

SITE CLASSIFICATION REPORT
CERTIFICATE 2529758

CLIENT TERRANOVIS PTY LTD
JOB ADDRESS LOT 33 ANDALUSIAN AV DARLING DOWNS
CLIENT JOB NO.
OWNER
STRUCTERRE JOB NO. S838596
DATE OF ASSESSMENT 20/4/17

SITE RECORD



SITE CLASSIFICATION **A** *(in accordance with AS2870)*
FOOTING DETAIL **A**
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 - 2100 FILL - sand - yellow / brown; 2100 - 2400 FILL - sand - grey / brown; 2400 - 2500 clayey SAND - grey / brown; 2500 end of hole.

NOTES

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 10.3 May 2016. 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 10.2 May 2016. For Equivalent Class sites, refer to the Explanatory Notes and Standard Recommendations for Equivalent Class Sites, version 1.2 May 2016.

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.

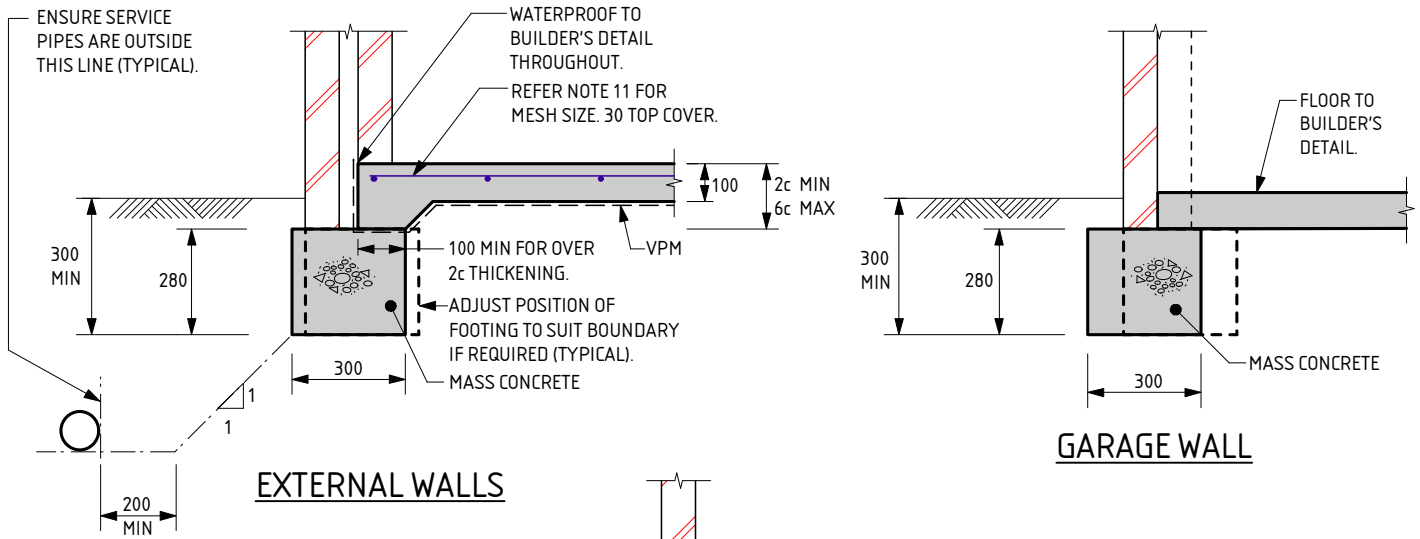
ADDITIONAL NOTES / REQUIREMENTS

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.

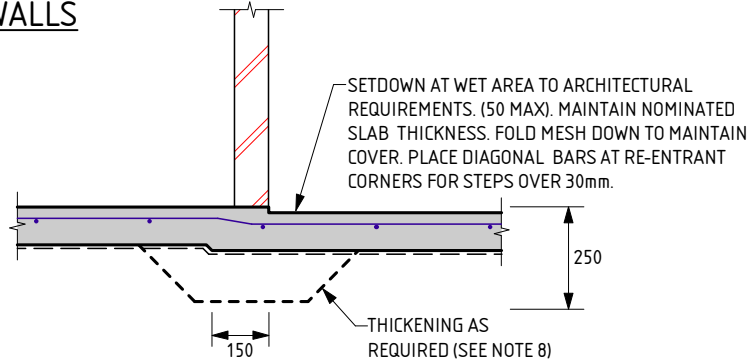
Sample Retrieval Probe

This report has been prepared using the Sample Retrieval Probe. A number of boreholes are conducted across the site or building area, in order to determine the soil profiles and provide a representation of the ground conditions. Where reactive material is encountered within the zone of influence, laboratory analysis is conducted in accordance with AS1289 3.1.2, 3.2.1, 3.3.1, 3.4.1 and 3.6.1.

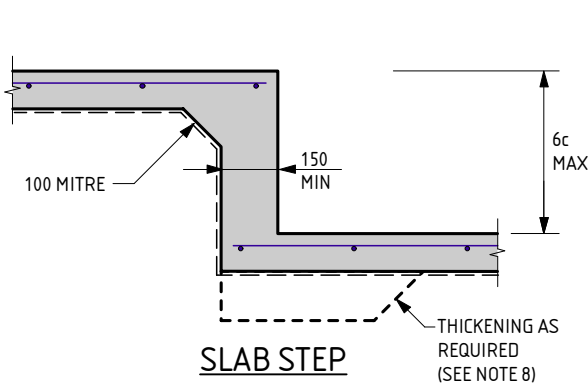


EXTERNAL WALLS

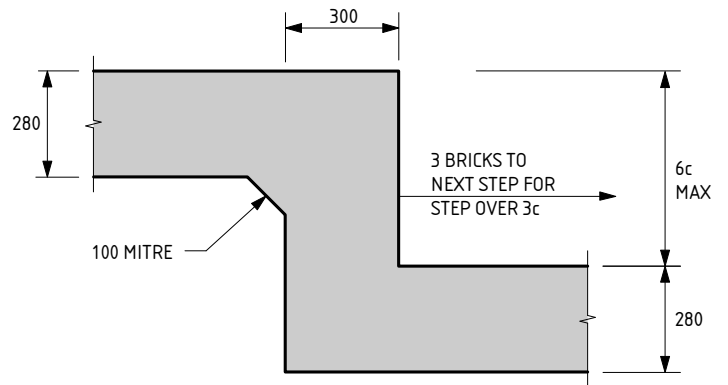
GARAGE WALL



WET AREA STEP



SLAB STEP



FOOTING STEP

NOTES:

- REMOVE ALL TOPSOIL, VEGETATION AND DELETERIOUS FILL MATERIAL FROM THE BUILDING AREA.
- SAND FILL TO BE CLEAN WELL DRAINED, WITH MAX FINES (PARTICLES UP TO 0.075mm) CONTENT OF 5%. SAND TO BE COMPACTED TO A MIN 6 BLOWS/300mm FOR 750mm OR DEPTH OF PAD.
- A MIN OF 150mm OF SAND REQUIRED UNDER FOOTINGS.
- IF CLAY ON SITE AN ENGINEER TO BE CONSULTED.
- ROOF AND SURFACE WATER TO BE TAKEN AWAY FROM FOUNDATION AREA.
- EXCAVATIONS FOR PLUMBING NOT TO UNDERMINE FOOTINGS. IF UNDERMINING IS LIKELY TO OCCUR, CONTACT THE ENGINEER.
- WHERE PLUMBING PIPES PASS THROUGH FOOTINGS OR SLAB, SPECIFIED DEPTH OF ALL CONCRETE IS ALWAYS TO BE MAINTAINED.
- PLACE SLAB THICKENINGS (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m.
- REINFORCEMENT SHALL BE IN ACCORDANCE WITH THE FOLLOWING STANDARDS:
SL INDICATES DEFORMED SQUARE MESH D500L TO AS/NZS 4671.
ALL STEELWORK TO BE TREATED IN ACCORDANCE WITH THE NATIONAL CONSTRUCTION CODE OR TO AS 3700, AS APPLICABLE.
- LAP ALL MESH ONE TRANSVERSE WIRE PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.
- IF THE LENGTH TO WIDTH RATIO OF THE GROUND SLAB OR ANY PART OF THE GROUND SLAB EXCEEDS 3:1. REFER BACK TO THIS OFFICE FOR MESH SIZE. IF THE LENGTH TO WIDTH RATIO IS LESS THAN 3:1, USE THE FOLLOWING:
USE SL52/SL63 MESH FOR SLAB SPAN UP TO 22m.
USE SL62 MESH FOR SLAB SPAN UP TO 26m.
USE SL72 MESH FOR SLAB SPAN UP TO 30m.
USE SL82 MESH FOR SLAB SPAN UP TO 32m.
- CONCRETE TO CONFORM WITH AS 3600.
- BLENDED CEMENT TO CONFORM WITH AS 3972.
- ALL CONCRETE TO BE N20/20/100.
- CURE SLAB BY KEEPING MOIST FOR 3 DAYS (OR EQUIVALENT METHOD), TO IMPROVE CRACK CONTROL.
- THIS IS A PERFORMANCE-BASED DESIGN.
- A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- IF POLISHED (OR HONED) CONCRETE FINISHES ARE DESIRED, THIS DESIGN SHOULD BE REFERRED BACK TO THIS OFFICE FOR CONSIDERATION, AS IT IS NOT THE INTENTION OF THESE DESIGNS FOR SUCH FINISHES.
- PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS WILL STILL ENABLE THE BARRIER TO MEET THE PERFORMANCE PROVISIONS OF THE BUILDING CODE OF AUSTRALIA.

DATE LAST MODIFIED - 25/11/16

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

A



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

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CLIENT: TERRANOVIS PTY LTD

SCALE: 1:20

DATE: 27/4/17

APPROVED

EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS STABLE (A CLASS) SITES

GENERAL

1. THE EXPLANATORY NOTES AND STANDARD RECOMMENDATIONS ARE TO BE READ IN CONJUNCTION WITH THE SITE CLASSIFICATION REPORT.
2. THE PURPOSE OF THE SITE CLASSIFICATION REPORT IS TO:
 - a) CLASSIFY THE SITE IN ACCORDANCE WITH AS 2870 - 2011 "RESIDENTIAL SLABS AND FOOTINGS - CONSTRUCTION"
 - b) ENABLE FOOTINGS TO BE DESIGNED,
 - c) PROVIDE EARTHWORK RECOMMENDATIONS, AND
 - d) PROVIDE A WIND CLASSIFICATION IN ACCORDANCE WITH AS 4055 "WIND LOADS FOR HOUSING".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.
3. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE INSPECTION. THE RECOMMENDED FOOTING DESIGN IS SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 14) AS A MINIMUM. SHOULD CHANGES TO THE LEVELS OF THE SITE OCCUR, OTHER THAN THE RECOMMENDATIONS INCLUDED IN THE SITE CLASSIFICATION REPORT, REFER BACK TO THIS OFFICE FOR REVIEW OF CLASSIFICATION AND FOOTING DESIGN.
4. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF THE INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO RE-ASSESSMENT AND MAY CHANGE.
5. CLASS A SITES ARE STABLE SITES, GENERALLY SAND, LIMESTONE, GRAVEL OR A COMBINATION. CLASS P SITES ARE PARTICULAR CLASSIFICATIONS, SUCH AS UNUSUAL SITES OR SITES REQUIRING ADDITIONAL INVESTIGATION PRIOR TO PROVIDING DETAILS.
6. BOREHOLES EXCAVATED REVEAL THE SOIL PROFILE AT THE BOREHOLE LOCATION ONLY. FROM THIS, IT IS INFERRED THAT THESE ARE THE SOIL CONDITIONS OVER THE SITE. VARIATIONS CAN OCCUR WHICH MAY NOT HAVE BEEN DETECTED AT THE INVESTIGATION STAGE AND THEREFORE ANY ANOMALY SHOULD BE REFERRED BACK TO THIS OFFICE TO ENABLE THE FOOTING DESIGN TO BE CONFIRMED, ALTERED, OR SPECIFIC EARTHWORK RECOMMENDATIONS GIVEN TO ADDRESS THE ANOMALY. THIS MAY RESULT IN AN UPGRADE OF FOOTINGS OR SAND PAD REQUIREMENTS.
7. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE IN ORDER TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.

SAND PAD

8. THE ADDITION OF A SAND PAD CAN MODIFY THE EXPECTED SURFACE MOVEMENT FROM SEASONAL MOISTURE CHANGES, (YS), AND CAN CHANGE THE SITE CLASSIFICATION OF THE SITE FROM THAT PRESENTED. THE EXPECTED SURFACE MOVEMENT IS RE-CALCULATED INCORPORATING THE RECOMMENDED SAND PAD, AS OUTLINED ON THE SITE CLASSIFICATION REPORT, AND THE RECOMMENDED FOOTING DESIGN IS BASED ON THIS MODIFIED EXPECTED SURFACE MOVEMENT. THEREFORE, 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.
9. 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 SITE BE LOCATED IN A LOW LYING OR FLOOD PRONE AREA, REFER TO THE LOCAL AUTHORITY FOR MINIMUM BUILDING HEIGHT.
10. IMPORTED FILL FOR USE AS A SAND PAD TO BE FREE OF ANY DELETERIOUS MATERIALS INCLUDING ORGANICS, (ROOTS, STUMPS, GRASSES, DECOMPOSED ORGANICS - PEAT, TIMBER), BUILDING RUBBLE, GLASS, PLASTICS, WASTE MATERIALS. THE FINES CONTENT, (PERCENTAGE PASSING THE 0.075mm SIEVE) TO BE LESS THAN 5% BY MASS.
11. ON CLASS A SITES, A SAND PAD IS NOT REQUIRED STRUCTURALLY. HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 450mm SAND PAD IS RECOMMENDED.
12. 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.
13. IT IS REQUIRED THAT EARTH WORKERS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

EARTHWORKS

14. RECOMMENDED EARTH WORKS TO BE CONDUCTED IN ACCORDANCE WITH AS 3798-2007 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS", AND TO INCLUDE BUT NOT LIMITED TO:
 - a) REMOVAL OF ALL VEGETATION, TOPSOILS, UNCONTROLLED FILLS AND OTHER DELETERIOUS MATERIALS FROM THE BUILDING ENVELOPE,
 - 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 3798-2007 TABLE 5.1.
15. 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 IT 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. THAT IS TO BE CERTIFIED BY OTHERS UNLESS SPECIFICALLY REQUESTED.
16. ANY ORGANIC MATTER OR ROOTS ENCOUNTERED, THAT 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 AS A MINIMUM.

RETAINING WALLS

17. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
18. IF THE PROPOSED BUILDING IS TO BE LOCATED WITHIN 1:1 (HORIZONTAL TO VERTICAL) DISTANCE OF ANY 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

19. ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM 1200MM, WHICHEVER IS GREATER. THIS IS TERMED THE INFLUENCE ZONE. FOR ALL STRUCTURES WITHIN THE INFLUENCE ZONE OF THE SOAKWELL, IT WILL BE NECESSARY TO UPGRADE THE FOOTING DETAIL IN THE VICINITY. PLEASE REFER BACK TO THIS OFFICE IF REQUIRED.

WIND CLASSIFICATION

20. WIND CLASSIFICATION IS GIVEN FOR THE EXPECTED CONDITION 5 YEARS HENCE. THIS CLASSIFICATION IS LIMITED TO BUILDINGS 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 5 TIMES 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

21. 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

22. 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 THAT A FULL SEISMIC DESIGN IS CONDUCTED.

CORROSION CLASSIFICATION

23. THE CORROSION CLASSIFICATION HAS BEEN ASSESSED IN ACCORDANCE WITH AS3700 (CURRENT VERSION).

DOC# SS001-1.1.3 VERSION 10.3 - MAY 2016



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham
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1 ERINDALE ROAD, BALCATT A W.A. 6021
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