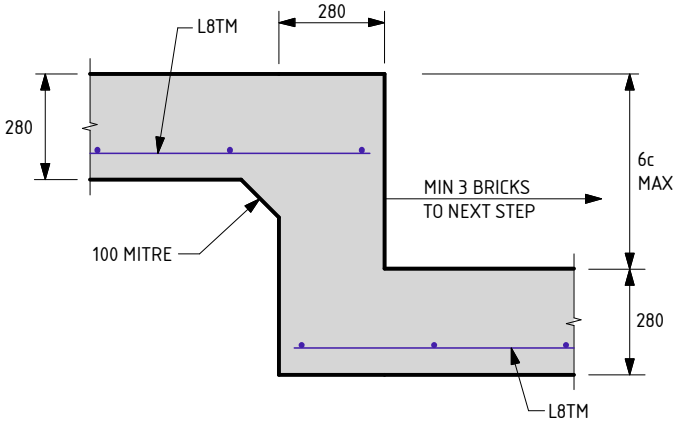
Signed:
Gervase Purich
Chief Executive Officer



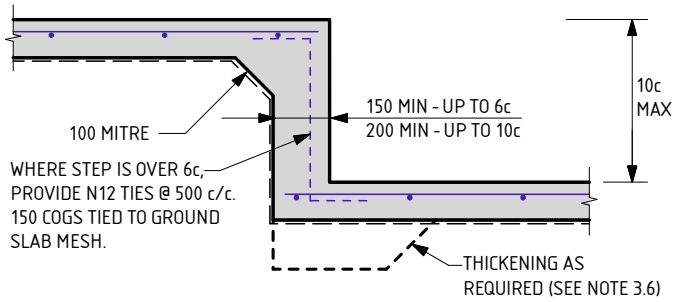
EXTERNAL WALLS



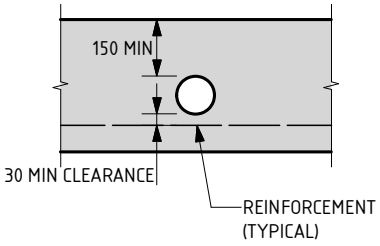
GARAGE WALL



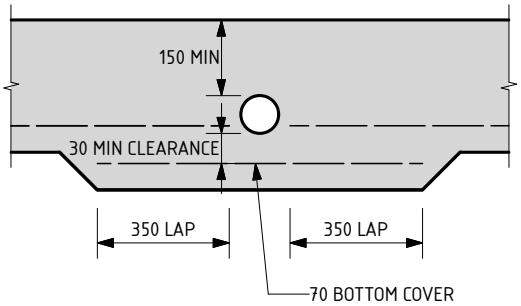
FOOTING STEP



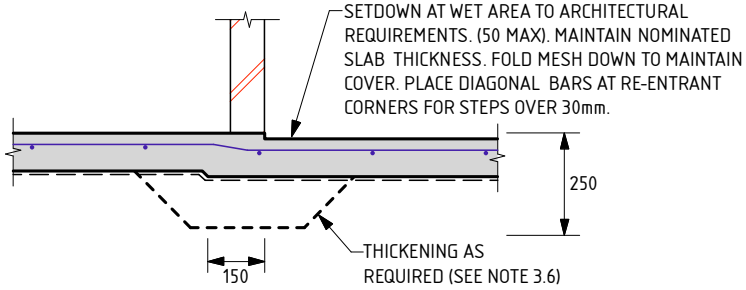
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

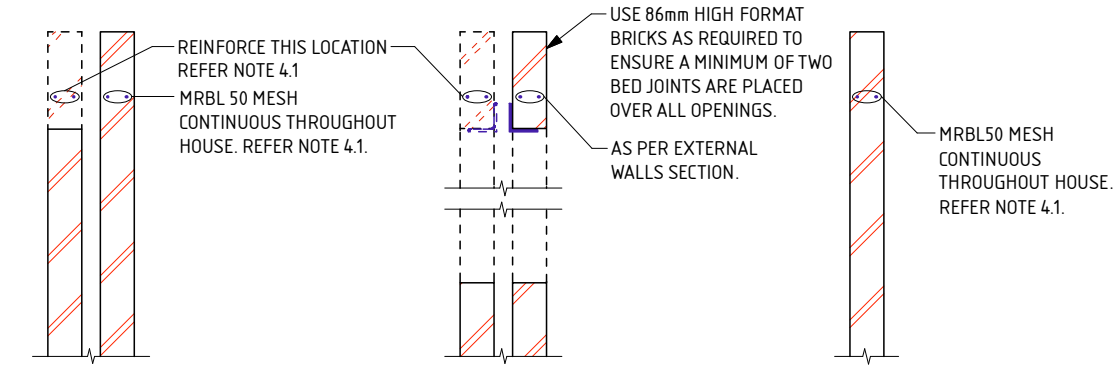
PROJECT: LOT 446 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

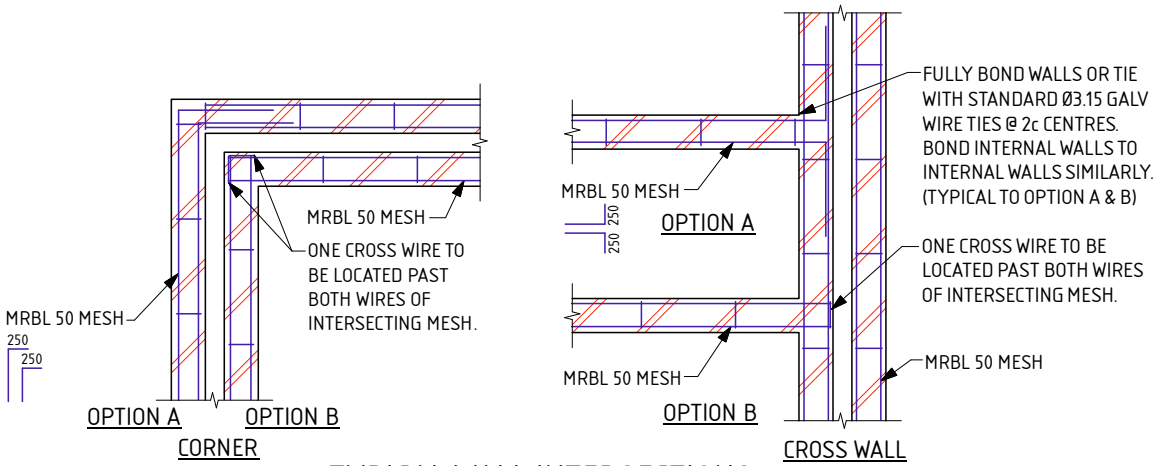
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 446 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 446 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 446 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED

SITE CLASSIFICATION REPORT

CERTIFICATE 2594897

CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 447 ORTON RD BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082895
DATE OF ASSESSMENT	3/11/22

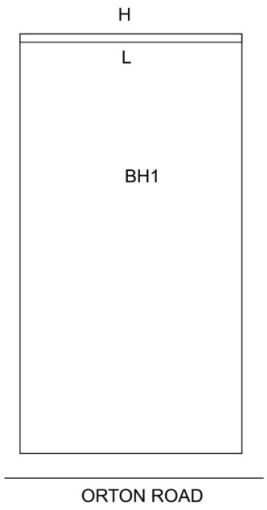
SITE RECORD

SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N2**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	No Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1700 FILL - sand - brown; 1700 - 2000 clayey SAND with gravel (laterite) - brown; 2000 hard ground refusal.

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.

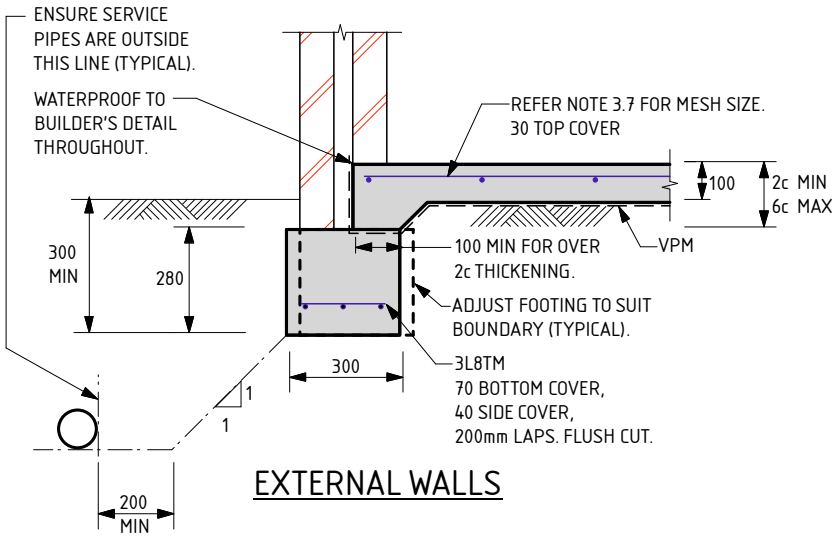
ADDITIONAL NOTES / REQUIREMENTS

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.

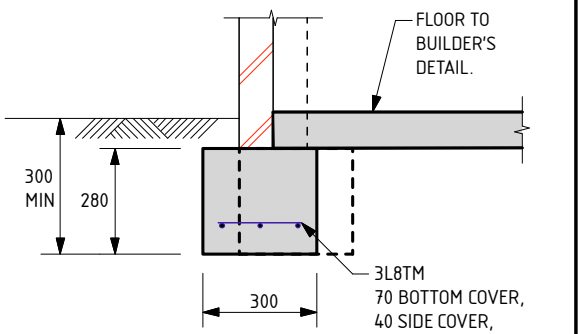
Stormwater Design
Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

-- END OF REPORT --

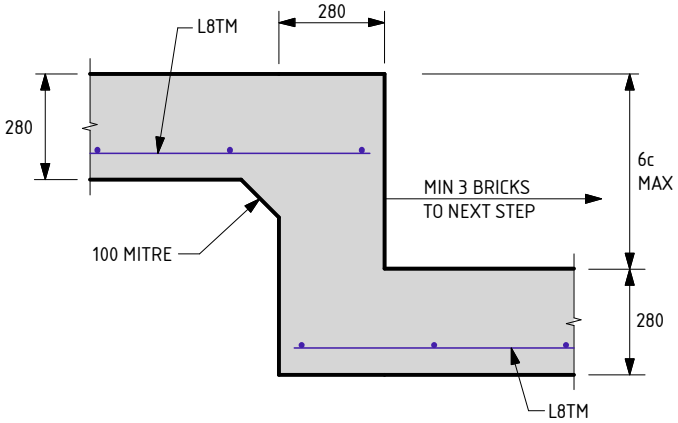
Signed:
Gervase Purich
Chief Executive Officer



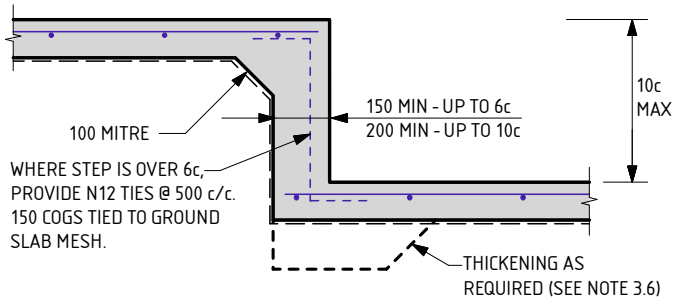
EXTERNAL WALLS



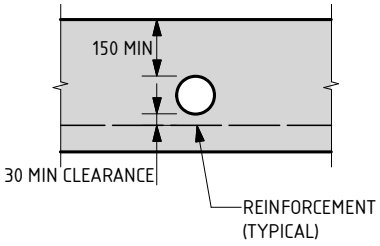
GARAGE WALL



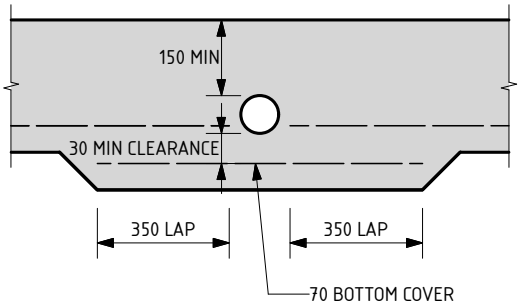
FOOTING STEP



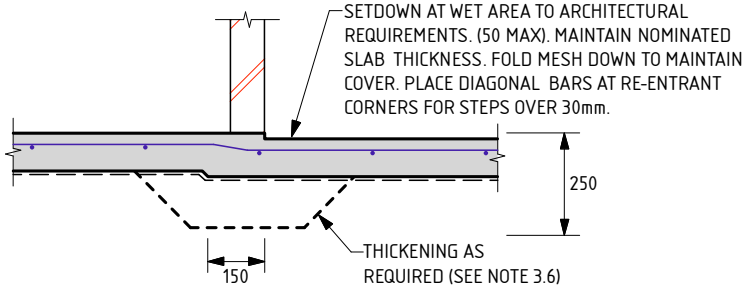
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

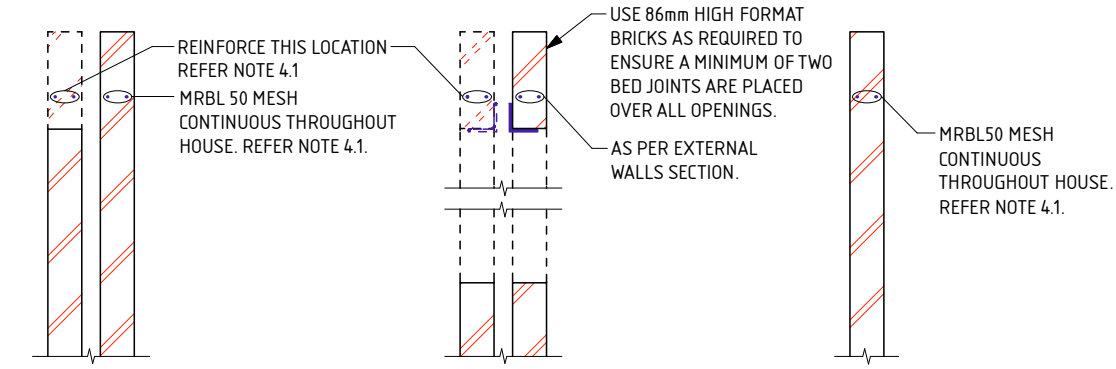
PROJECT: LOT 447 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

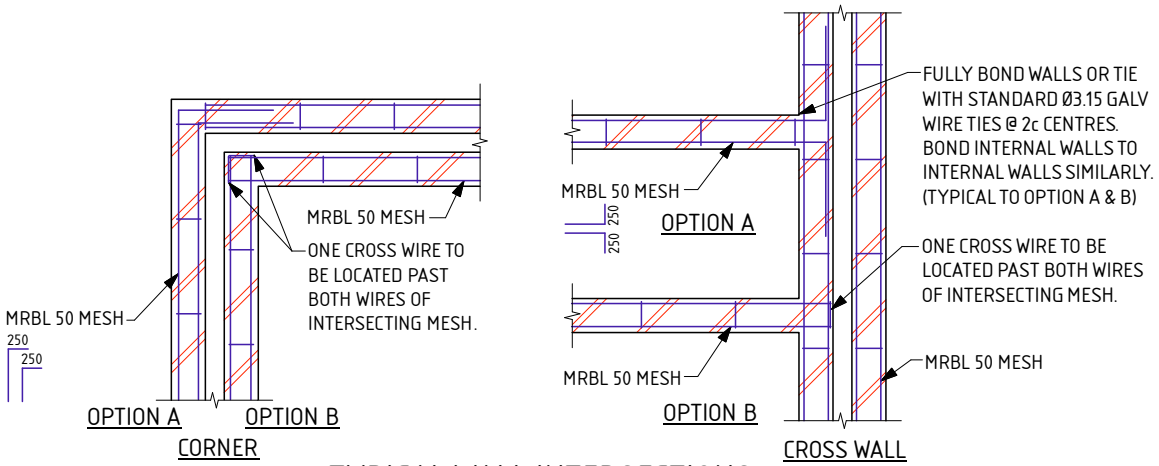
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 447 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 447 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 447 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED

SITE CLASSIFICATION REPORT

CERTIFICATE 2594898

CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 448 ORTON RD BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082894
DATE OF ASSESSMENT	3/11/22

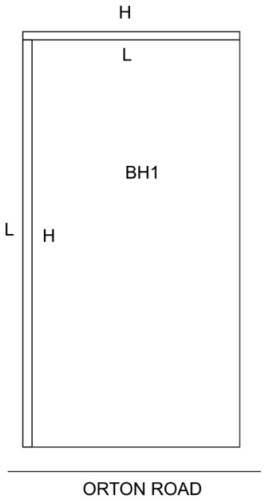
SITE RECORD

SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N2**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	No Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1600 FILL - sand - brown; 1600 - 1900 clayey SAND with gravel (laterite) - brown; 1900 hard ground refusal.

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.

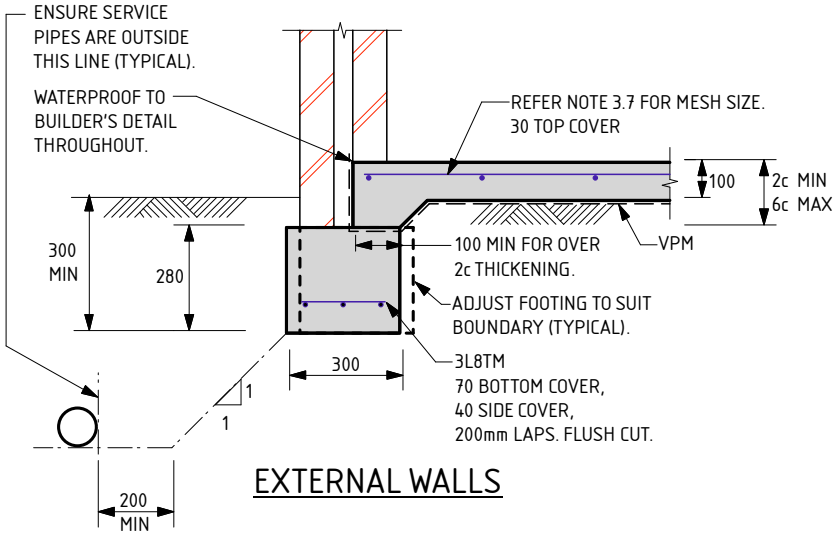
ADDITIONAL NOTES / REQUIREMENTS

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.

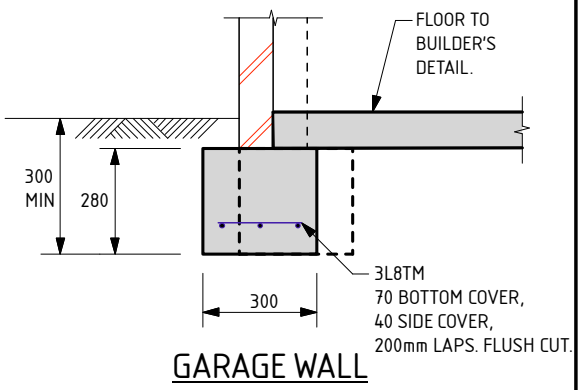
Stormwater Design
Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

-- END OF REPORT --

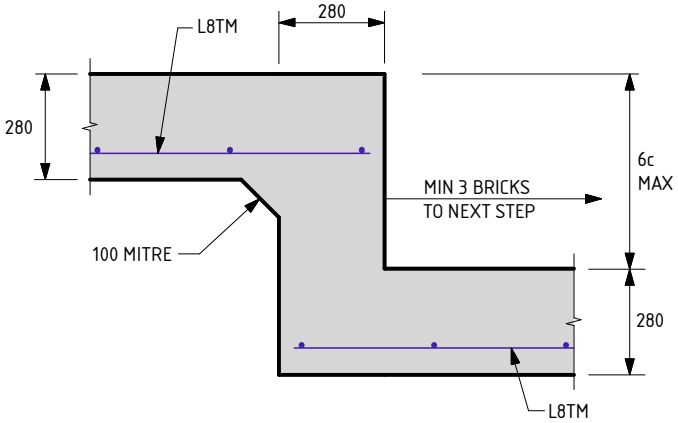
Signed:
Gervase Purich
Chief Executive Officer



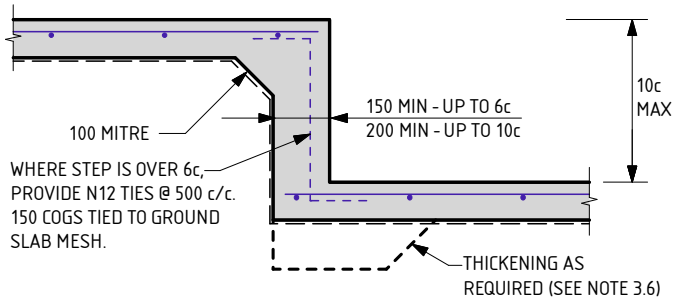
EXTERNAL WALLS



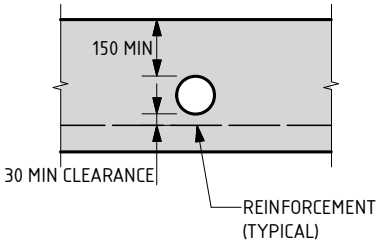
GARAGE WALL



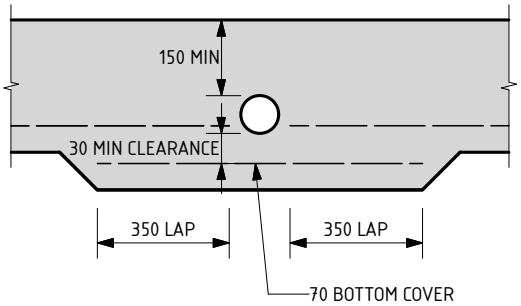
FOOTING STEP



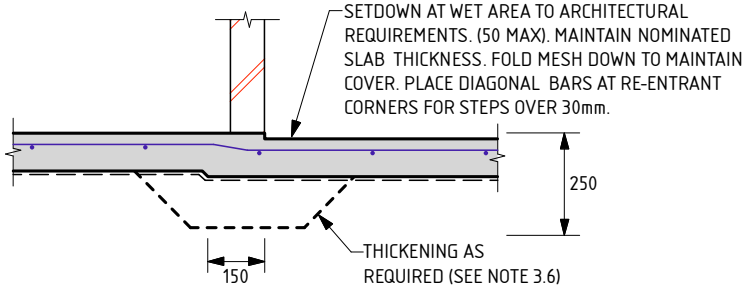
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

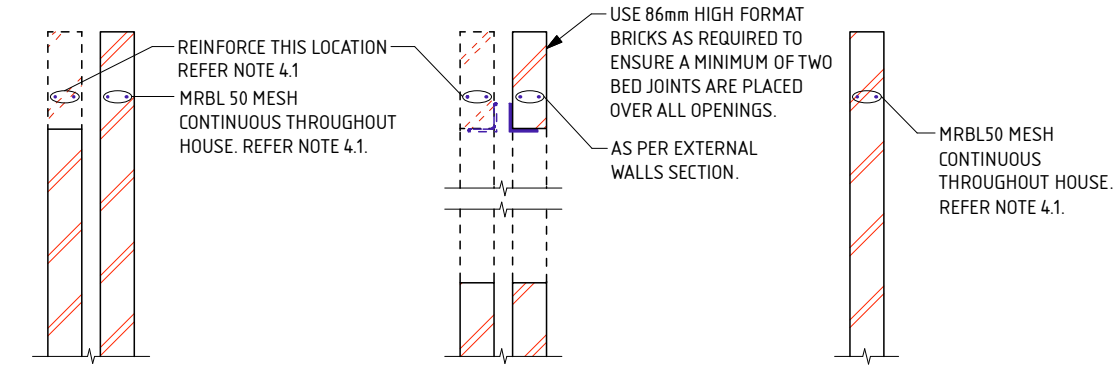
PROJECT: LOT 448 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

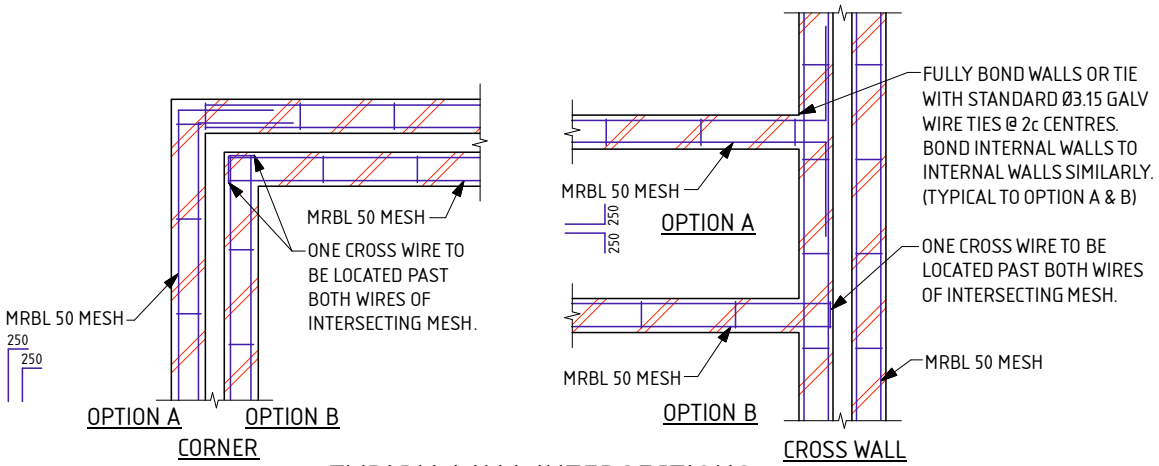
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 448 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 448 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 448 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED

SITE CLASSIFICATION REPORT

CERTIFICATE 2594899

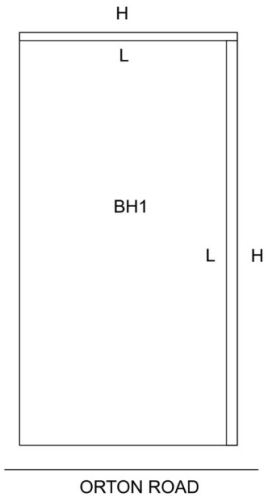
CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 449 ORTON RD BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082893
DATE OF ASSESSMENT	3/11/22
SITE RECORD	

SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N2**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	No Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1600 FILL - sand - brown; 1600 - 2100 clayey SAND with gravel (laterite) - brown; 2100 hard ground refusal.

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.

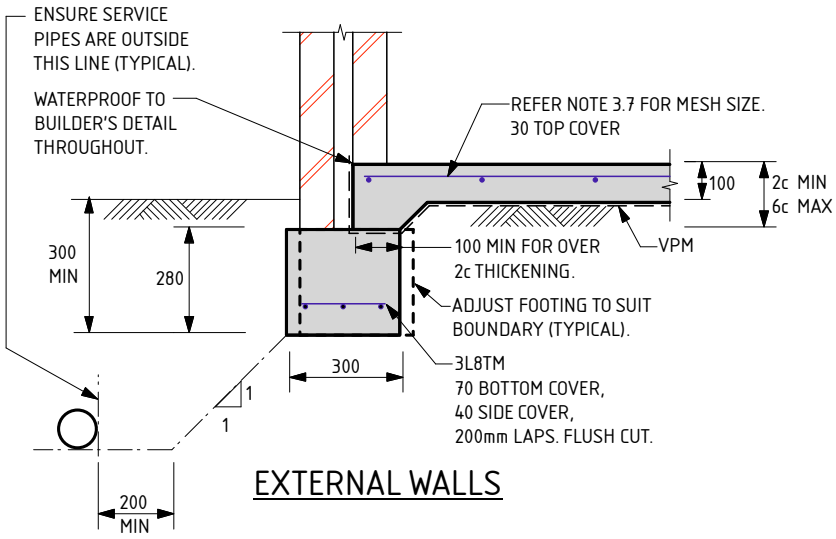
ADDITIONAL NOTES / REQUIREMENTS

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.

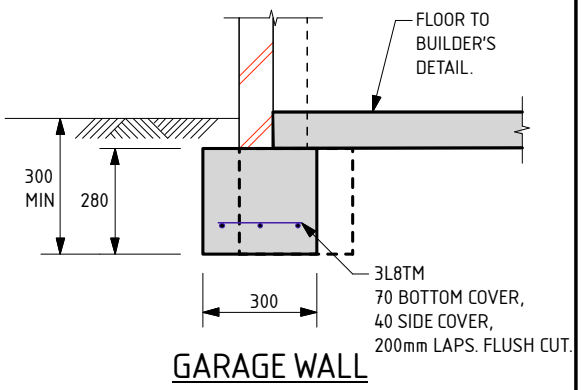
Stormwater Design
Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

-- END OF REPORT --

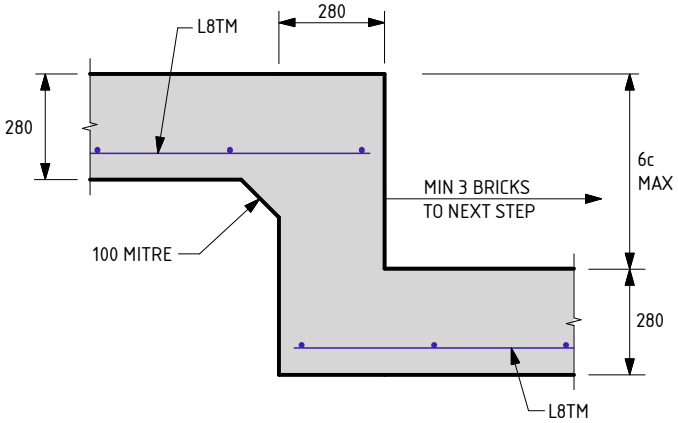
Signed:
Gervase Purich
Chief Executive Officer



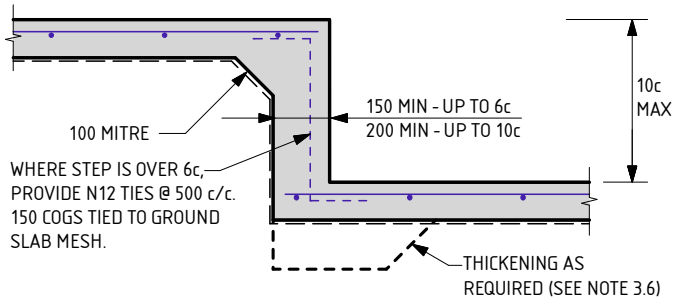
EXTERNAL WALLS



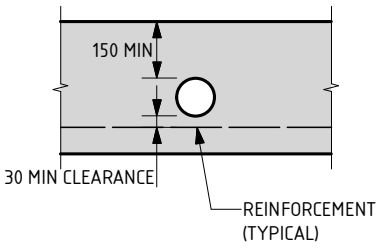
GARAGE WALL



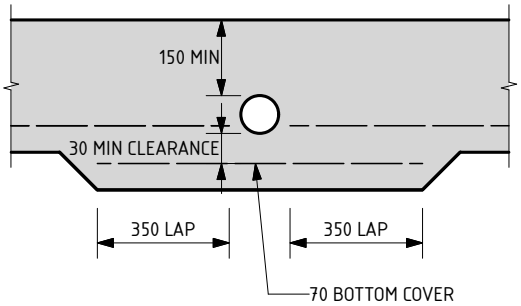
FOOTING STEP



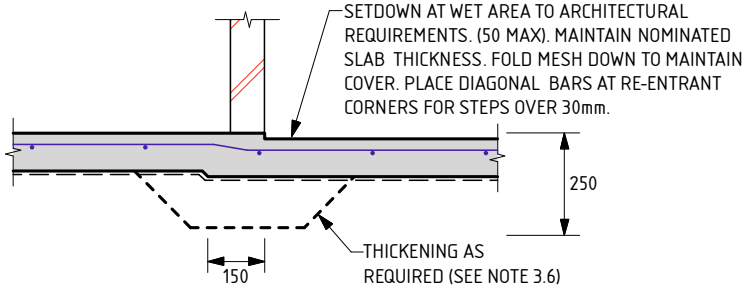
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

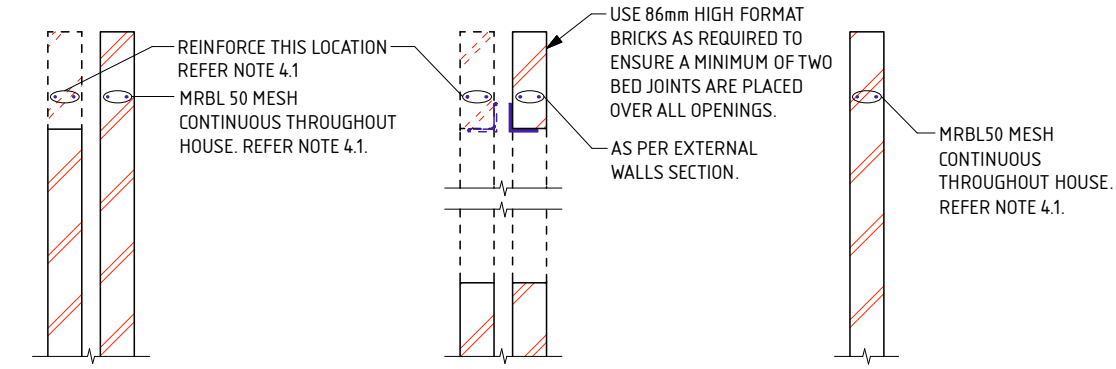
PROJECT: LOT 449 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

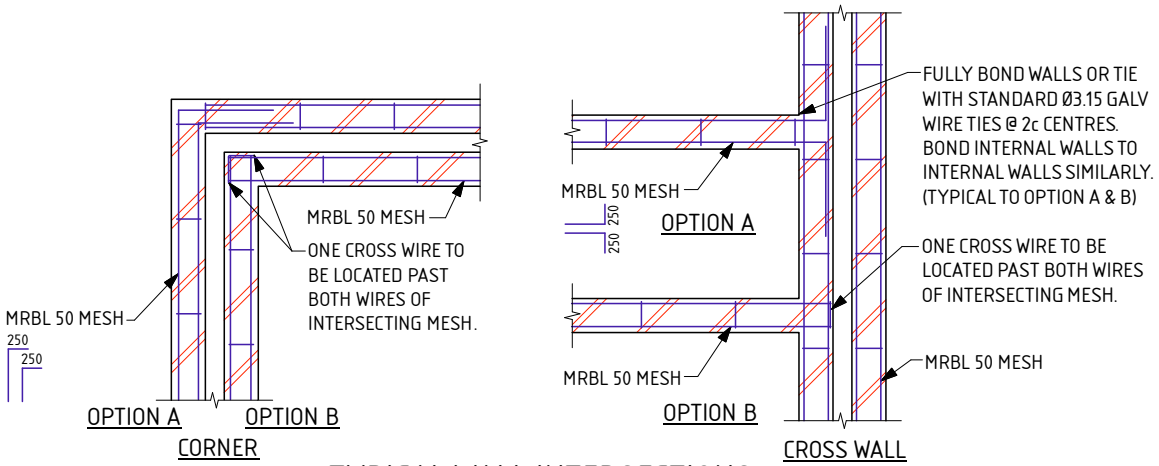
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 449 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 449 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 449 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED

SITE CLASSIFICATION REPORT

CERTIFICATE 2594879

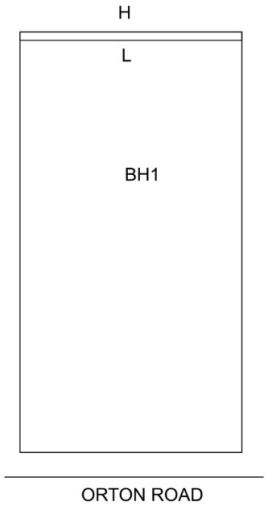
CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 450 ORTON RD BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082892
DATE OF ASSESSMENT	3/11/22
SITE RECORD	

SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N2**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	No Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1600 FILL - sand - brown; 1600 - 1700 (CLAY with gravel trace sand with 11% linear shrinkage and 67% passing the 0.425mm sieve) - pale brown; 1700 - 2500 sandy CLAY trace gravel (laterite) - brown mottled pale grey; 2500 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.

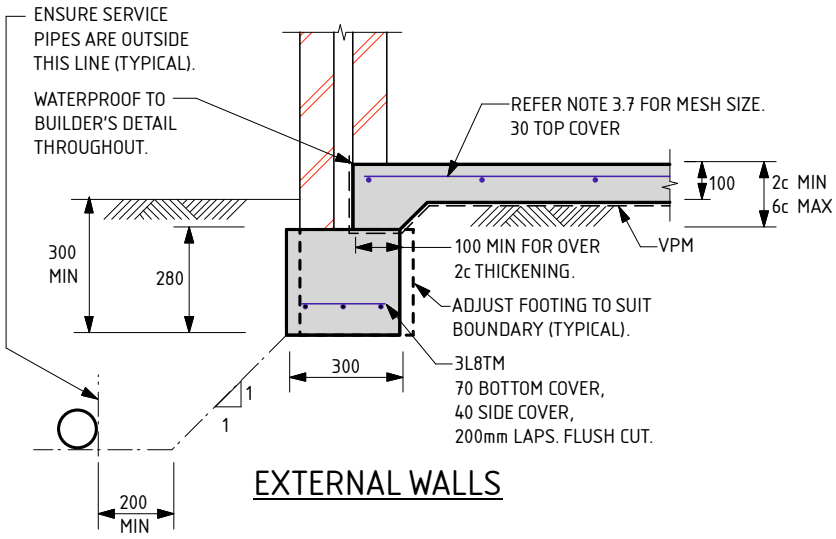
ADDITIONAL NOTES / REQUIREMENTS

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.

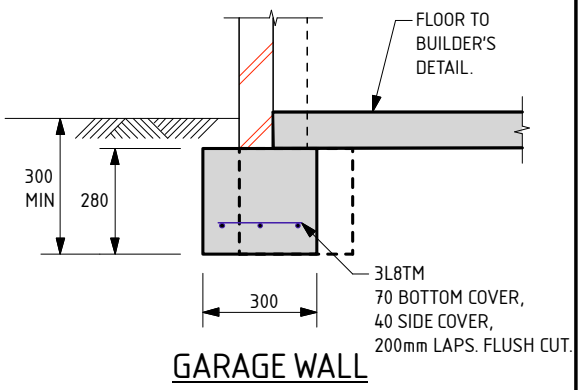
Stormwater Design
Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

-- END OF REPORT --

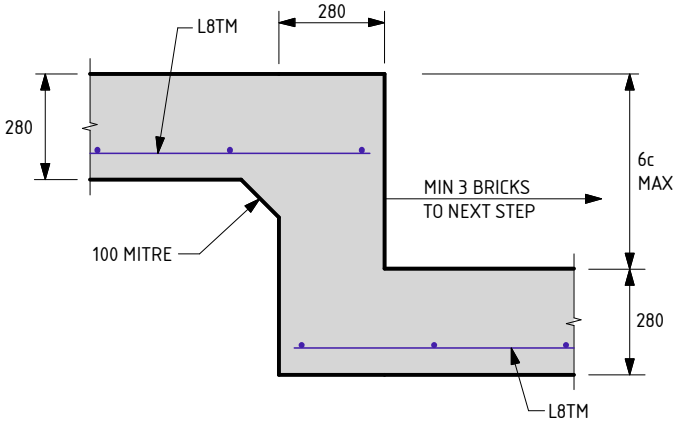
Signed:
Gervase Purich
Chief Executive Officer



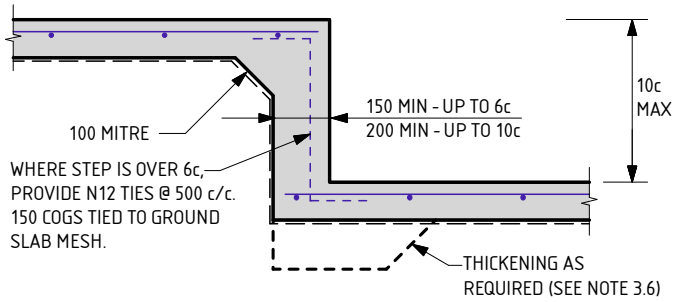
EXTERNAL WALLS



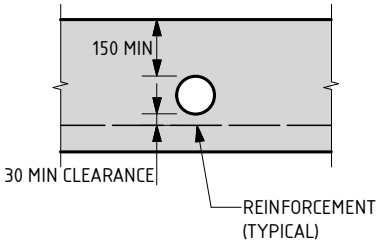
GARAGE WALL



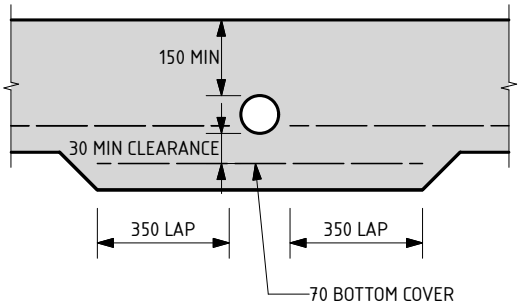
FOOTING STEP



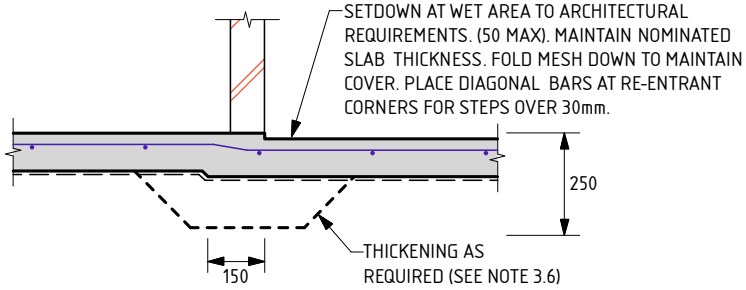
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

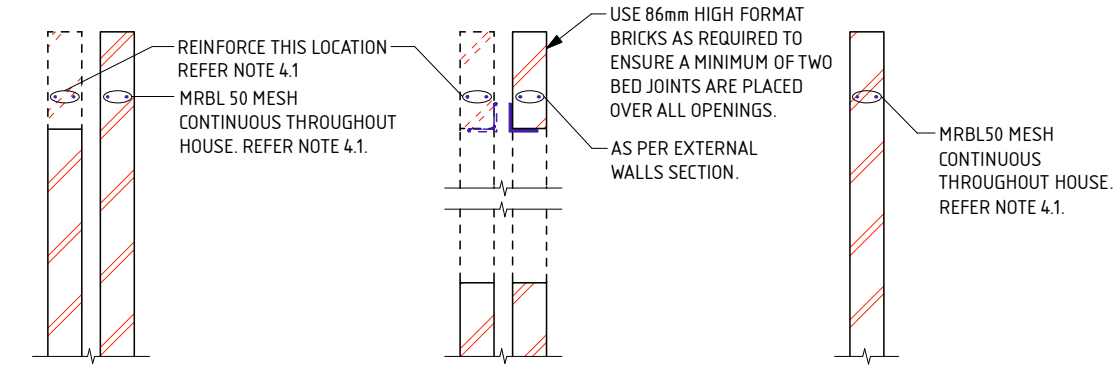
PROJECT: LOT 450 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

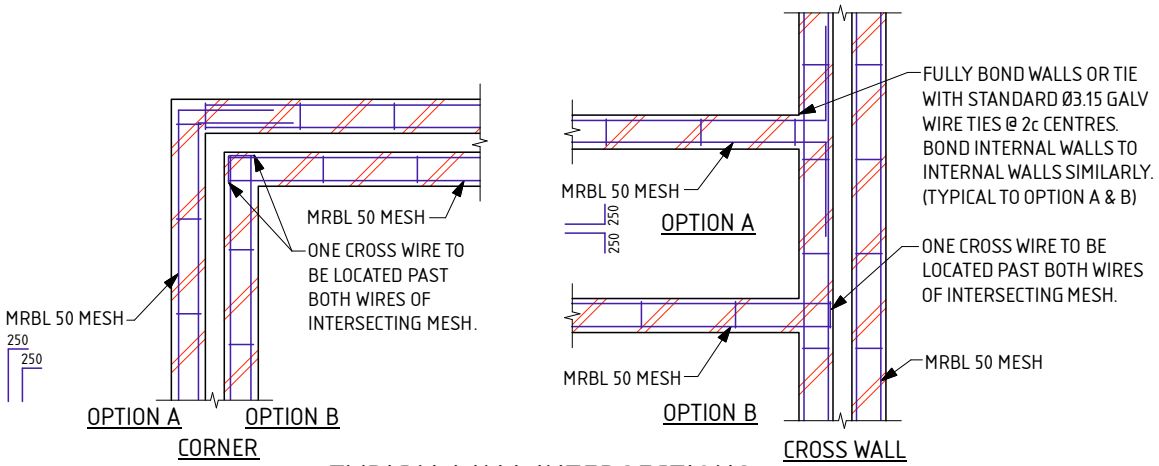
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 450 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 450 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 450 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED

SITE CLASSIFICATION REPORT

CERTIFICATE 2594900

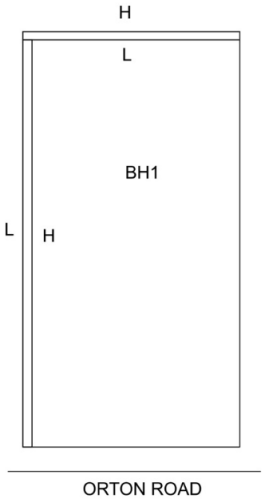
CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 451 ORTON RD BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082891
DATE OF ASSESSMENT	3/11/22
SITE RECORD	

SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N2**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	No Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1500 FILL - sand - brown; 1500 - 1900 clayey SAND with gravel (laterite) - brown; 1900 hard ground refusal.

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.

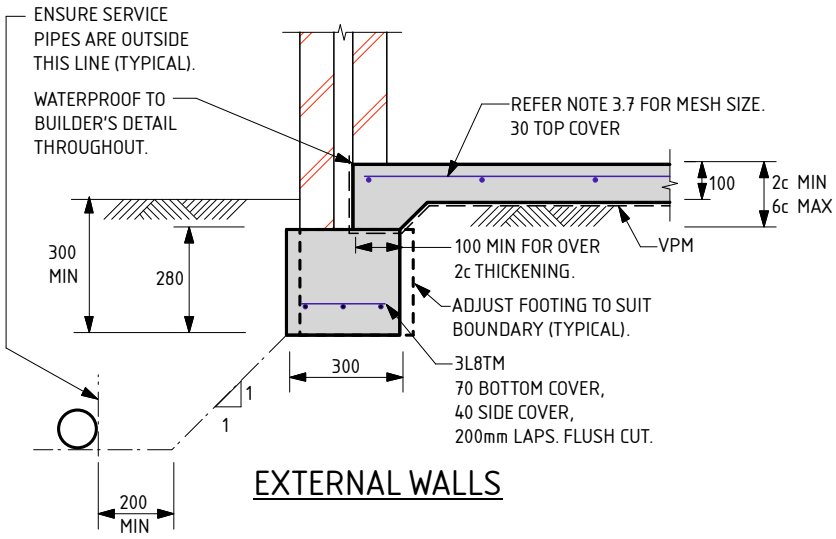
ADDITIONAL NOTES / REQUIREMENTS

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.

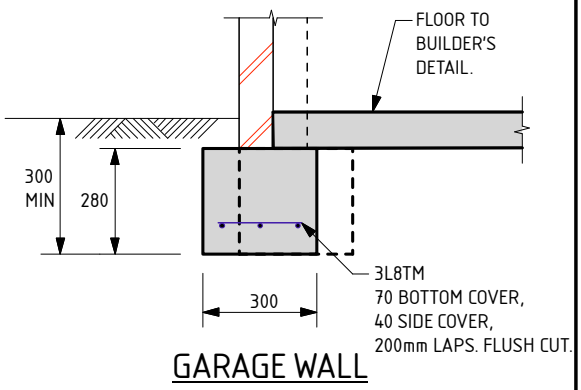
Stormwater Design
Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

-- END OF REPORT --

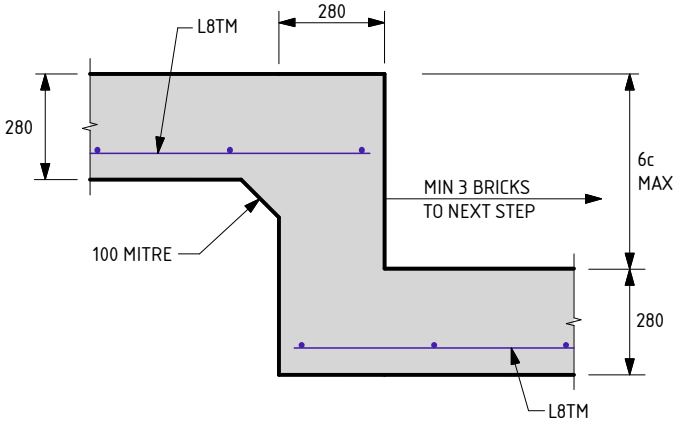
Signed:
Gervase Purich
Chief Executive Officer



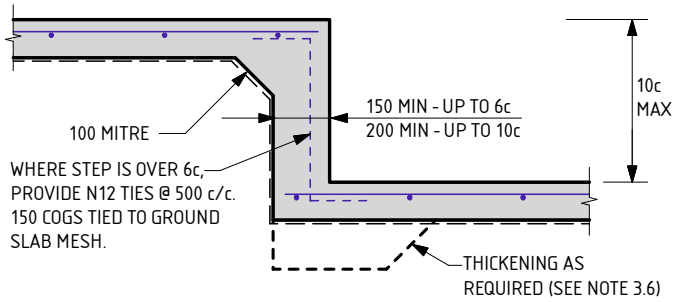
EXTERNAL WALLS



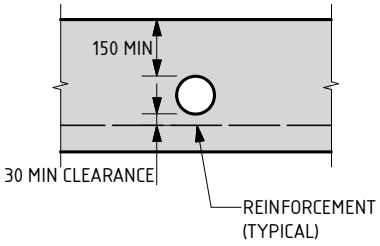
GARAGE WALL



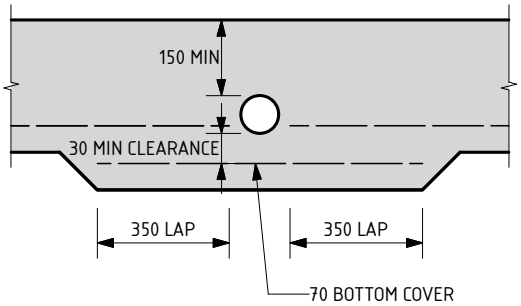
FOOTING STEP



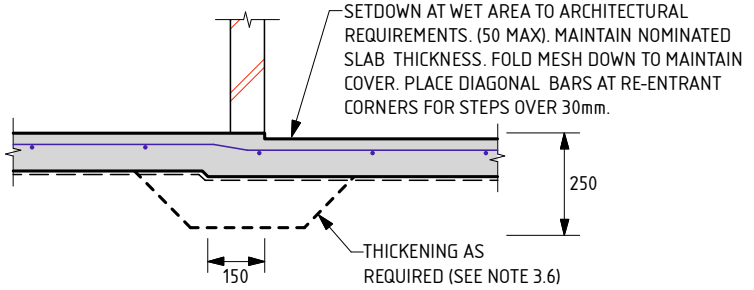
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

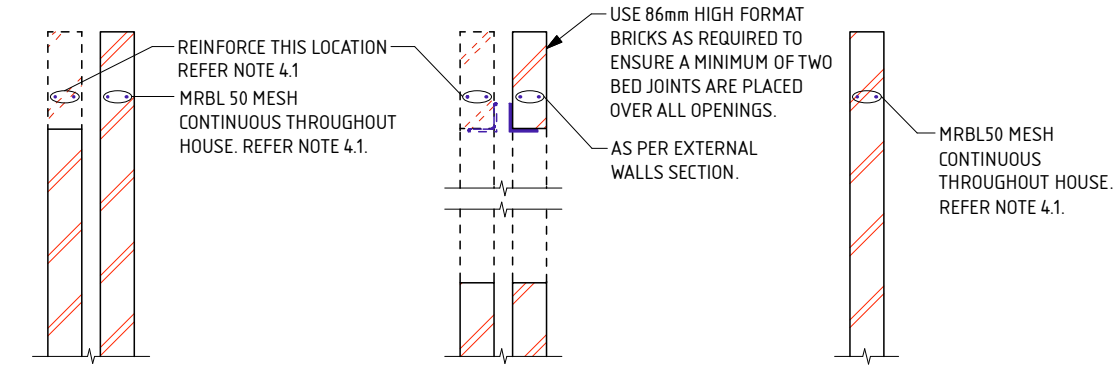
PROJECT: LOT 451 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

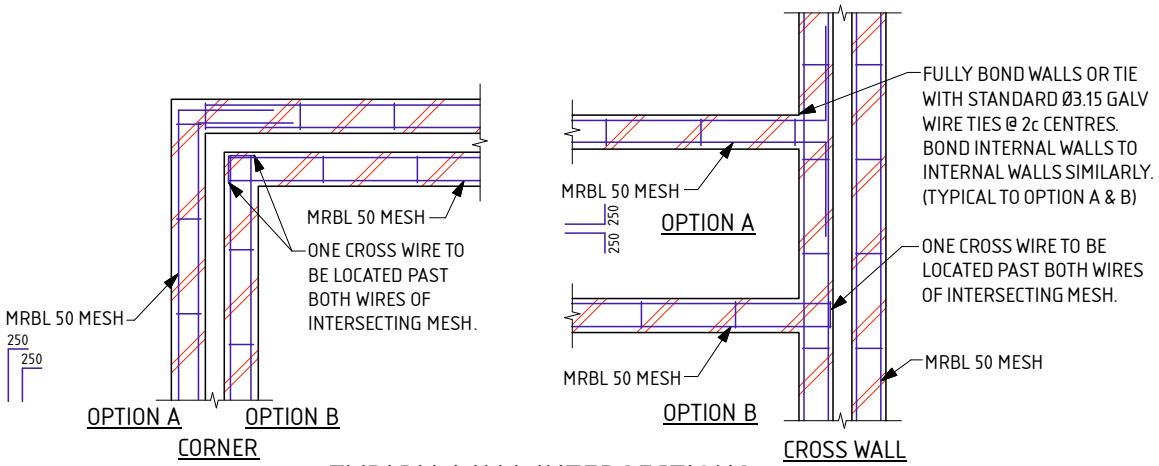
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 451 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 451 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 451 ORTON RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED

SITE CLASSIFICATION REPORT

CERTIFICATE 2594901

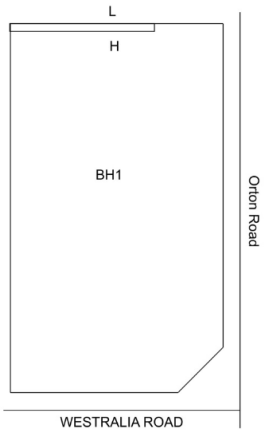
CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 452 WESTRALIA RD BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082887
DATE OF ASSESSMENT	3/11/22
SITE RECORD	

SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N2**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	No Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1800 FILL - sand - brown; 1800 - 2000 FILL - sand with clay - brown; 2000 - 2300 clayey SAND with gravel (laterite) - brown mottled pale grey; 2300 hard ground refusal.

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.

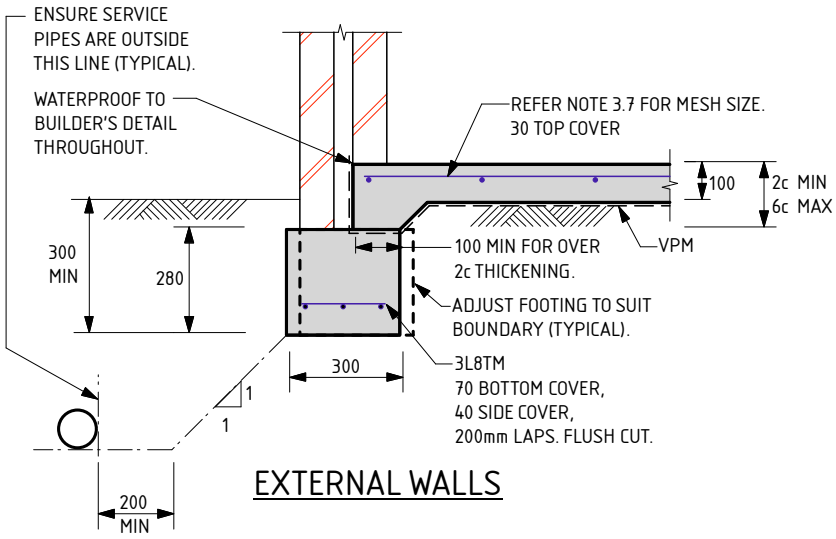
ADDITIONAL NOTES / REQUIREMENTS

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.

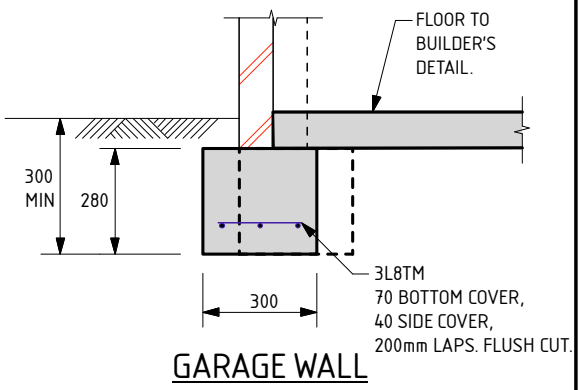
Stormwater Design
Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

-- END OF REPORT --

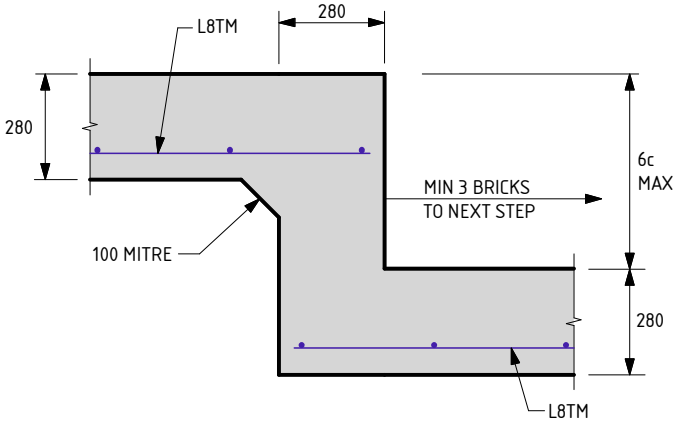
Signed:
Gervase Purich
Chief Executive Officer



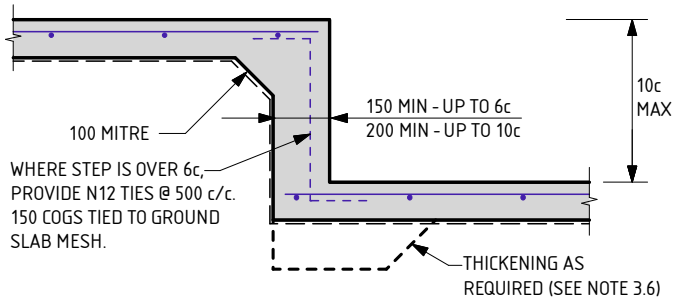
EXTERNAL WALLS



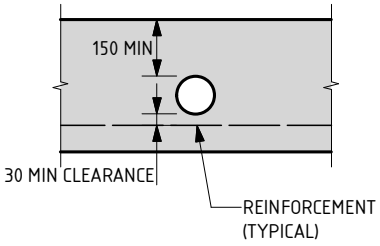
GARAGE WALL



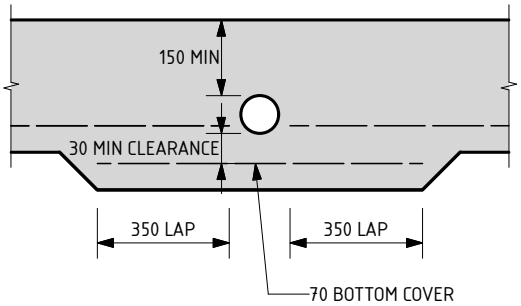
FOOTING STEP



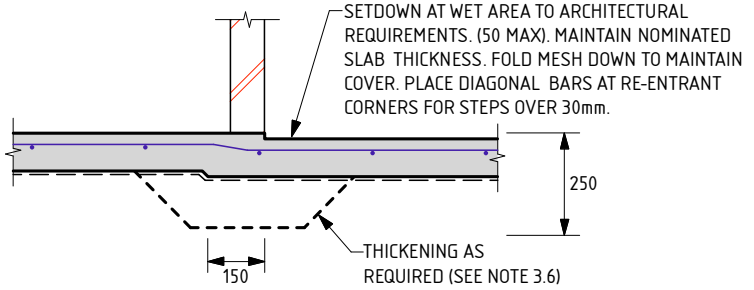
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

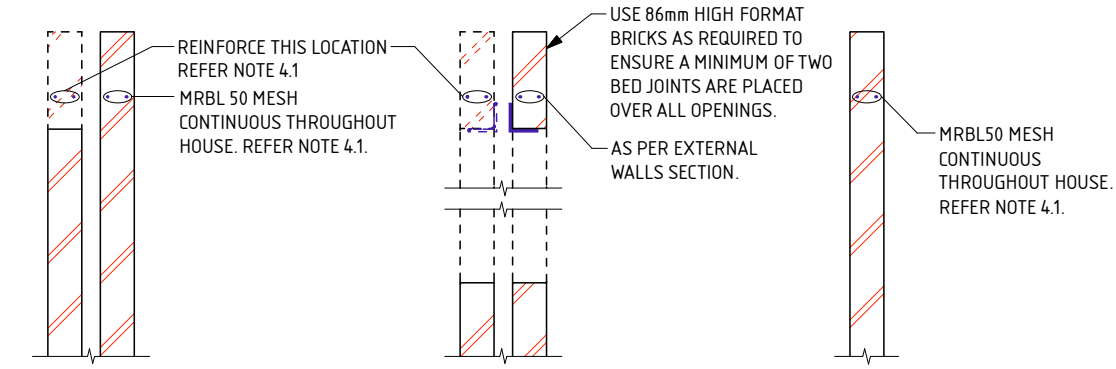
PROJECT: LOT 452 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

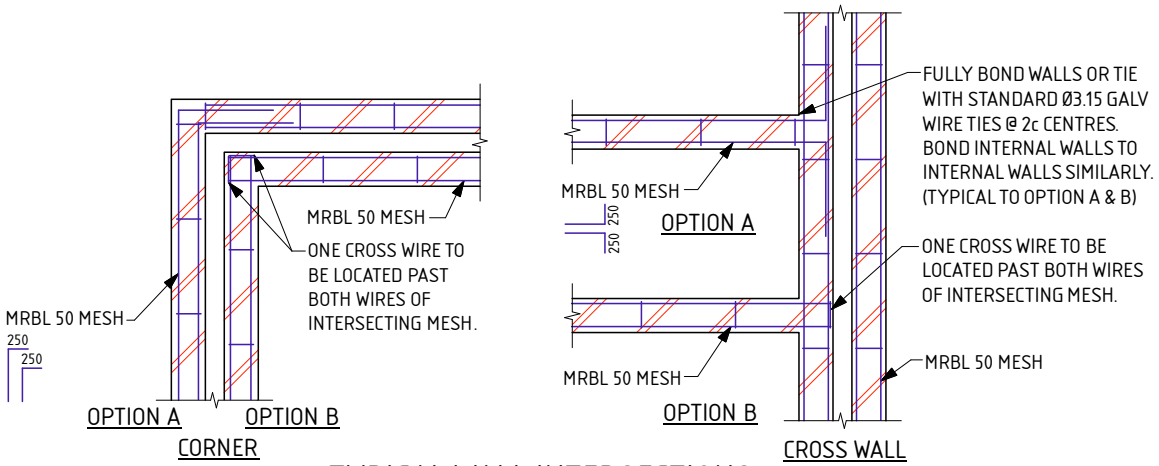
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 452 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 452 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 452 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED

SITE CLASSIFICATION REPORT

CERTIFICATE 2594902

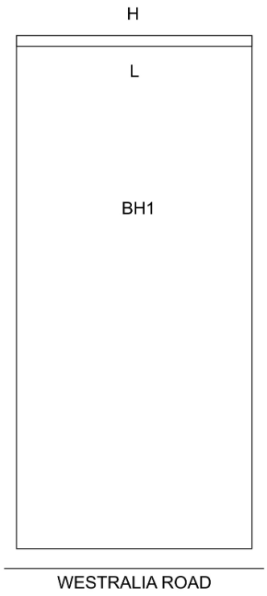
CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 453 WESTRALIA RD BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082888
DATE OF ASSESSMENT	3/11/22
SITE RECORD	

SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N2**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	Partial Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1800 FILL - sand - pale brown; 1800 - 2000 clayey SAND with gravel (laterite) - brown; 2000 hard ground refusal.

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.

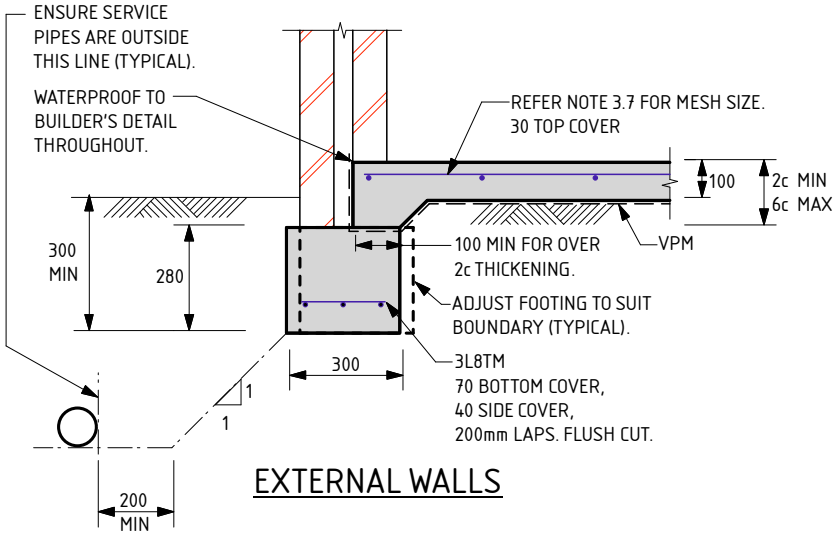
ADDITIONAL NOTES / REQUIREMENTS

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.

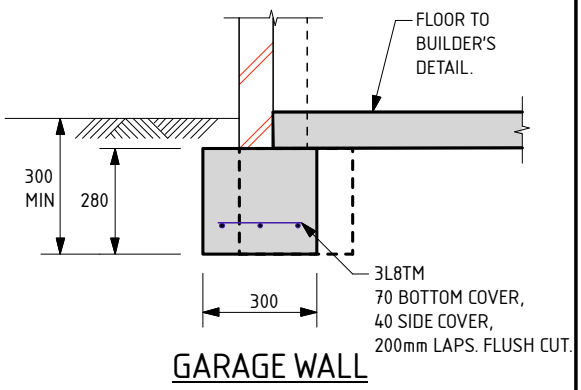
Stormwater Design
Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

-- END OF REPORT --

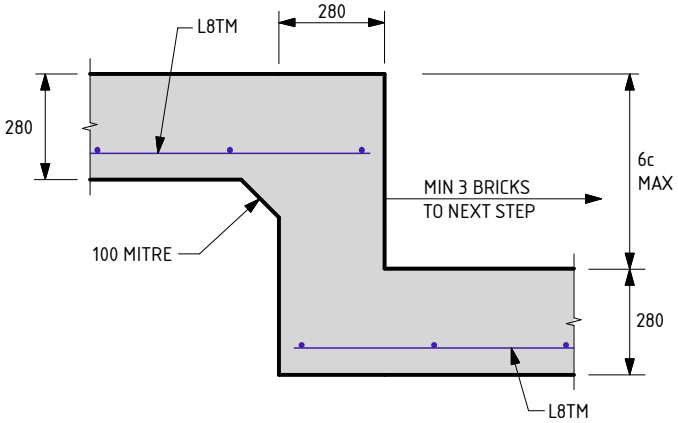
Signed:
Gervase Purich
Chief Executive Officer



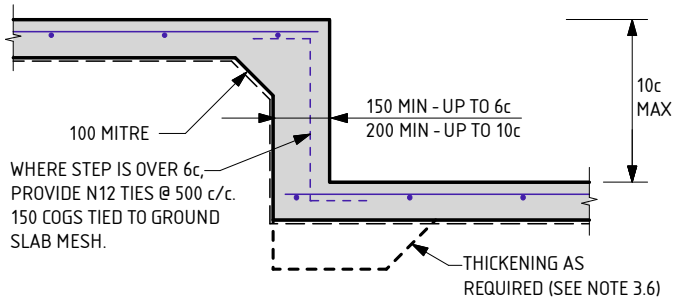
EXTERNAL WALLS



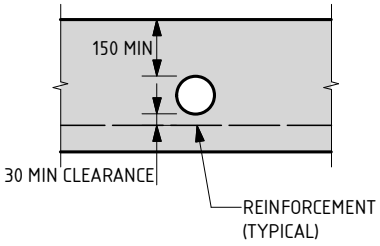
GARAGE WALL



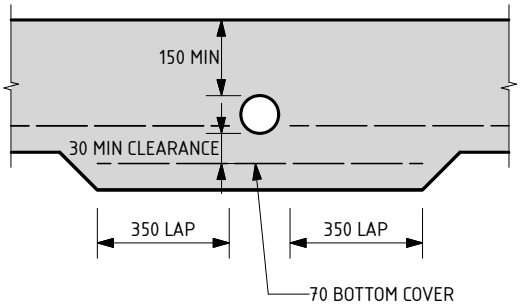
FOOTING STEP



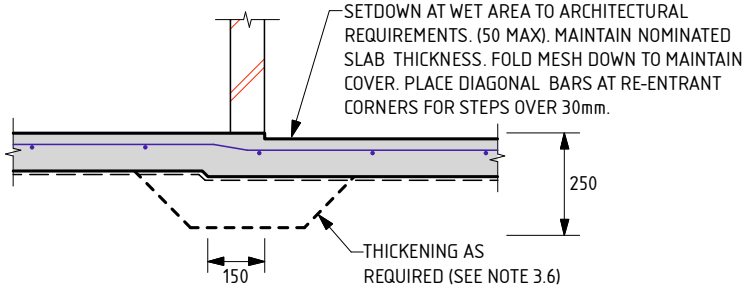
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

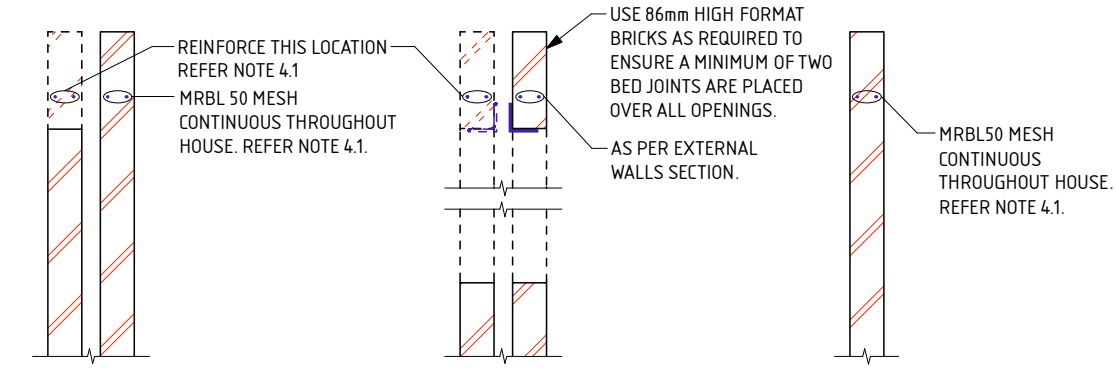
PROJECT: LOT 453 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

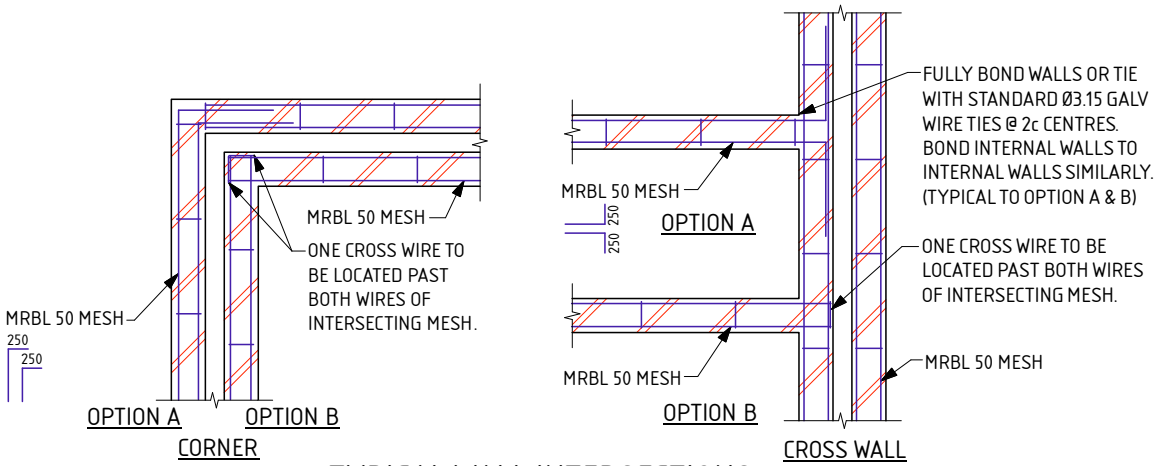
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 453 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 453 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 453 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED

SITE CLASSIFICATION REPORT

CERTIFICATE 2594903

CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 454 WESTRALIA RD BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082889
DATE OF ASSESSMENT	3/11/22
SITE RECORD	

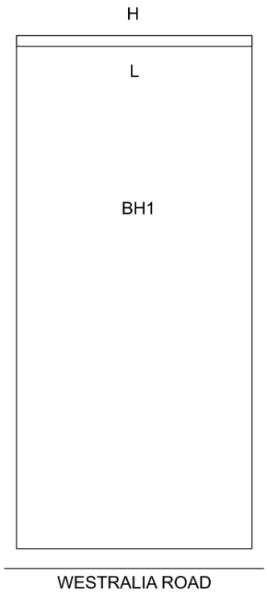
SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N1**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	Full Shielding	

Issued Date: 9 November 2022

SOIL PROFILE

BOREHOLE 1: 0 - 1800 FILL - sand - pale brown; 1800 - 2000 clayey SAND with gravel (laterite) - brown; 2000 hard ground refusal.

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.

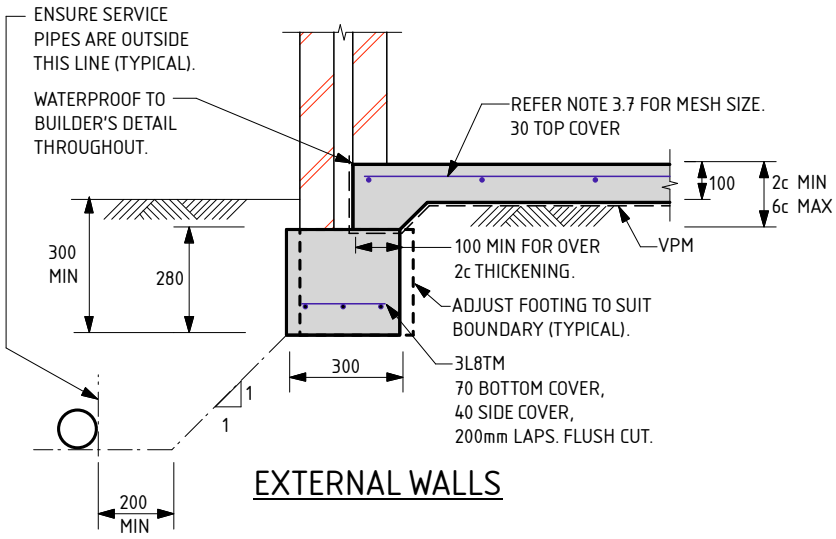
ADDITIONAL NOTES / REQUIREMENTS

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.

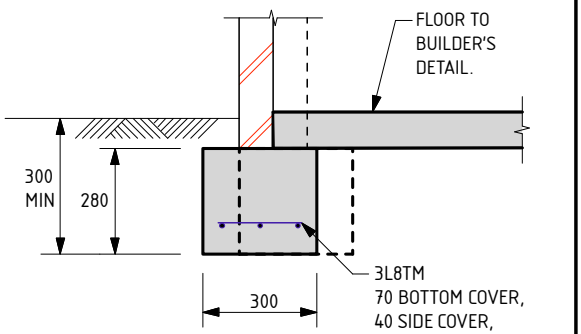
Stormwater Design
Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

-- END OF REPORT --

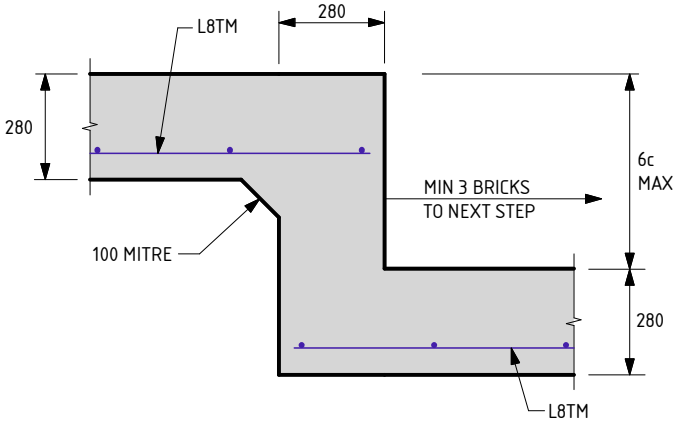
Signed:
Gervase Purich
Chief Executive Officer



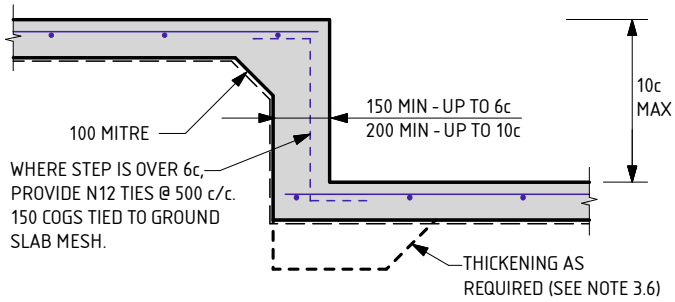
EXTERNAL WALLS



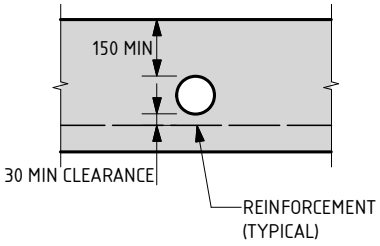
GARAGE WALL



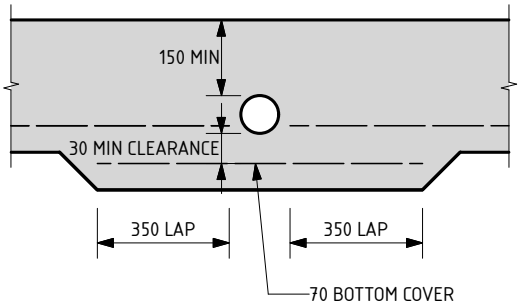
FOOTING STEP



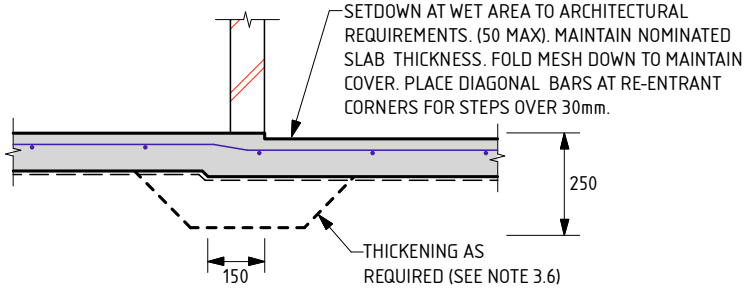
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

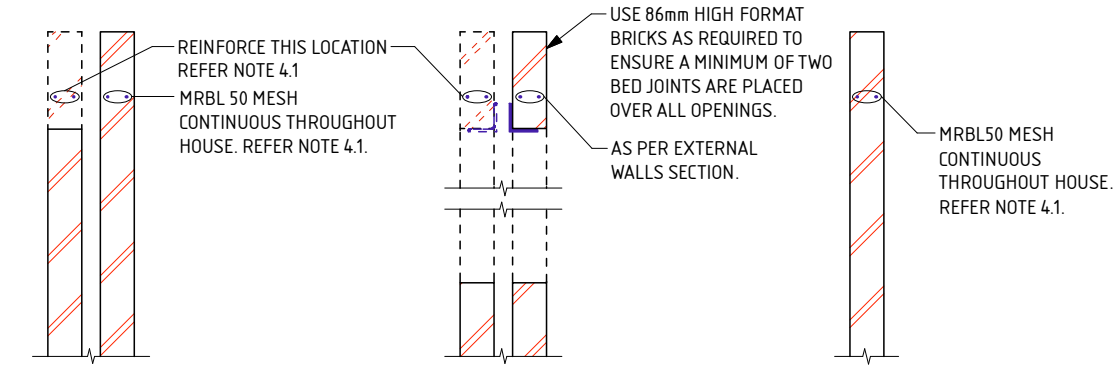
PROJECT: LOT 454 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

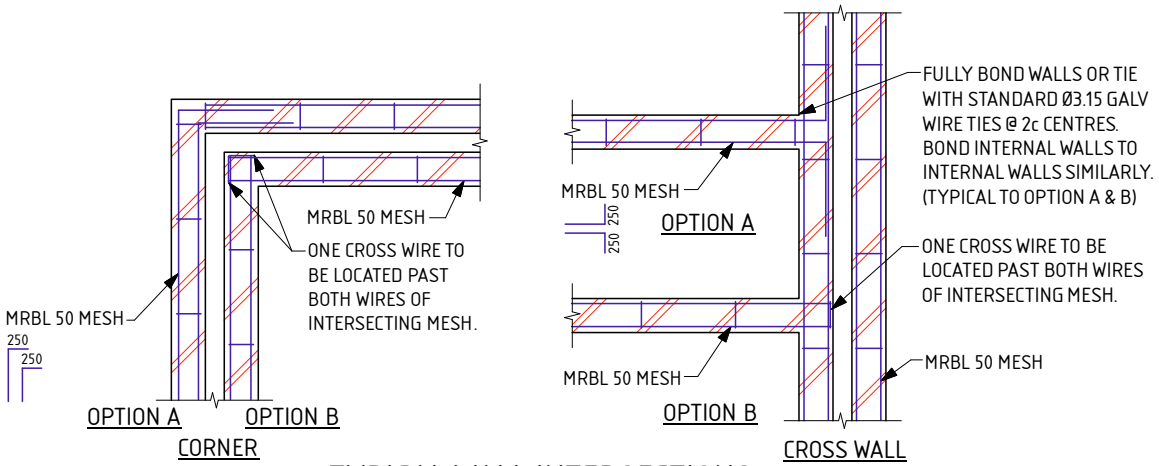
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 454 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 454 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 454 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED

SITE CLASSIFICATION REPORT

CERTIFICATE 2594904

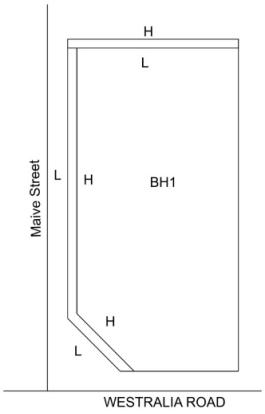
CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 455 WESTRALIA RD BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082890
DATE OF ASSESSMENT	3/11/22
SITE RECORD	

SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N1**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	Full Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1700 FILL - sand - pale brown; 1700 - 2200 sandy CLAY trace gravel (laterite) - pale brown; 2200 hard ground refusal.

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.

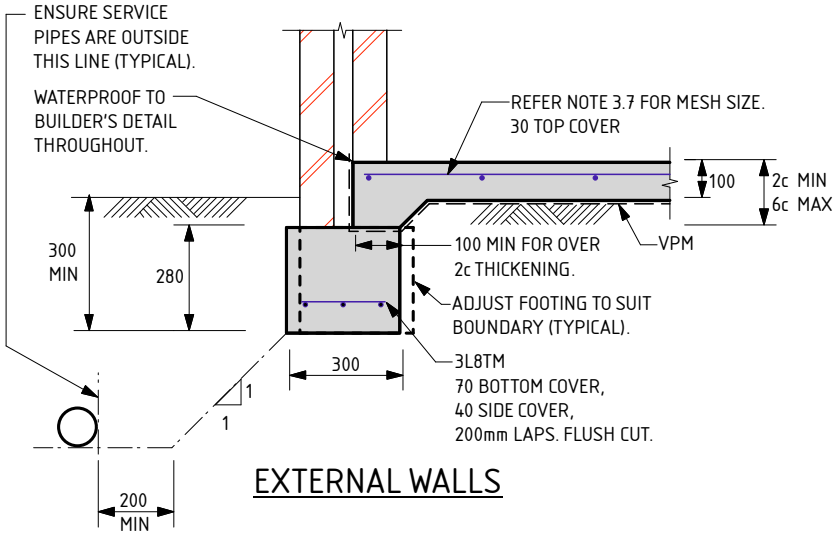
ADDITIONAL NOTES / REQUIREMENTS

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.

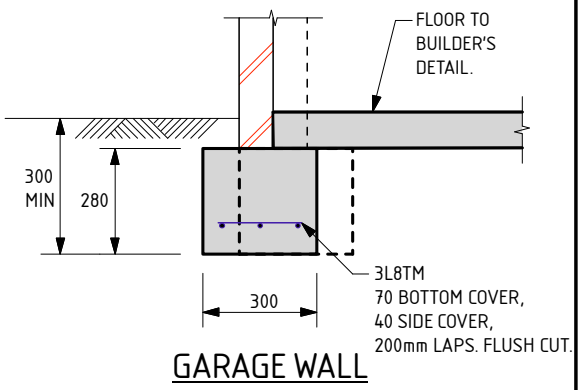
Stormwater Design
Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

-- END OF REPORT --

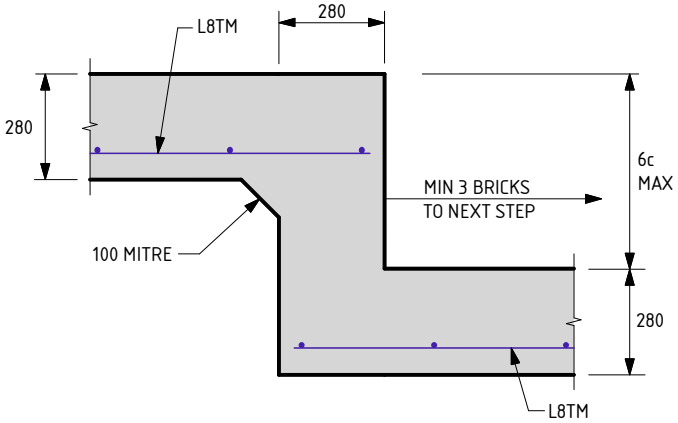
Signed:
Gervase Purich
Chief Executive Officer



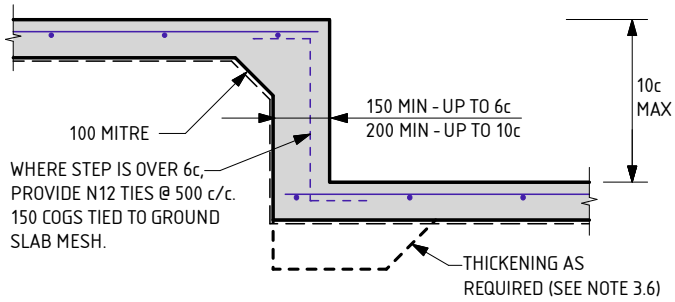
EXTERNAL WALLS



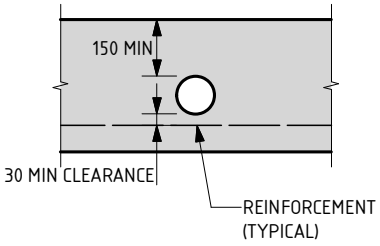
GARAGE WALL



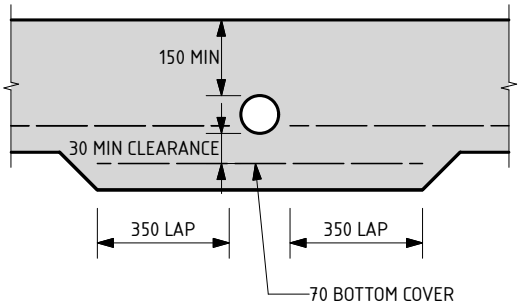
FOOTING STEP



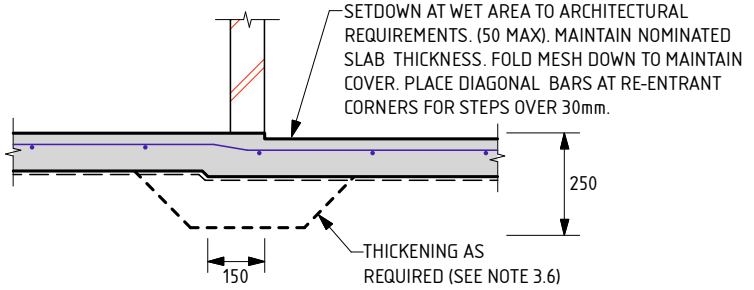
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

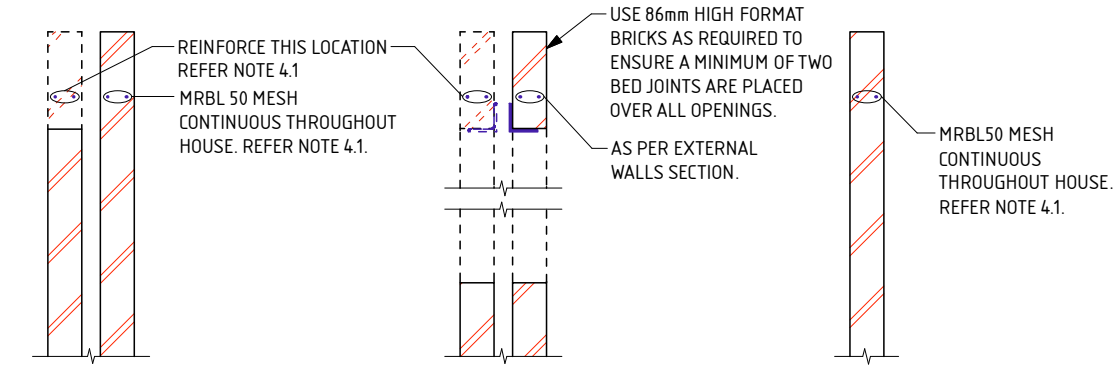
PROJECT: LOT 455 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

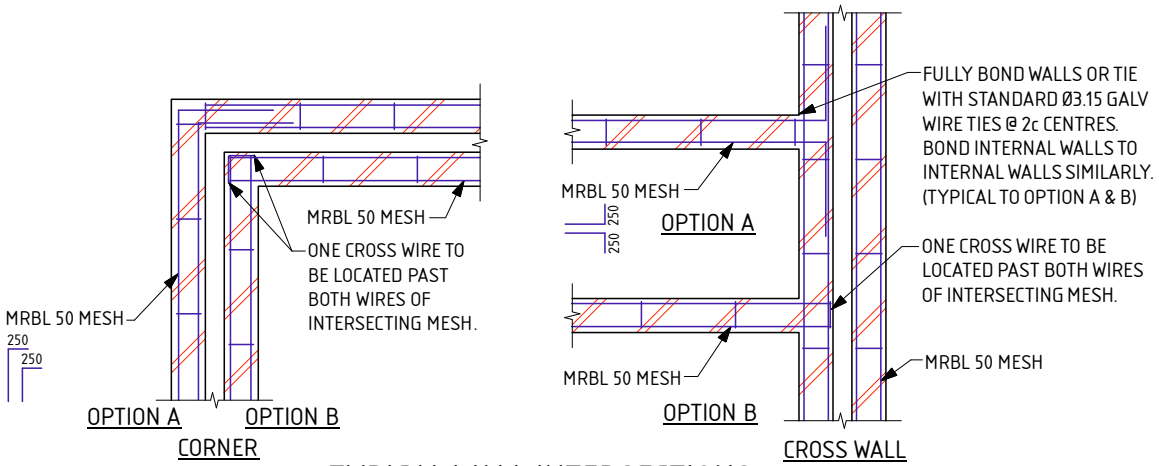
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 455 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 455 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 455 WESTRALIA RD BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED

SITE CLASSIFICATION REPORT

CERTIFICATE 2594881

CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 465 MAIVE ST BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082906
DATE OF ASSESSMENT	3/11/22

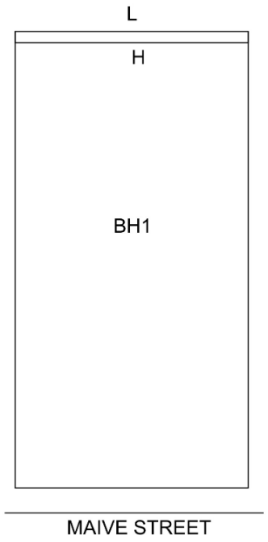
SITE RECORD

SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N2**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	Partial Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1500 FILL - sand - brown; 1500 - 1700 (Clayey SAND with gravel with 12% linear shrinkage and 55% passing the 0.425mm sieves) - pale brown; 1700 - 2500 sandy CLAY trace gravel (laterite) - brown mottled pale grey; 2500 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.

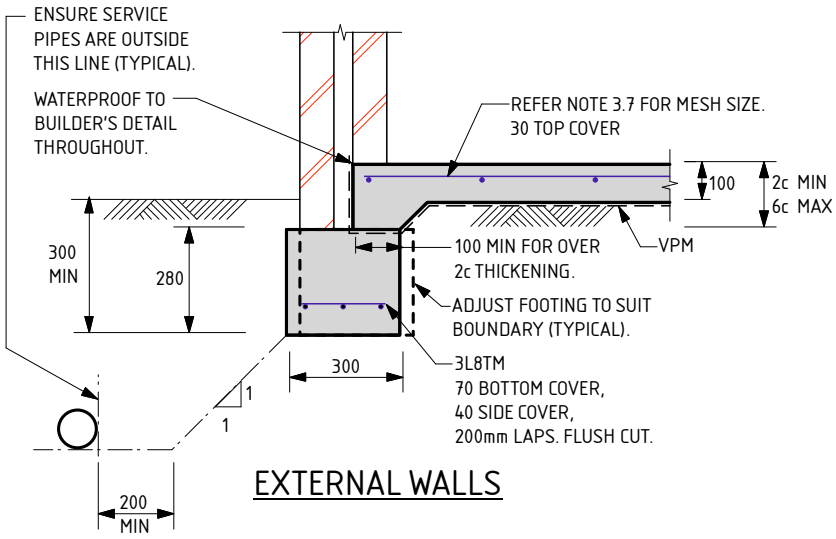
Stormwater Design

Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

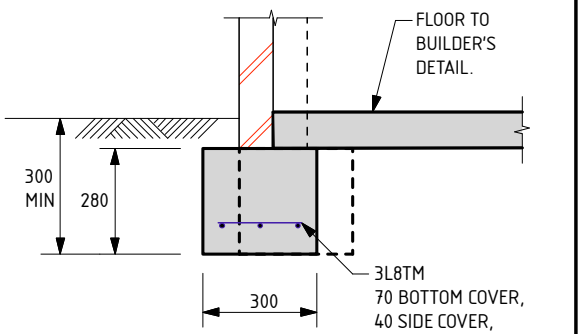
-- END OF REPORT --

Signed:

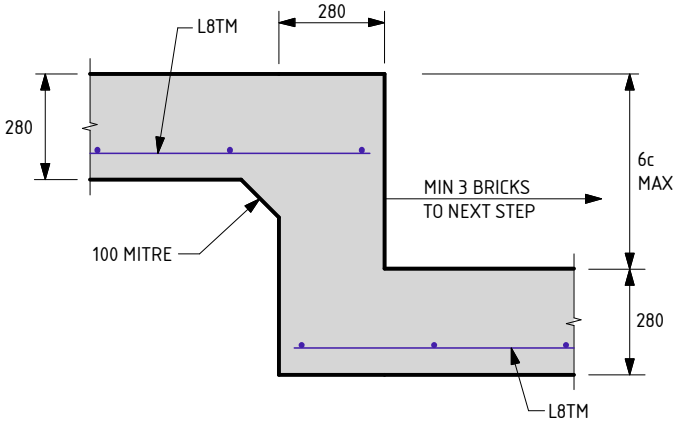
Gervase Purich
Chief Executive Officer



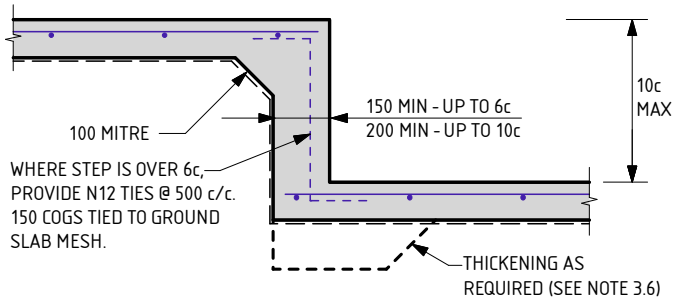
EXTERNAL WALLS



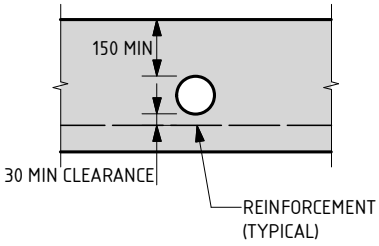
GARAGE WALL



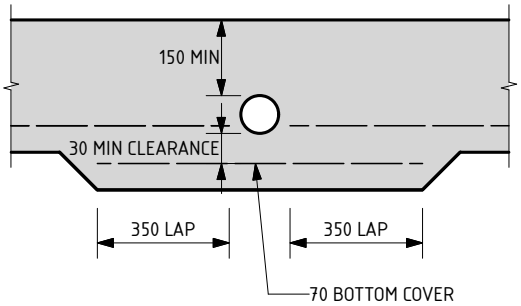
FOOTING STEP



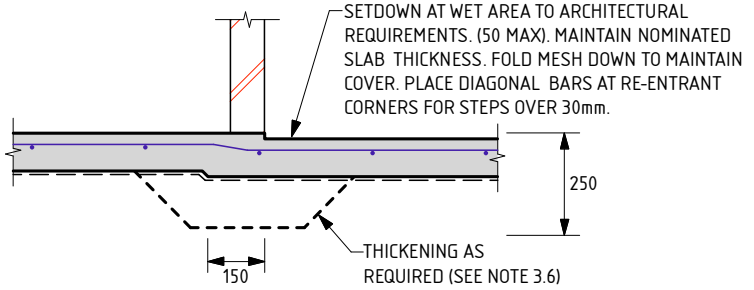
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

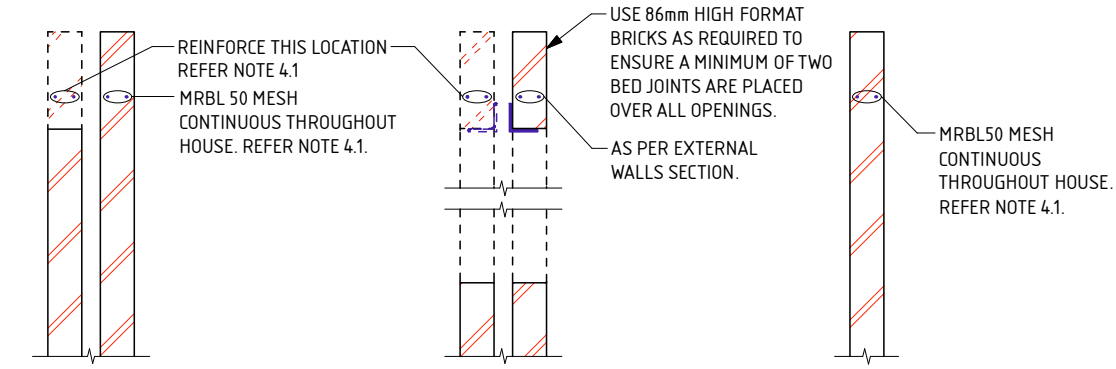
PROJECT: LOT 465 MAIVE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

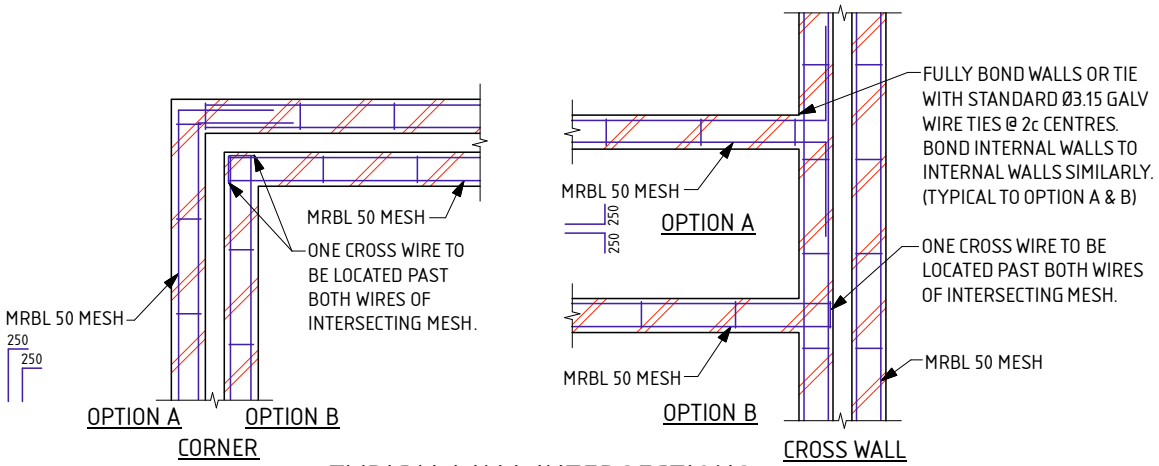
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 465 MAIVE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 465 MAIVE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 465 MAIVE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED

SITE CLASSIFICATION REPORT

CERTIFICATE 2594909

CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 466 MAIVE ST BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082907
DATE OF ASSESSMENT	3/11/22
SITE RECORD	

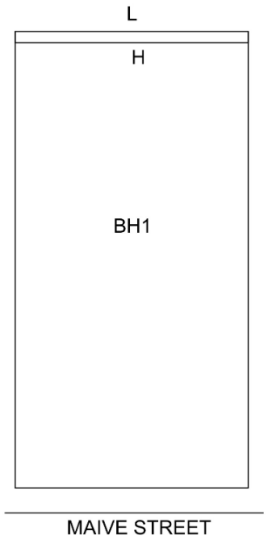
SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N2**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	Partial Shielding	

Issued Date: 9 November 2022

SOIL PROFILE

BOREHOLE 1: 0 - 1400 FILL - sand - brown; 1400 - 1500 SAND - grey; 1500 - 1700 SAND - pale brown; 1700 - 2200 sandy CLAY trace gravel (laterite) - pale brown / brown; 2200 hard ground refusal.

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.

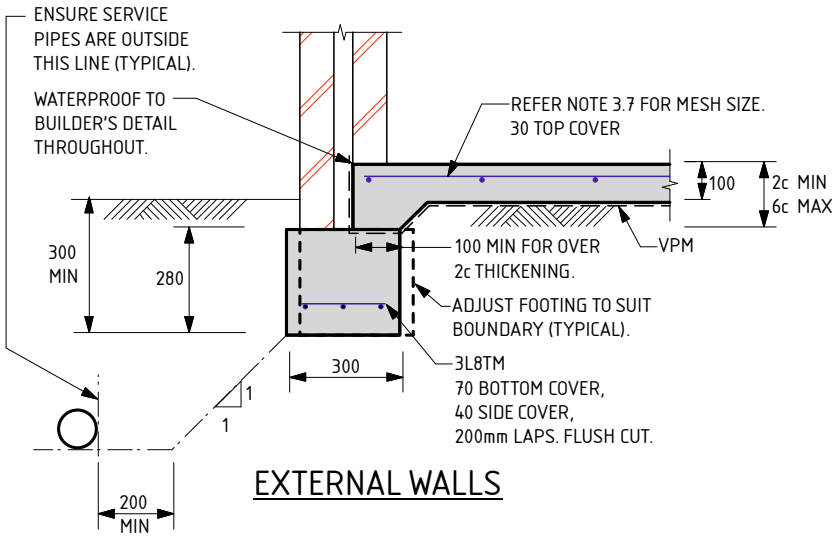
ADDITIONAL NOTES / REQUIREMENTS

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.

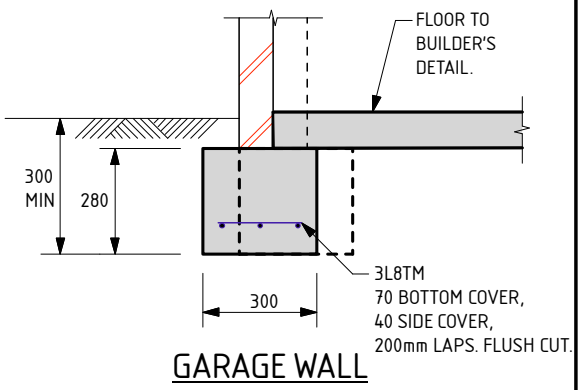
Stormwater Design
Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

-- END OF REPORT --

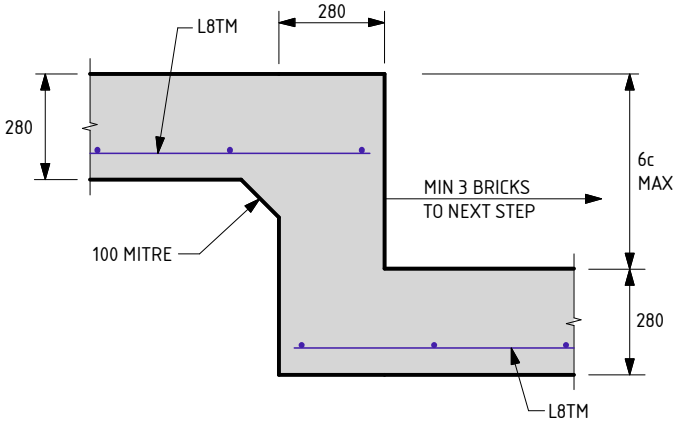
Signed:
Gervase Purich
Chief Executive Officer



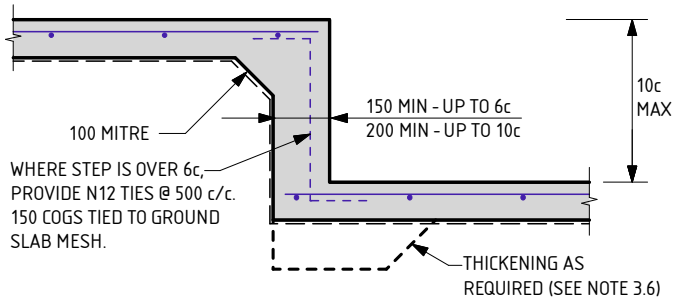
EXTERNAL WALLS



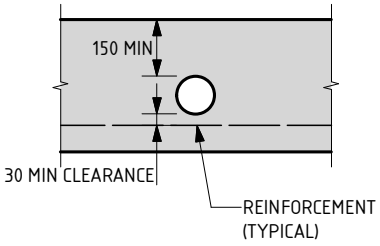
GARAGE WALL



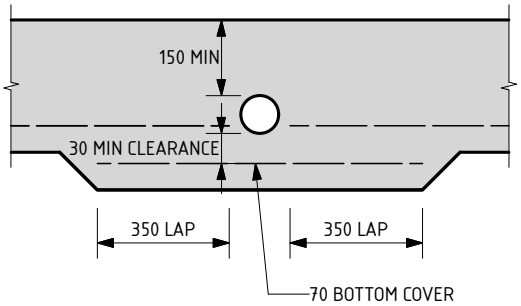
FOOTING STEP



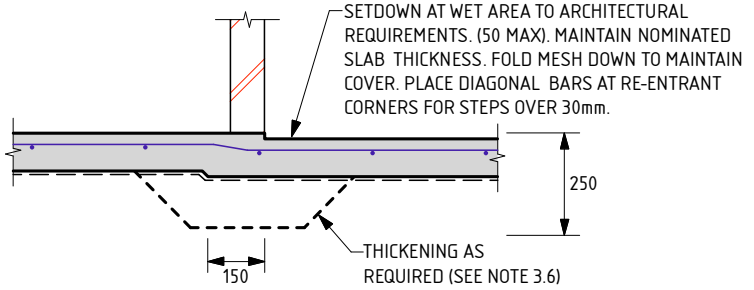
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

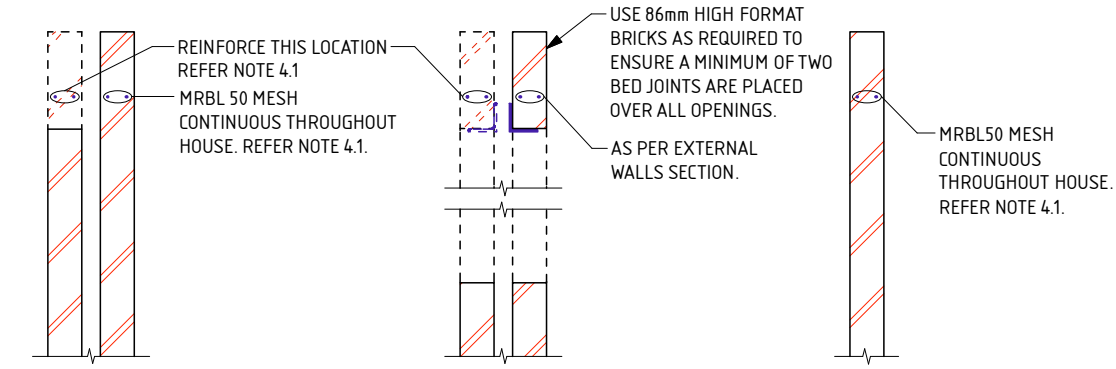
PROJECT: LOT 466 MAIVE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

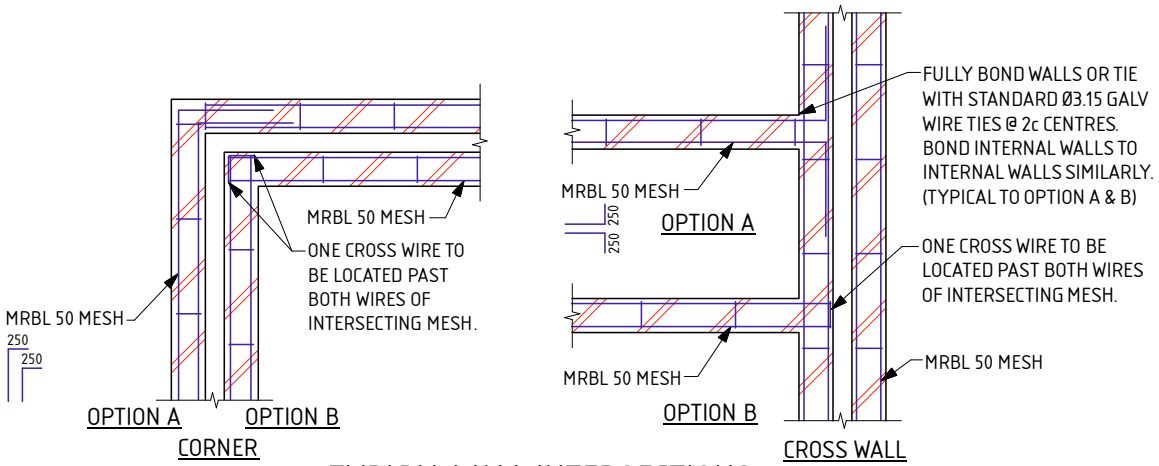
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 466 MAIVE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 466 MAIVE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 466 MAIVE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED

SITE CLASSIFICATION REPORT

CERTIFICATE 2594883

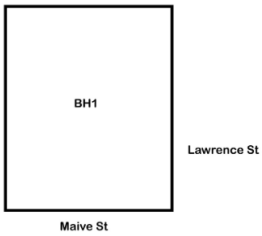
CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 489 MAIVE ST BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082909
DATE OF ASSESSMENT	2/11/22
SITE RECORD	

SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N2**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	Partial Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1200 FILL - sand - brown; 1200 - 1500 FILL - sand trace gravel - grey; 1500 - 2000 clayey SAND with gravel - brown; 2000 hard ground refusal.

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.

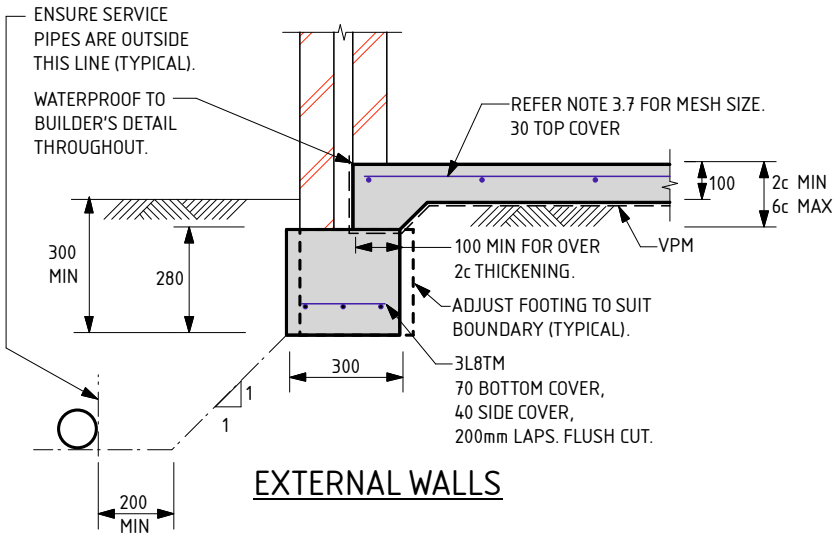
ADDITIONAL NOTES / REQUIREMENTS

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.

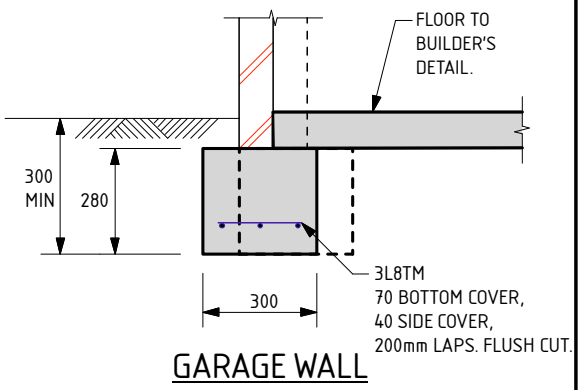
Stormwater Design
Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

-- END OF REPORT --

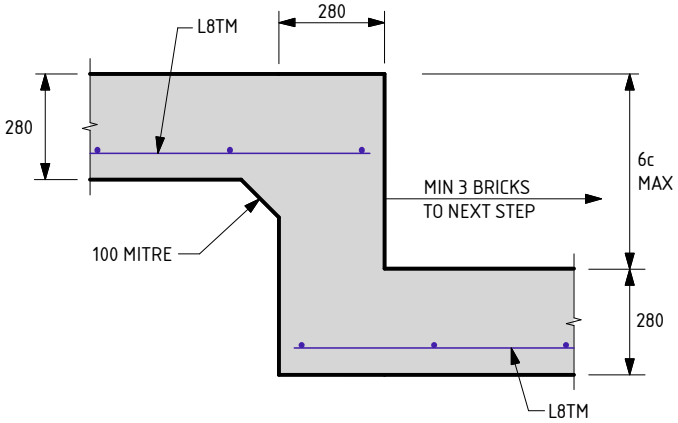
Signed:
Gervase Purich
Chief Executive Officer



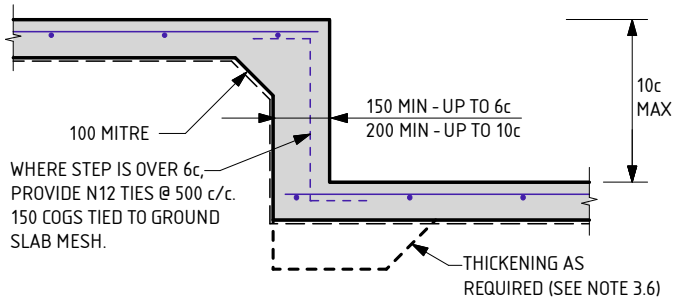
EXTERNAL WALLS



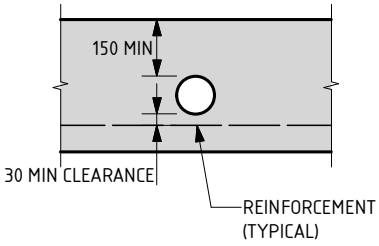
GARAGE WALL



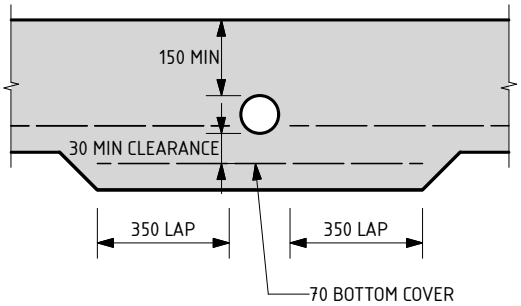
FOOTING STEP



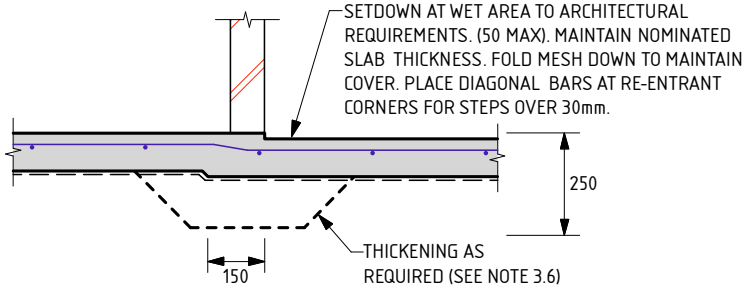
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

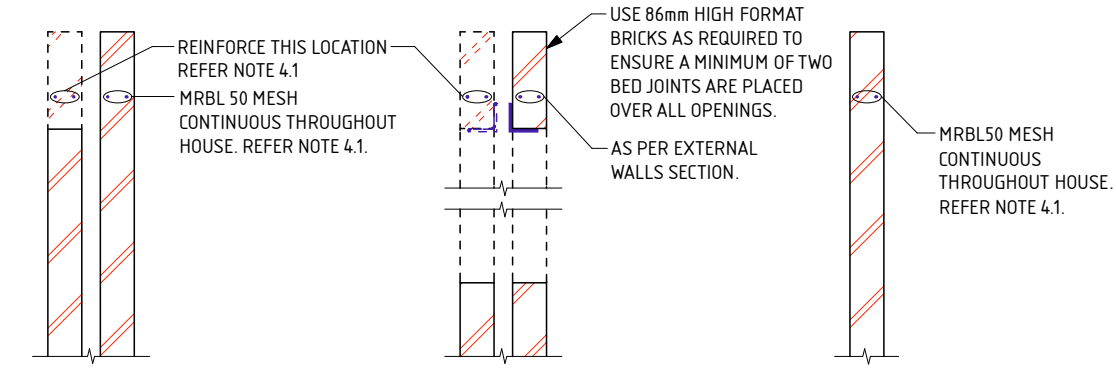
PROJECT: LOT 489 MAIVE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

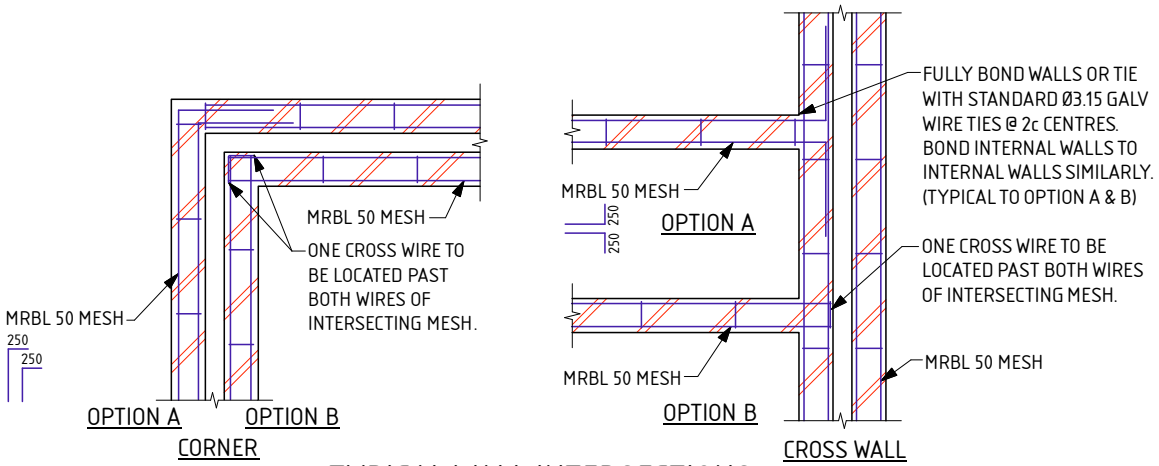
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 489 MAIVE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 489 MAIVE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 489 MAIVE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED

SITE CLASSIFICATION REPORT

CERTIFICATE 2594882

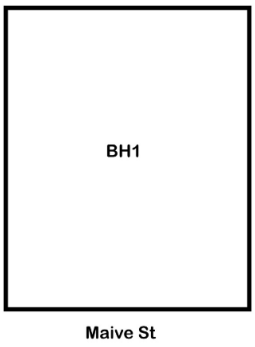
CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 490 MAIVE ST BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082910
DATE OF ASSESSMENT	2/11/22
SITE RECORD	

SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N2**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	Partial Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1200 FILL - sand - brown; 1200 - 1500 FILL - sand trace gravel - grey; 1500 - 2000 clayey SAND with gravel - brown; 2000 hard ground refusal.

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.

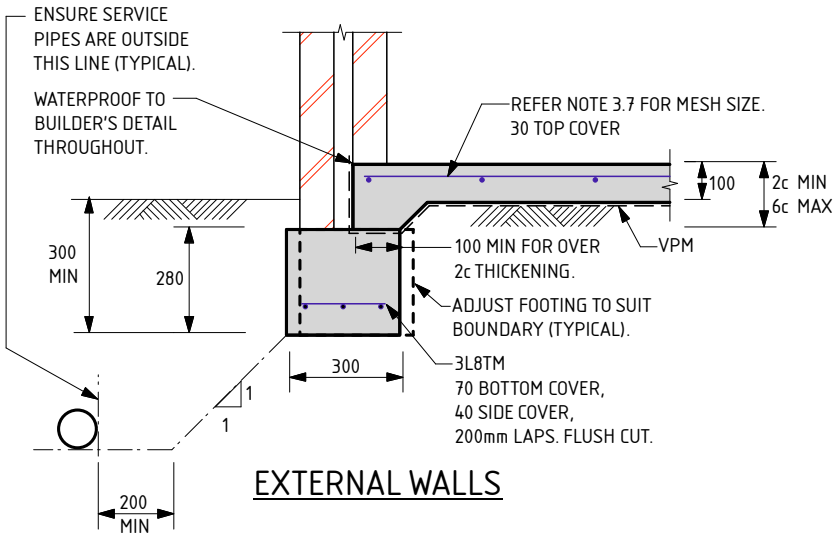
ADDITIONAL NOTES / REQUIREMENTS

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.

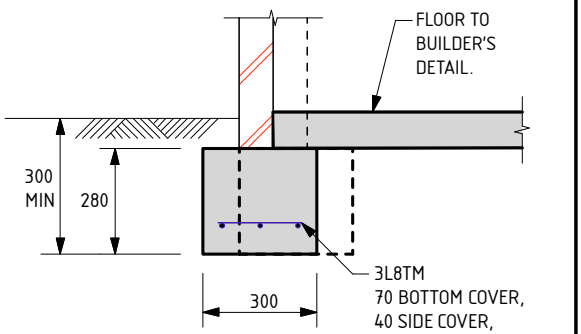
Stormwater Design
Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

-- END OF REPORT --

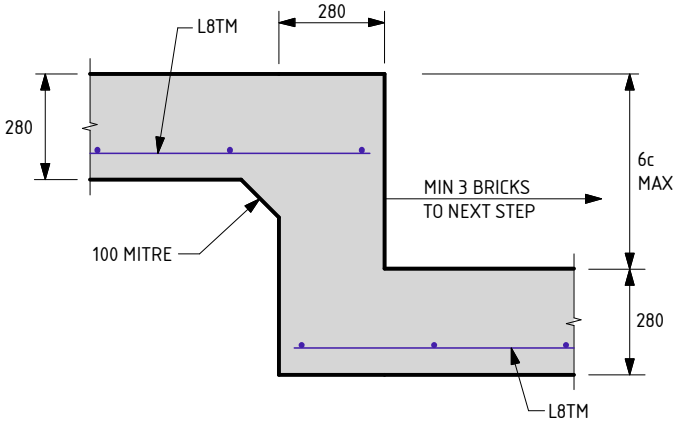
Signed:
Gervase Purich
Chief Executive Officer



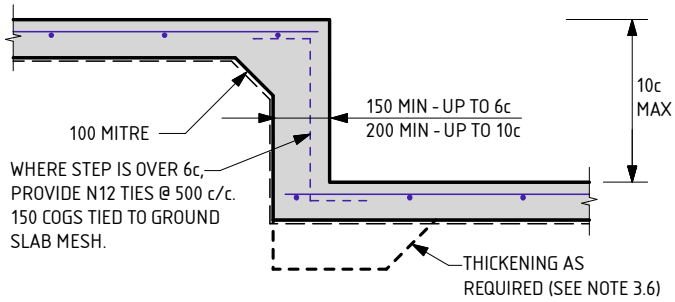
EXTERNAL WALLS



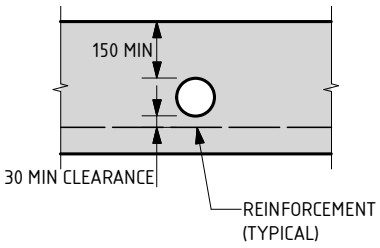
GARAGE WALL



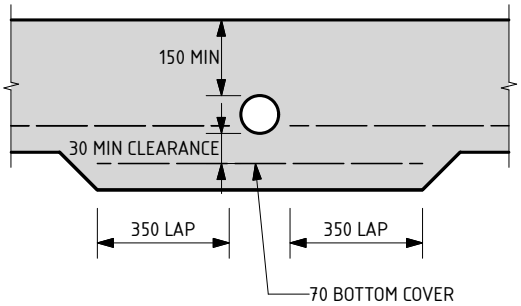
FOOTING STEP



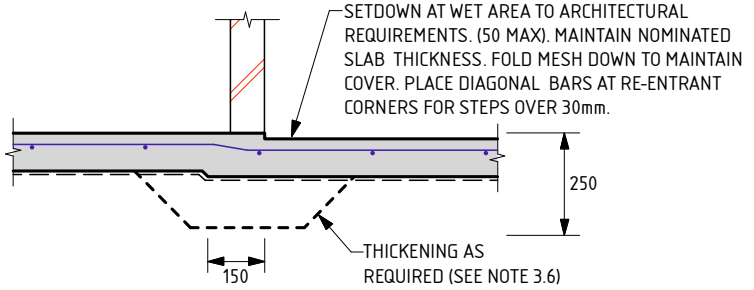
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

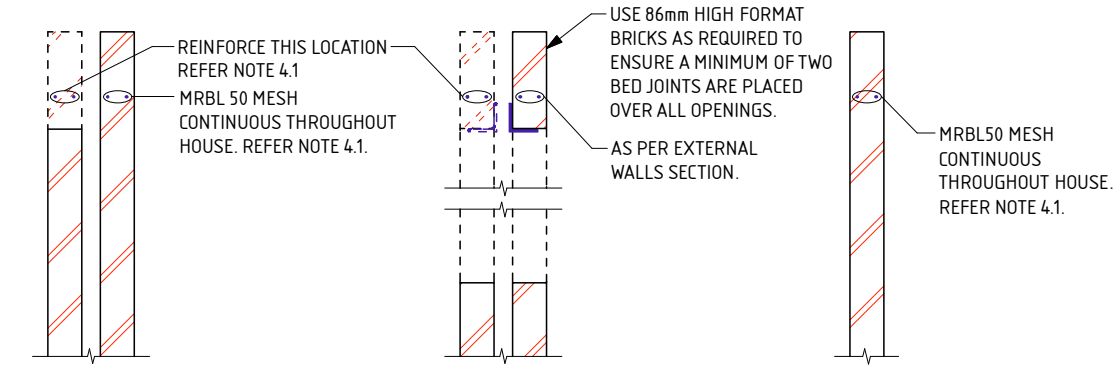
PROJECT: LOT 490 MAIVE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

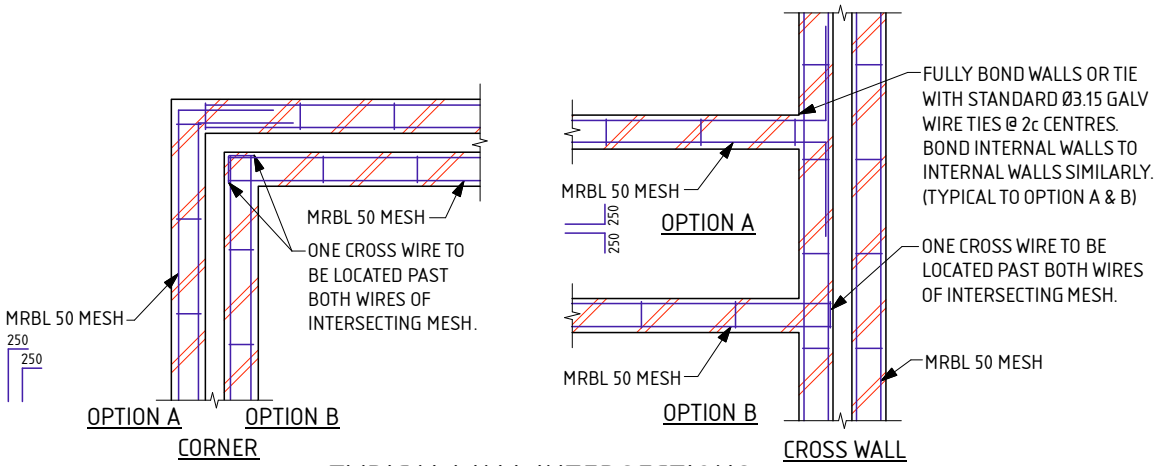
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 490 MAIVE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 490 MAIVE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 490 MAIVE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED

SITE CLASSIFICATION REPORT

CERTIFICATE 2594891

CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 491 MAIVE ST BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082911
DATE OF ASSESSMENT	2/11/22
SITE RECORD	

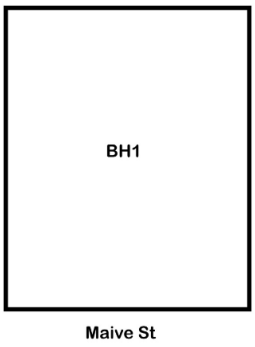
SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N1**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	Full Shielding	

Issued Date: 9 November 2022

SOIL PROFILE

BOREHOLE 1: 0 - 1200 FILL - sand - brown; 1200 - 1500 FILL - sand trace gravel - grey; 1500 - 2000 clayey SAND with gravel - brown; 2000 hard ground refusal.

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.

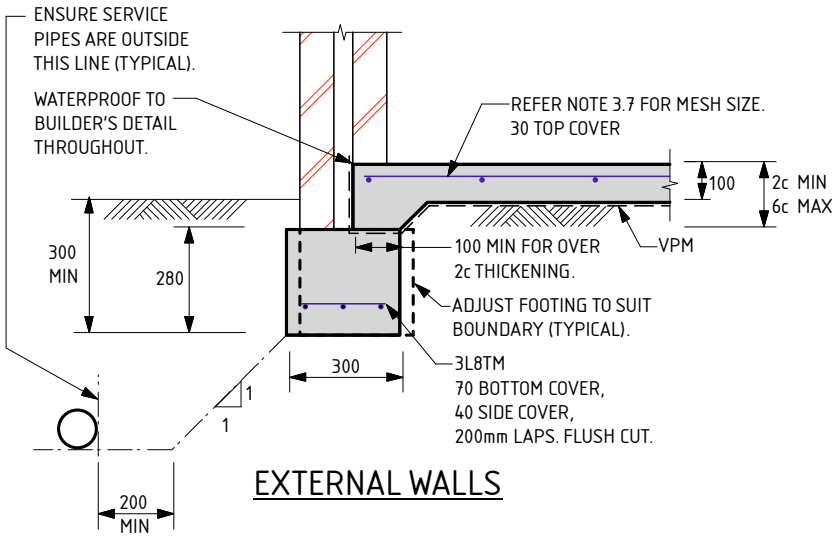
ADDITIONAL NOTES / REQUIREMENTS

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.

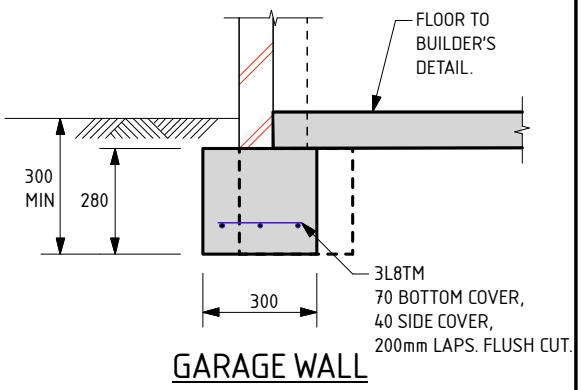
Stormwater Design
Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

-- END OF REPORT --

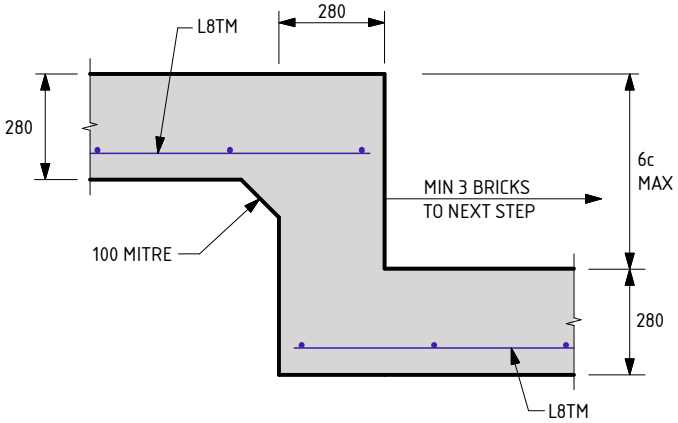
Signed:
Gervase Purich
Chief Executive Officer



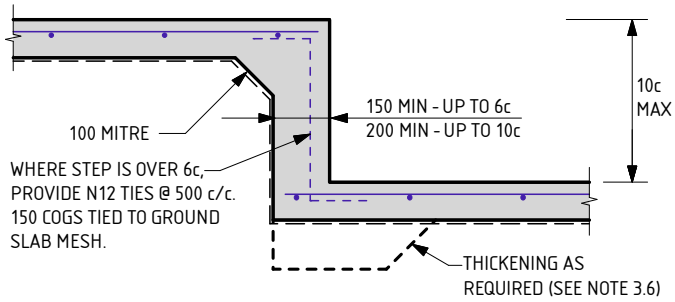
EXTERNAL WALLS



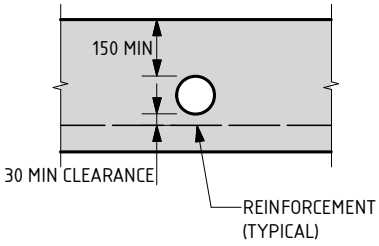
GARAGE WALL



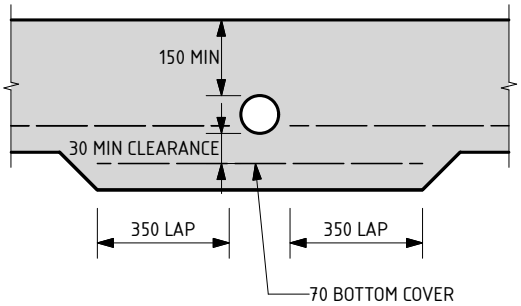
FOOTING STEP



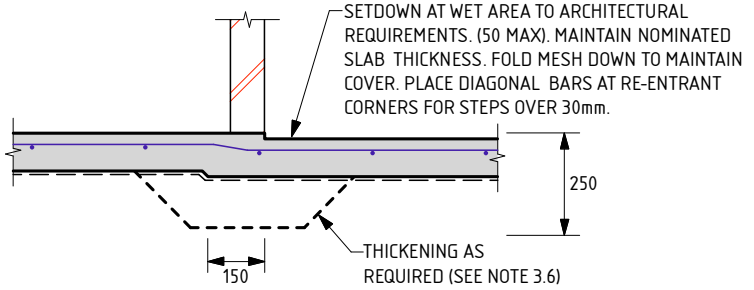
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

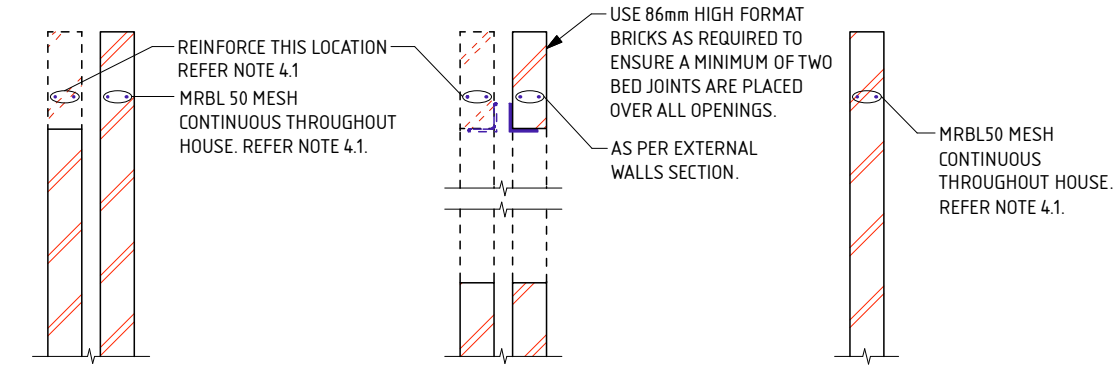
PROJECT: LOT 491 MAIVE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

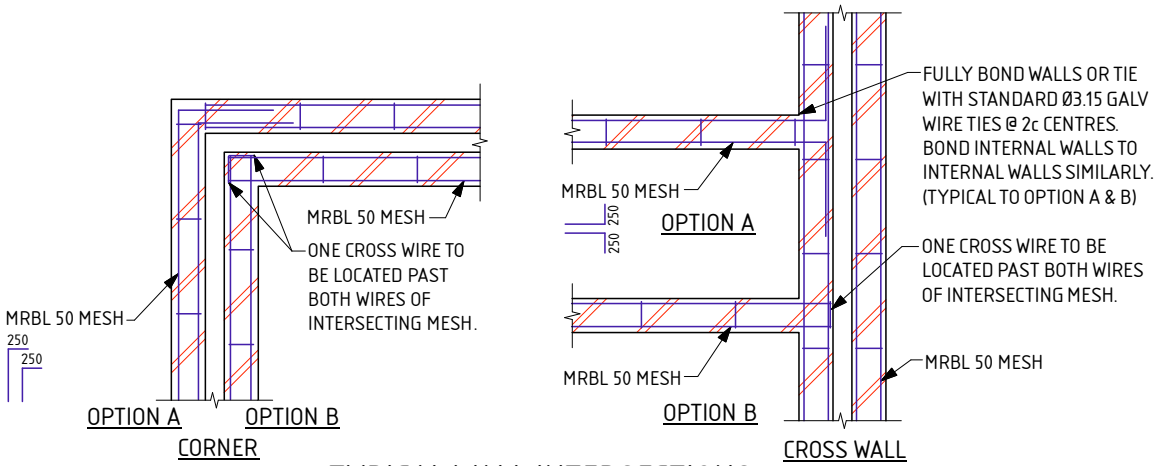
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 491 MAIVE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 491 MAIVE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 491 MAIVE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED

SITE CLASSIFICATION REPORT

CERTIFICATE 2594890

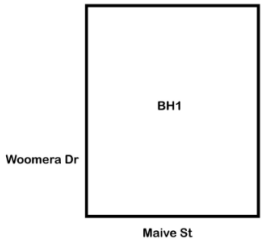
CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 492 MAIVE ST BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082913
DATE OF ASSESSMENT	2/11/22
SITE RECORD	

SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N1**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	Full Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1200 FILL - sand - brown; 1200 - 1500 FILL - sand trace gravel - grey; 1500 - 2000 clayey SAND with gravel - brown; 2000 hard ground refusal.

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.

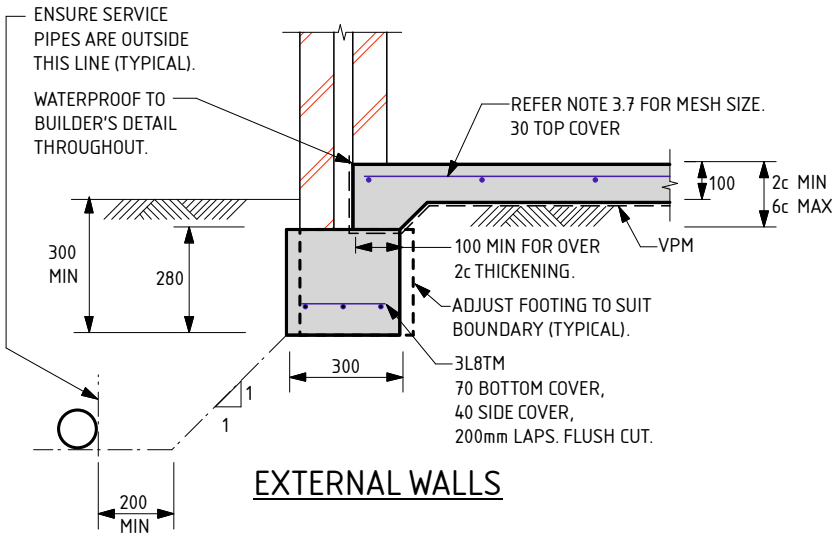
ADDITIONAL NOTES / REQUIREMENTS

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.

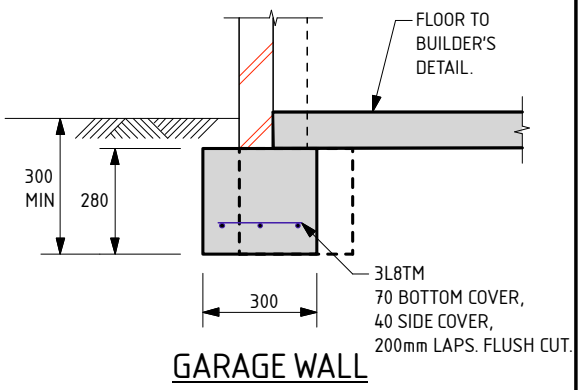
Stormwater Design
Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

-- END OF REPORT --

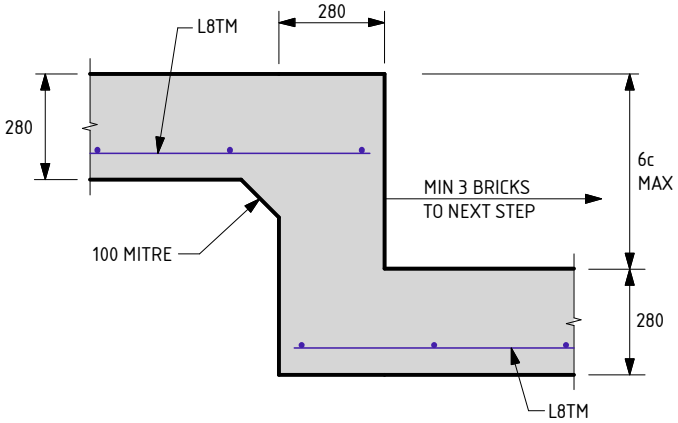
Signed:
Gervase Purich
Chief Executive Officer



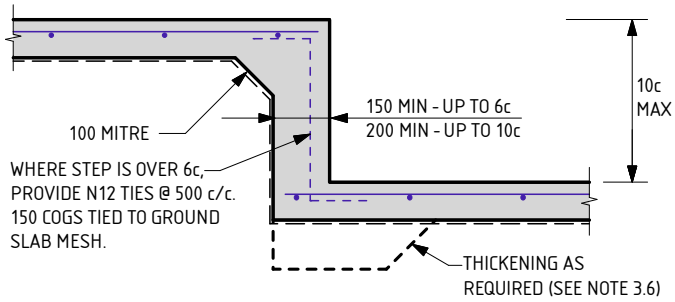
EXTERNAL WALLS



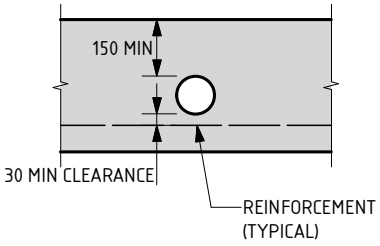
GARAGE WALL



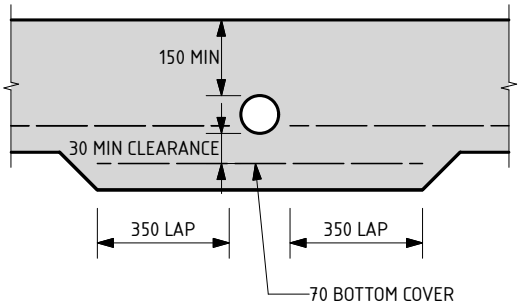
FOOTING STEP



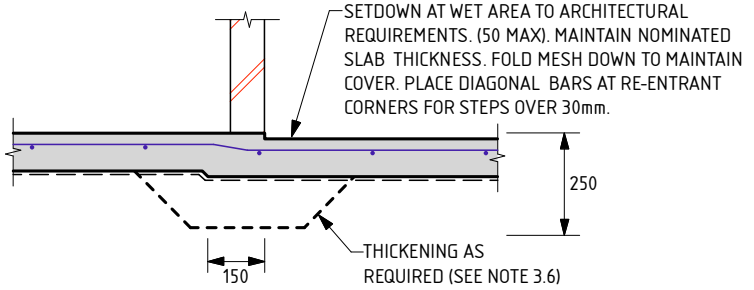
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

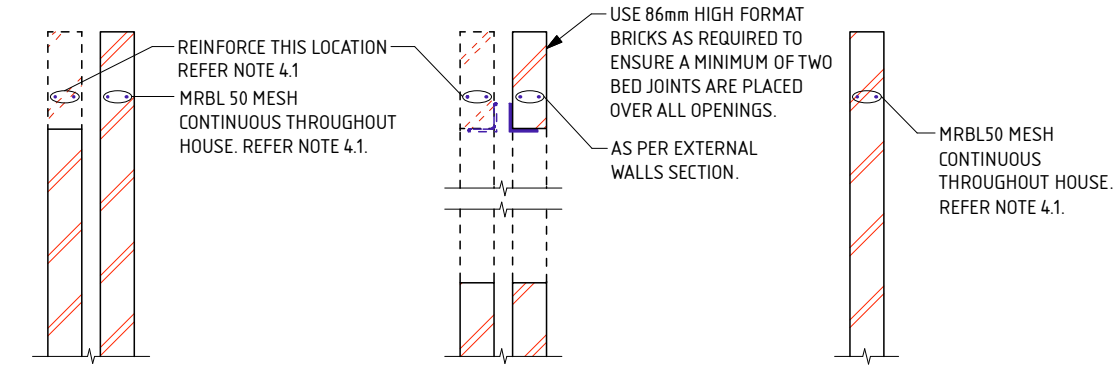
PROJECT: LOT 492 MAIVE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

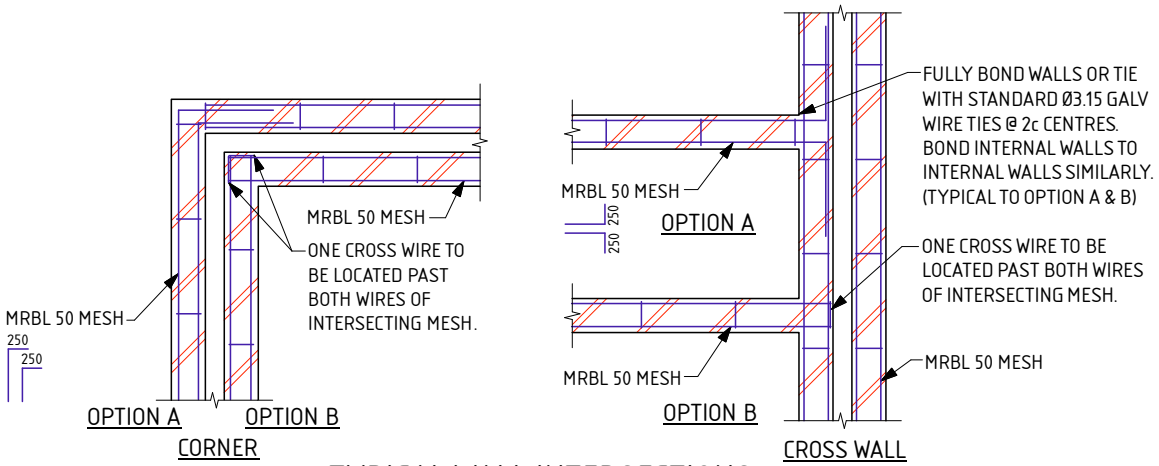
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 492 MAIVE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 492 MAIVE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 492 MAIVE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED

SITE CLASSIFICATION REPORT

CERTIFICATE 2594884

CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 562 LAWRENCE ST BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082915
DATE OF ASSESSMENT	2/11/22
SITE RECORD	

SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N2**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	No Shielding	

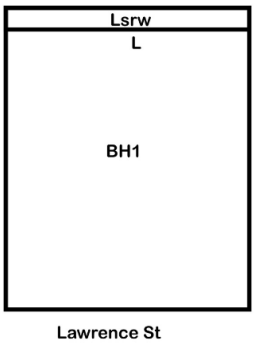
WA | QLD | NSW | VIC
1 Erindale Road, Balcatta, Western Australia 6021 | PO Box 792, Balcatta, Western Australia 6914
Phone (+618) 9205 4500 | Fax (+618) 9205 4501 | Email wageotechsite@structerre.com.au | Web www.structerre.com.au
ABN 71 349 772 837 Zemla Pty Ltd ACN 008 966 283 as trustee for the Young Purich and Higham Unit Trust trading as Structerre Consulting Engineers

Issued Date: 9 November 2022

SOIL PROFILE

BOREHOLE 1: 0 - 1200 FILL - sand - brown; 1200 - 1500 FILL - sand trace gravel - grey; 1500 - 2000 clayey SAND with gravel - brown; 2000 hard ground refusal.

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.

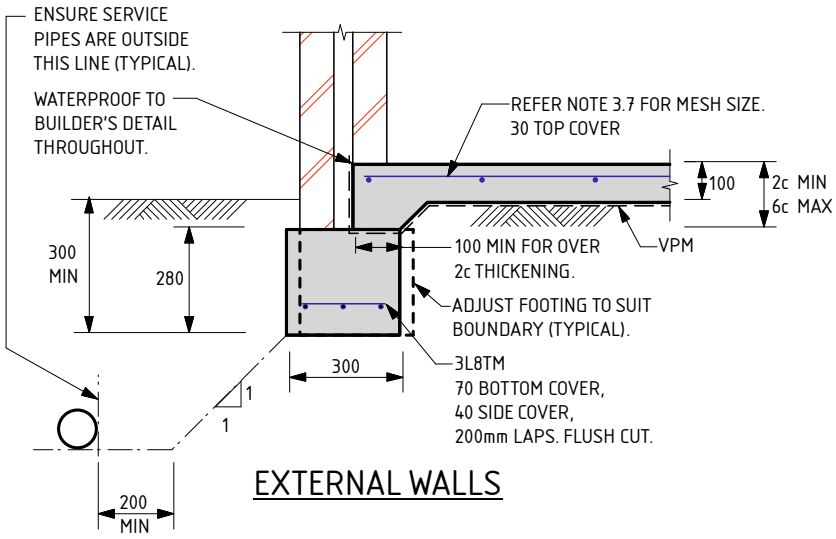
ADDITIONAL NOTES / REQUIREMENTS

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.

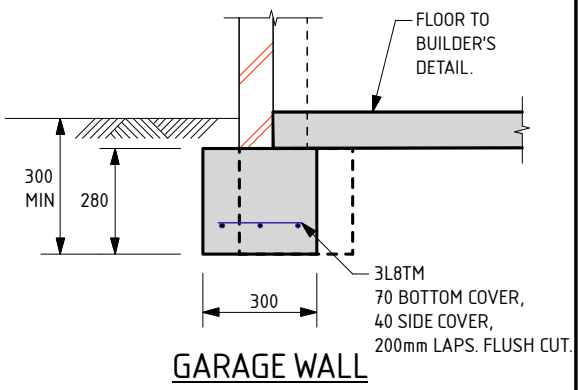
Stormwater Design
Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

-- END OF REPORT --

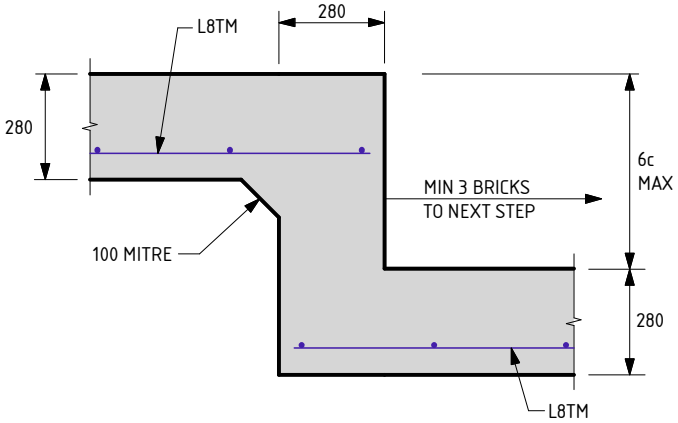
Signed:
Gervase Purich
Chief Executive Officer



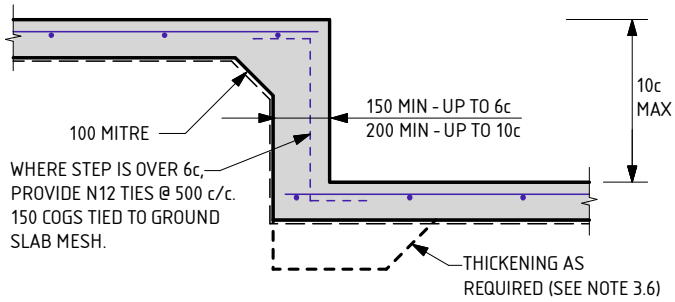
EXTERNAL WALLS



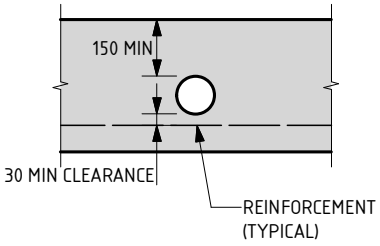
GARAGE WALL



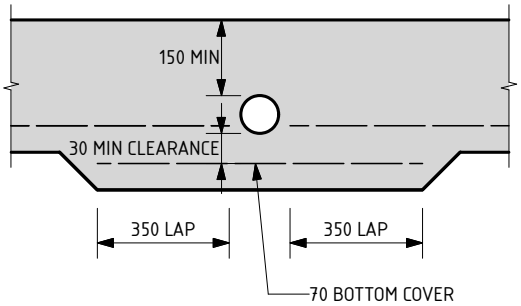
FOOTING STEP



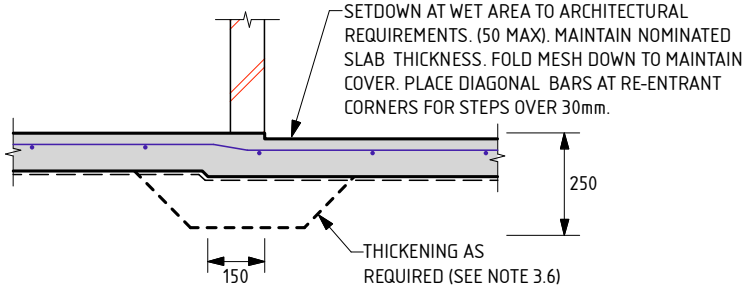
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

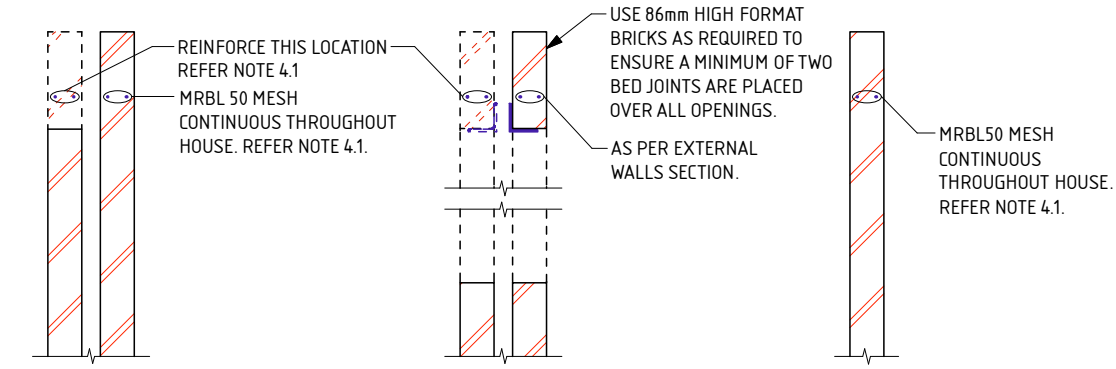
PROJECT: LOT 562 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

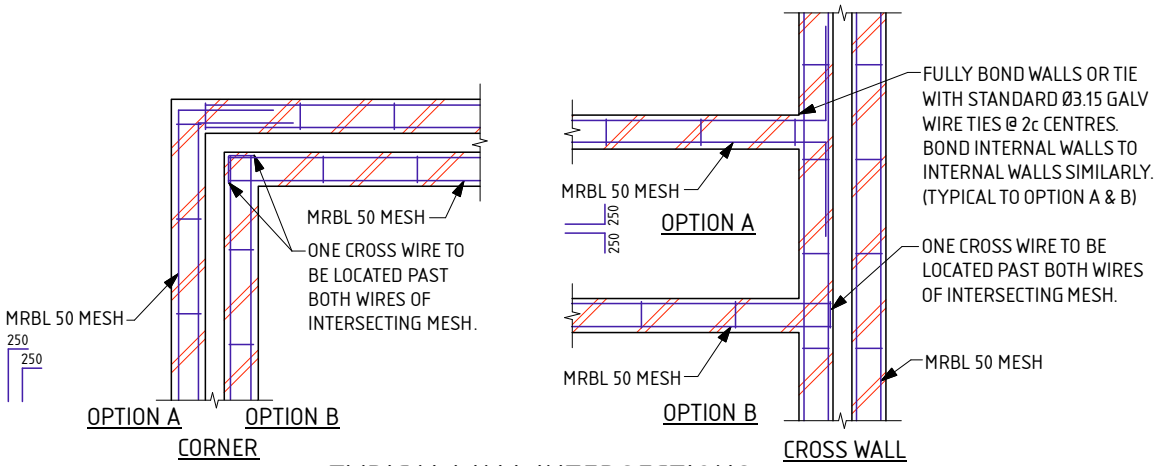
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 562 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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

STRUCterre consulting engineers
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 562 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 562 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED

SITE CLASSIFICATION REPORT

CERTIFICATE 2594886

CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 563 LAWRENCE ST BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082917
DATE OF ASSESSMENT	2/11/22
SITE RECORD	

SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N2**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	No Shielding	

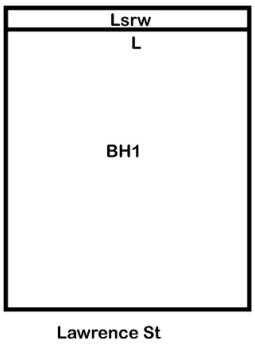
WA | QLD | NSW | VIC
1 Erindale Road, Balcatta, Western Australia 6021 | PO Box 792, Balcatta, Western Australia 6914
Phone (+618) 9205 4500 | Fax (+618) 9205 4501 | Email wageotechsite@structerre.com.au | Web www.structerre.com.au
ABN 71 349 772 837 Zemla Pty Ltd ACN 008 966 283 as trustee for the Young Purich and Higham Unit Trust trading as Structerre Consulting Engineers

Issued Date: 9 November 2022

SOIL PROFILE

BOREHOLE 1: 0 - 1200 FILL - sand - brown; 1200 - 1500 FILL - sand trace gravel - grey; 1500 - 2000 clayey SAND with gravel - brown; 2000 hard ground refusal.

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.

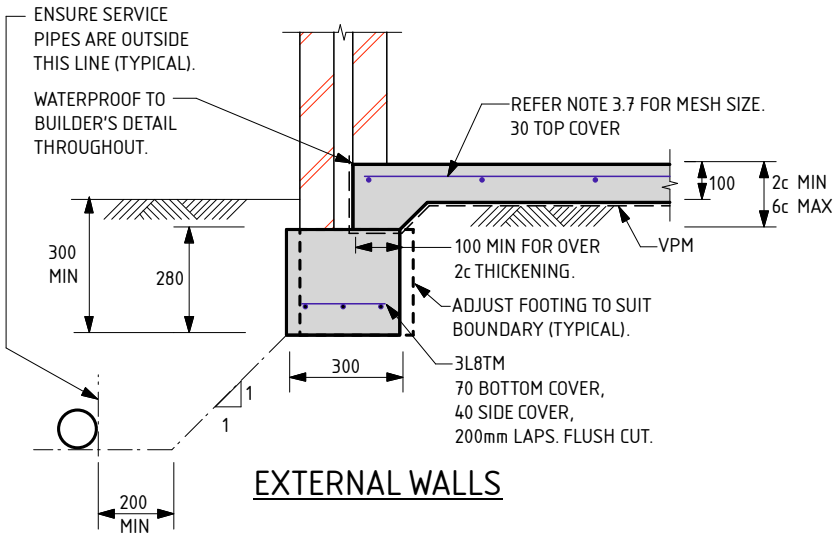
ADDITIONAL NOTES / REQUIREMENTS

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.

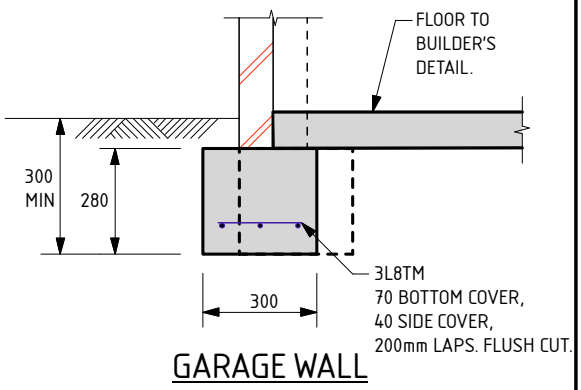
Stormwater Design
Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

-- END OF REPORT --

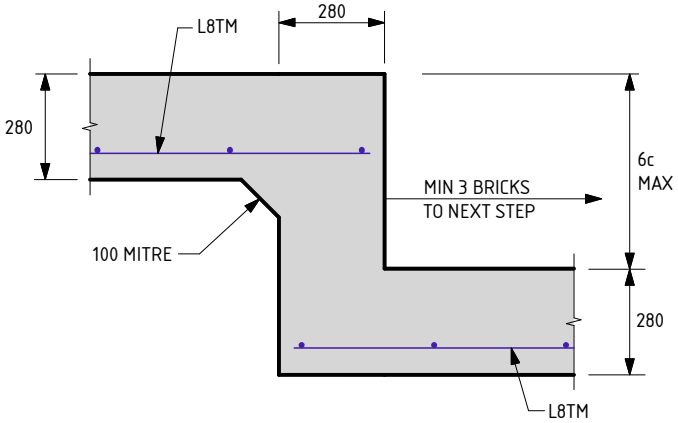
Signed:
Gervase Purich
Chief Executive Officer



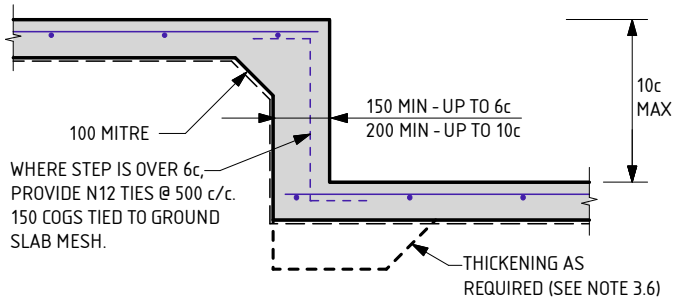
EXTERNAL WALLS



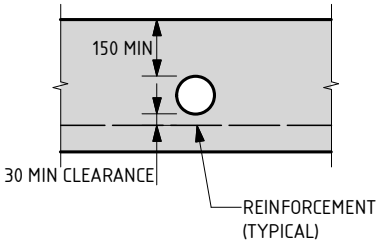
GARAGE WALL



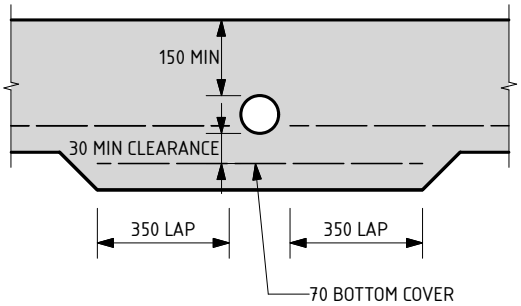
FOOTING STEP



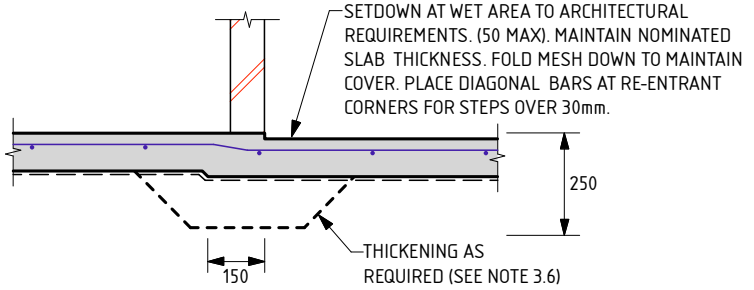
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

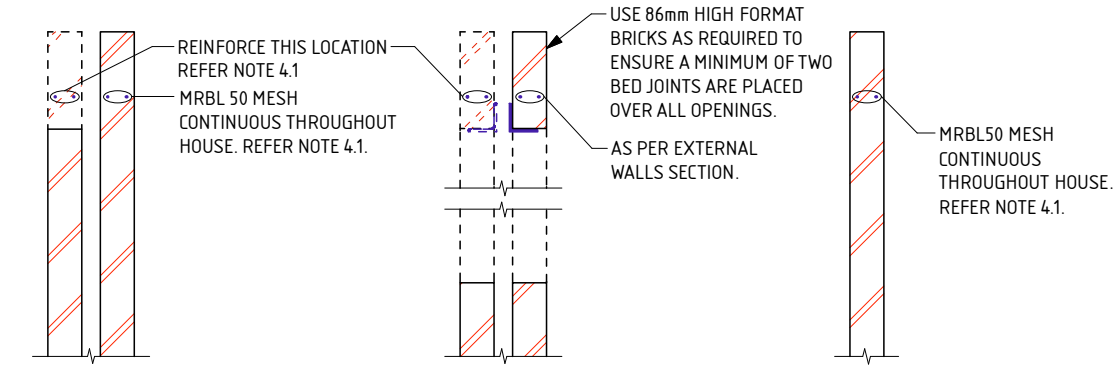
PROJECT: LOT 563 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

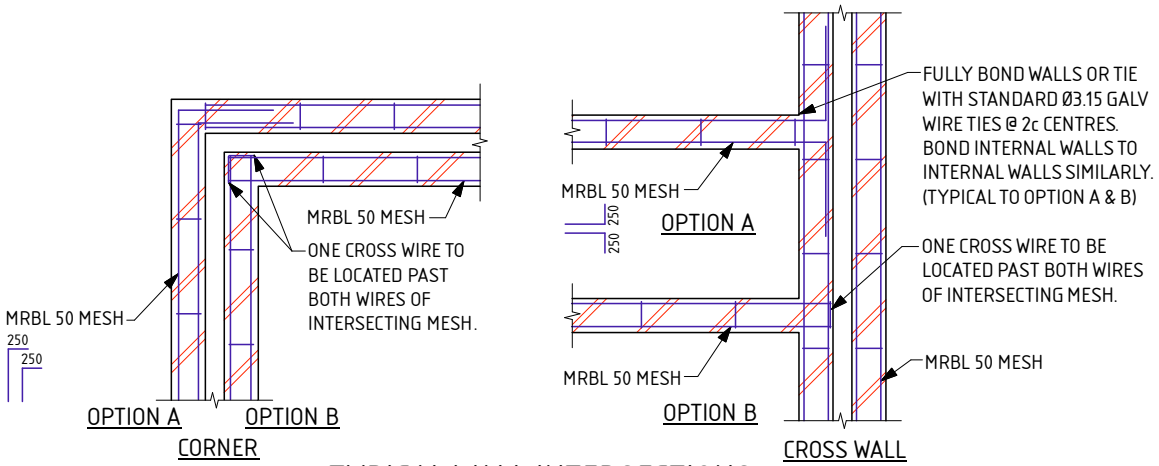
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 563 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 563 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 563 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED

SITE CLASSIFICATION REPORT

CERTIFICATE 2594887

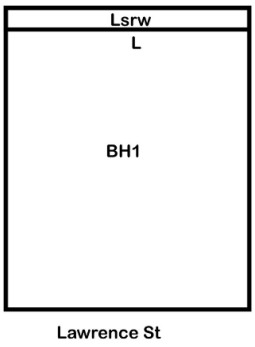
CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 564 LAWRENCE ST BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082919
DATE OF ASSESSMENT	2/11/22
SITE RECORD	

SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N2**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	No Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1200 FILL - sand - brown; 1200 - 1500 FILL - sand trace gravel - grey; 1500 - 2000 clayey SAND with gravel - brown; 2000 hard ground refusal.

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.

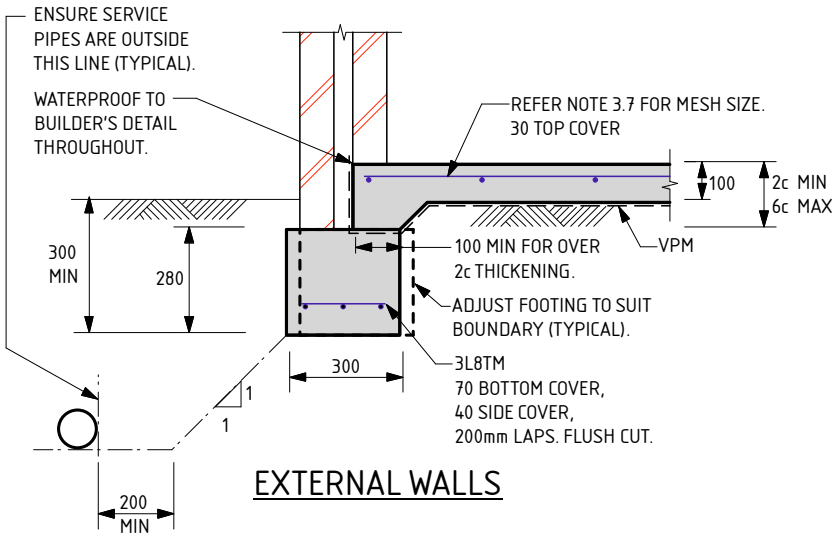
ADDITIONAL NOTES / REQUIREMENTS

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.

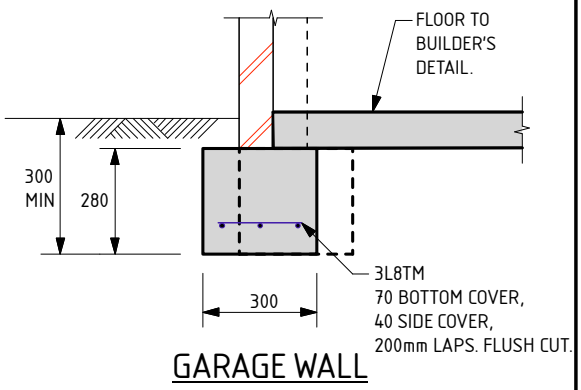
Stormwater Design
Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

-- END OF REPORT --

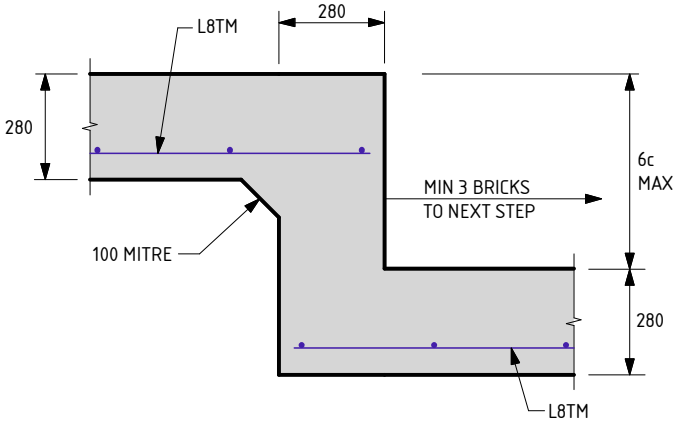
Signed:
Gervase Purich
Chief Executive Officer



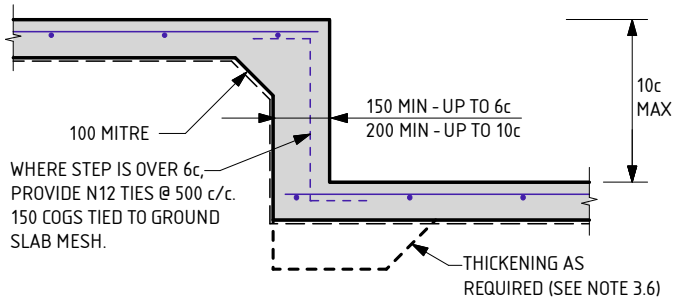
EXTERNAL WALLS



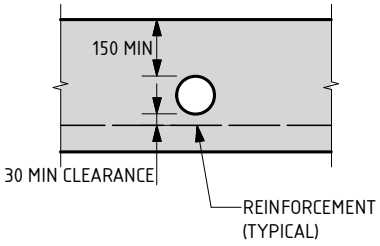
GARAGE WALL



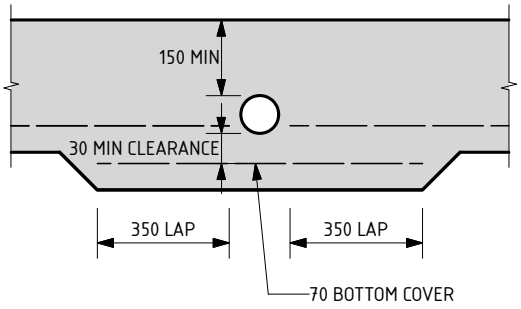
FOOTING STEP



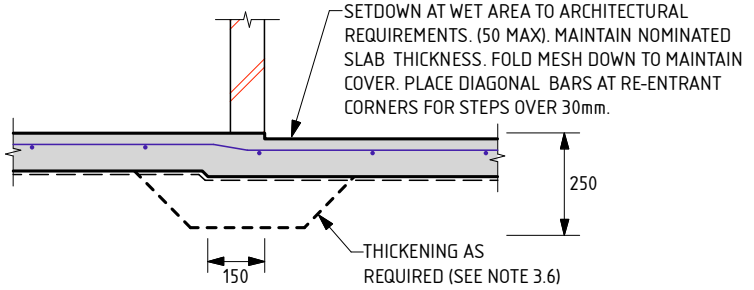
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

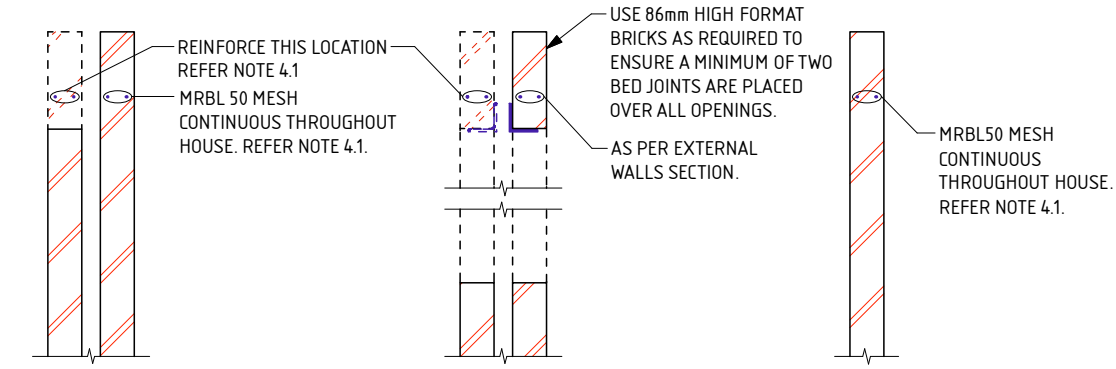
PROJECT: LOT 564 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

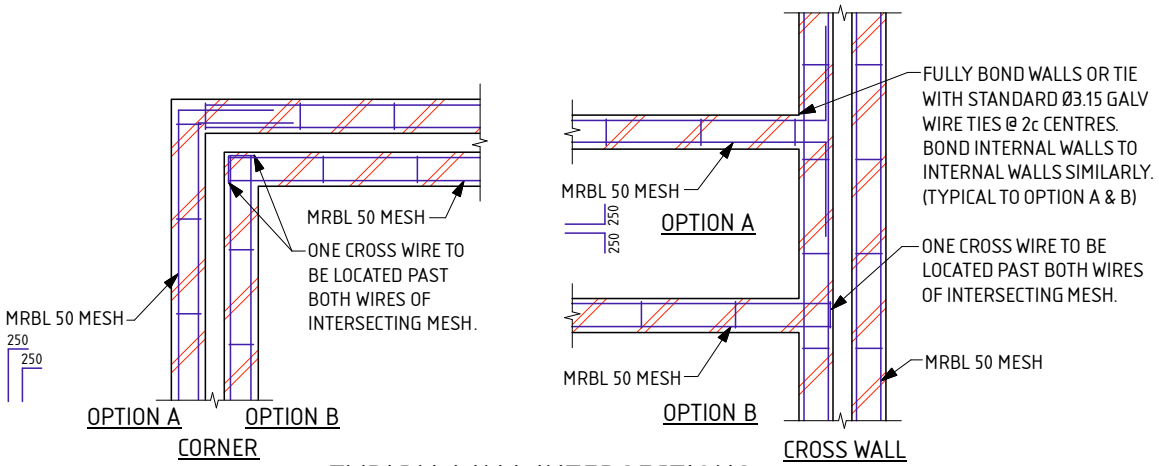
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 564 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 564 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 564 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED

SITE CLASSIFICATION REPORT

CERTIFICATE 2594888

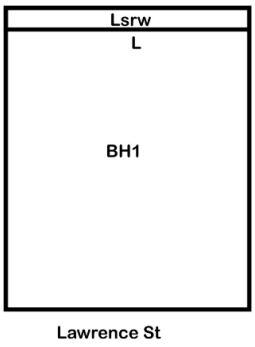
CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 565 LAWRENCE ST BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082921
DATE OF ASSESSMENT	2/11/22
SITE RECORD	

SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N2**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	No Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1200 FILL - sand - brown; 1200 - 1500 FILL - sand trace gravel - grey; 1500 - 2000 clayey SAND with gravel - brown; 2000 hard ground refusal.

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.

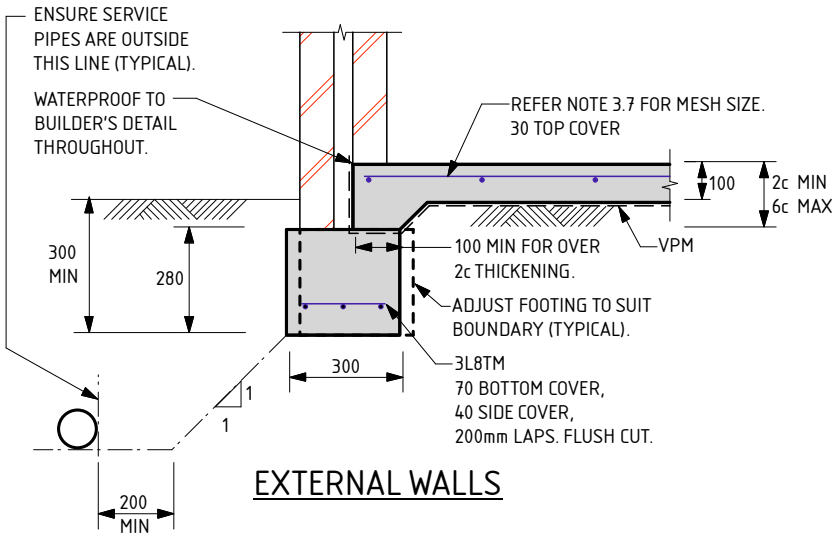
ADDITIONAL NOTES / REQUIREMENTS

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.

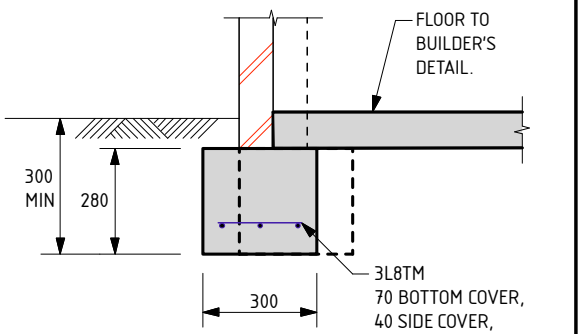
Stormwater Design
Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

-- END OF REPORT --

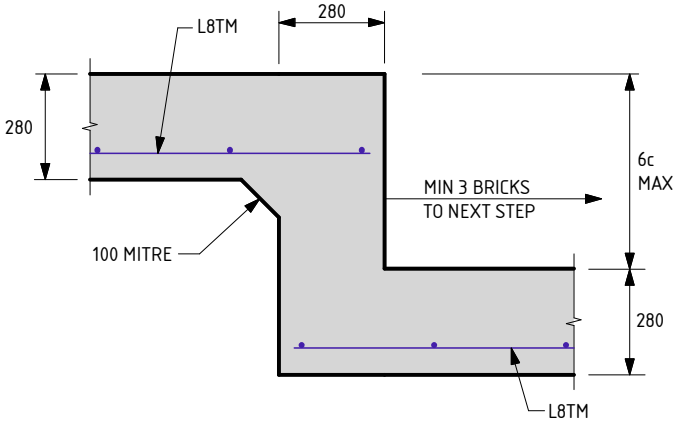
Signed:
Gervase Purich
Chief Executive Officer



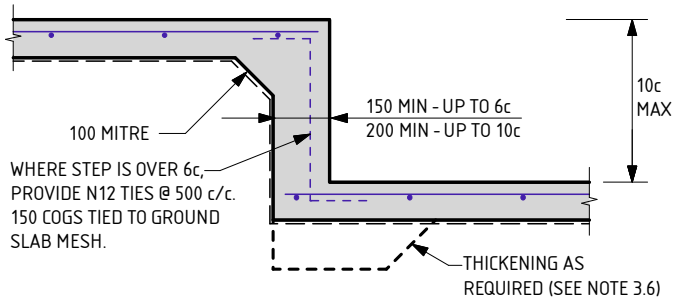
EXTERNAL WALLS



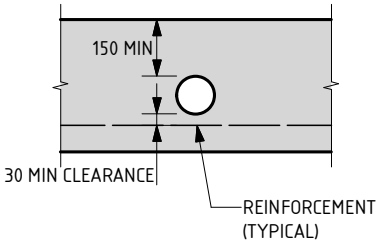
GARAGE WALL



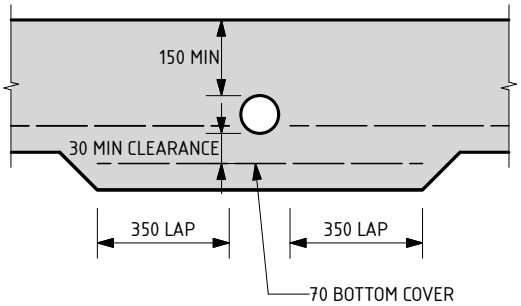
FOOTING STEP



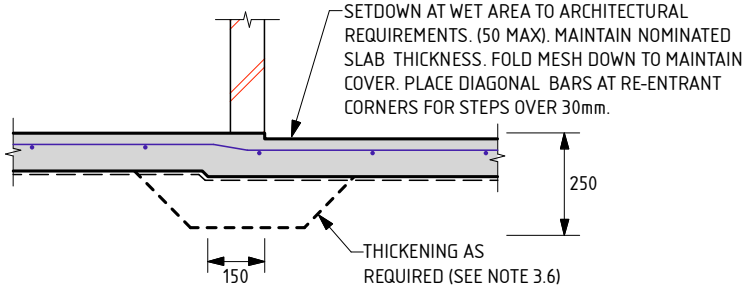
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

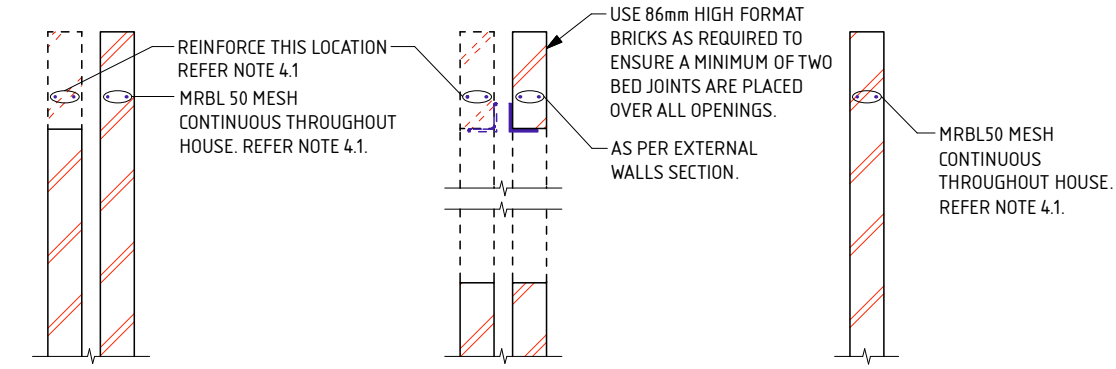
PROJECT: LOT 565 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

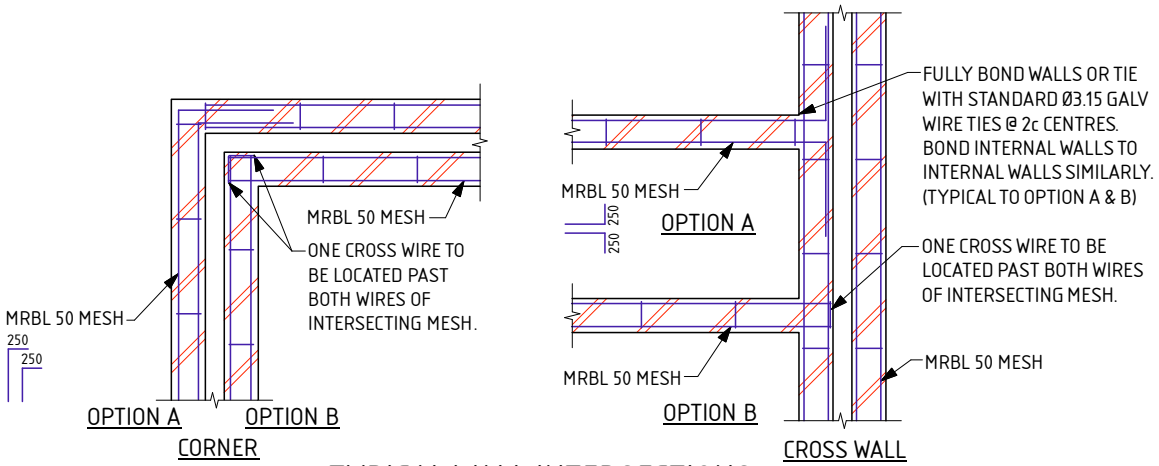
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 565 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 565 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 565 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED

SITE CLASSIFICATION REPORT

CERTIFICATE 2594889

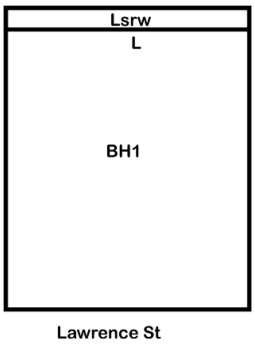
CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 566 LAWRENCE ST BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082922
DATE OF ASSESSMENT	2/11/22
SITE RECORD	

SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N2**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	No Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1200 FILL - sand - brown; 1200 - 1500 FILL - sand trace gravel - grey; 1500 - 2000 clayey SAND with gravel - brown; 2000 hard ground refusal.

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.

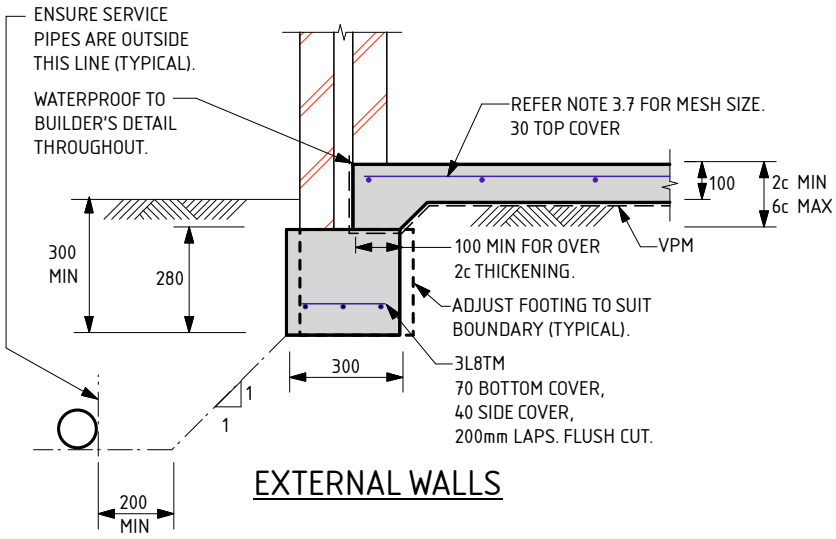
ADDITIONAL NOTES / REQUIREMENTS

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.

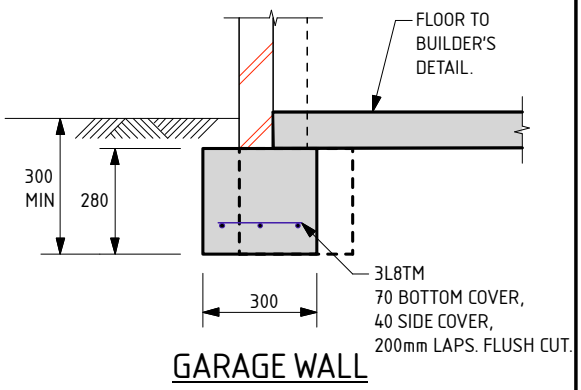
Stormwater Design
Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

-- END OF REPORT --

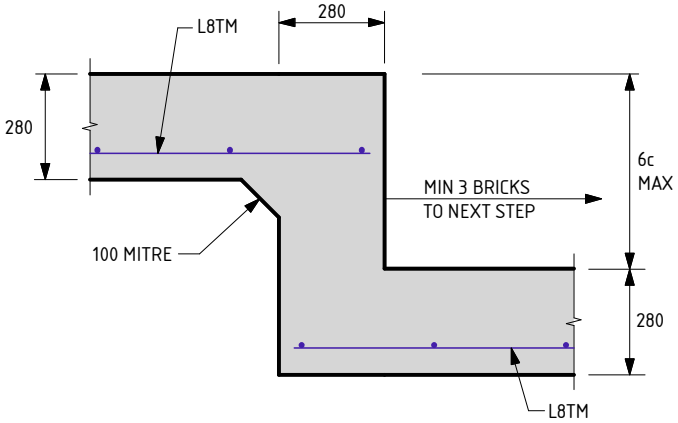
Signed:
Gervase Purich
Chief Executive Officer



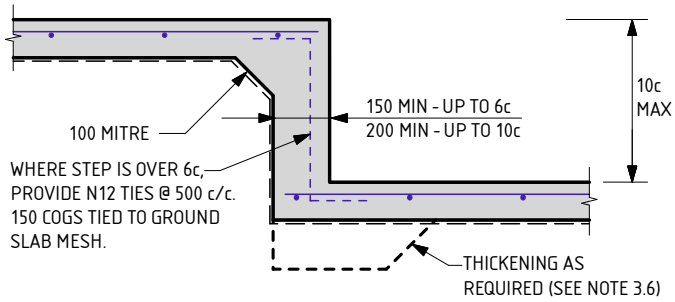
EXTERNAL WALLS



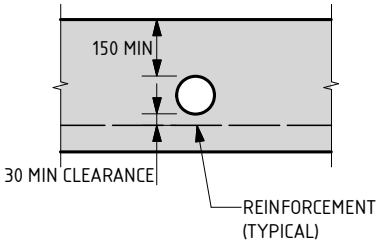
GARAGE WALL



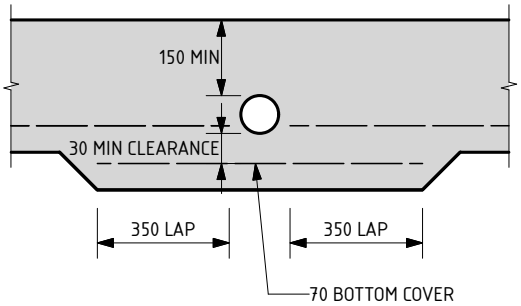
FOOTING STEP



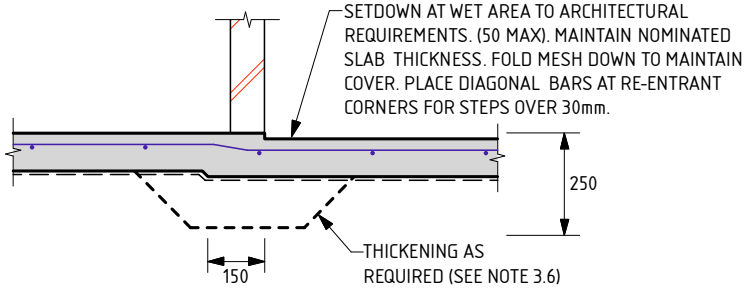
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

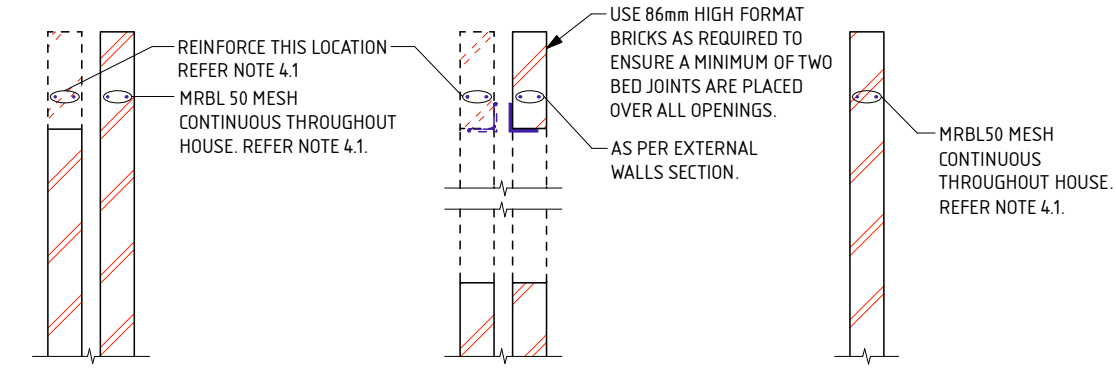
PROJECT: LOT 566 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

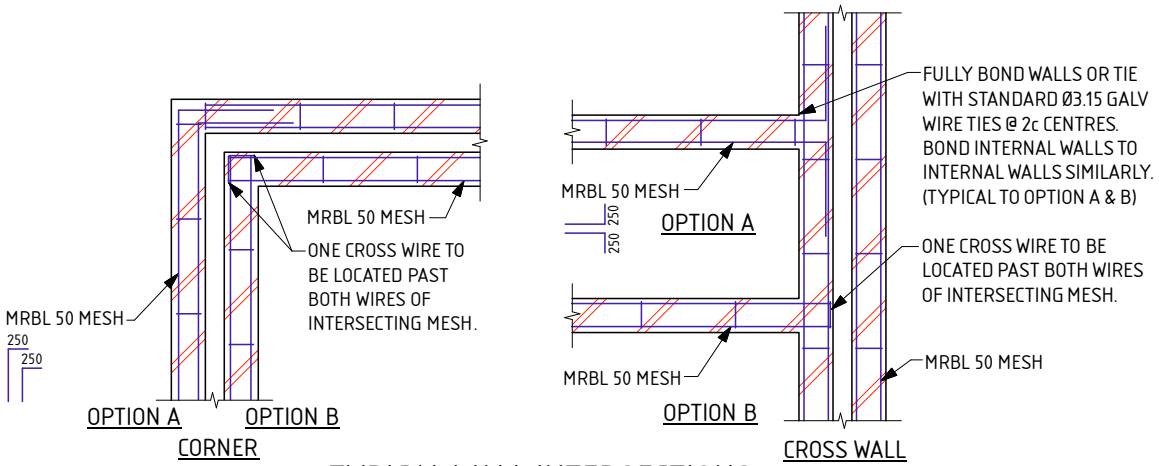
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 566 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 566 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 566 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED

SITE CLASSIFICATION REPORT

CERTIFICATE 2594877

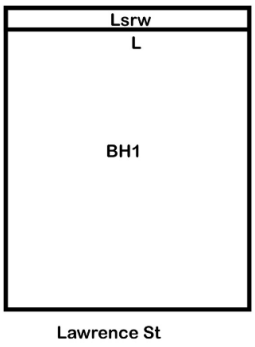
CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 567 LAWRENCE ST BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082923
DATE OF ASSESSMENT	2/11/22
SITE RECORD	

SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N2**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	No Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1200 FILL - sand - brown; 1200 - 1500 FILL - sand trace gravel - grey; 1500 - 2000 clayey SAND with gravel - brown; 2000 hard ground refusal.

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.

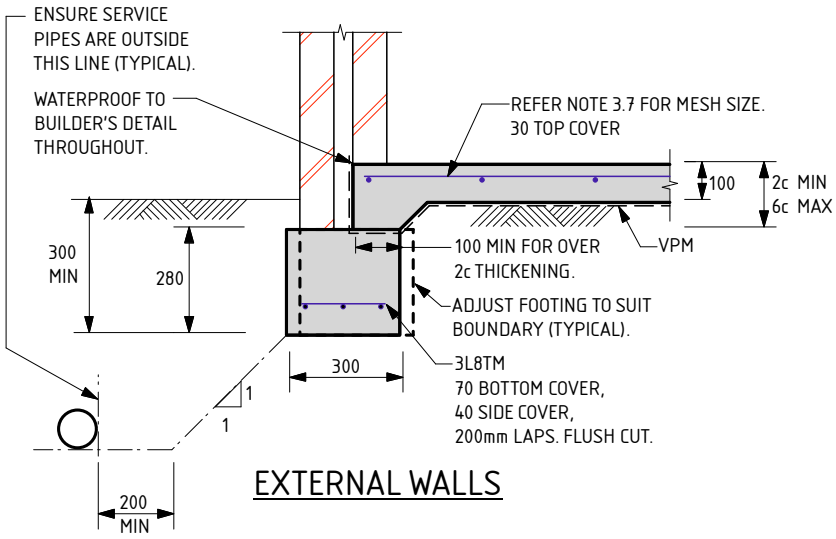
ADDITIONAL NOTES / REQUIREMENTS

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.

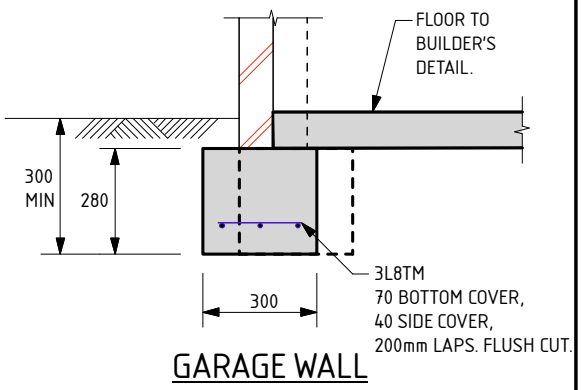
Stormwater Design
Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

-- END OF REPORT --

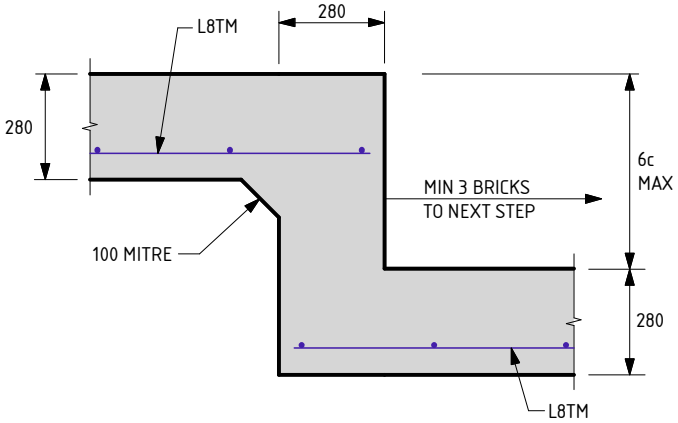
Signed:
Gervase Purich
Chief Executive Officer



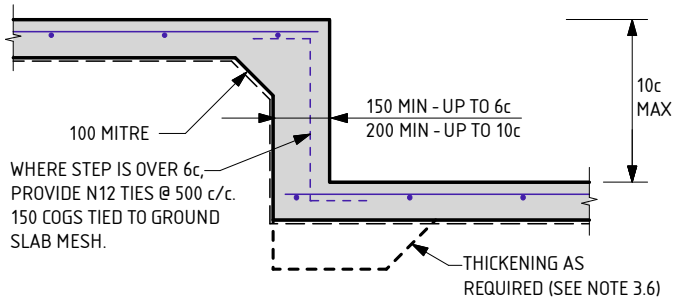
EXTERNAL WALLS



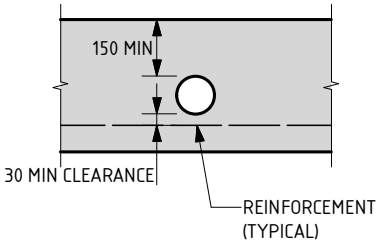
GARAGE WALL



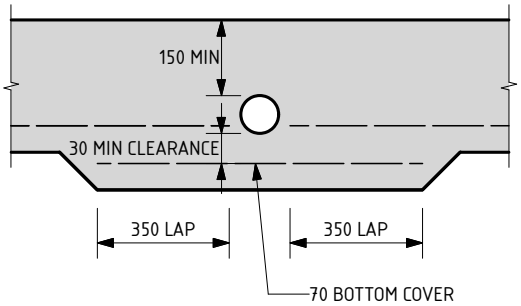
FOOTING STEP



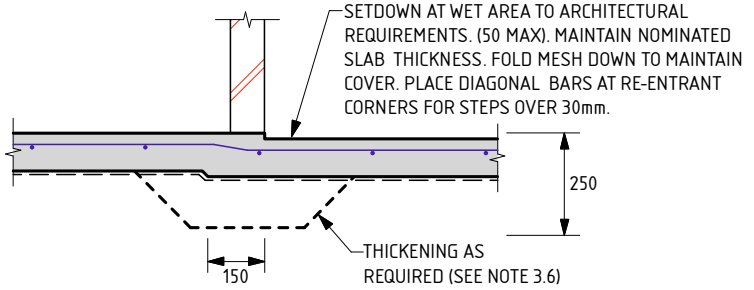
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

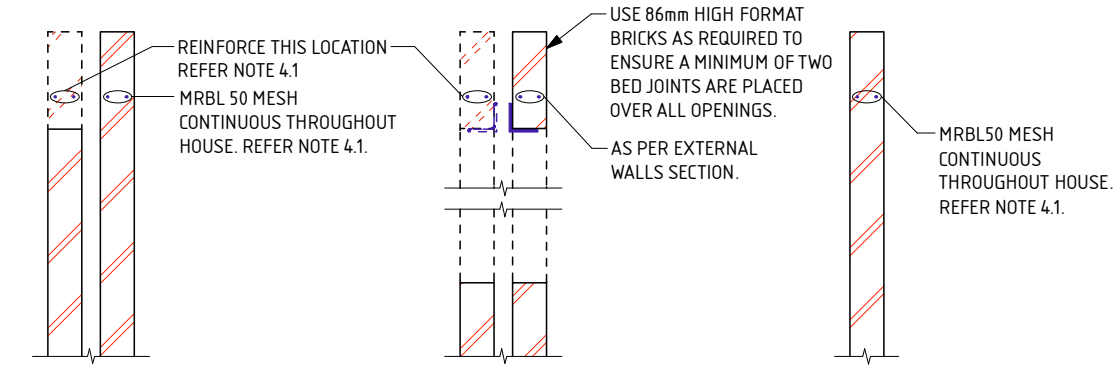
PROJECT: LOT 567 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

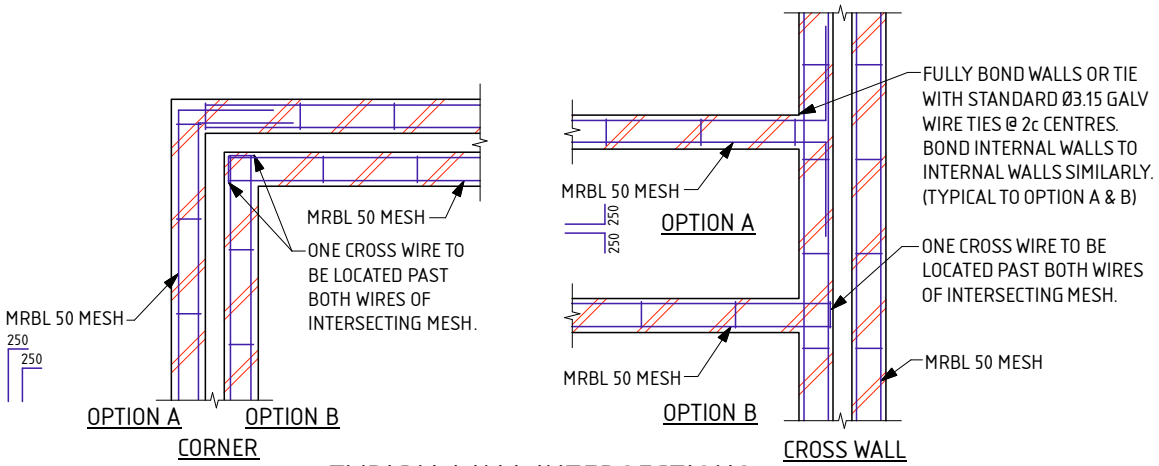
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 567 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 567 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 567 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED

SITE CLASSIFICATION REPORT

CERTIFICATE 2594876

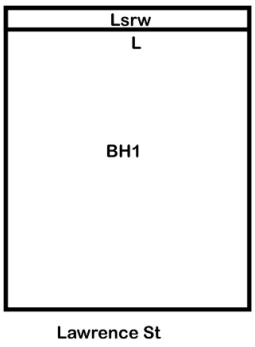
CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 568 LAWRENCE ST BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082924
DATE OF ASSESSMENT	2/11/22
SITE RECORD	

SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N2**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	No Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1200 FILL - sand - brown; 1200 - 1500 FILL - sand trace gravel - grey; 1500 - 2000 clayey SAND with gravel - brown; 2000 hard ground refusal.

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.

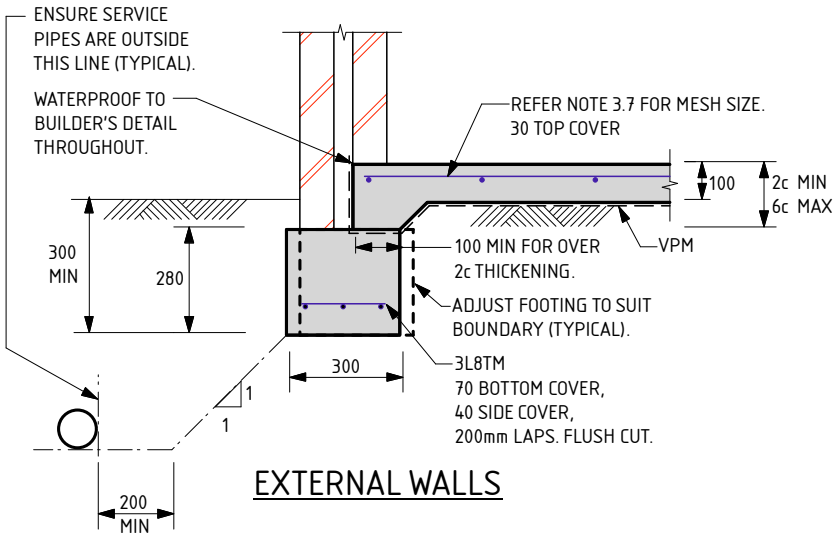
ADDITIONAL NOTES / REQUIREMENTS

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.

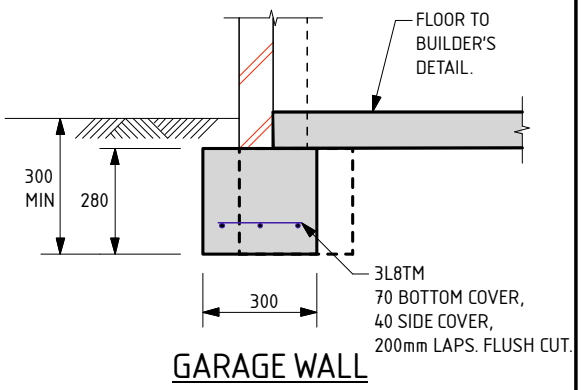
Stormwater Design
Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

-- END OF REPORT --

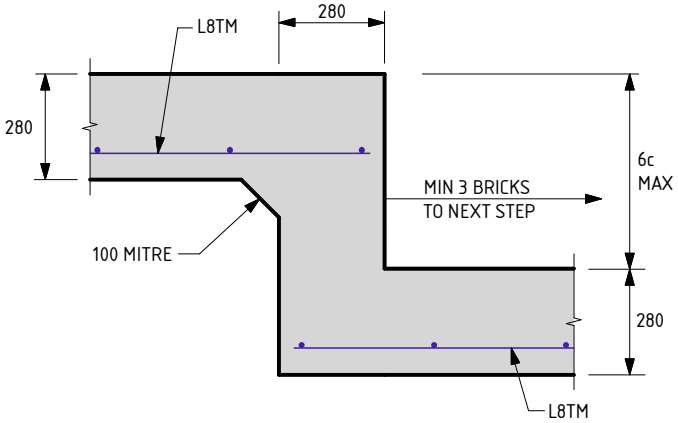
Signed:
Gervase Purich
Chief Executive Officer



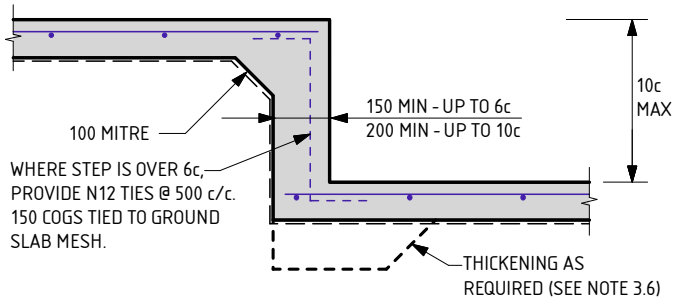
EXTERNAL WALLS



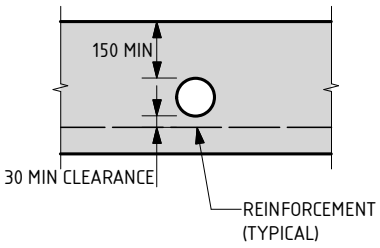
GARAGE WALL



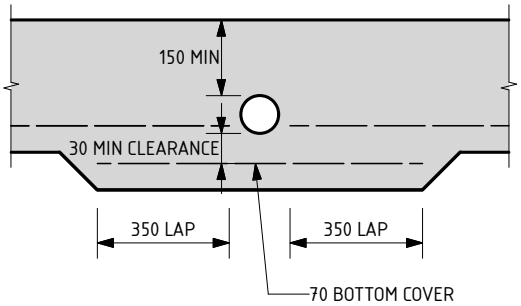
FOOTING STEP



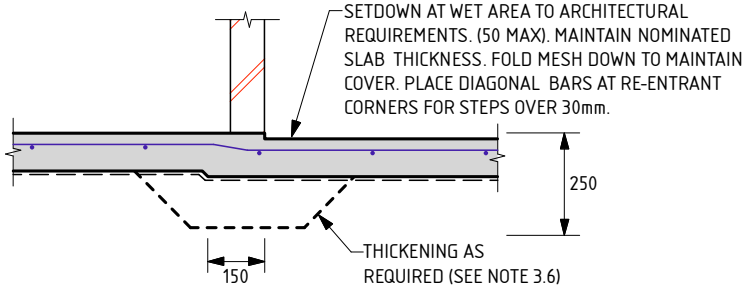
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

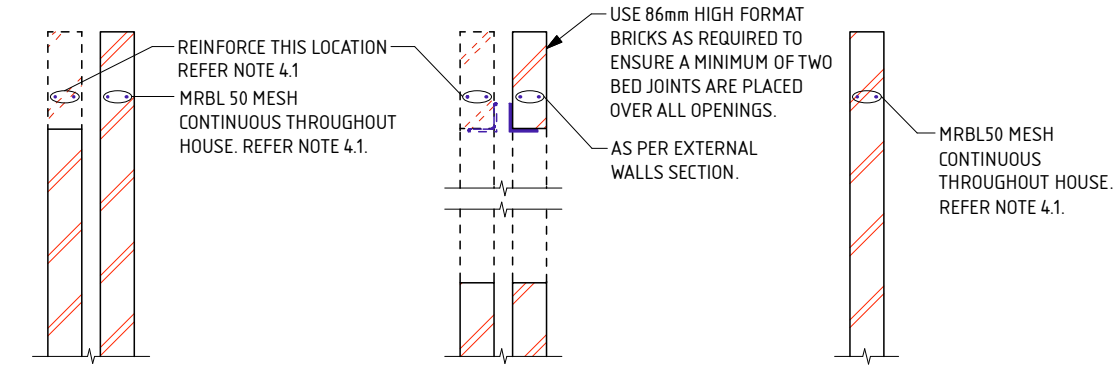
PROJECT: LOT 568 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

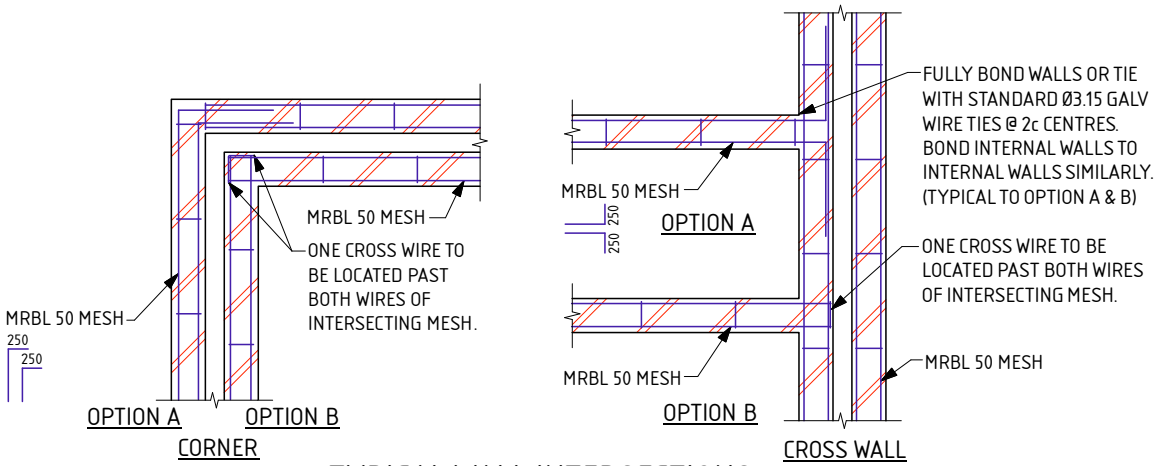
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 568 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 568 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 568 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED

SITE CLASSIFICATION REPORT

CERTIFICATE 2594875

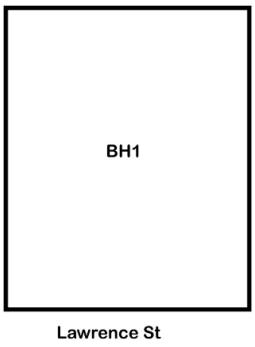
CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 569 LAWRENCE ST BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082925
DATE OF ASSESSMENT	2/11/22
SITE RECORD	

SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N2**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	Partial Shielding	

SOIL PROFILE

BOREHOLE 1: 0 - 1200 FILL - sand - brown; 1200 - 1500 FILL - sand trace gravel - grey; 1500 - 2000 clayey SAND with gravel - brown; 2000 hard ground refusal.

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.

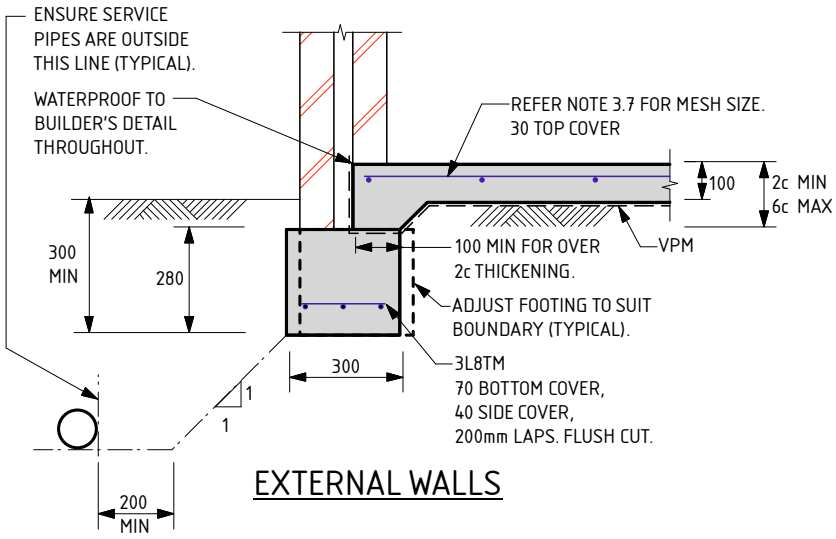
ADDITIONAL NOTES / REQUIREMENTS

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.

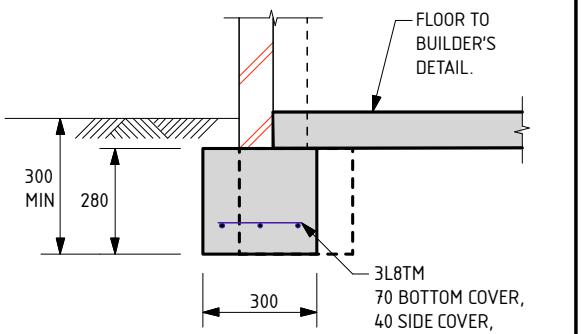
Stormwater Design
Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

-- END OF REPORT --

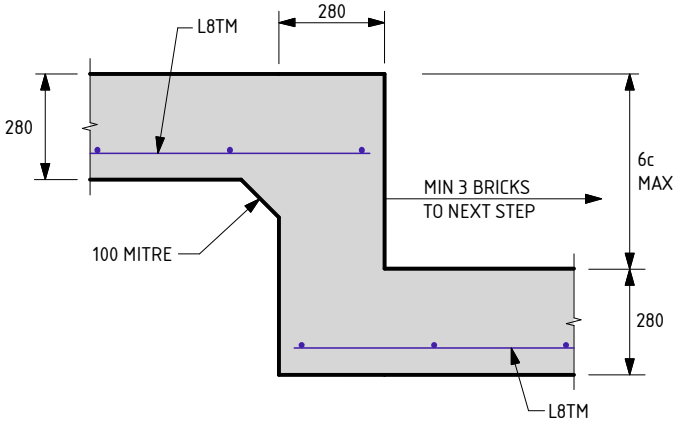
Signed:
Gervase Purich
Chief Executive Officer



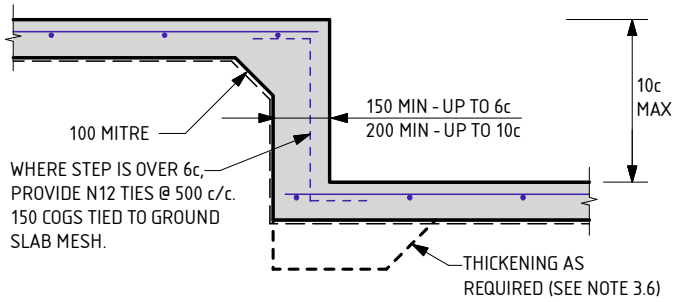
EXTERNAL WALLS



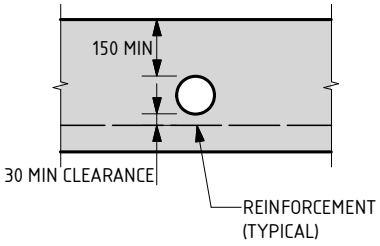
GARAGE WALL



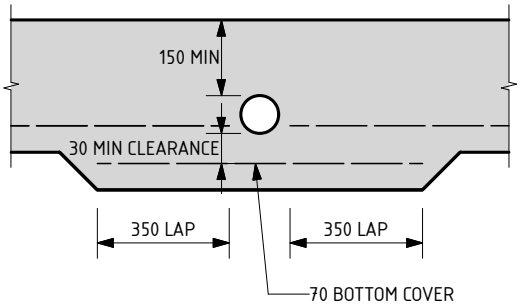
FOOTING STEP



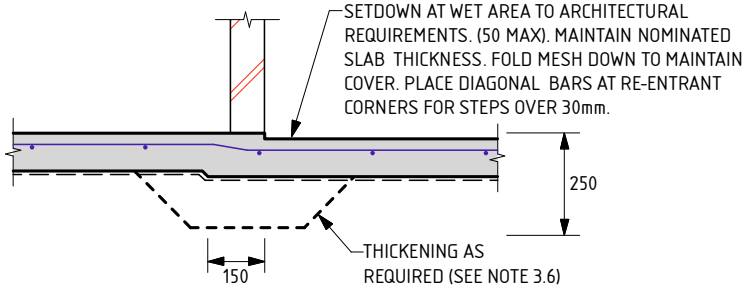
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

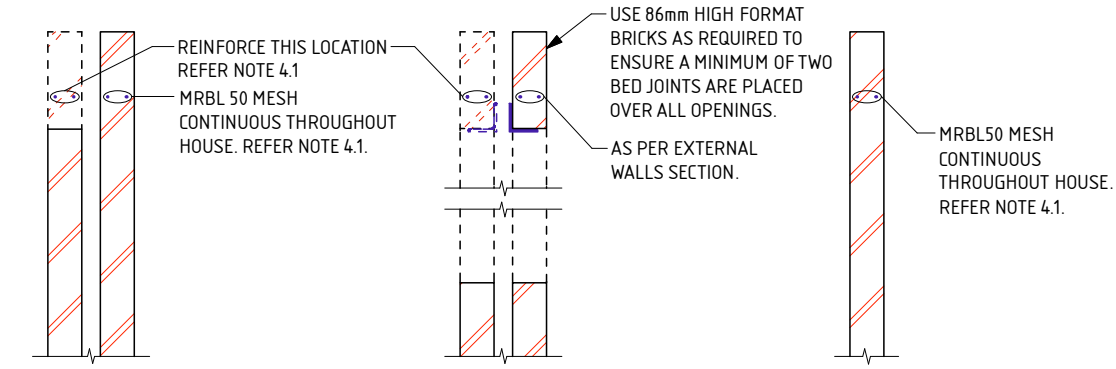
PROJECT: LOT 569 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

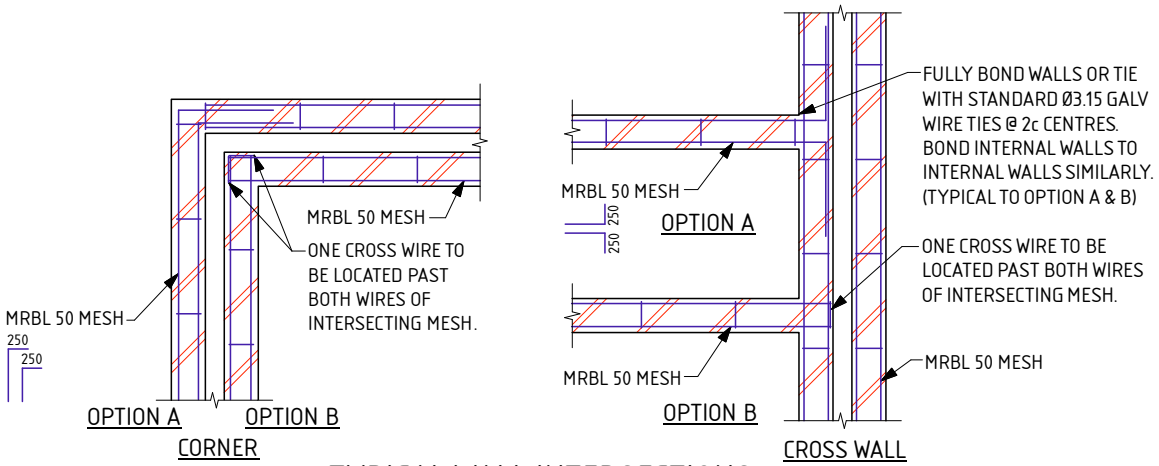
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 569 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 569 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 569 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED

SITE CLASSIFICATION REPORT

CERTIFICATE 2594874

CLIENT	DELFINA PROPERTIES PTY LTD
JOB ADDRESS	**LOT 570 LAWRENCE ST BYFORD**
CLIENT JOB NO.	
OWNER	
STRUCTERRE JOB NO.	S1082926
DATE OF ASSESSMENT	2/11/22
SITE RECORD	

SITE CLASSIFICATION	**A**	*(in accordance with AS2870)*
FOOTING DETAIL	**B1**	
SAND PAD	**No sand pad required structurally**	
BUSHFIRE PRONE AREA	**Yes**	*(see NOTE 2.)*
CORROSION CLASSIFICATION	**R1**	*(Durability Class in accordance with AS3700)*
WIND CLASSIFICATION	**N2**	*(in accordance with AS4055)*
-TERRAIN CATEGORY	2	
-TOPOGRAPHIC	T0	
-SHIELDING	Partial Shielding	

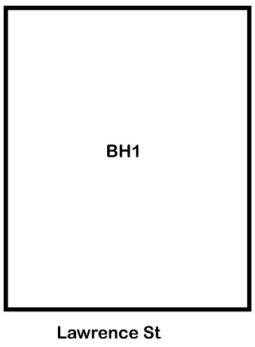
WA | QLD | NSW | VIC
1 Erindale Road, Balcatta, Western Australia 6021 | PO Box 792, Balcatta, Western Australia 6914
Phone (+618) 9205 4500 | Fax (+618) 9205 4501 | Email wageotechsite@structerre.com.au | Web www.structerre.com.au
ABN 71 349 772 837 Zemla Pty Ltd ACN 008 966 283 as trustee for the Young Purich and Higham Unit Trust trading as Structerre Consulting Engineers

Issued Date: 9 November 2022

SOIL PROFILE

BOREHOLE 1: 0 - 1200 FILL - sand - brown; 1200 - 1500 FILL - sand trace gravel - grey; 1500 - 2000 clayey SAND with gravel - brown; 2000 hard ground refusal.

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.

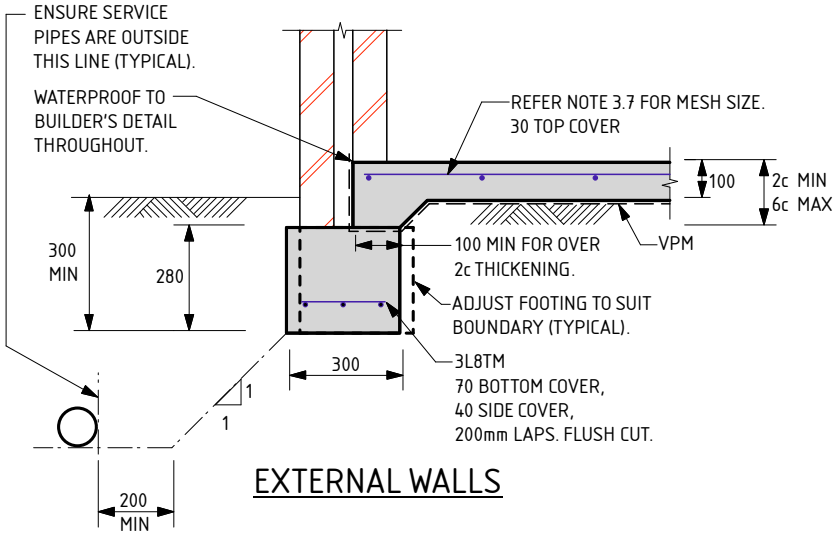
ADDITIONAL NOTES / REQUIREMENTS

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.

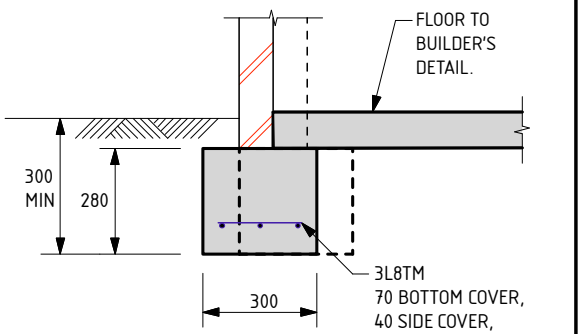
Stormwater Design
Site conditions suggest that stormwater disposal maybe problematic, therefore it is recommended that Structerre is engaged to conduct a stormwater design or review. If the site has direct council connection, please disregard this notation.

-- END OF REPORT --

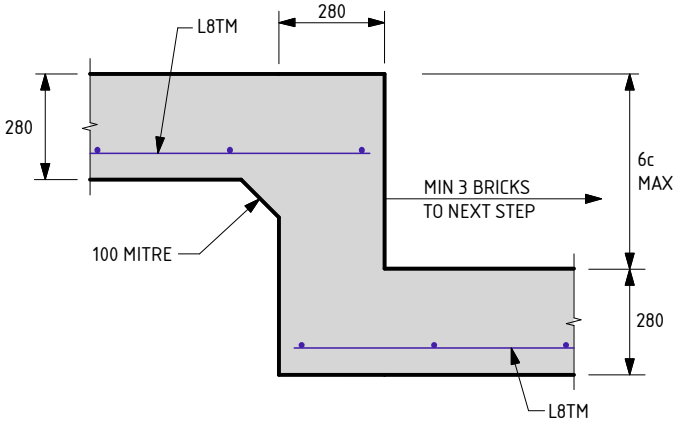
Signed:
Gervase Purich
Chief Executive Officer



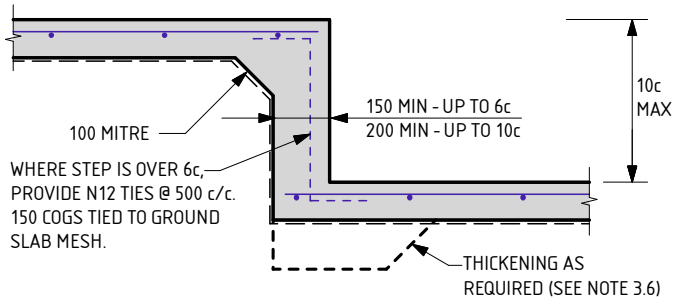
EXTERNAL WALLS



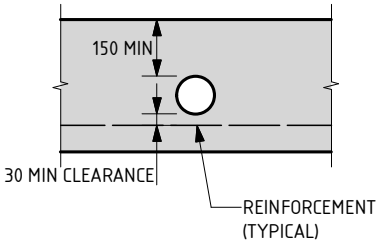
GARAGE WALL



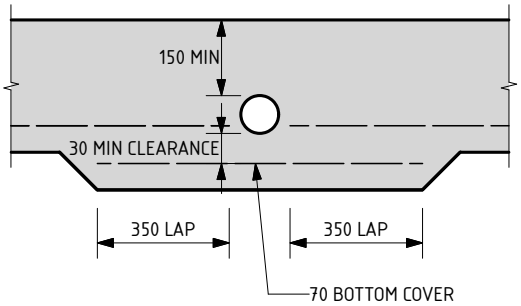
FOOTING STEP



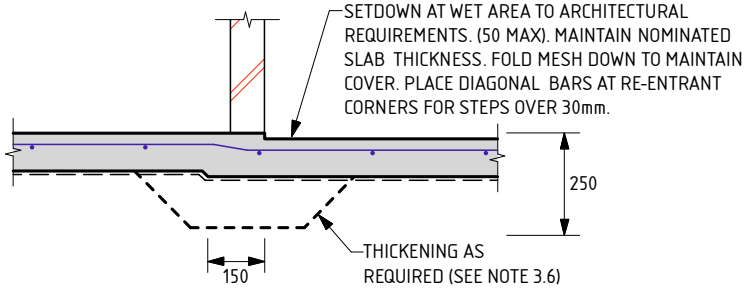
SLAB STEP



OPTION A
PENETRATION CLEAR OF REINFORCEMENT



OPTION B
PENETRATION INTERRUPTS REINFORCEMENT



WET AREA STEP

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

STRUCterre consulting engineers
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

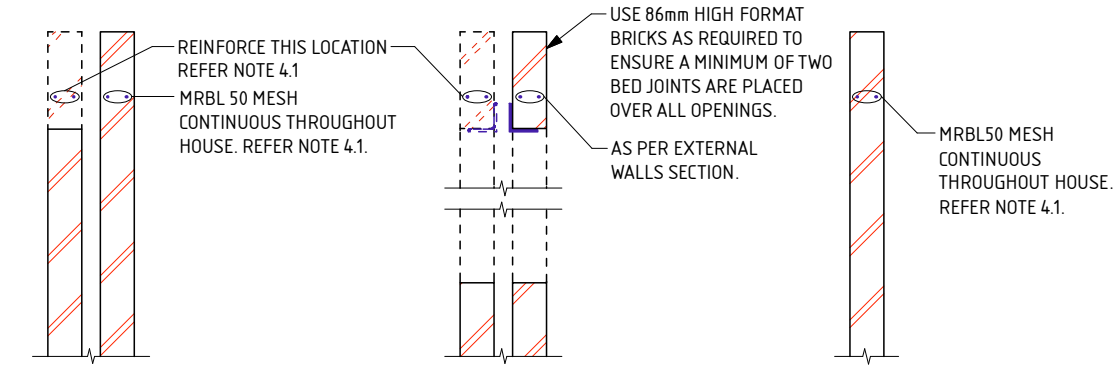
PROJECT: LOT 570 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

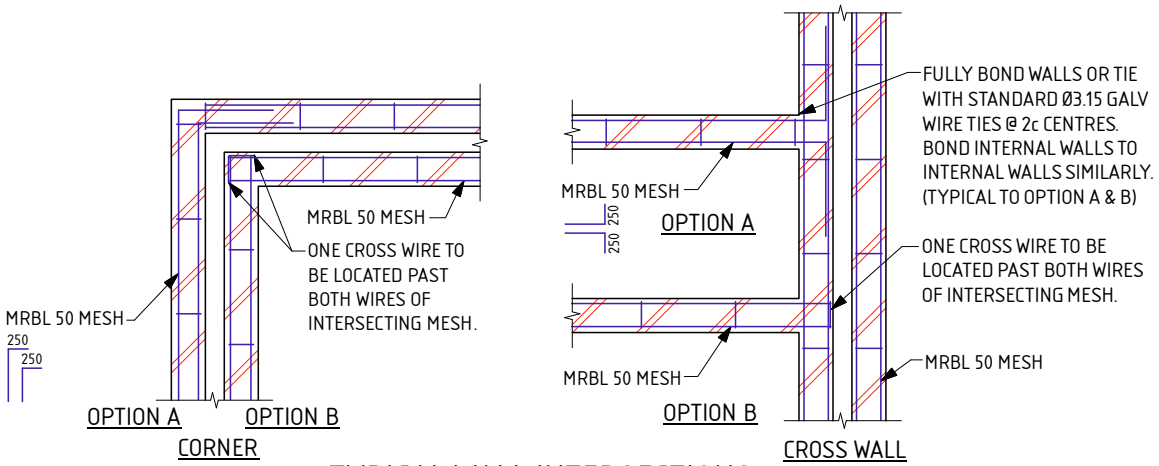
SCALE 1:20

DATE 9/11/22

APPROVED



TYPICAL WALL SECTIONS



TYPICAL WALL INTERSECTIONS

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 0.07mm) 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

STRUCterre consulting engineers
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 570 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 570 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

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.

STRUCterre consulting engineers
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 570 LAWRENCE ST BYFORD

CLIENT: DELFINA PROPERTIES PTY LTD

SCALE 1:20

DATE 9/11/22

APPROVED