

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2601424

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 324 AVALANCHE PDE BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096847  
**DATE OF ASSESSMENT** 17/7/23

**SITE RECORD**

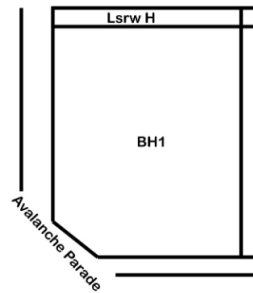


<b>SITE CLASSIFICATION</b>	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
<b>FOOTING DETAIL</b>	<b>CM3</b>
<b>SAND PAD</b>	<b>No sand pad required structurally</b>
<b>BUSHFIRE PRONE AREA</b>	<b>Yes</b> <i>(see NOTE 2.)</i>
<b>CORROSION CLASSIFICATION</b>	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
<b>WIND CLASSIFICATION</b>	<b>N2</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	No Shielding

## SOIL PROFILE

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

## APPROXIMATE BOREHOLE LOCATIONS



### NOTE 1 Explanatory Notes & Standard Recommendations

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

### NOTE 2 Bushfire - Prone Area

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

## ADDITIONAL NOTES / REQUIREMENTS

### Site Condition

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

### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J416765 dated 24/08/2022.

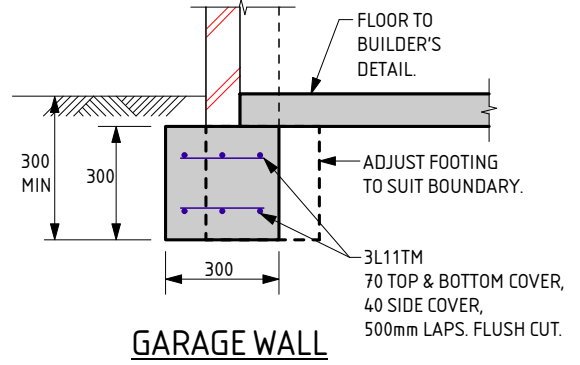
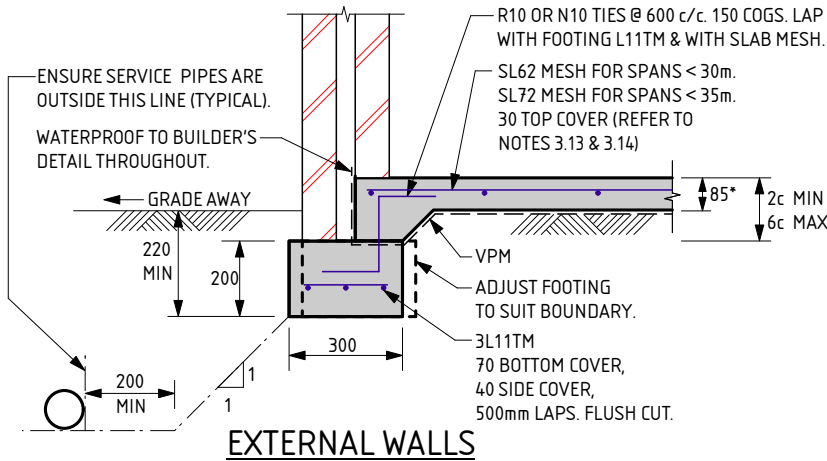
### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

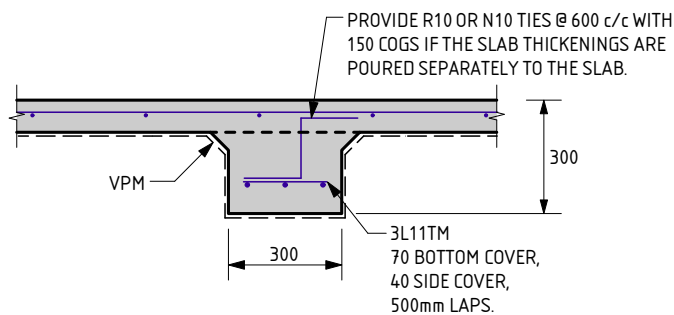
### Internal Thickening Inspection

This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

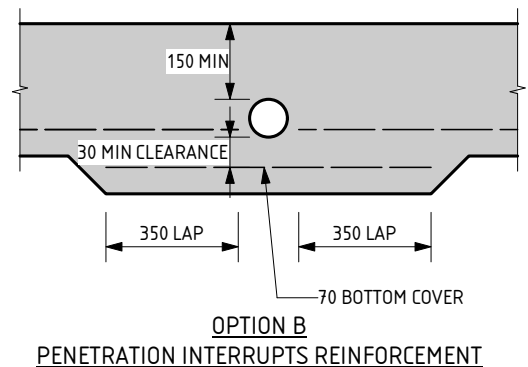
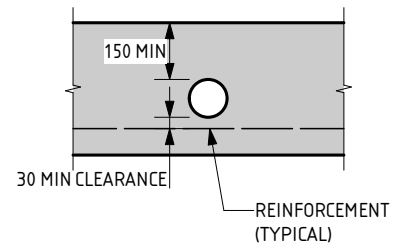
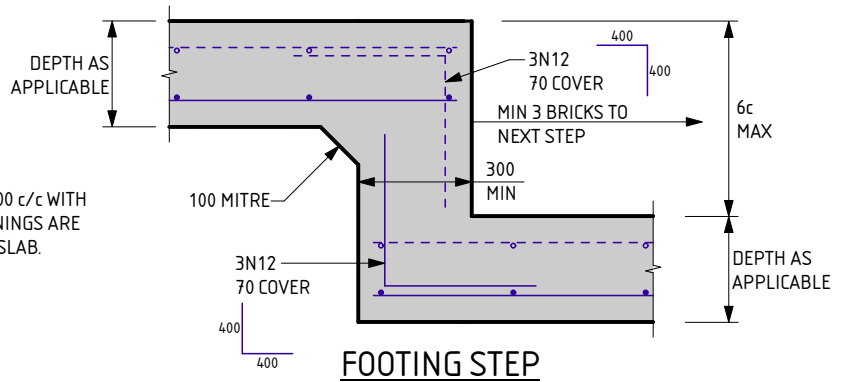
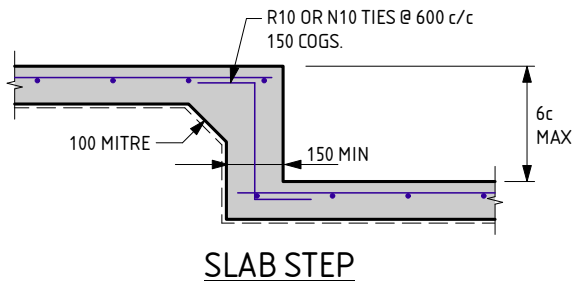
**-- END OF REPORT --**



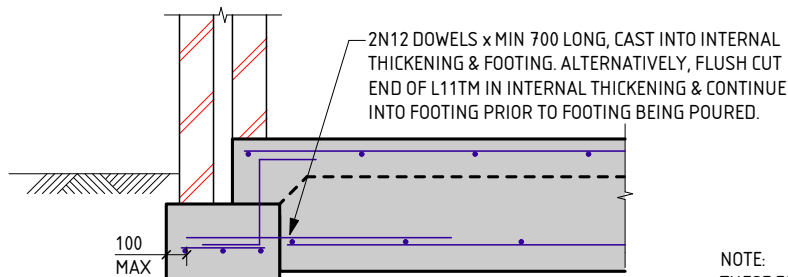
\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
IF 100mm SLAB USED, MESH TO BE:  
SL62 MESH FOR SPANS < 25m.  
SL72 MESH FOR SPANS < 30m.  
SL82 MESH FOR SPANS < 35m.



REFER TO STRUCterre'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCterre PRIOR TO CONCRETE POUR.



**SERVICE PIPE DIAGRAM**  
- MAXIMUM PENETRATION SIZE TO BE Ø150.



### EXTERNAL FOOTING TO INTERNAL THICKENING

THIS DETAIL IS EQUIVALENT TO  
STRUCterre FOOTING DETAIL C4.0

NOTE:  
THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
DATE LAST MODIFIED - 19/01/23

**CM3**  
CAVITY MASONRY

**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, BALEATTA W.A. 6021

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

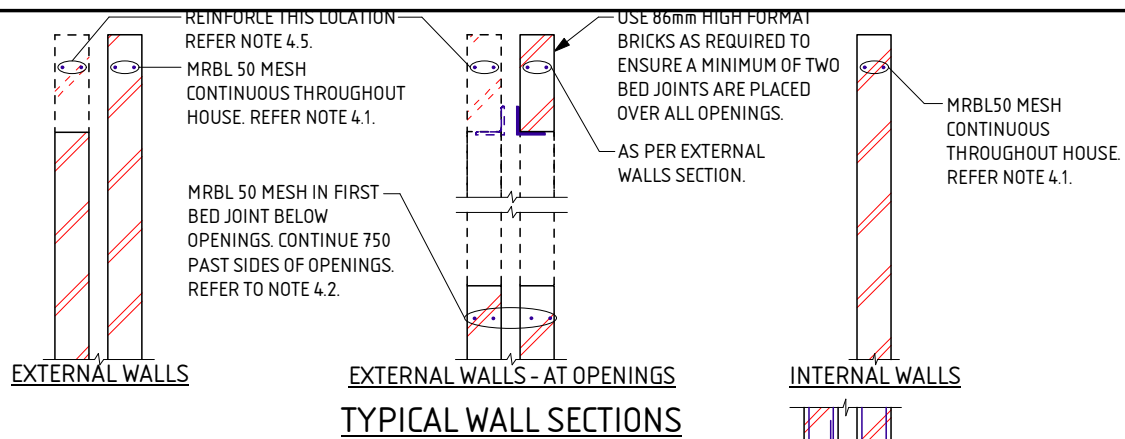
PROJECT:  
LOT 324 AVALANCHE PDE BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

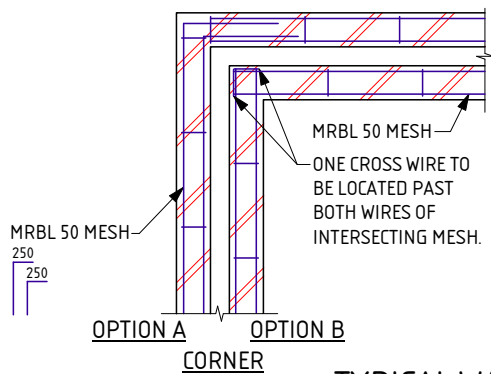
SCALE: 1:20

DATE: 18/7/23

APPROVED



**TYPICAL WALL SECTIONS**



**TYPICAL WALL INTERSECTIONS**

**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT : <b>LOT 324 AVALANCHE PDE BALDIVIS</b>	
CLIENT : <b>KEC NOMINEES PTY LTD</b>	
SCALE : <b>1:20</b>	APPROVED
DATE : <b>18/7/23</b>	

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemia Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unit 1 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 324 AVALANCHE PDE BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 18/7/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :

LOT 324 AVALANCHE PDE BALDIVIS

CLIENT :

KEC NOMINEES PTY LTD

SCALE

1:20

APPROVED

DATE

18/7/23

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

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2601423

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 325 AVALANCHE PDE BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096846  
**DATE OF ASSESSMENT** 17/7/23

**SITE RECORD**

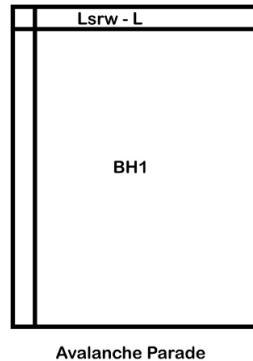


SITE CLASSIFICATION	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
FOOTING DETAIL	<b>CM3</b>
SAND PAD	<b>No sand pad required structurally</b>
BUSHFIRE PRONE AREA	<b>Yes</b> <i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	<b>N2</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	No Shielding

## SOIL PROFILE

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

## APPROXIMATE BOREHOLE LOCATIONS



### NOTE 1 Explanatory Notes & Standard Recommendations

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

### NOTE 2 Bushfire - Prone Area

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

### ADDITIONAL NOTES / REQUIREMENTS

#### Site Condition

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

#### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J416765 dated 24/08/2022.

#### Internal Thickenings

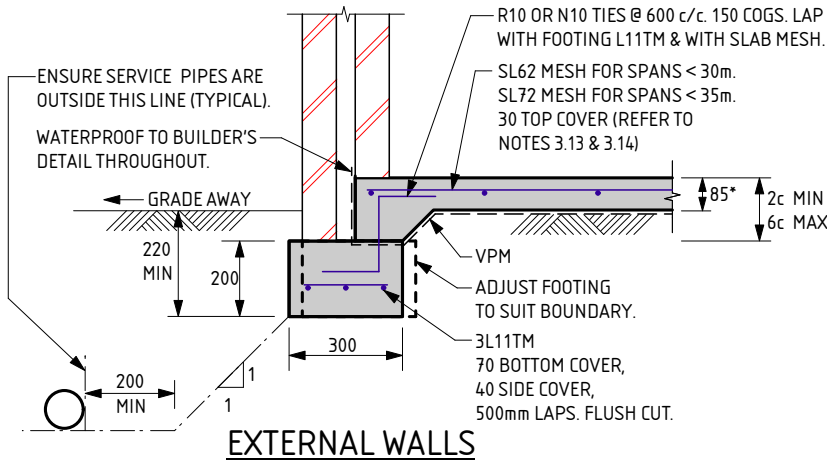
Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

#### Internal Thickening Inspection

This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

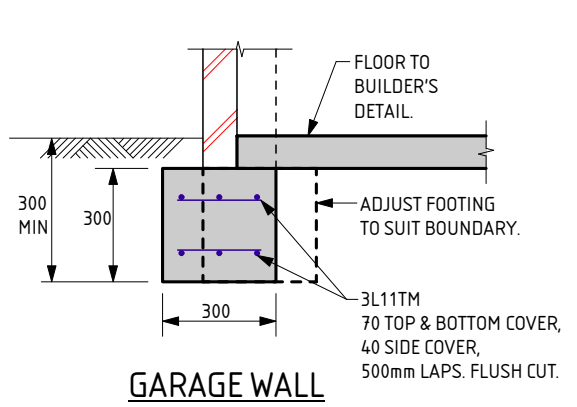
-- END OF REPORT --



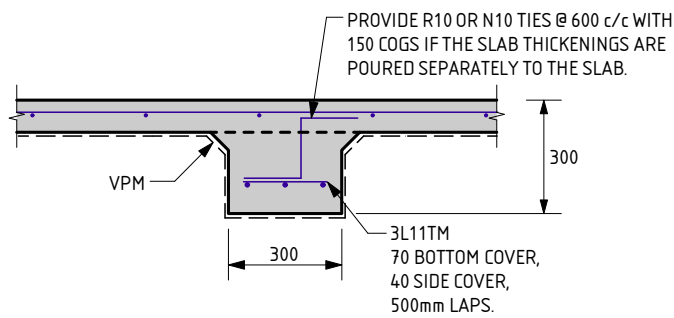


**EXTERNAL WALLS**

\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
 IF 100mm SLAB USED, MESH TO BE:  
 SL62 MESH FOR SPANS < 25m.  
 SL72 MESH FOR SPANS < 30m.  
 SL82 MESH FOR SPANS < 35m.

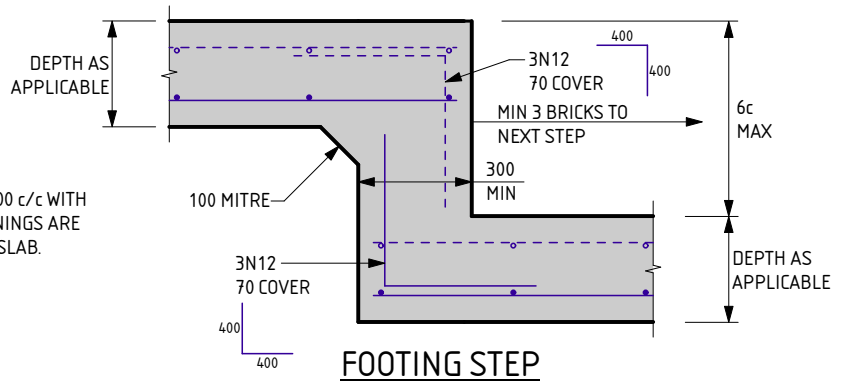


**GARAGE WALL**

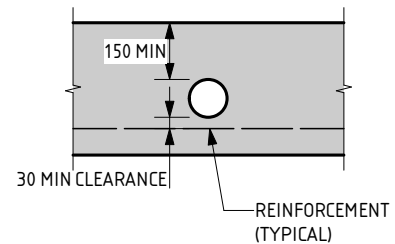


**INTERNAL THICKENING**

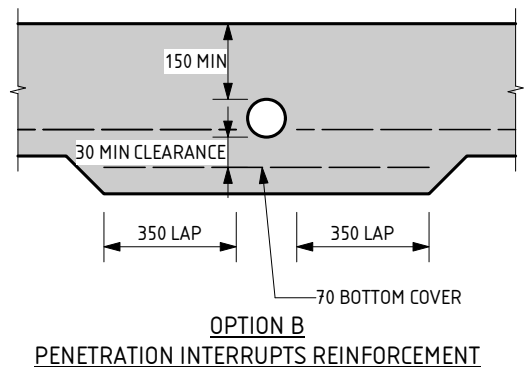
REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**FOOTING STEP**



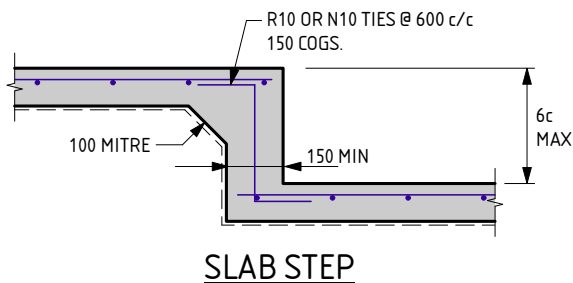
**OPTION A  
PENETRATION CLEAR OF REINFORCEMENT**



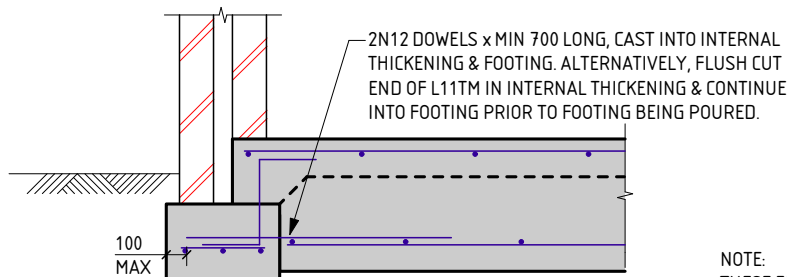
**OPTION B  
PENETRATION INTERRUPTS REINFORCEMENT**

**SERVICE PIPE DIAGRAM**

- MAXIMUM PENETRATION SIZE TO BE Ø150.



**SLAB STEP**



**EXTERNAL FOOTING TO INTERNAL THICKENING**

THIS DETAIL IS EQUIVALENT TO  
 STRUCTERRE FOOTING DETAIL C4.0

NOTE:  
 THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
 DATE LAST MODIFIED - 19/01/23

**CM3**  
 CAVITY MASONRY



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

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

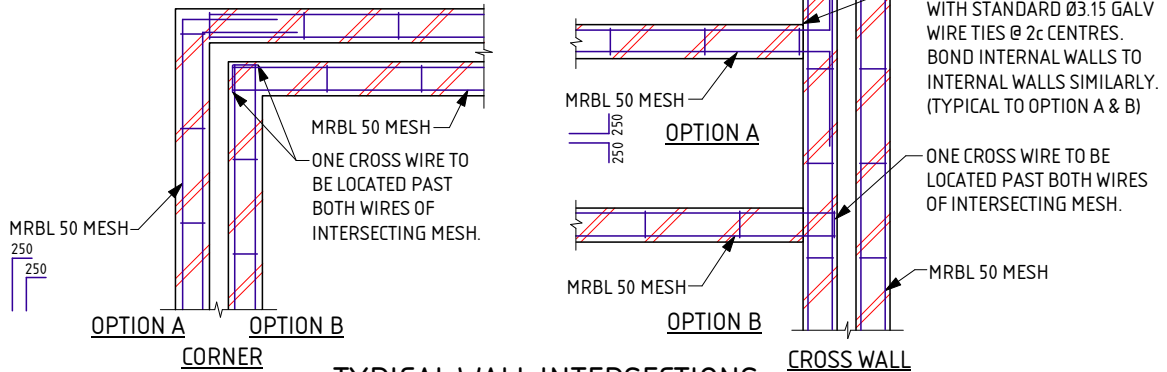
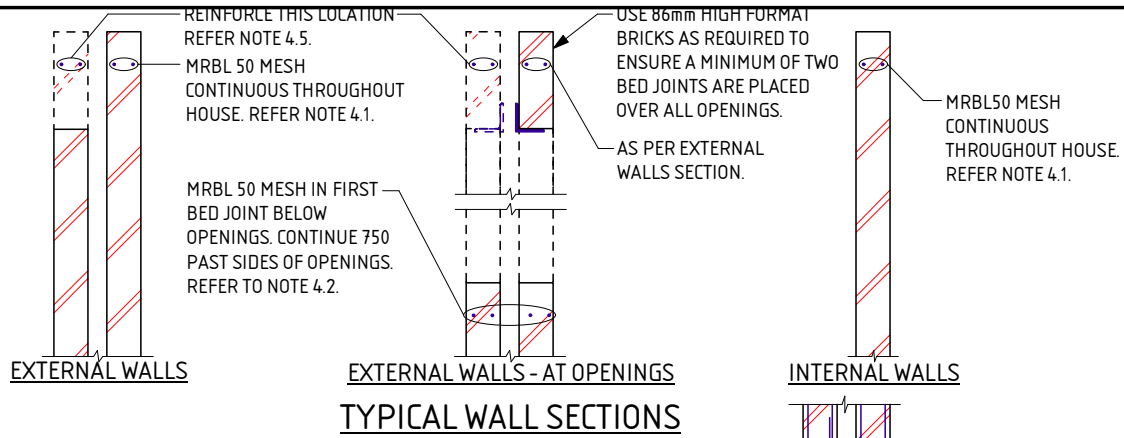
PROJECT: LOT 325 AVALANCHE PDE BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 18/7/23

APPROVED



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT: LOT 325 AVALANCHE PDE BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 18/7/23

APPROVED

# EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

## EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemia Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unitil 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 325 AVALANCHE PDE BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 18/7/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :

LOT 325 AVALANCHE PDE BALDIVIS

CLIENT :

KEC NOMINEES PTY LTD

SCALE

1:20

APPROVED

DATE

18/7/23

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

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2601422

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 326 AVALANCHE PDE BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096848  
**DATE OF ASSESSMENT** 17/7/23

**SITE RECORD**

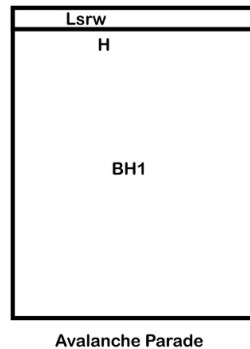


SITE CLASSIFICATION	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
FOOTING DETAIL	<b>CM3</b>
SAND PAD	<b>No sand pad required structurally</b>
BUSHFIRE PRONE AREA	<b>Yes</b> <i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	<b>N2</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	Partial Shielding

## SOIL PROFILE

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

## APPROXIMATE BOREHOLE LOCATIONS



### NOTE 1 Explanatory Notes & Standard Recommendations

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

### NOTE 2 Bushfire - Prone Area

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

### ADDITIONAL NOTES / REQUIREMENTS

#### Site Condition

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

#### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J416765 dated 24/08/2022.

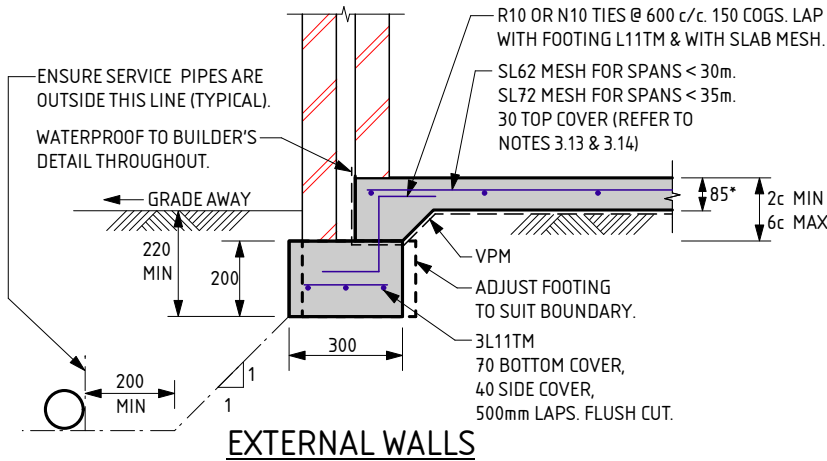
#### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

#### Internal Thickening Inspection

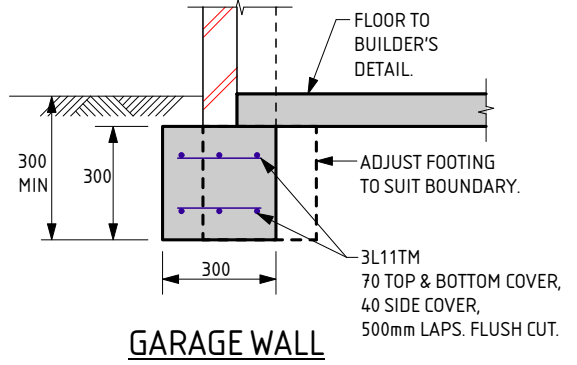
This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

-- END OF REPORT --

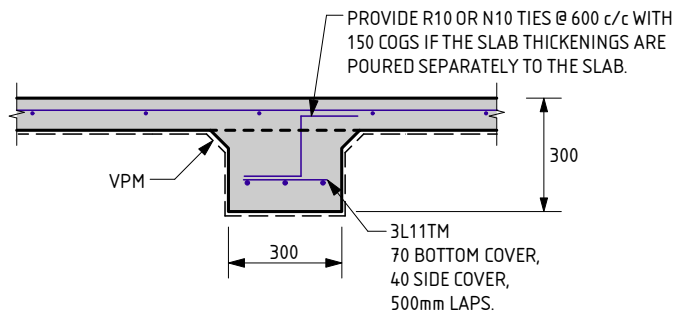


**EXTERNAL WALLS**

\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
 IF 100mm SLAB USED, MESH TO BE:  
 SL62 MESH FOR SPANS < 25m.  
 SL72 MESH FOR SPANS < 30m.  
 SL82 MESH FOR SPANS < 35m.

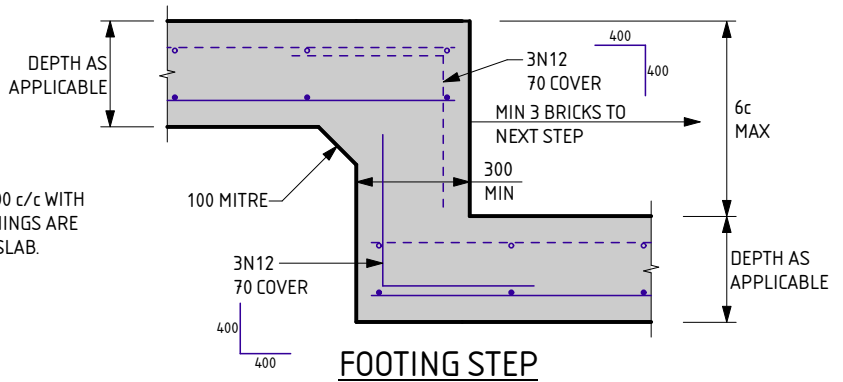


**GARAGE WALL**

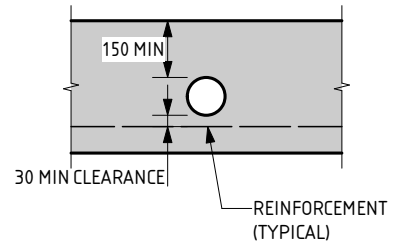


**INTERNAL THICKENING**

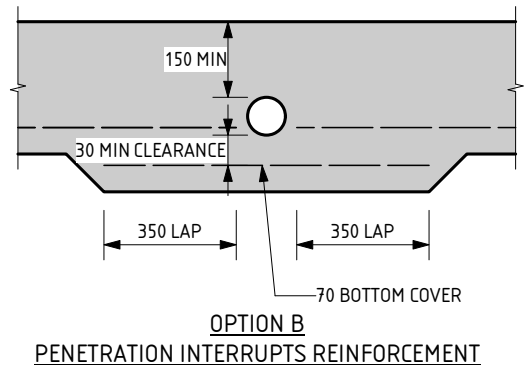
REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**FOOTING STEP**



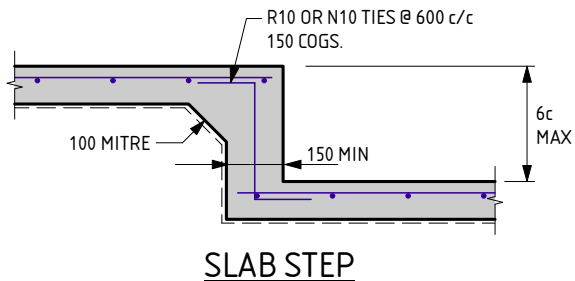
**OPTION A  
PENETRATION CLEAR OF REINFORCEMENT**



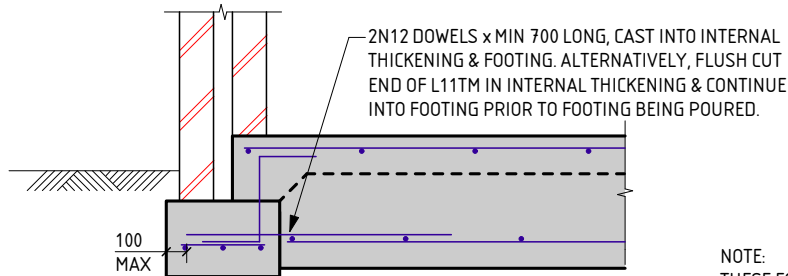
**OPTION B  
PENETRATION INTERRUPTS REINFORCEMENT**

**SERVICE PIPE DIAGRAM**

- MAXIMUM PENETRATION SIZE TO BE Ø150.



**SLAB STEP**



**EXTERNAL FOOTING TO INTERNAL THICKENING**

THIS DETAIL IS EQUIVALENT TO  
 STRUCTERRE FOOTING DETAIL C4.0

NOTE:  
 THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
 DATE LAST MODIFIED - 19/01/23

**CM3**  
 CAVITY MASONRY



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

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

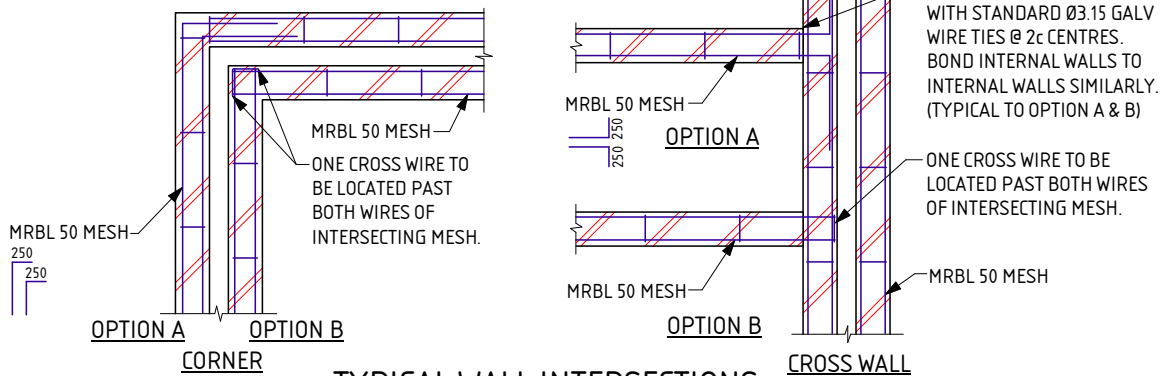
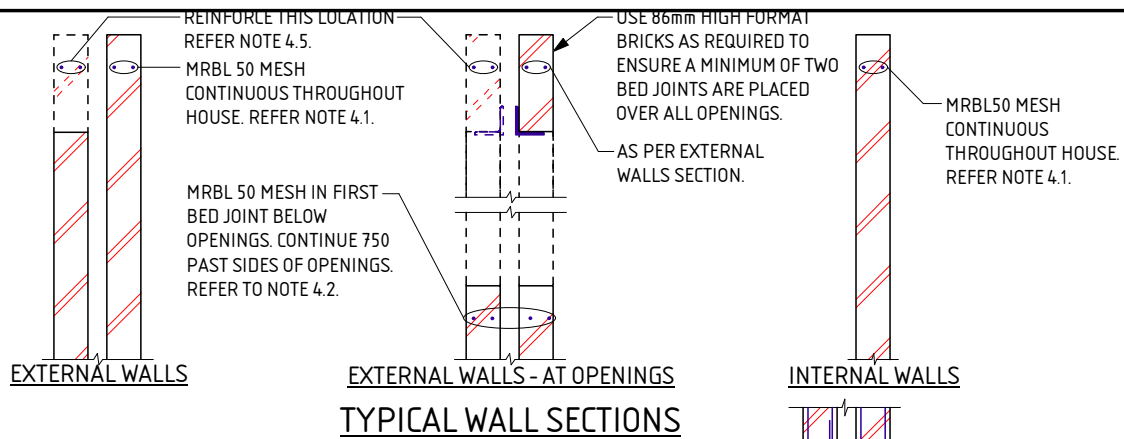
PROJECT: LOT 326 AVALANCHE PDE BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 18/7/23

APPROVED



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

PROJECT : <b>LOT 326 AVALANCHE PDE BALDIVIS</b>	
CLIENT : <b>KEC NOMINEES PTY LTD</b>	
SCALE : <b>1:20</b>	APPROVED
DATE : <b>18/7/23</b>	



## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemia Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unit 1 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 326 AVALANCHE PDE BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 18/7/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :

LOT 326 AVALANCHE PDE BALDIVIS

CLIENT :

KEC NOMINEES PTY LTD

SCALE

1:20

APPROVED

DATE

18/7/23

A handwritten signature in blue ink, appearing to be 'J. Smith', is written over the 'APPROVED' field.

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2601421

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 327 AVALANCHE PDE BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096850  
**DATE OF ASSESSMENT** 17/7/23

**SITE RECORD**

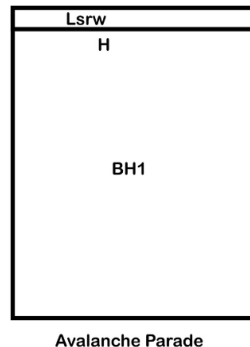


<b>SITE CLASSIFICATION</b>	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
<b>FOOTING DETAIL</b>	<b>CM3</b>
<b>SAND PAD</b>	<b>No sand pad required structurally</b>
<b>BUSHFIRE PRONE AREA</b>	<b>Yes</b> <i>(see NOTE 2.)</i>
<b>CORROSION CLASSIFICATION</b>	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
<b>WIND CLASSIFICATION</b>	<b>N1</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	Full Shielding

## SOIL PROFILE

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

## APPROXIMATE BOREHOLE LOCATIONS



### NOTE 1 Explanatory Notes & Standard Recommendations

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

### NOTE 2 Bushfire - Prone Area

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

## ADDITIONAL NOTES / REQUIREMENTS

### Site Condition

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

### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J416765 dated 24/08/2022.

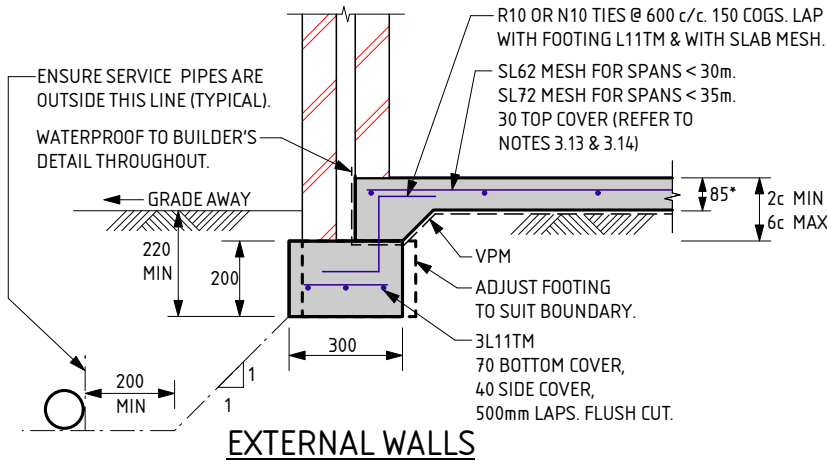
### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

### Internal Thickening Inspection

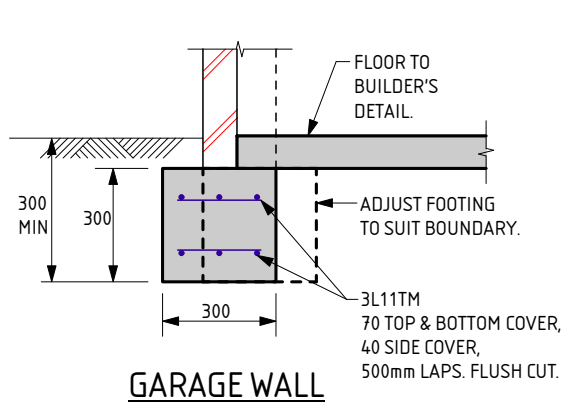
This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

-- END OF REPORT --

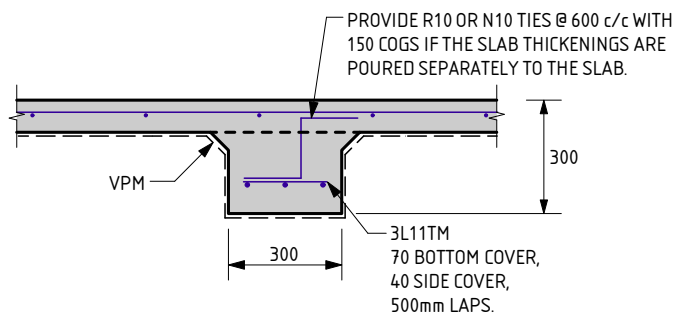


**EXTERNAL WALLS**

\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
 IF 100mm SLAB USED, MESH TO BE:  
 SL62 MESH FOR SPANS < 25m.  
 SL72 MESH FOR SPANS < 30m.  
 SL82 MESH FOR SPANS < 35m.

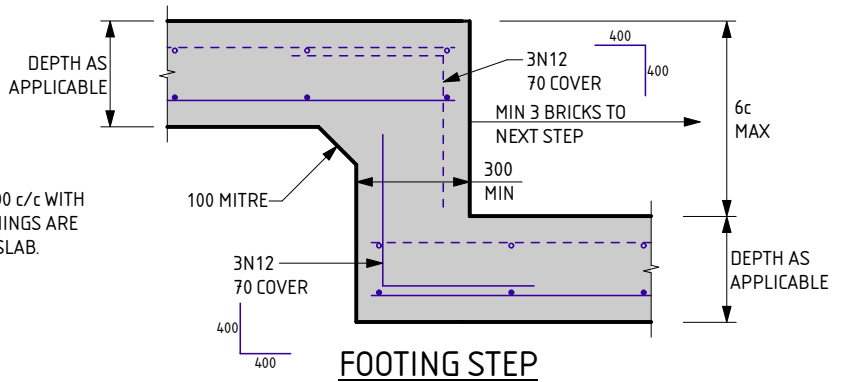


**GARAGE WALL**

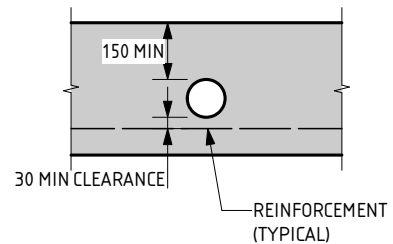


**INTERNAL THICKENING**

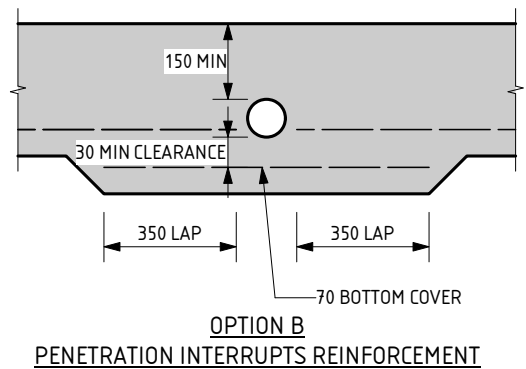
REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**FOOTING STEP**



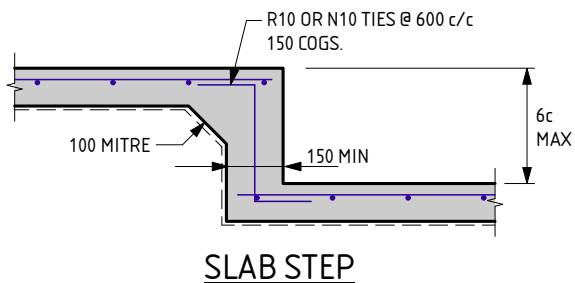
**OPTION A  
PENETRATION CLEAR OF REINFORCEMENT**



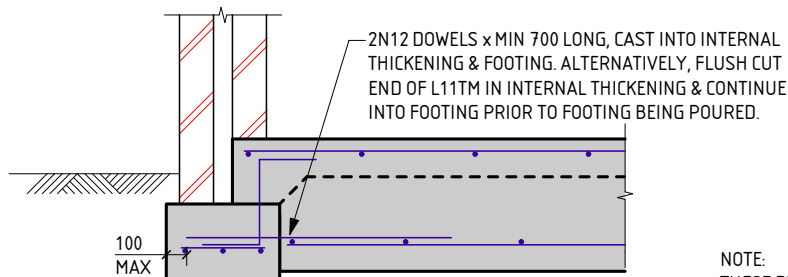
**OPTION B  
PENETRATION INTERRUPTS REINFORCEMENT**

**SERVICE PIPE DIAGRAM**

- MAXIMUM PENETRATION SIZE TO BE Ø150.



**SLAB STEP**



**EXTERNAL FOOTING TO INTERNAL THICKENING**

THIS DETAIL IS EQUIVALENT TO  
 STRUCTERRE FOOTING DETAIL C4.0

NOTE:  
 THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
 DATE LAST MODIFIED - 19/01/23

**CM3**  
 CAVITY MASONRY



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

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

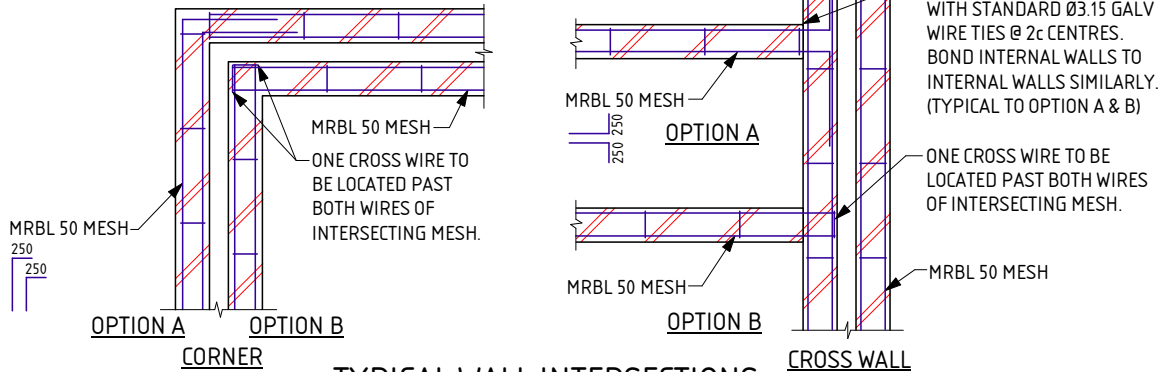
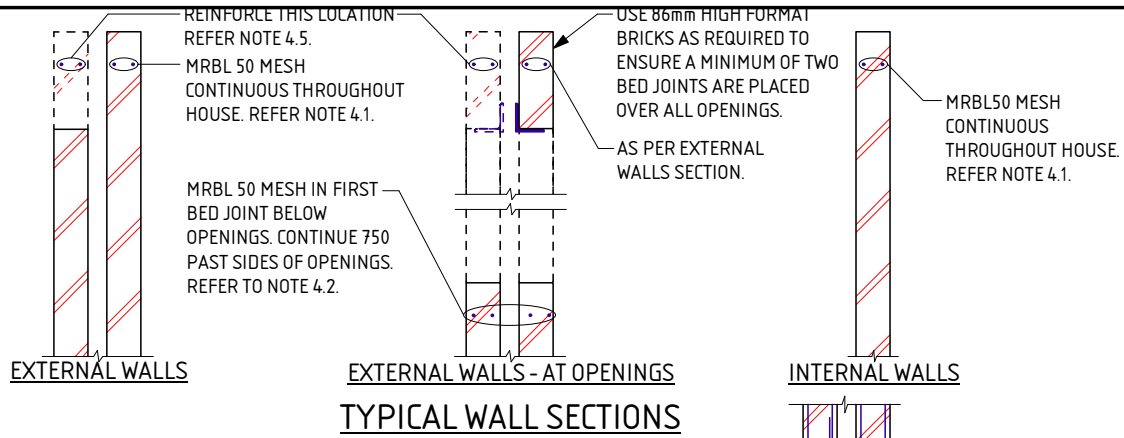
PROJECT: LOT 327 AVALANCHE PDE BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 18/7/23

APPROVED



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT: LOT 327 AVALANCHE PDE BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 18/7/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

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

PROJECT :  
LOT 327 AVALANCHE PDE BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 18/7/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :  
LOT 327 AVALANCHE PDE BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE 1:20

DATE 18/7/23

APPROVED

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



**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2601420

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 328 AVALANCHE PDE BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096851  
**DATE OF ASSESSMENT** 17/7/23

**SITE RECORD**

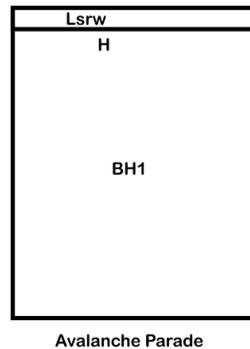


**SITE CLASSIFICATION** **S - EQUIVALENT** *(in accordance with AS2870)*  
**FOOTING DETAIL** **CM3**  
**SAND PAD** **No sand pad required structurally**  
**BUSHFIRE PRONE AREA** **Yes** *(see NOTE 2.)*  
**CORROSION CLASSIFICATION** **R3** *(Durability Class in accordance with AS3700)*  
**WIND CLASSIFICATION** **N1** *(in accordance with AS4055)*  
    **-TERRAIN CATEGORY** 2  
    **-TOPOGRAPHIC** T0  
    **-SHIELDING** Full Shielding

## SOIL PROFILE

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

## APPROXIMATE BOREHOLE LOCATIONS



### NOTE 1 Explanatory Notes & Standard Recommendations

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

### NOTE 2 Bushfire - Prone Area

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

## ADDITIONAL NOTES / REQUIREMENTS

### Site Condition

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

### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J416765 dated 24/08/2022.

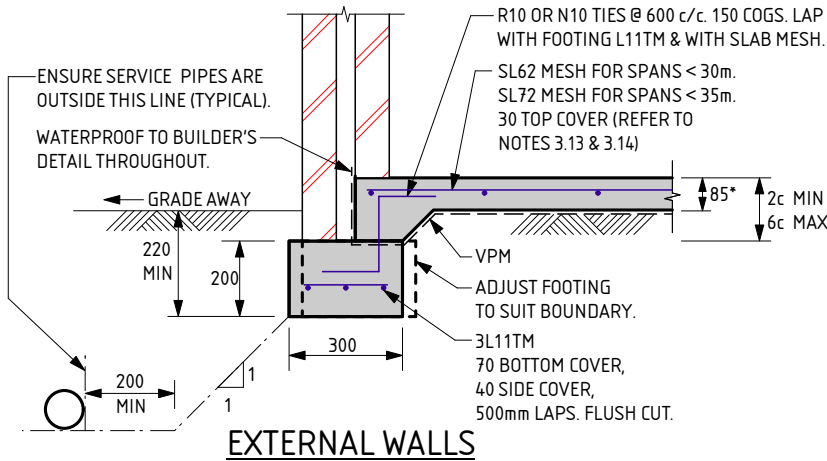
### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

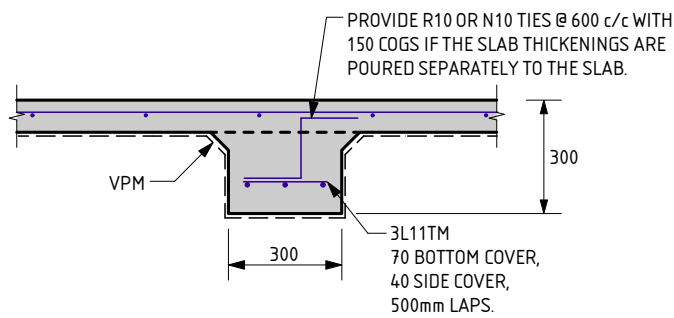
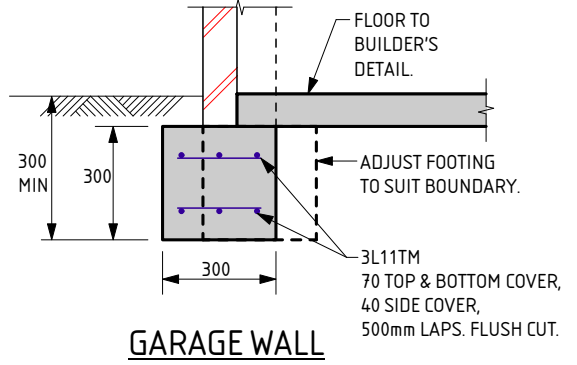
### Internal Thickening Inspection

This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

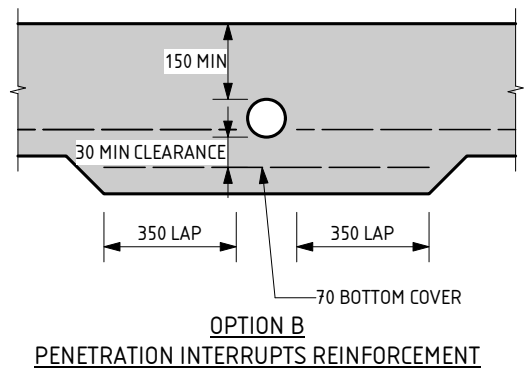
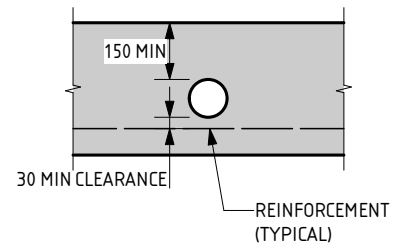
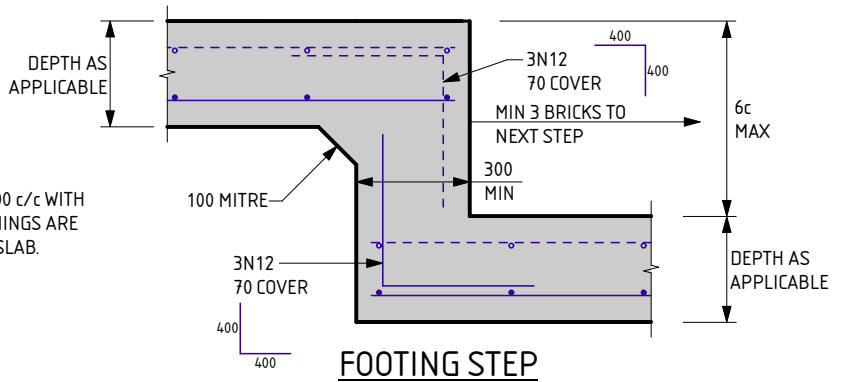
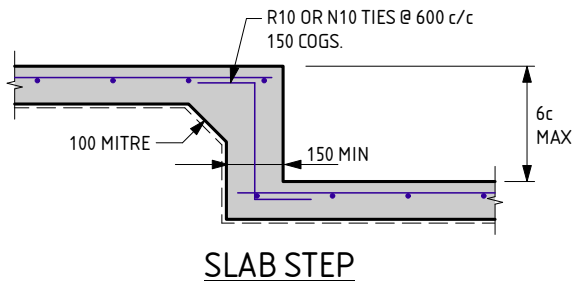
-- END OF REPORT --



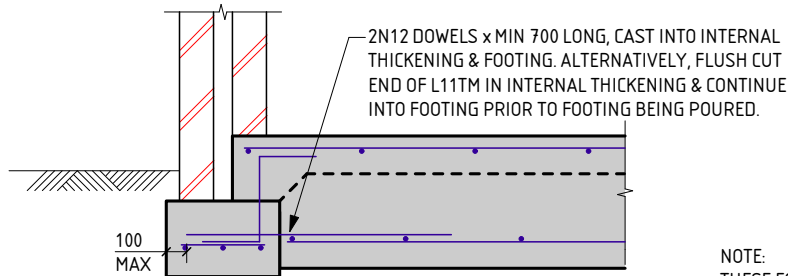
\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
IF 100mm SLAB USED, MESH TO BE:  
SL62 MESH FOR SPANS < 25m.  
SL72 MESH FOR SPANS < 30m.  
SL82 MESH FOR SPANS < 35m.



REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**SERVICE PIPE DIAGRAM**  
- MAXIMUM PENETRATION SIZE TO BE Ø150.



**EXTERNAL FOOTING TO INTERNAL THICKENING**

THIS DETAIL IS EQUIVALENT TO  
STRUCTERRE FOOTING DETAIL C4.0

NOTE:  
THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
DATE LAST MODIFIED - 19/01/23

**CM3**  
CAVITY MASONRY

**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, BALEATTA W.A. 6021

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

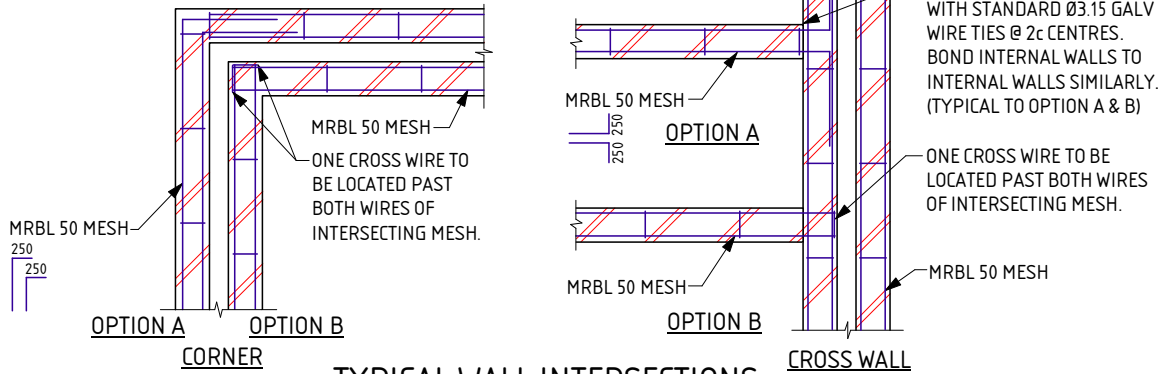
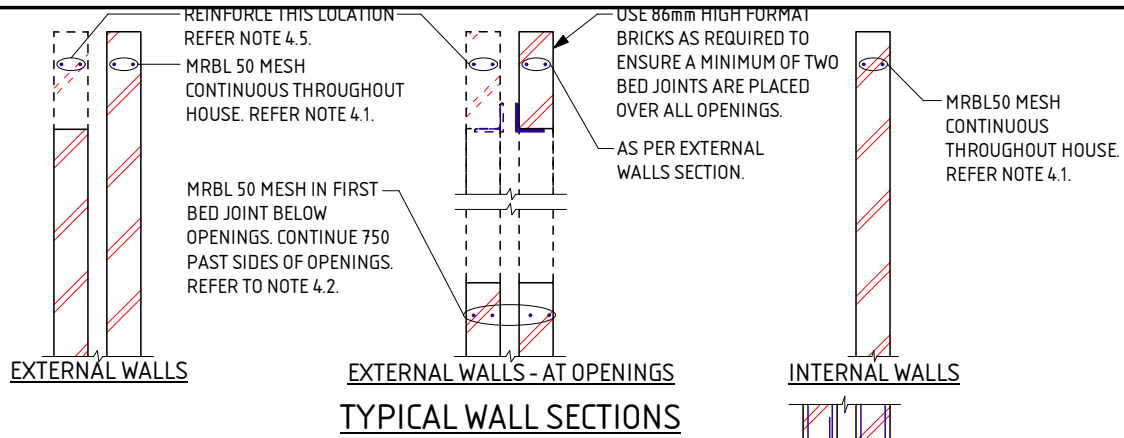
PROJECT:  
LOT 328 AVALANCHE PDE BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 18/7/23

APPROVED



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT: LOT 328 AVALANCHE PDE BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 18/7/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unit 1 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 328 AVALANCHE PDE BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 18/7/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :

LOT 328 AVALANCHE PDE BALDIVIS

CLIENT :

KEC NOMINEES PTY LTD

SCALE

1:20

APPROVED

DATE

18/7/23

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

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2601419

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 329 AVALANCHE PDE BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096854  
**DATE OF ASSESSMENT** 17/7/23

**SITE RECORD**

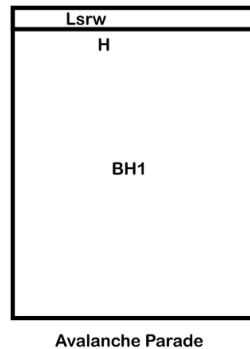


<b>SITE CLASSIFICATION</b>	<b>S - EQUIVALENT</b> (in accordance with AS2870)
<b>FOOTING DETAIL</b>	<b>CM3</b>
<b>SAND PAD</b>	<b>No sand pad required structurally</b>
<b>BUSHFIRE PRONE AREA</b>	<b>Yes</b> (see NOTE 2.)
<b>CORROSION CLASSIFICATION</b>	<b>R3</b> (Durability Class in accordance with AS3700)
<b>WIND CLASSIFICATION</b>	<b>N1</b> (in accordance with AS4055)
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	Full Shielding

## SOIL PROFILE

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

## APPROXIMATE BOREHOLE LOCATIONS



### NOTE 1 Explanatory Notes & Standard Recommendations

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

### NOTE 2 Bushfire - Prone Area

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

## ADDITIONAL NOTES / REQUIREMENTS

### Site Condition

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

### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J416765 dated 24/08/2022.

### Internal Thickenings

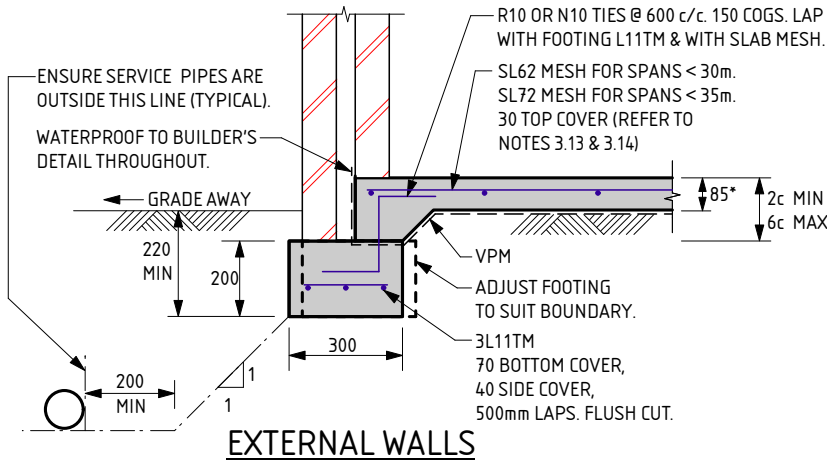
Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

### Internal Thickening Inspection

This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

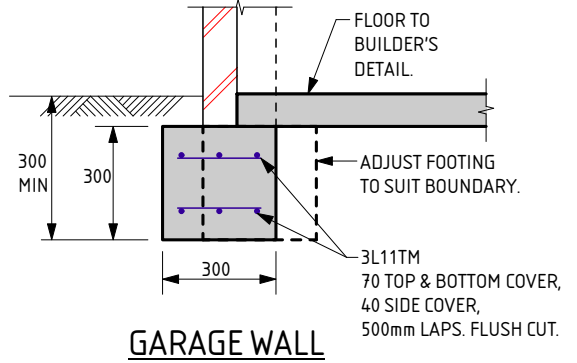
-- END OF REPORT --



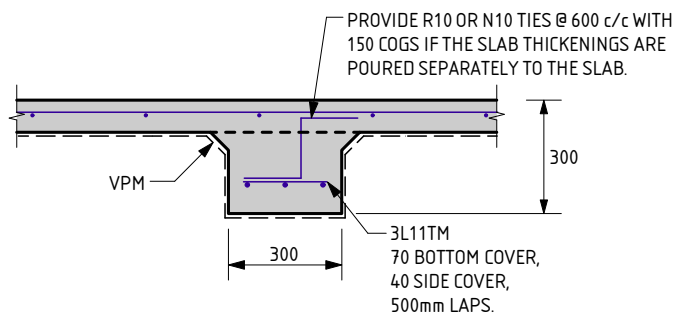


**EXTERNAL WALLS**

\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
 IF 100mm SLAB USED, MESH TO BE:  
 SL62 MESH FOR SPANS < 25m.  
 SL72 MESH FOR SPANS < 30m.  
 SL82 MESH FOR SPANS < 35m.

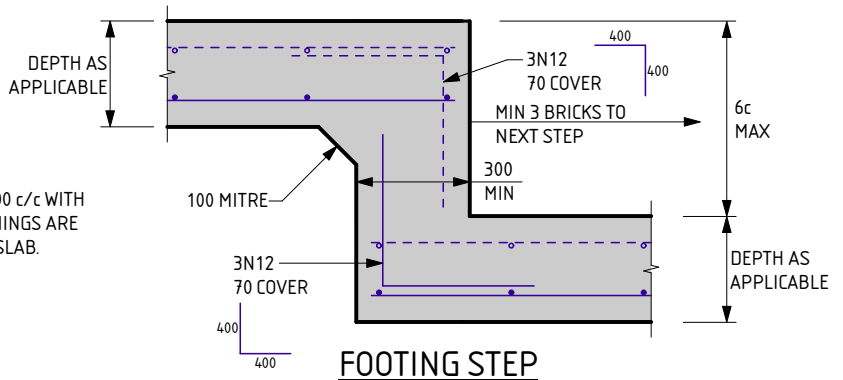


**GARAGE WALL**

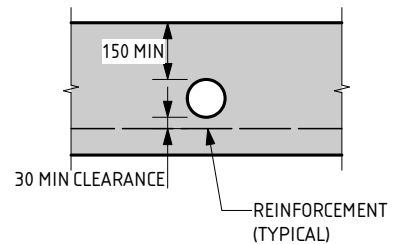


**INTERNAL THICKENING**

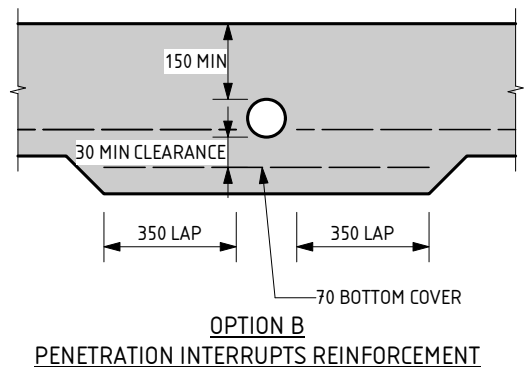
REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**FOOTING STEP**



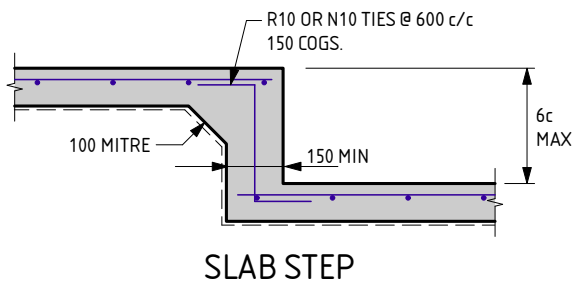
**OPTION A  
PENETRATION CLEAR OF REINFORCEMENT**



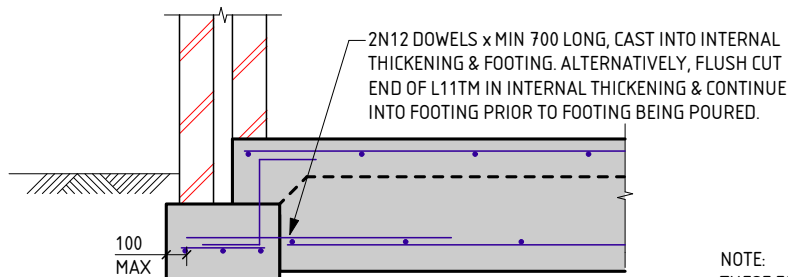
**OPTION B  
PENETRATION INTERRUPTS REINFORCEMENT**

**SERVICE PIPE DIAGRAM**

- MAXIMUM PENETRATION SIZE TO BE Ø150.



**SLAB STEP**



**EXTERNAL FOOTING TO INTERNAL THICKENING**

THIS DETAIL IS EQUIVALENT TO  
 STRUCTERRE FOOTING DETAIL C4.0

NOTE:  
 THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
 DATE LAST MODIFIED - 19/01/23

**CM3**  
 CAVITY MASONRY



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

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

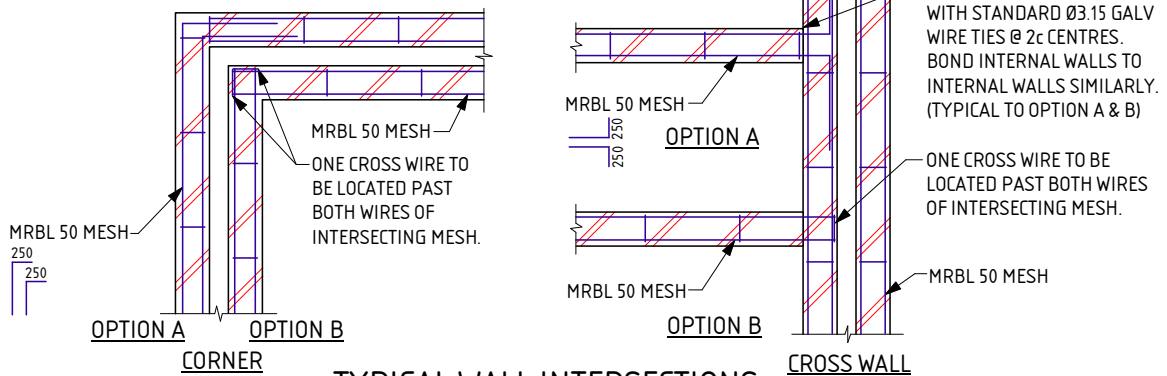
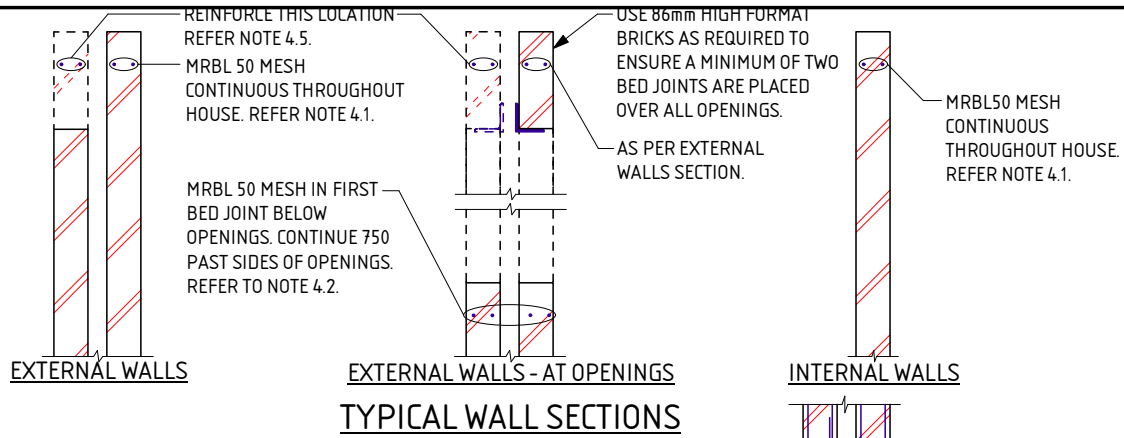
PROJECT: LOT 329 AVALANCHE PDE BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 18/7/23

APPROVED



### REACTIVE SITE NOTES FOR CM1 - CM7

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

#### 1.0 SITE CLASSIFICATION

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

#### 3.0 FOOTINGS & SLABS

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

#### 4.0 MASONRY

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

#### 5.0 MAINTENANCE

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

#### 6.0 QUALITY CONTROL PROGRAM REQUIREMENTS

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE - 10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT: LOT 329 AVALANCHE PDE BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 18/7/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unit 1 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 329 AVALANCHE PDE BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 18/7/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :

LOT 329 AVALANCHE PDE BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE 1:20

DATE 18/7/23

APPROVED

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

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2601418

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 330 AVALANCHE PDE BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096855  
**DATE OF ASSESSMENT** 17/7/23

**SITE RECORD**

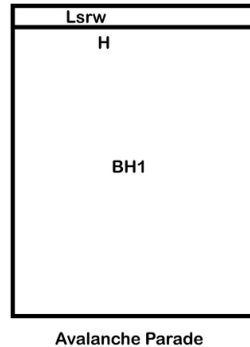


<b>SITE CLASSIFICATION</b>	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
<b>FOOTING DETAIL</b>	<b>CM3</b>
<b>SAND PAD</b>	<b>No sand pad required structurally</b>
<b>BUSHFIRE PRONE AREA</b>	<b>Yes</b> <i>(see NOTE 2.)</i>
<b>CORROSION CLASSIFICATION</b>	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
<b>WIND CLASSIFICATION</b>	<b>N1</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	Full Shielding

## SOIL PROFILE

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

## APPROXIMATE BOREHOLE LOCATIONS



### NOTE 1 Explanatory Notes & Standard Recommendations

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

### NOTE 2 Bushfire - Prone Area

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

## ADDITIONAL NOTES / REQUIREMENTS

### Site Condition

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

### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J416765 dated 24/08/2022.

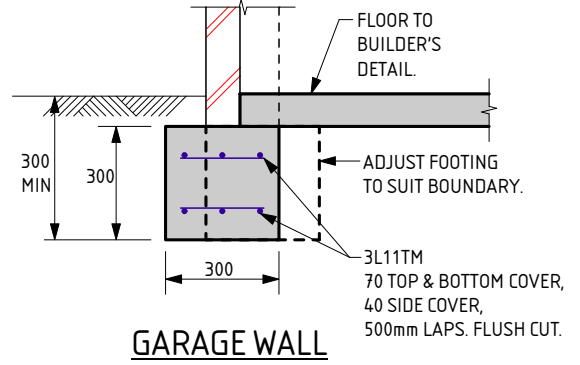
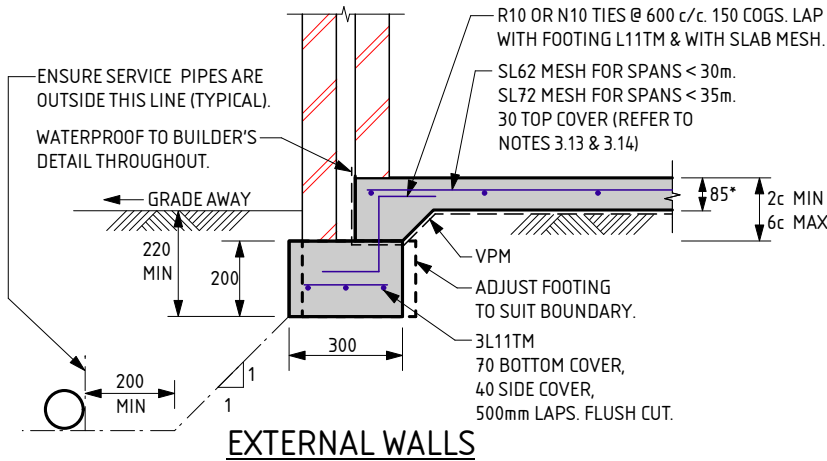
### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

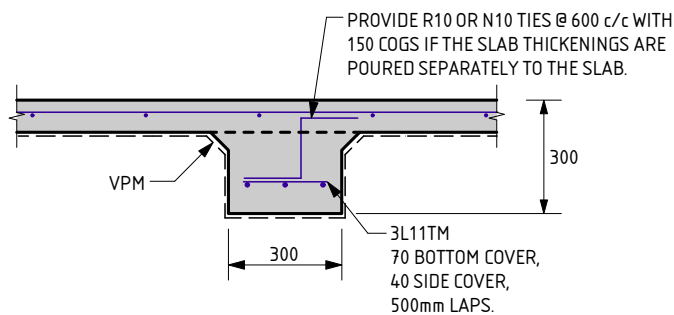
### Internal Thickening Inspection

This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

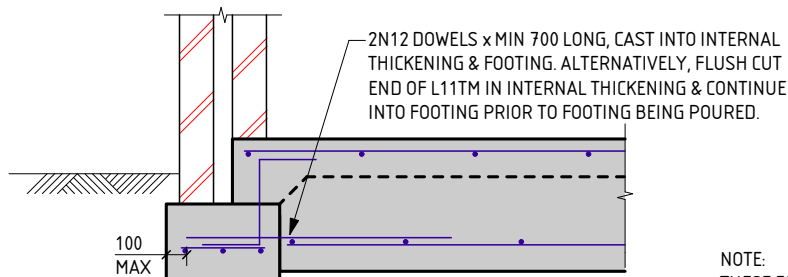
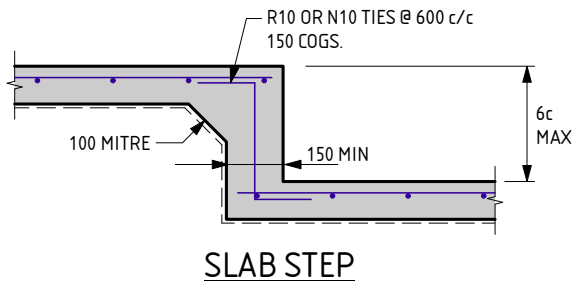
**-- END OF REPORT --**



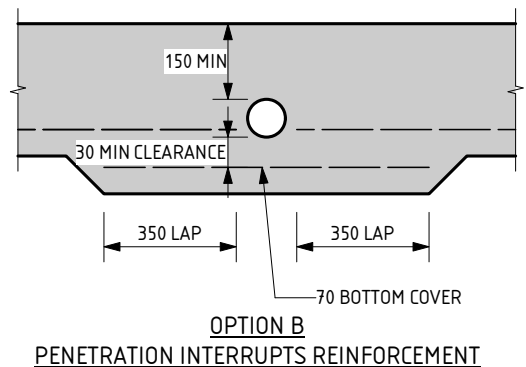
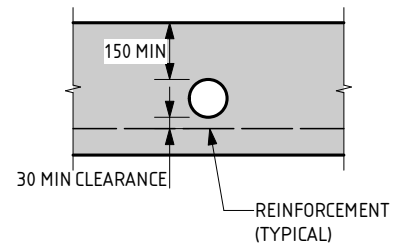
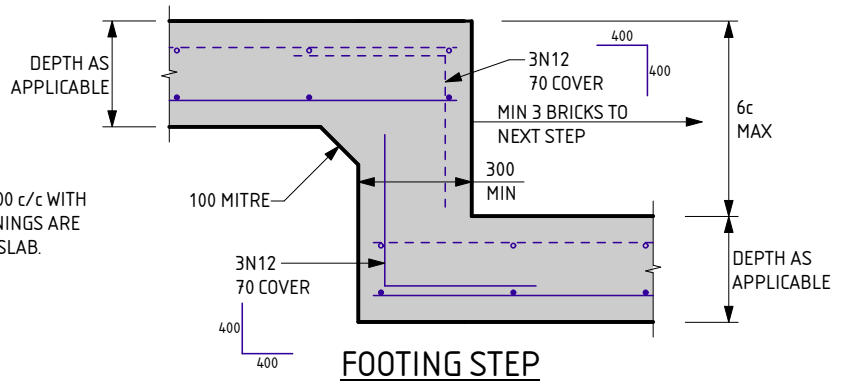
\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
IF 100mm SLAB USED, MESH TO BE:  
SL62 MESH FOR SPANS < 25m.  
SL72 MESH FOR SPANS < 30m.  
SL82 MESH FOR SPANS < 35m.



REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



THIS DETAIL IS EQUIVALENT TO  
STRUCTERRE FOOTING DETAIL C4.0



### SERVICE PIPE DIAGRAM

- MAXIMUM PENETRATION SIZE TO BE Ø150.

NOTE:  
THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
DATE LAST MODIFIED - 19/01/23

**CM3**  
CAVITY MASONRY

**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, BALEATTA W.A. 6021

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

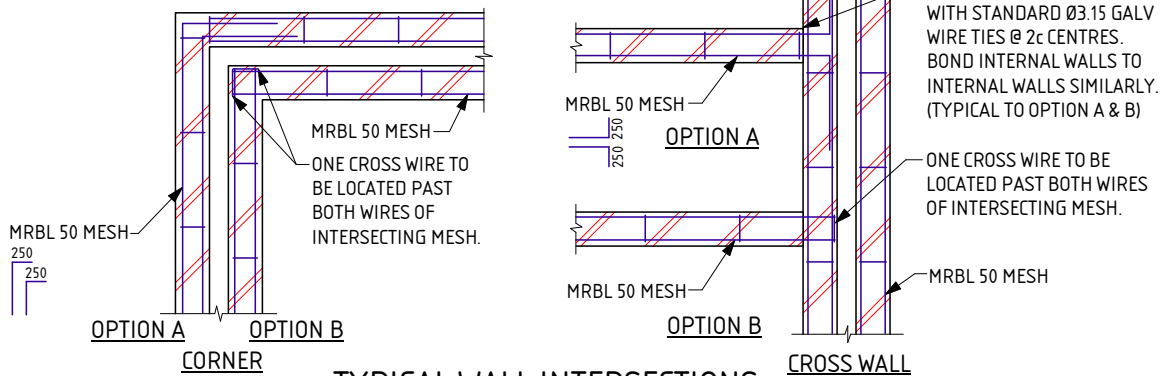
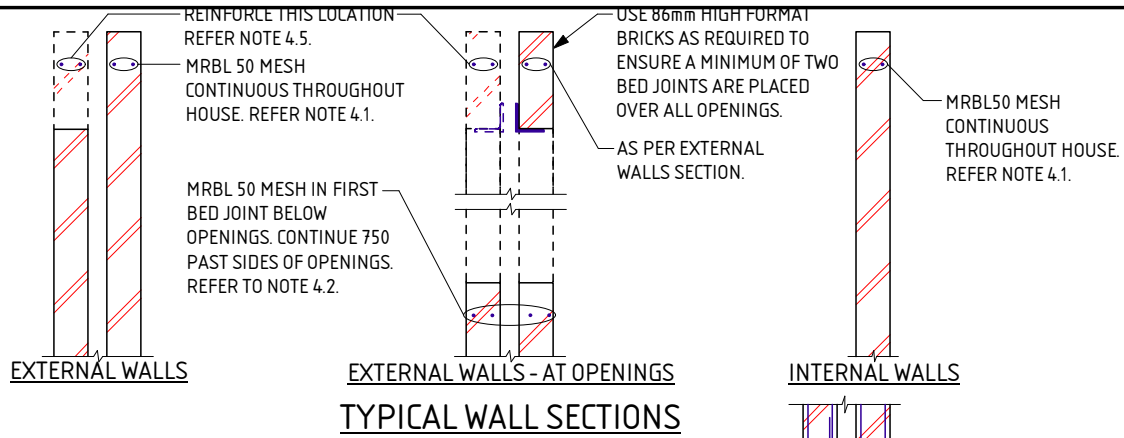
PROJECT:  
LOT 330 AVALANCHE PDE BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 18/7/23

APPROVED



#### REACTIVE SITE NOTES FOR CM1 - CM7

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

#### 1.0 SITE CLASSIFICATION

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

#### 3.0 FOOTINGS & SLABS

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

#### 4.0 MASONRY

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

#### 5.0 MAINTENANCE

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

#### 6.0 QUALITY CONTROL PROGRAM REQUIREMENTS

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT: LOT 330 AVALANCHE PDE BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 18/7/23

APPROVED



## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unit 1 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 330 AVALANCHE PDE BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 18/7/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :

LOT 330 AVALANCHE PDE BALDIVIS

CLIENT :

KEC NOMINEES PTY LTD

SCALE

1:20

APPROVED

DATE

18/7/23

A handwritten signature in blue ink, appearing to be 'J. Smith', is written over the 'APPROVED' field.

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2601417

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 331 AVALANCHE PDE BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096856  
**DATE OF ASSESSMENT** 17/7/23

**SITE RECORD**

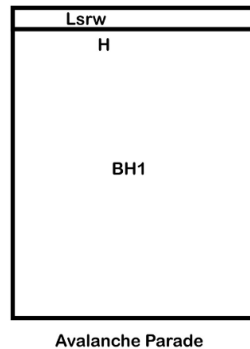


<b>SITE CLASSIFICATION</b>	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
<b>FOOTING DETAIL</b>	<b>CM3</b>
<b>SAND PAD</b>	<b>No sand pad required structurally</b>
<b>BUSHFIRE PRONE AREA</b>	<b>Yes</b> <i>(see NOTE 2.)</i>
<b>CORROSION CLASSIFICATION</b>	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
<b>WIND CLASSIFICATION</b>	<b>N1</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	Full Shielding

## SOIL PROFILE

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

## APPROXIMATE BOREHOLE LOCATIONS



### NOTE 1 Explanatory Notes & Standard Recommendations

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

### NOTE 2 Bushfire - Prone Area

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

### ADDITIONAL NOTES / REQUIREMENTS

#### Site Condition

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

#### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J416765 dated 24/08/2022.

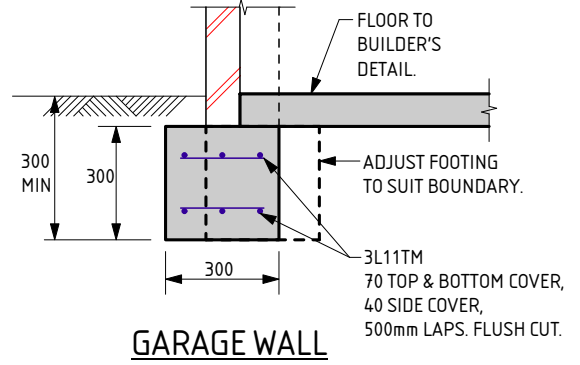
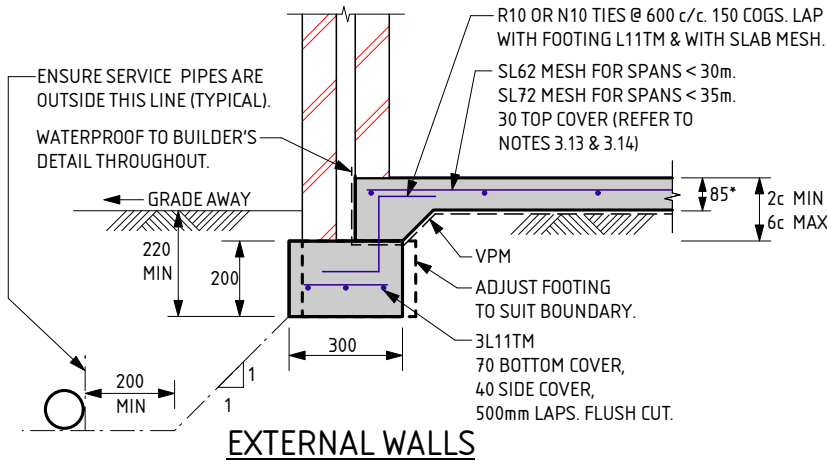
#### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

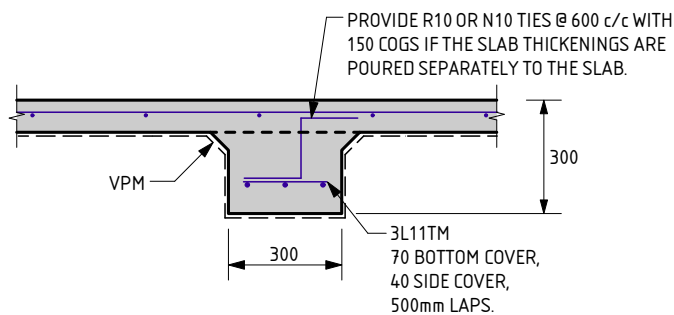
#### Internal Thickening Inspection

This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

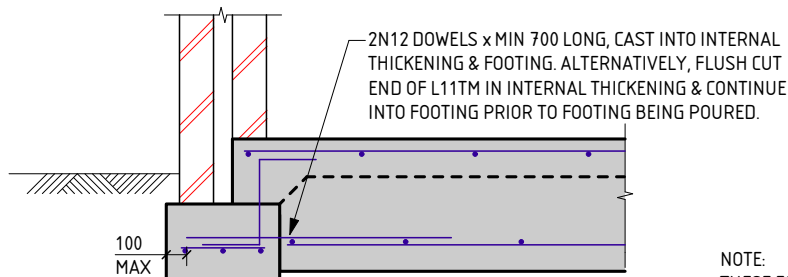
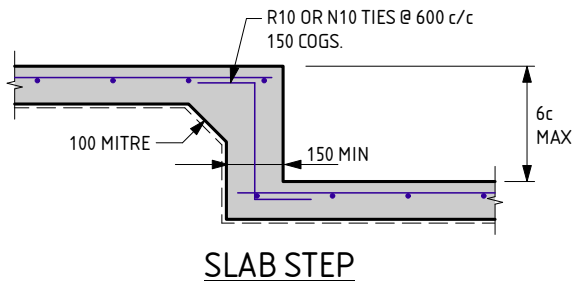
-- END OF REPORT --



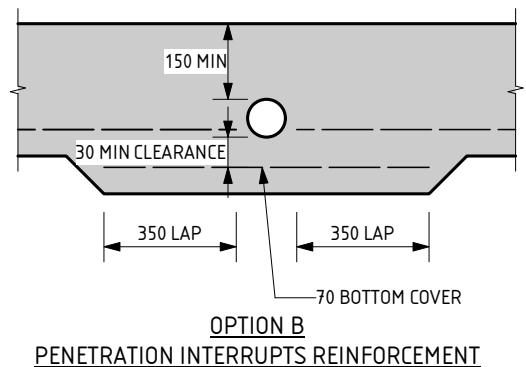
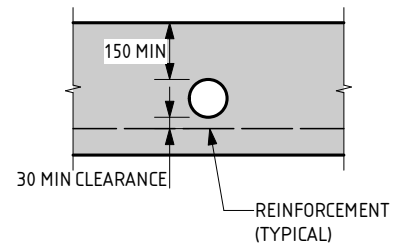
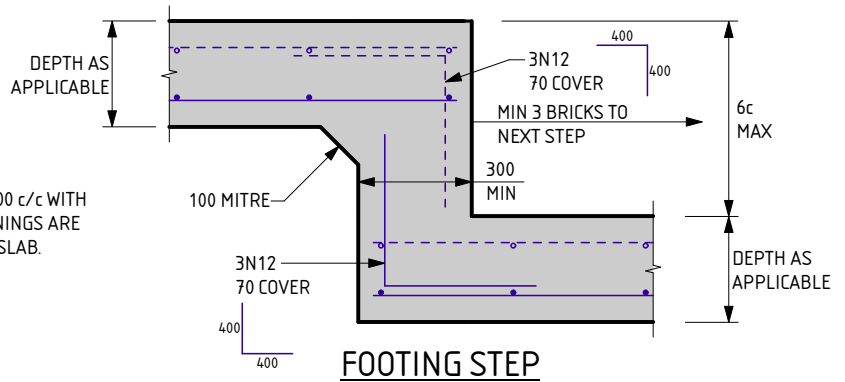
\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
IF 100mm SLAB USED, MESH TO BE:  
SL62 MESH FOR SPANS < 25m.  
SL72 MESH FOR SPANS < 30m.  
SL82 MESH FOR SPANS < 35m.



REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



THIS DETAIL IS EQUIVALENT TO  
STRUCTERRE FOOTING DETAIL C4.0



### SERVICE PIPE DIAGRAM

- MAXIMUM PENETRATION SIZE TO BE Ø150.

NOTE:  
THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
DATE LAST MODIFIED - 19/01/23

**CM3**  
CAVITY MASONRY

**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, BALEATTA W.A. 6021

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

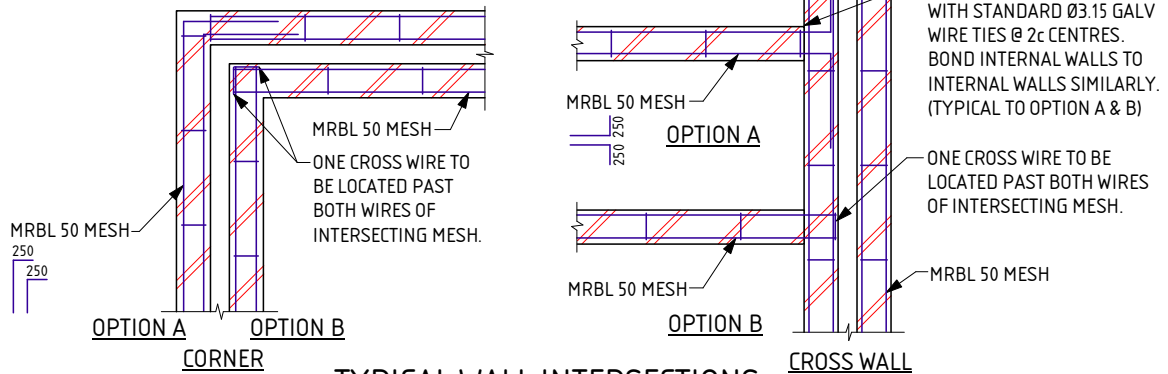
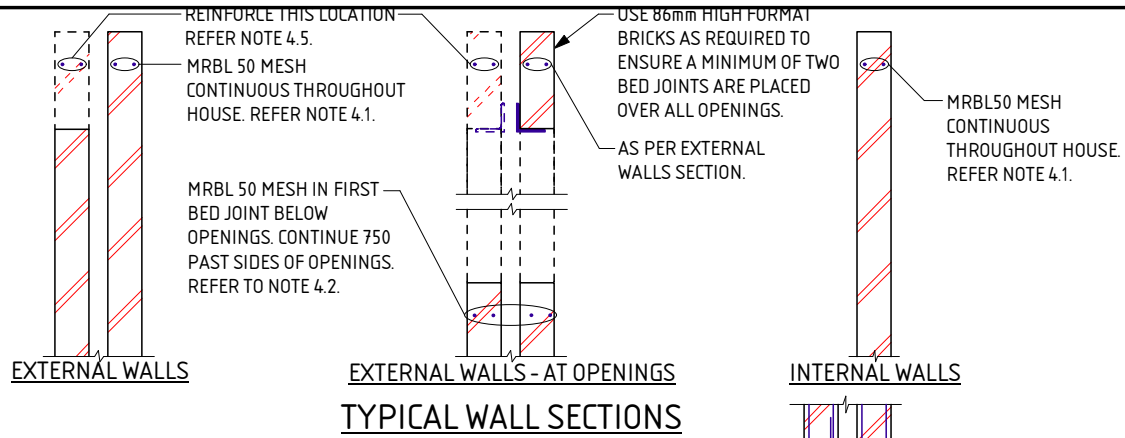
PROJECT:  
LOT 331 AVALANCHE PDE BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 18/7/23

APPROVED



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT: LOT 331 AVALANCHE PDE BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 18/7/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unit 1 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 331 AVALANCHE PDE BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 18/7/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :

LOT 331 AVALANCHE PDE BALDIVIS

CLIENT :

KEC NOMINEES PTY LTD

SCALE

1:20

APPROVED

DATE

18/7/23

A handwritten signature in blue ink, appearing to be 'J. Smith', is written over the 'APPROVED' field.



**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2601416

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 332 AVALANCHE PDE BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096857  
**DATE OF ASSESSMENT** 17/7/23

**SITE RECORD**

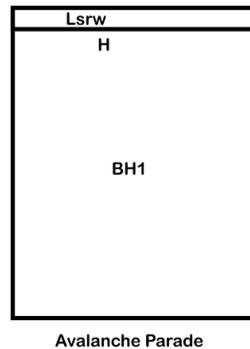


<b>SITE CLASSIFICATION</b>	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
<b>FOOTING DETAIL</b>	<b>CM3</b>
<b>SAND PAD</b>	<b>No sand pad required structurally</b>
<b>BUSHFIRE PRONE AREA</b>	<b>Yes</b> <i>(see NOTE 2.)</i>
<b>CORROSION CLASSIFICATION</b>	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
<b>WIND CLASSIFICATION</b>	<b>N1</b> <i>(in accordance with AS4055)</i>
<b>-TERRAIN CATEGORY</b>	<b>2</b>
<b>-TOPOGRAPHIC</b>	<b>T0</b>
<b>-SHIELDING</b>	<b>Full Shielding</b>

## SOIL PROFILE

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

## APPROXIMATE BOREHOLE LOCATIONS



### NOTE 1 Explanatory Notes & Standard Recommendations

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

### NOTE 2 Bushfire - Prone Area

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

### ADDITIONAL NOTES / REQUIREMENTS

#### Site Condition

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

#### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J416765 dated 24/08/2022.

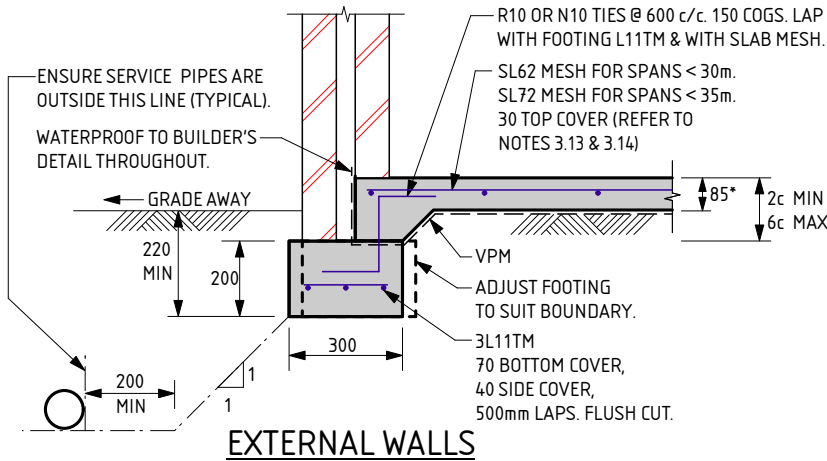
#### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

#### Internal Thickening Inspection

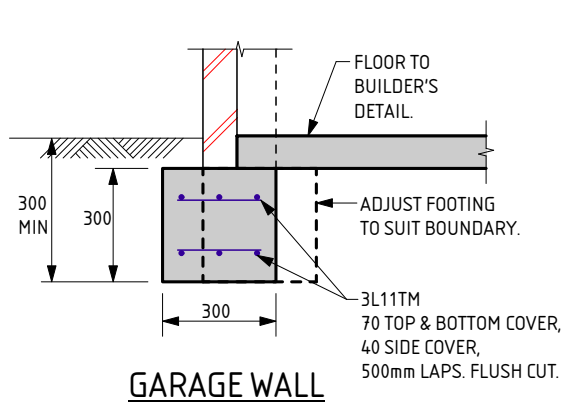
This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

-- END OF REPORT --

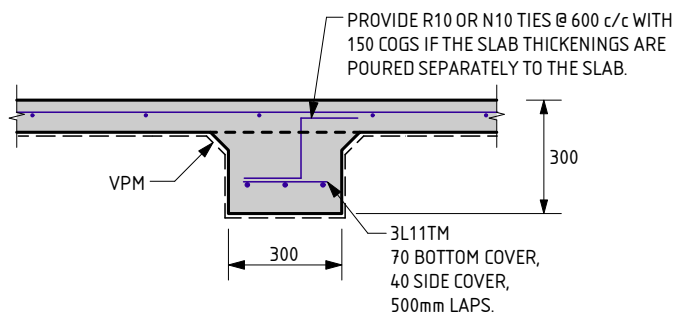


**EXTERNAL WALLS**

\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
 IF 100mm SLAB USED, MESH TO BE:  
 SL62 MESH FOR SPANS < 25m.  
 SL72 MESH FOR SPANS < 30m.  
 SL82 MESH FOR SPANS < 35m.

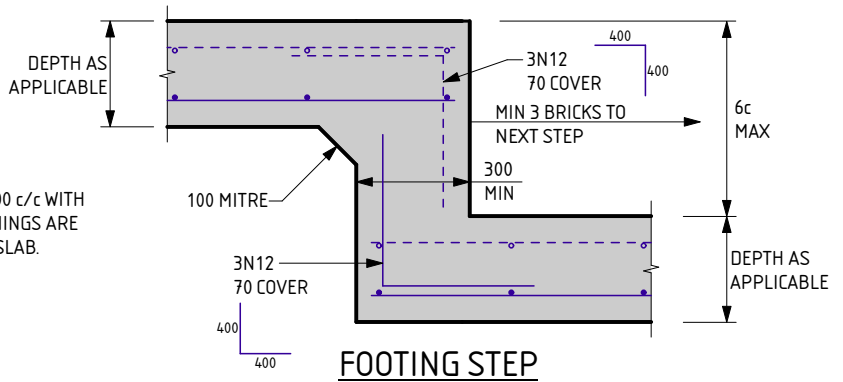


**GARAGE WALL**

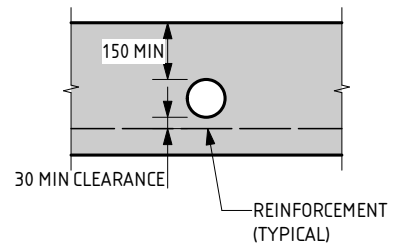


**INTERNAL THICKENING**

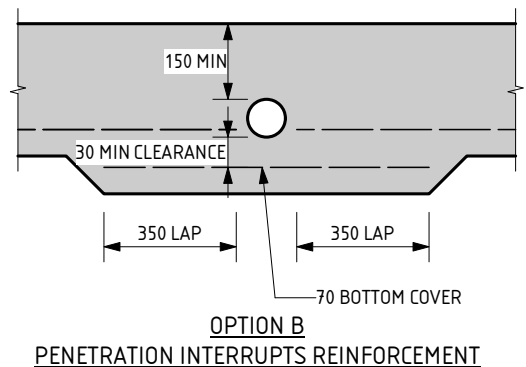
REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**FOOTING STEP**



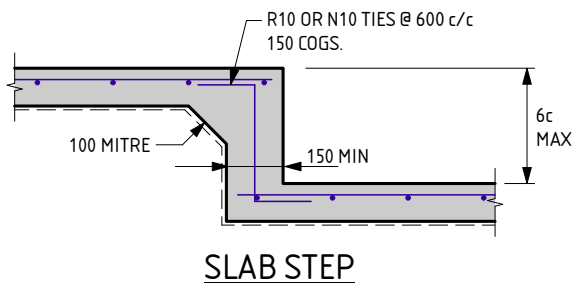
**OPTION A  
PENETRATION CLEAR OF REINFORCEMENT**



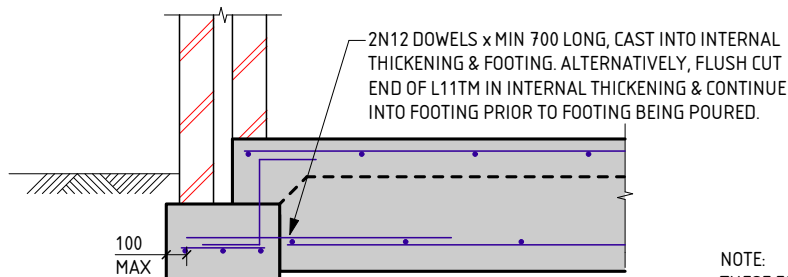
**OPTION B  
PENETRATION INTERRUPTS REINFORCEMENT**

**SERVICE PIPE DIAGRAM**

- MAXIMUM PENETRATION SIZE TO BE Ø150.



**SLAB STEP**



**EXTERNAL FOOTING TO INTERNAL THICKENING**

THIS DETAIL IS EQUIVALENT TO  
 STRUCTERRE FOOTING DETAIL C4.0

NOTE:  
 THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
 DATE LAST MODIFIED - 19/01/23

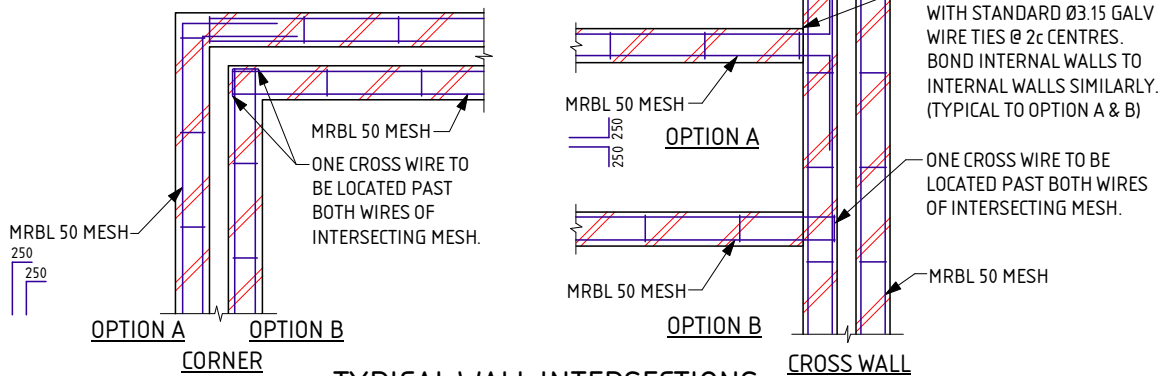
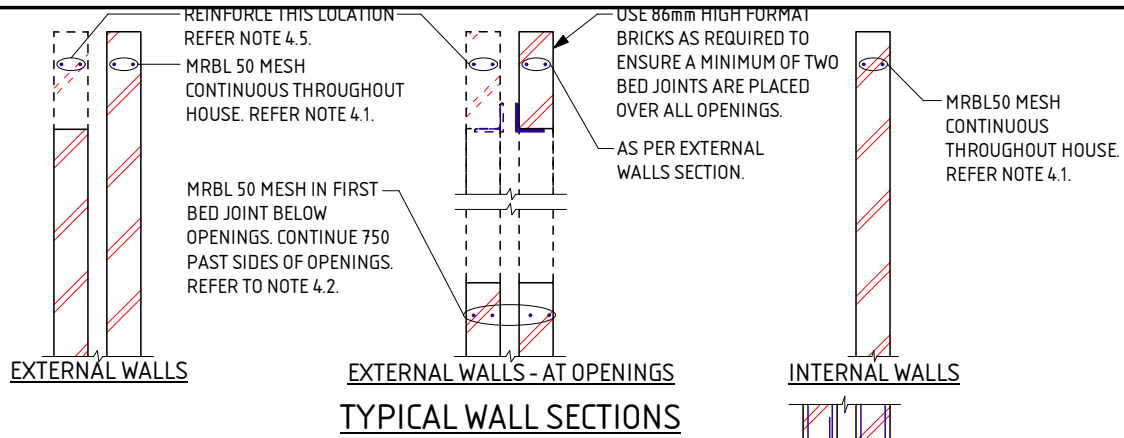
**CM3**  
 CAVITY MASONRY



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

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

PROJECT: LOT 332 AVALANCHE PDE BALDIVIS	
CLIENT: KEC NOMINEES PTY LTD	
SCALE: 1:20	APPROVED 
DATE: 18/7/23	



### REACTIVE SITE NOTES FOR CM1 - CM7

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

#### 1.0 SITE CLASSIFICATION

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

#### 3.0 FOOTINGS & SLABS

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

#### 4.0 MASONRY

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

#### 5.0 MAINTENANCE

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

#### 6.0 QUALITY CONTROL PROGRAM REQUIREMENTS

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT: LOT 332 AVALANCHE PDE BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 18/7/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unit 1 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 332 AVALANCHE PDE BALDIVIS

CLIENT :

KEC NOMINEES PTY LTD

SCALE

1:20

APPROVED

DATE

18/7/23

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :

LOT 332 AVALANCHE PDE BALDIVIS

CLIENT :

KEC NOMINEES PTY LTD

SCALE

1:20

APPROVED

DATE

18/7/23

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

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2601415

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 333 AVALANCHE PDE BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096858  
**DATE OF ASSESSMENT** 17/7/23

**SITE RECORD**

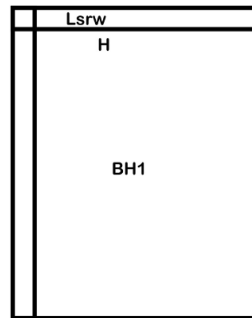


<b>SITE CLASSIFICATION</b>	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
<b>FOOTING DETAIL</b>	<b>CM3</b>
<b>SAND PAD</b>	<b>No sand pad required structurally</b>
<b>BUSHFIRE PRONE AREA</b>	<b>Yes</b> <i>(see NOTE 2.)</i>
<b>CORROSION CLASSIFICATION</b>	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
<b>WIND CLASSIFICATION</b>	<b>N2</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	No Shielding

## SOIL PROFILE

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

## APPROXIMATE BOREHOLE LOCATIONS



Avalanche Parade

### NOTE 1 Explanatory Notes & Standard Recommendations

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

### NOTE 2 Bushfire - Prone Area

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

### ADDITIONAL NOTES / REQUIREMENTS

#### Site Condition

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

#### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J416765 dated 24/08/2022.

#### Internal Thickenings

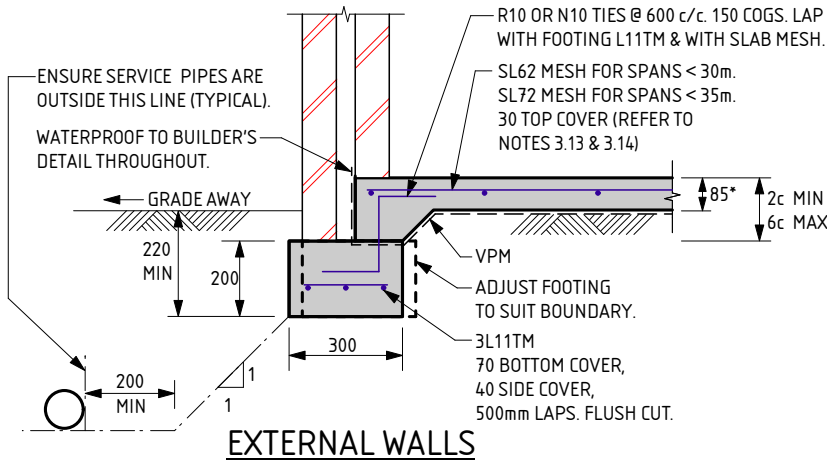
Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

#### Internal Thickening Inspection

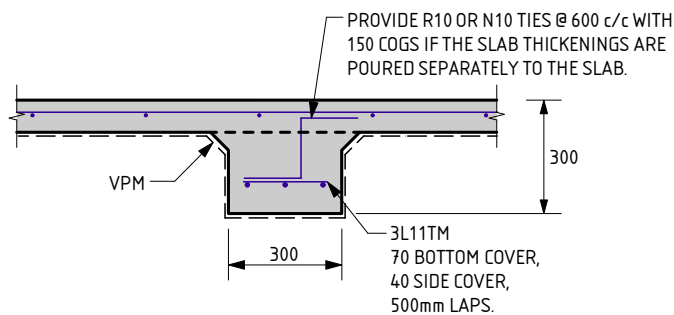
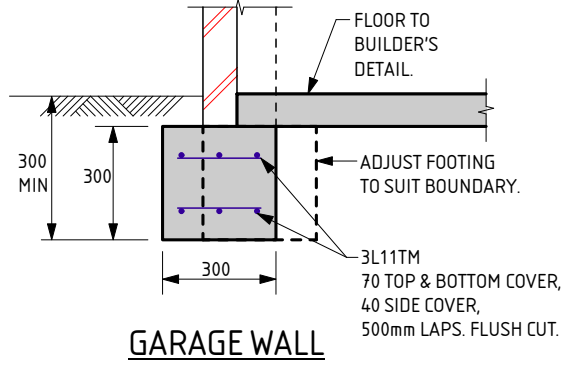
This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

-- END OF REPORT --

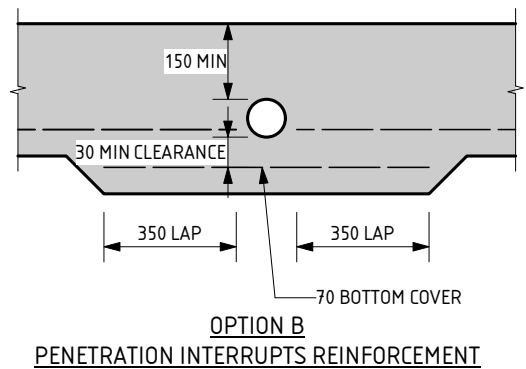
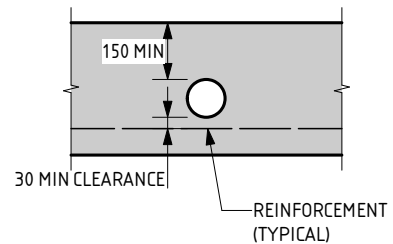
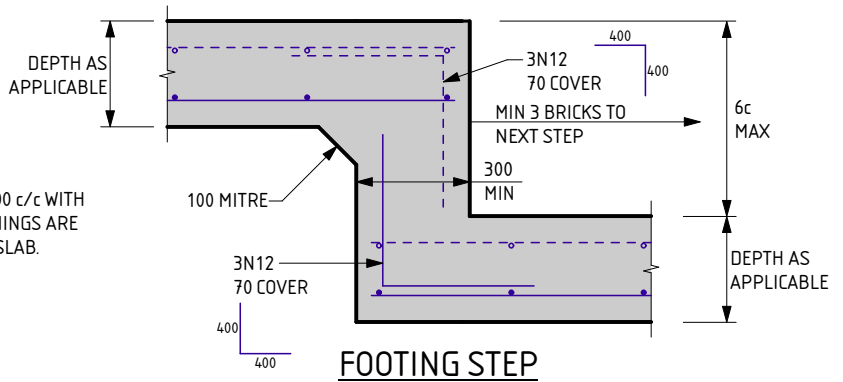
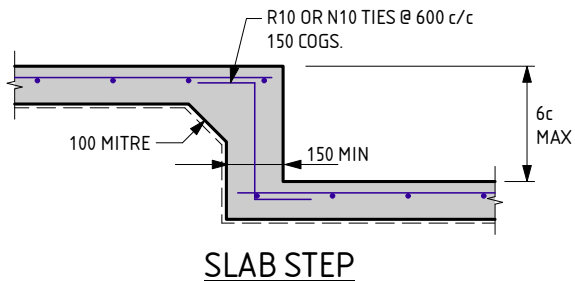




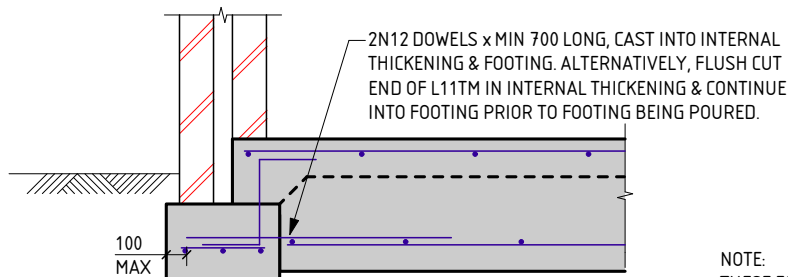
\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
IF 100mm SLAB USED, MESH TO BE:  
SL62 MESH FOR SPANS < 25m.  
SL72 MESH FOR SPANS < 30m.  
SL82 MESH FOR SPANS < 35m.



REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**SERVICE PIPE DIAGRAM**  
- MAXIMUM PENETRATION SIZE TO BE Ø150.



**EXTERNAL FOOTING TO INTERNAL THICKENING**

THIS DETAIL IS EQUIVALENT TO  
STRUCTERRE FOOTING DETAIL C4.0

NOTE:  
THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
DATE LAST MODIFIED - 19/01/23

**CM3**  
CAVITY MASONRY

**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, BALEATTA W.A. 6021

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

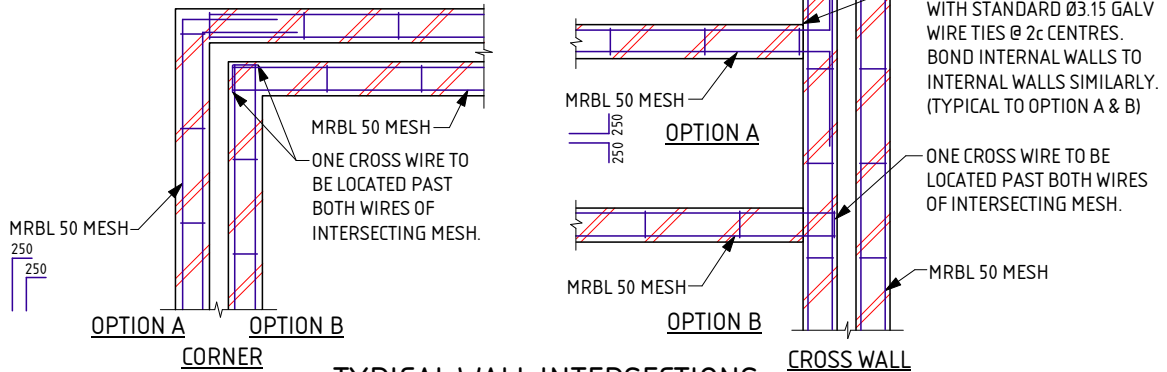
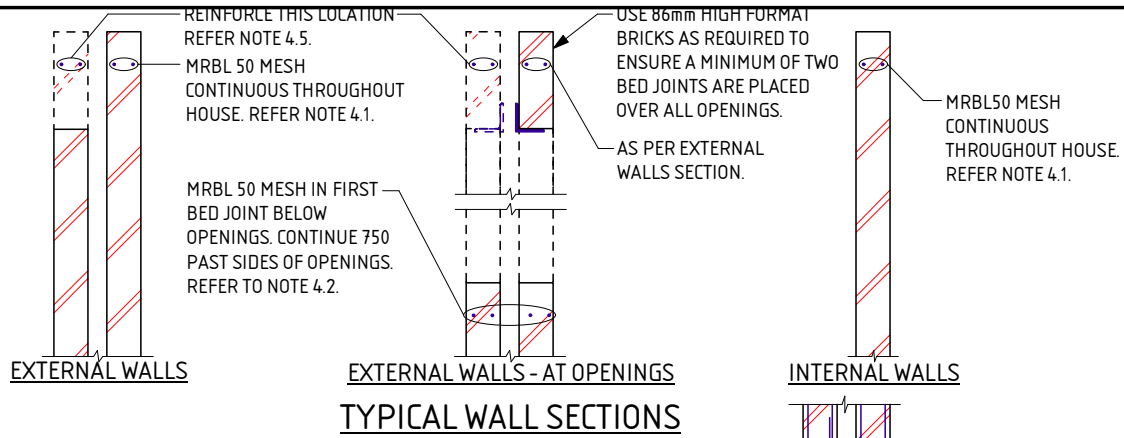
PROJECT:  
LOT 333 AVALANCHE PDE BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 18/7/23

APPROVED



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

PROJECT : <b>LOT 333 AVALANCHE PDE BALDIVIS</b>	
CLIENT : <b>KEC NOMINEES PTY LTD</b>	
SCALE : <b>1:20</b>	APPROVED
DATE : <b>18/7/23</b>	

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemia Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unit 1 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 333 AVALANCHE PDE BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 18/7/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :

LOT 333 AVALANCHE PDE BALDIVIS

CLIENT :

KEC NOMINEES PTY LTD

SCALE

1:20

APPROVED

DATE

18/7/23

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

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2601414

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 334 AVALANCHE PDE BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096859  
**DATE OF ASSESSMENT** 17/7/23

**SITE RECORD**

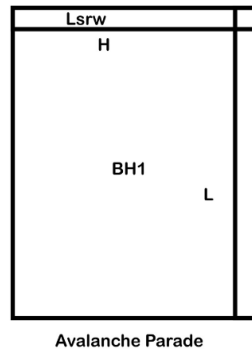


<b>SITE CLASSIFICATION</b>	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
<b>FOOTING DETAIL</b>	<b>CM3</b>
<b>SAND PAD</b>	<b>No sand pad required structurally</b>
<b>BUSHFIRE PRONE AREA</b>	<b>Yes</b> <i>(see NOTE 2.)</i>
<b>CORROSION CLASSIFICATION</b>	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
<b>WIND CLASSIFICATION</b>	<b>N2</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	No Shielding

## SOIL PROFILE

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

## APPROXIMATE BOREHOLE LOCATIONS



### NOTE 1 Explanatory Notes & Standard Recommendations

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

### NOTE 2 Bushfire - Prone Area

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

### ADDITIONAL NOTES / REQUIREMENTS

#### Site Condition

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

#### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J416765 dated 24/08/2022.

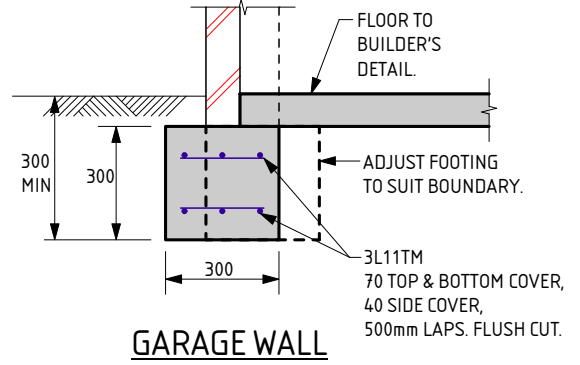
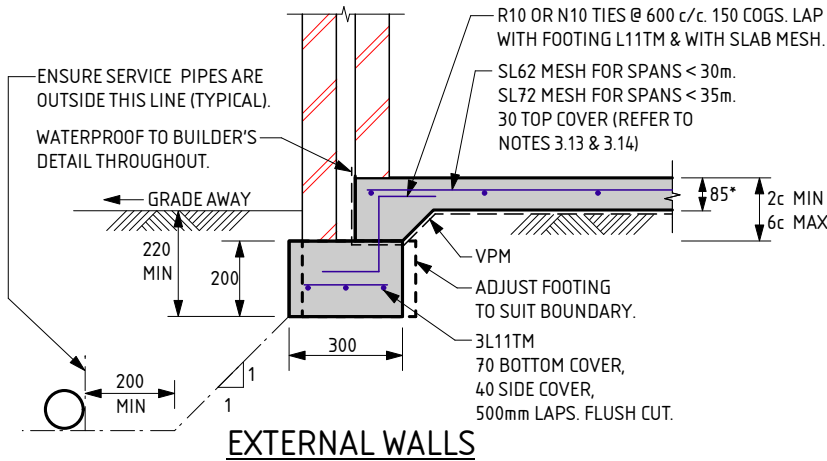
#### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

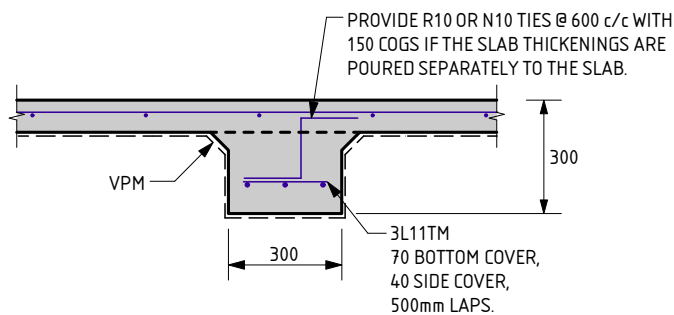
#### Internal Thickening Inspection

This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

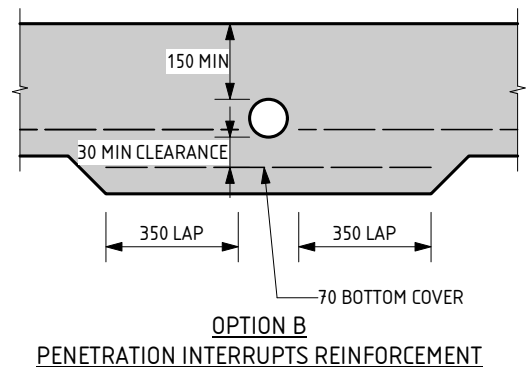
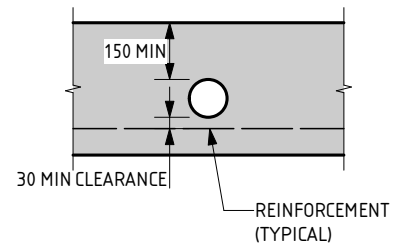
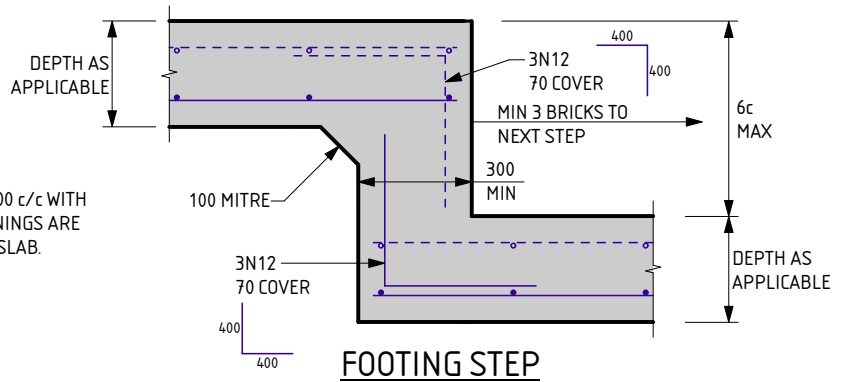
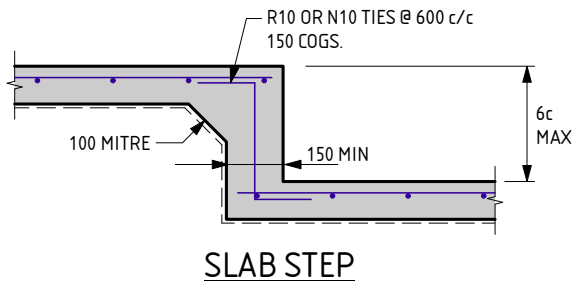
-- END OF REPORT --



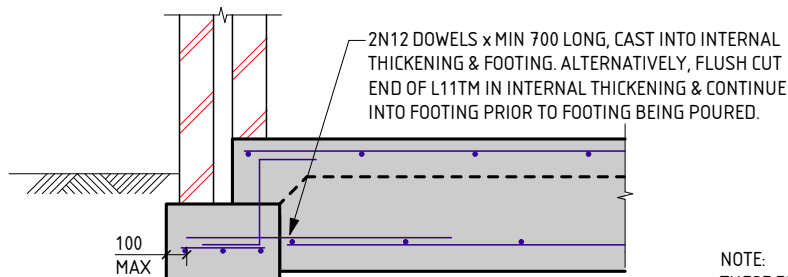
\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
IF 100mm SLAB USED, MESH TO BE:  
SL62 MESH FOR SPANS < 25m.  
SL72 MESH FOR SPANS < 30m.  
SL82 MESH FOR SPANS < 35m.



REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**SERVICE PIPE DIAGRAM**  
- MAXIMUM PENETRATION SIZE TO BE Ø150.



NOTE:  
THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
DATE LAST MODIFIED - 19/01/23

**CM3**  
CAVITY MASONRY

THIS DETAIL IS EQUIVALENT TO  
STRUCTERRE FOOTING DETAIL C4.0

**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, BALEATTA W.A. 6021

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

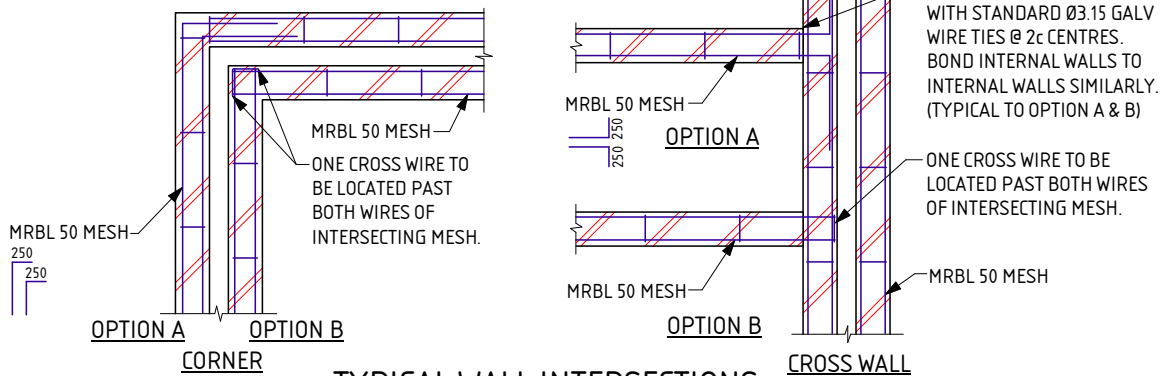
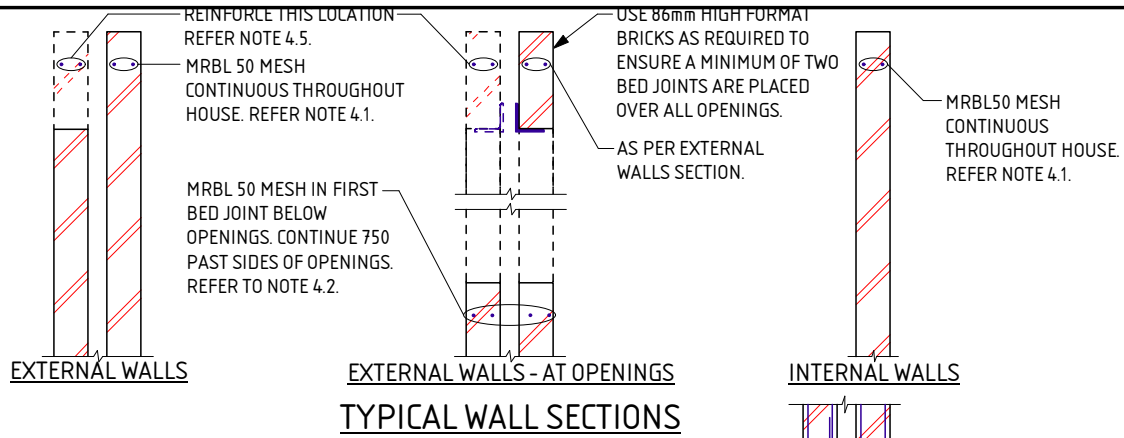
PROJECT:  
LOT 334 AVALANCHE PDE BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 18/7/23

APPROVED



### REACTIVE SITE NOTES FOR CM1 - CM7

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

#### 1.0 SITE CLASSIFICATION

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

#### 3.0 FOOTINGS & SLABS

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

#### 4.0 MASONRY

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

#### 5.0 MAINTENANCE

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

#### 6.0 QUALITY CONTROL PROGRAM REQUIREMENTS

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT: LOT 334 AVALANCHE PDE BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 18/7/23

APPROVED



# EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

## EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemia Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unit 1 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 334 AVALANCHE PDE BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 18/7/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :  
LOT 334 AVALANCHE PDE BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE 1:20

DATE 18/7/23

APPROVED

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

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2601413

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 335 AVALANCHE PDE BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096860  
**DATE OF ASSESSMENT** 17/7/23

**SITE RECORD**

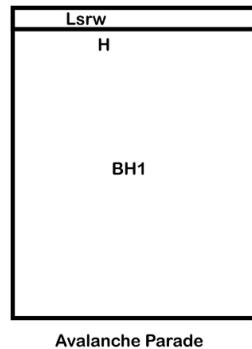


<b>SITE CLASSIFICATION</b>	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
<b>FOOTING DETAIL</b>	<b>CM3</b>
<b>SAND PAD</b>	<b>No sand pad required structurally</b>
<b>BUSHFIRE PRONE AREA</b>	<b>Yes</b> <i>(see NOTE 2.)</i>
<b>CORROSION CLASSIFICATION</b>	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
<b>WIND CLASSIFICATION</b>	<b>N2</b> <i>(in accordance with AS4055)</i>
<b>-TERRAIN CATEGORY</b>	2
<b>-TOPOGRAPHIC</b>	T0
<b>-SHIELDING</b>	No Shielding

## SOIL PROFILE

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

## APPROXIMATE BOREHOLE LOCATIONS



### NOTE 1 Explanatory Notes & Standard Recommendations

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

### NOTE 2 Bushfire - Prone Area

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

### ADDITIONAL NOTES / REQUIREMENTS

#### Site Condition

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

#### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J416765 dated 24/08/2022.

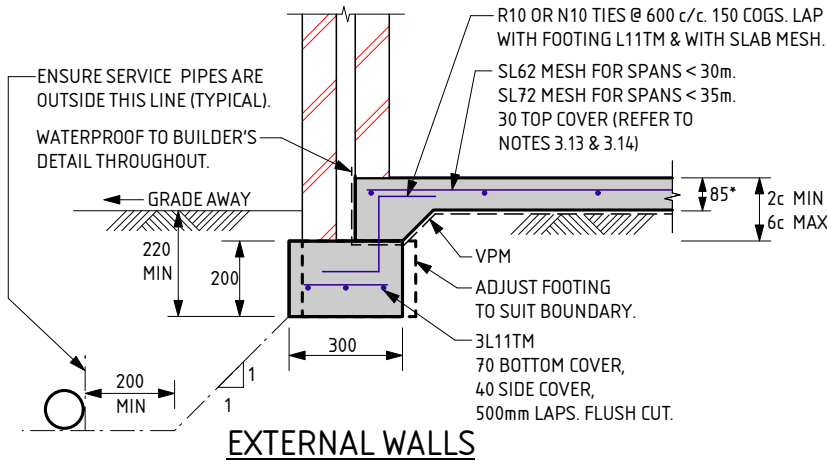
#### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

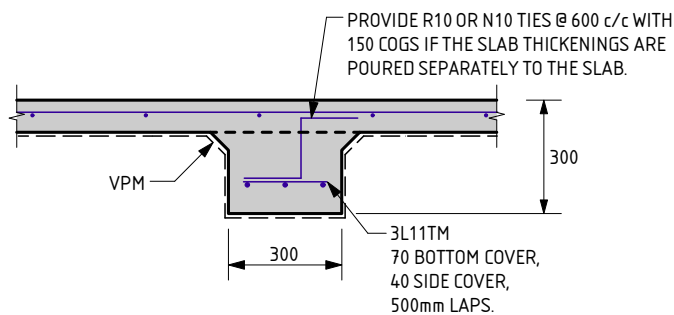
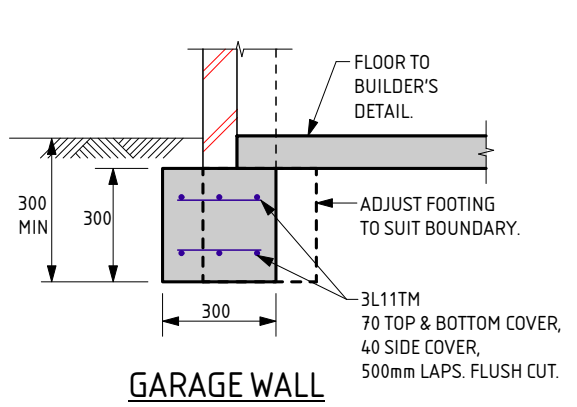
#### Internal Thickening Inspection

This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

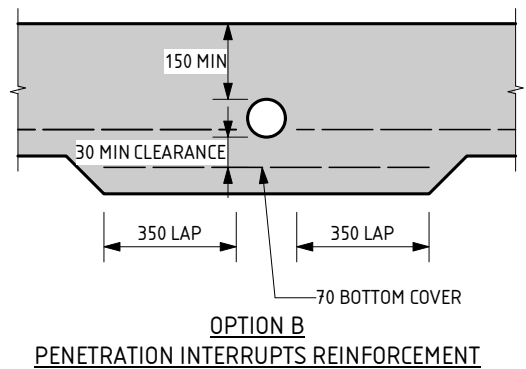
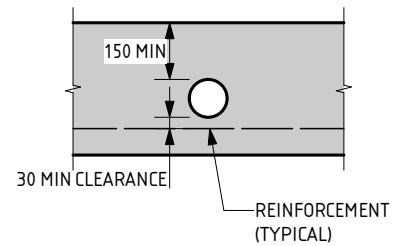
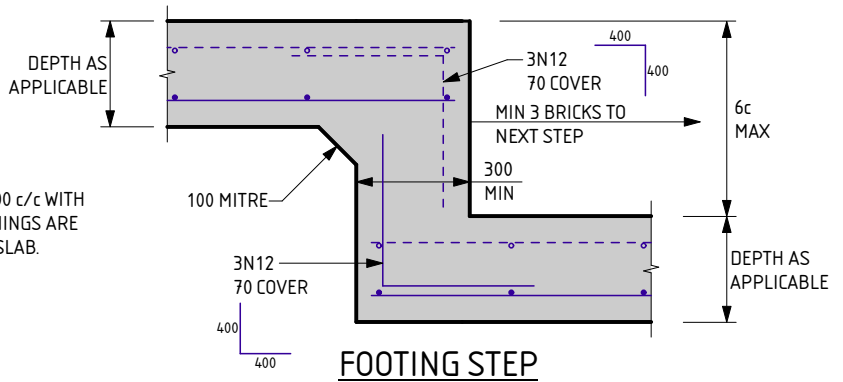
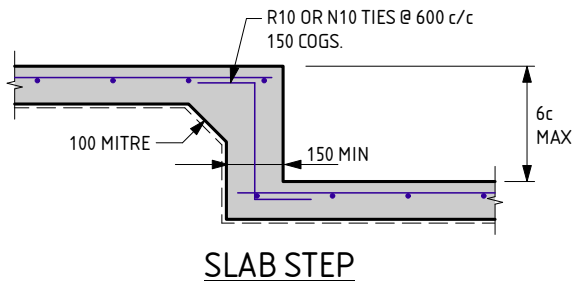
-- END OF REPORT --



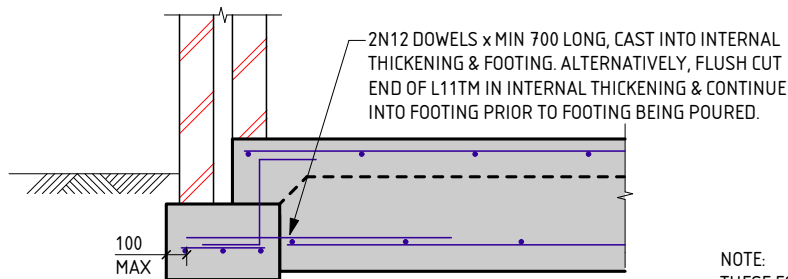
\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
IF 100mm SLAB USED, MESH TO BE:  
SL62 MESH FOR SPANS < 25m.  
SL72 MESH FOR SPANS < 30m.  
SL82 MESH FOR SPANS < 35m.



REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**SERVICE PIPE DIAGRAM**  
- MAXIMUM PENETRATION SIZE TO BE Ø150.



NOTE:  
THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
DATE LAST MODIFIED - 19/01/23

**CM3**  
CAVITY MASONRY

THIS DETAIL IS EQUIVALENT TO  
STRUCTERRE FOOTING DETAIL C4.0

**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, BALEATTA W.A. 6021

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

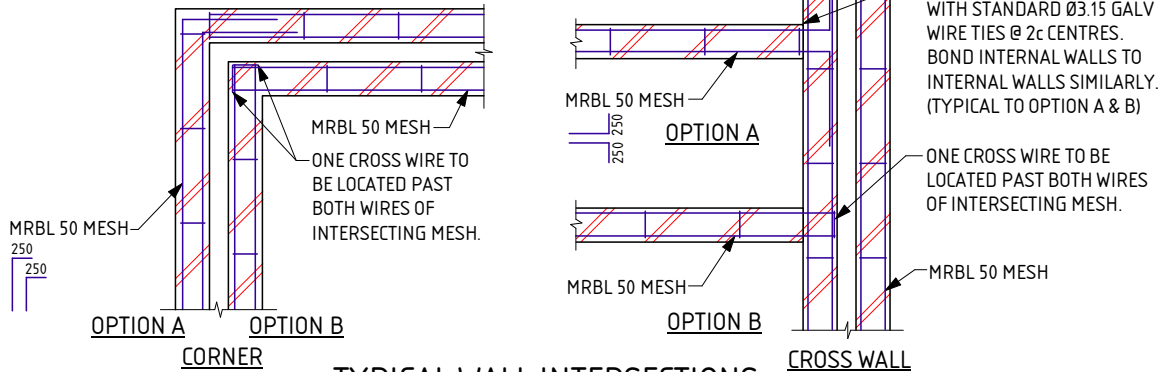
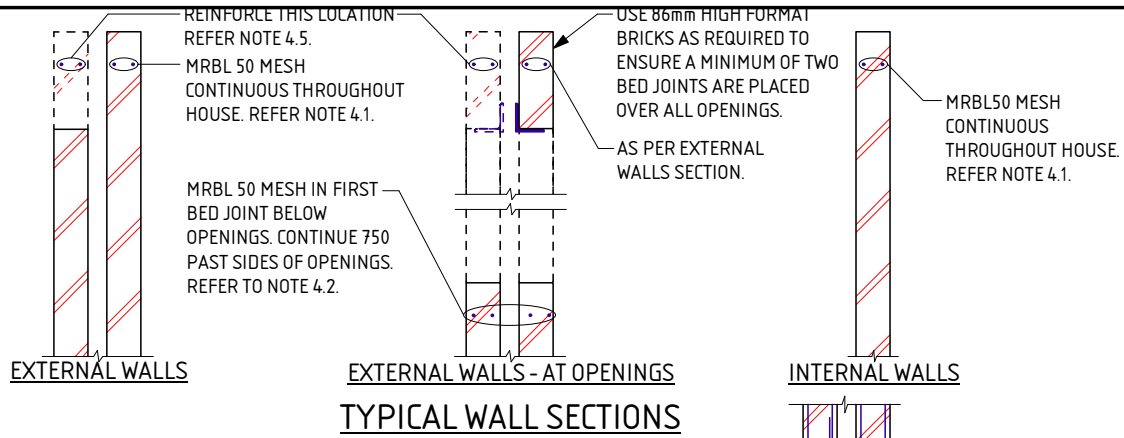
PROJECT:  
LOT 335 AVALANCHE PDE BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 18/7/23

APPROVED



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

PROJECT : <b>LOT 335 AVALANCHE PDE BALDIVIS</b>	
CLIENT : <b>KEC NOMINEES PTY LTD</b>	
SCALE : <b>1:20</b>	APPROVED
DATE : <b>18/7/23</b>	

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemia Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unitil 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 335 AVALANCHE PDE BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 18/7/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :

LOT 335 AVALANCHE PDE BALDIVIS

CLIENT :

KEC NOMINEES PTY LTD

SCALE

1:20

APPROVED

DATE

18/7/23

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



**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2601412

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 336 AVALANCHE PDE BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096861  
**DATE OF ASSESSMENT** 17/7/23

**SITE RECORD**

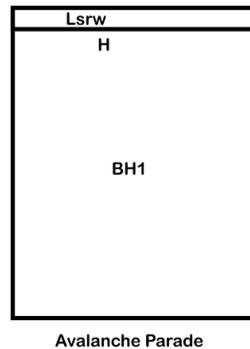


<b>SITE CLASSIFICATION</b>	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
<b>FOOTING DETAIL</b>	<b>CM3</b>
<b>SAND PAD</b>	<b>No sand pad required structurally</b>
<b>BUSHFIRE PRONE AREA</b>	<b>Yes</b> <i>(see NOTE 2.)</i>
<b>CORROSION CLASSIFICATION</b>	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
<b>WIND CLASSIFICATION</b>	<b>N2</b> <i>(in accordance with AS4055)</i>
<b>-TERRAIN CATEGORY</b>	2
<b>-TOPOGRAPHIC</b>	T0
<b>-SHIELDING</b>	No Shielding

## SOIL PROFILE

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

## APPROXIMATE BOREHOLE LOCATIONS



### NOTE 1 Explanatory Notes & Standard Recommendations

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

### NOTE 2 Bushfire - Prone Area

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

## ADDITIONAL NOTES / REQUIREMENTS

### Site Condition

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

### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J416765 dated 24/08/2022.

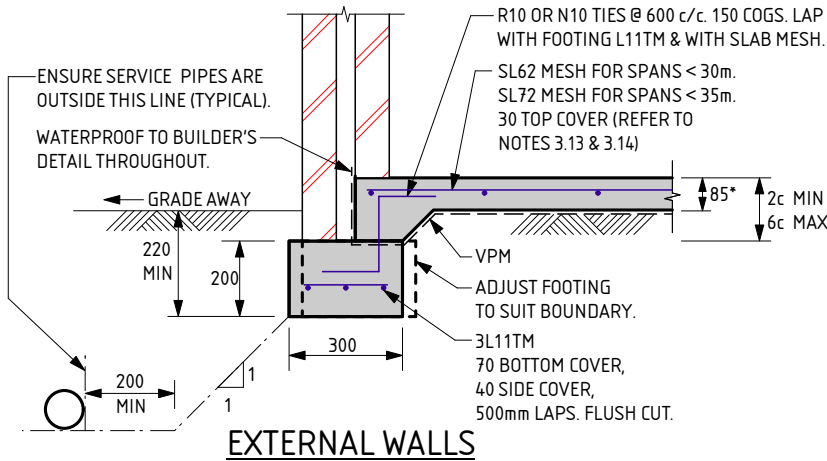
### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

### Internal Thickening Inspection

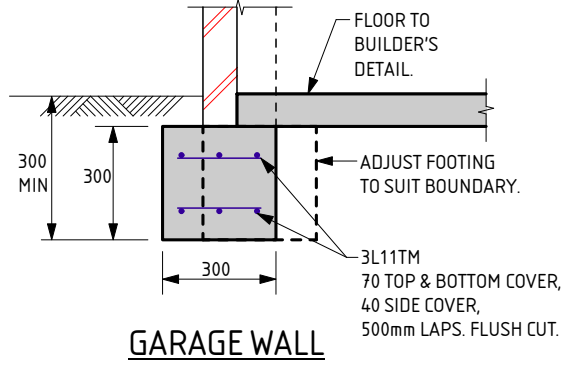
This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

-- END OF REPORT --

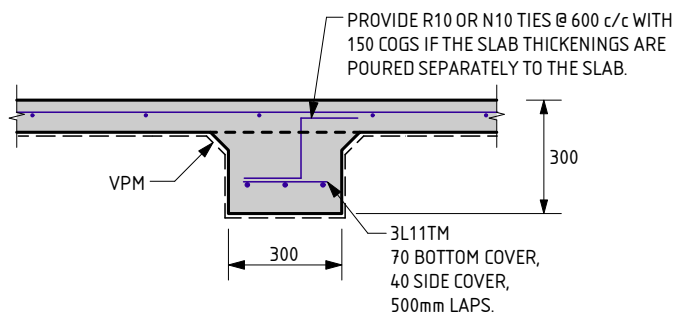


**EXTERNAL WALLS**

\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
 IF 100mm SLAB USED, MESH TO BE:  
 SL62 MESH FOR SPANS < 25m.  
 SL72 MESH FOR SPANS < 30m.  
 SL82 MESH FOR SPANS < 35m.

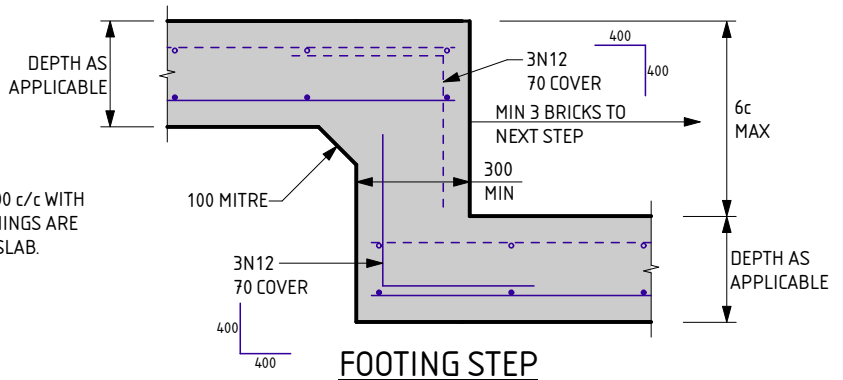


**GARAGE WALL**

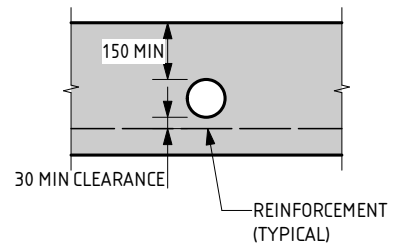


**INTERNAL THICKENING**

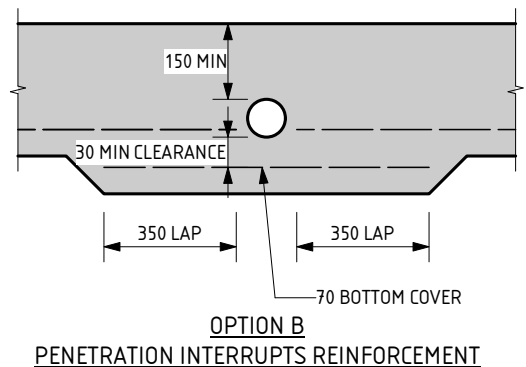
REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**FOOTING STEP**



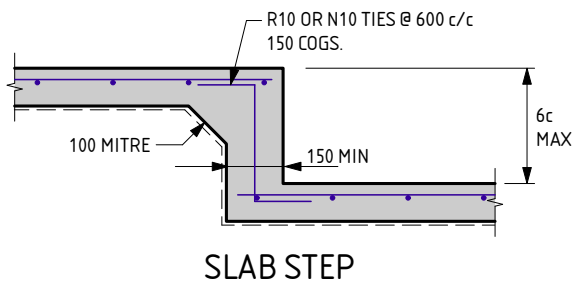
**OPTION A  
 PENETRATION CLEAR OF REINFORCEMENT**



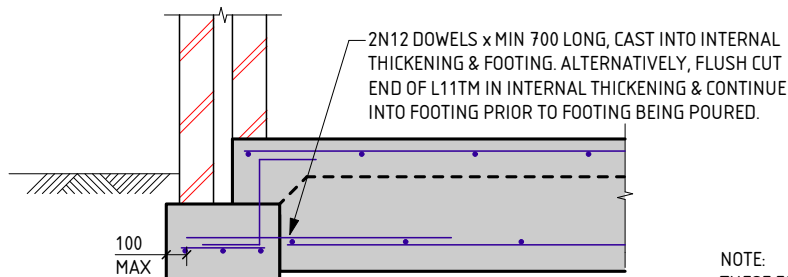
**OPTION B  
 PENETRATION INTERRUPTS REINFORCEMENT**

**SERVICE PIPE DIAGRAM**

- MAXIMUM PENETRATION SIZE TO BE Ø150.



**SLAB STEP**



**EXTERNAL FOOTING TO INTERNAL THICKENING**

THIS DETAIL IS EQUIVALENT TO  
 STRUCTERRE FOOTING DETAIL C4.0

NOTE:  
 THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
 DATE LAST MODIFIED - 19/01/23

**CM3**  
 CAVITY MASONRY



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

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

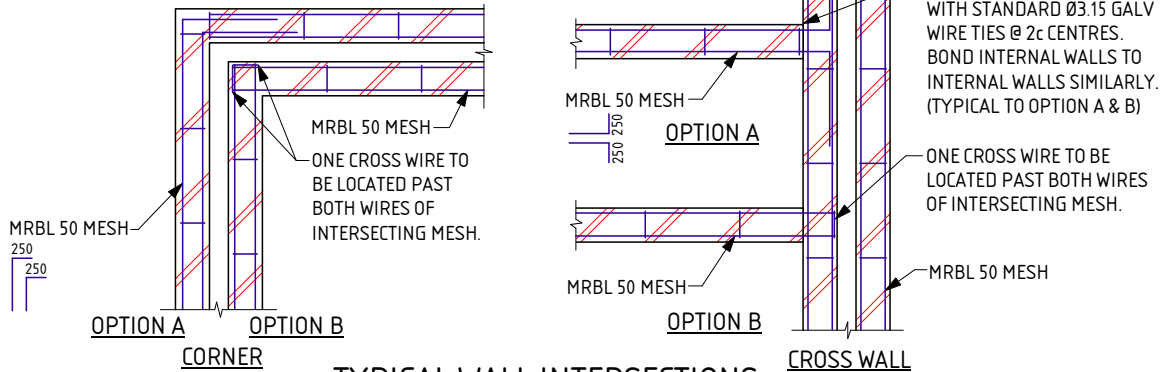
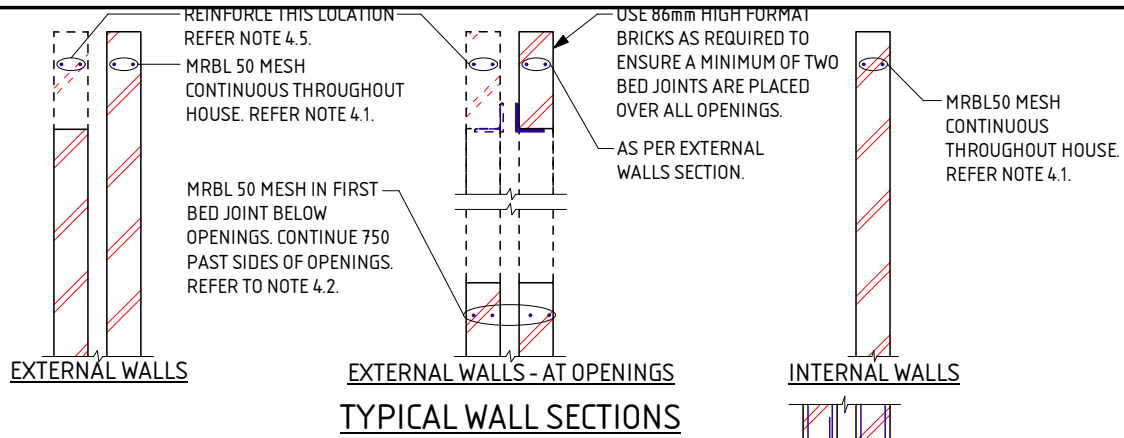
PROJECT: LOT 336 AVALANCHE PDE BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 18/7/23

APPROVED



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT : <b>LOT 336 AVALANCHE PDE BALDIVIS</b>	
CLIENT : <b>KEC NOMINEES PTY LTD</b>	
SCALE : <b>1:20</b>	APPROVED
DATE : <b>18/7/23</b>	

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unit 1 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 336 AVALANCHE PDE BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 18/7/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :

LOT 336 AVALANCHE PDE BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE 1:20

DATE 18/7/23

APPROVED

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

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2601411

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 337 AVALANCHE PDE BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096862  
**DATE OF ASSESSMENT** 17/7/23

**SITE RECORD**

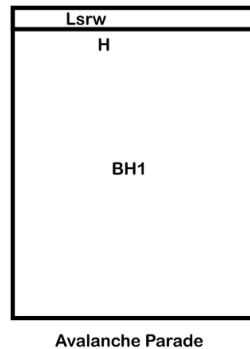


**SITE CLASSIFICATION** **S - EQUIVALENT** *(in accordance with AS2870)*  
**FOOTING DETAIL** **CM3**  
**SAND PAD** **No sand pad required structurally**  
**BUSHFIRE PRONE AREA** **Yes** *(see NOTE 2.)*  
**CORROSION CLASSIFICATION** **R3** *(Durability Class in accordance with AS3700)*  
**WIND CLASSIFICATION** **N2** *(in accordance with AS4055)*  
-TERRAIN CATEGORY 2  
-TOPOGRAPHIC T0  
-SHIELDING No Shielding

## SOIL PROFILE

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

## APPROXIMATE BOREHOLE LOCATIONS



### NOTE 1 Explanatory Notes & Standard Recommendations

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

### NOTE 2 Bushfire - Prone Area

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

### ADDITIONAL NOTES / REQUIREMENTS

#### Site Condition

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

#### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J416765 dated 24/08/2022.

#### Internal Thickenings

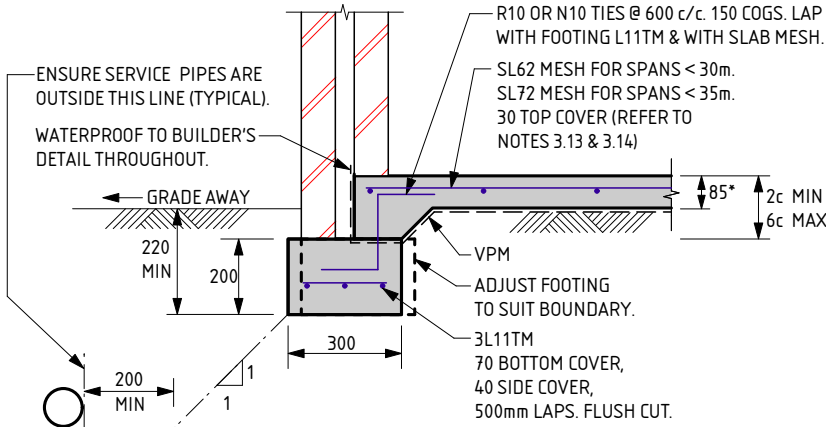
Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

#### Internal Thickening Inspection

This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

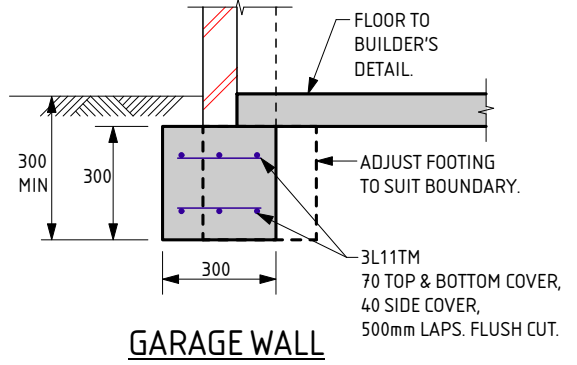
-- END OF REPORT --



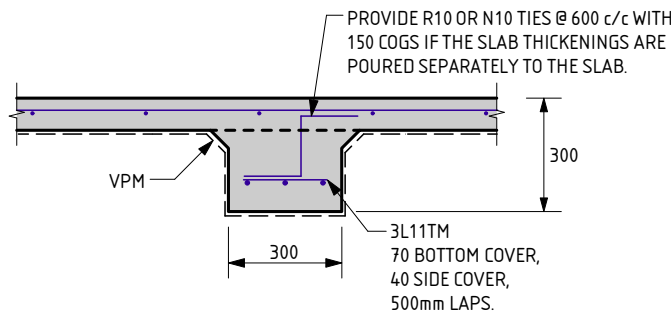


**EXTERNAL WALLS**

\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
 IF 100mm SLAB USED, MESH TO BE:  
 SL62 MESH FOR SPANS < 25m.  
 SL72 MESH FOR SPANS < 30m.  
 SL82 MESH FOR SPANS < 35m.

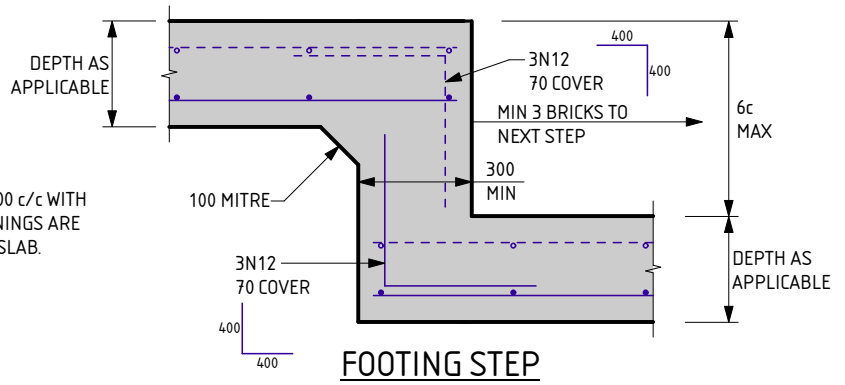


**GARAGE WALL**

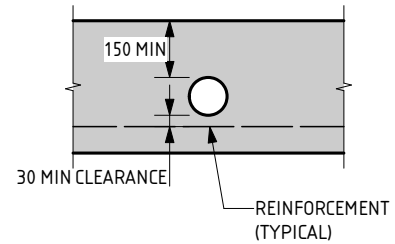


**INTERNAL THICKENING**

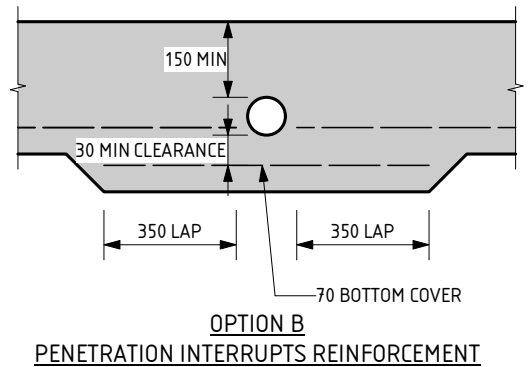
REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**FOOTING STEP**



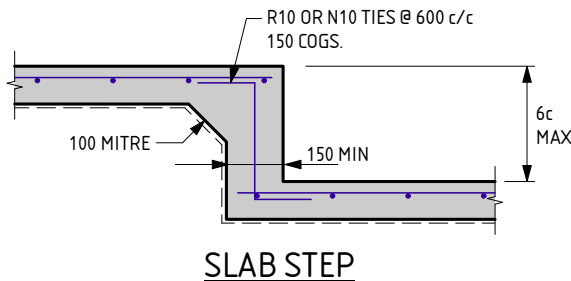
**OPTION A  
PENETRATION CLEAR OF REINFORCEMENT**



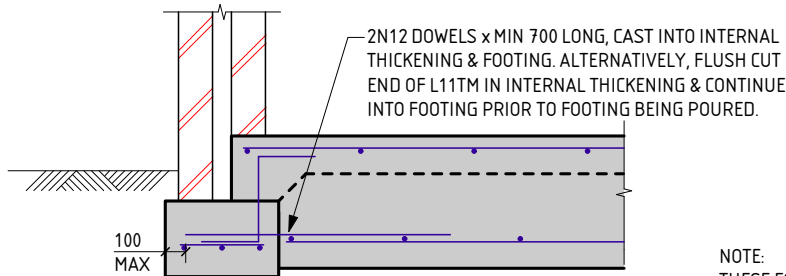
**OPTION B  
PENETRATION INTERRUPTS REINFORCEMENT**

**SERVICE PIPE DIAGRAM**

- MAXIMUM PENETRATION SIZE TO BE Ø150.



**SLAB STEP**



**EXTERNAL FOOTING TO INTERNAL THICKENING**

THIS DETAIL IS EQUIVALENT TO STRUCTERRE FOOTING DETAIL C4.0

NOTE:  
 THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
 DATE LAST MODIFIED - 19/01/23

**CM3**  
 CAVITY MASONRY



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

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

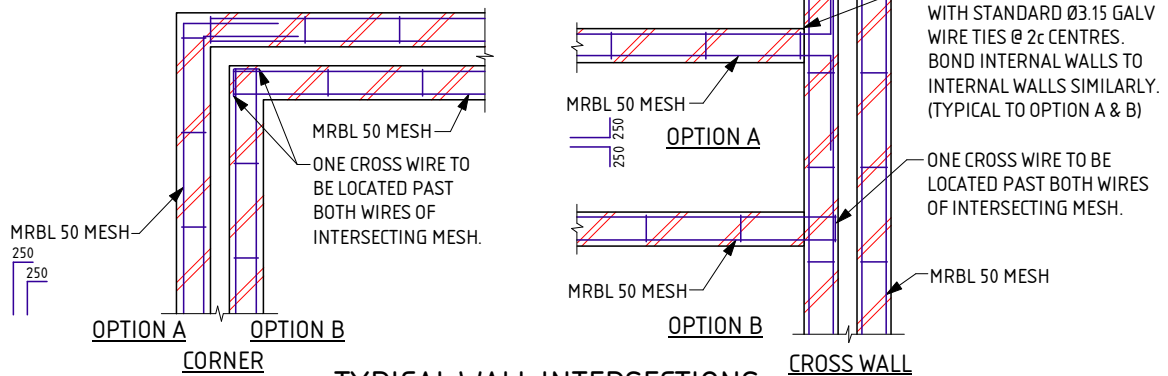
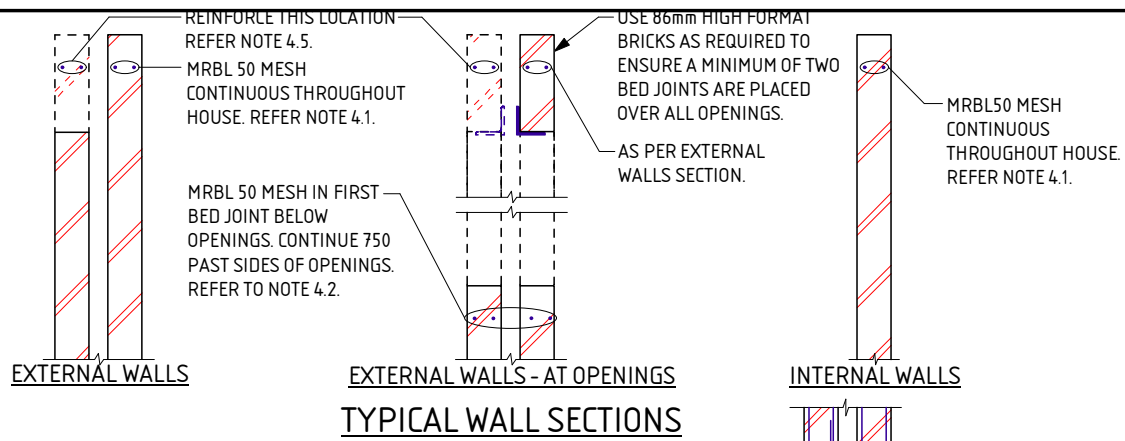
PROJECT: LOT 337 AVALANCHE PDE BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 18/7/23

APPROVED



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT: LOT 337 AVALANCHE PDE BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 18/7/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

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

PROJECT :  
LOT 337 AVALANCHE PDE BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 18/7/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :

LOT 337 AVALANCHE PDE BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE 1:20

DATE 18/7/23

APPROVED

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

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2601410

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 338 AVALANCHE PDE BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096863  
**DATE OF ASSESSMENT** 17/7/23

**SITE RECORD**

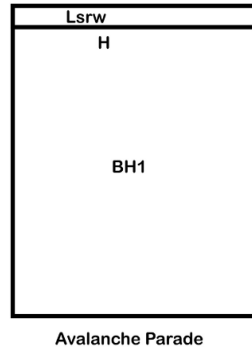


<b>SITE CLASSIFICATION</b>	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
<b>FOOTING DETAIL</b>	<b>CM3</b>
<b>SAND PAD</b>	<b>No sand pad required structurally</b>
<b>BUSHFIRE PRONE AREA</b>	<b>Yes</b> <i>(see NOTE 2.)</i>
<b>CORROSION CLASSIFICATION</b>	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
<b>WIND CLASSIFICATION</b>	<b>N2</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	No Shielding

## SOIL PROFILE

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

## APPROXIMATE BOREHOLE LOCATIONS



### NOTE 1 Explanatory Notes & Standard Recommendations

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

### NOTE 2 Bushfire - Prone Area

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

### ADDITIONAL NOTES / REQUIREMENTS

#### Site Condition

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

#### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J416765 dated 24/08/2022.

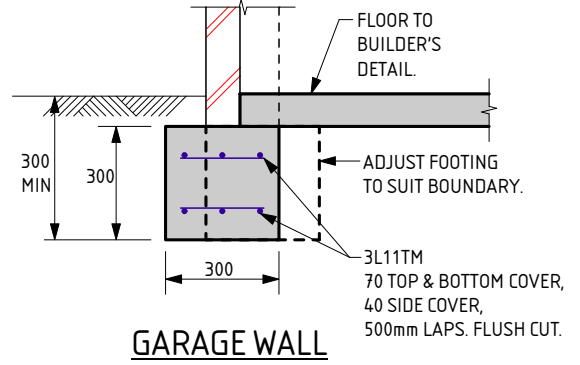
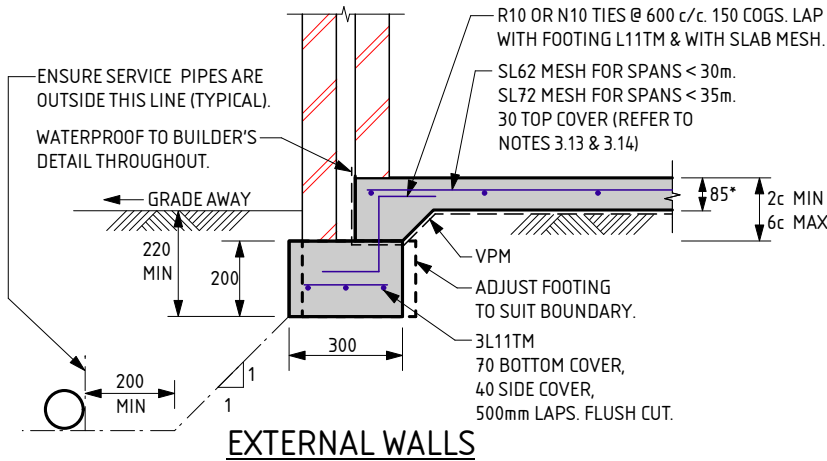
#### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

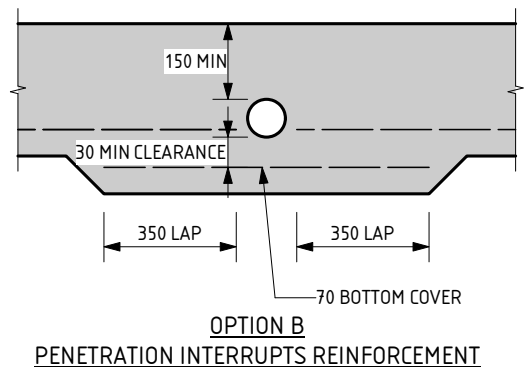
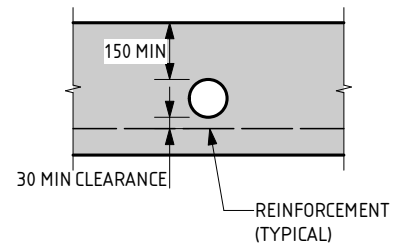
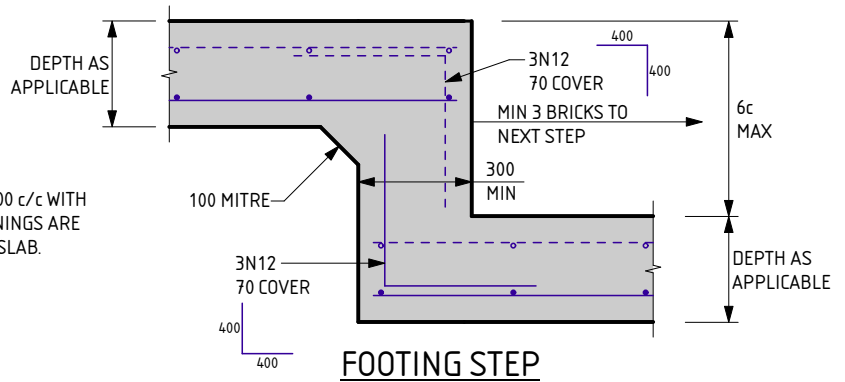
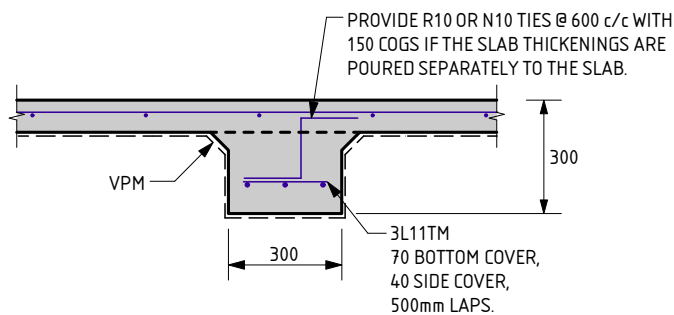
#### Internal Thickening Inspection

This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

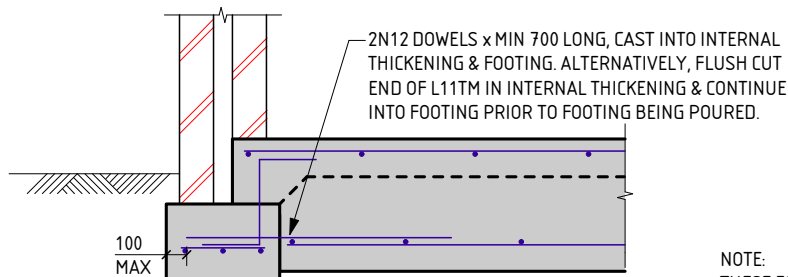
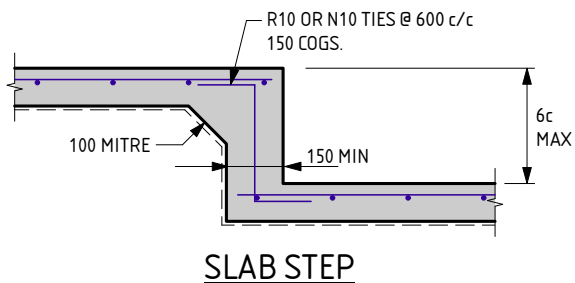
-- END OF REPORT --



\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
IF 100mm SLAB USED, MESH TO BE:  
SL62 MESH FOR SPANS < 25m.  
SL72 MESH FOR SPANS < 30m.  
SL82 MESH FOR SPANS < 35m.



**SERVICE PIPE DIAGRAM**  
- MAXIMUM PENETRATION SIZE TO BE Ø150.



NOTE:  
THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
DATE LAST MODIFIED - 19/01/23

**CM3**  
CAVITY MASONRY

THIS DETAIL IS EQUIVALENT TO  
STRUCTERRE FOOTING DETAIL C4.0

**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, BALEATTA W.A. 6021

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

PROJECT:  
LOT 338 AVALANCHE PDE BALDIVIS

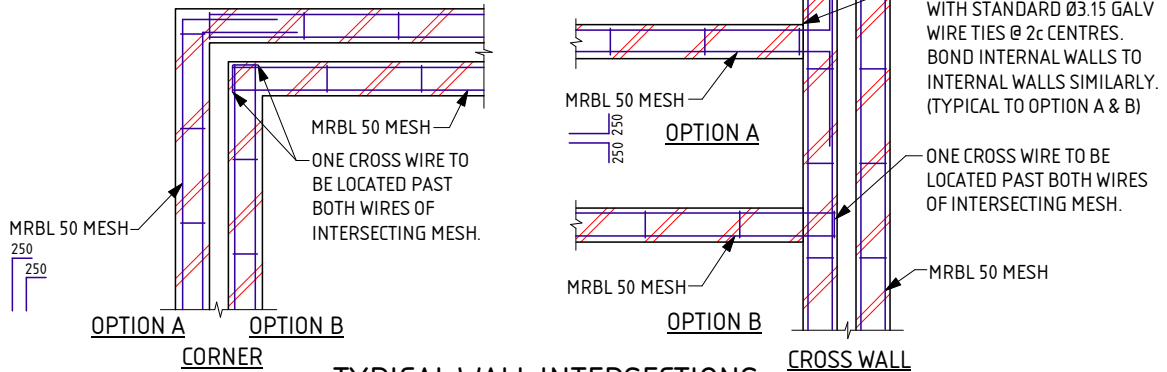
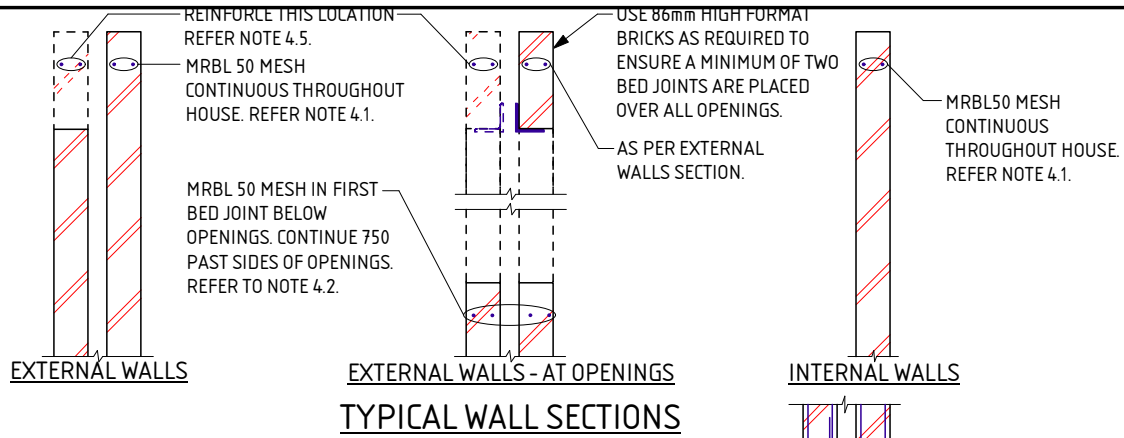
CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 18/7/23

APPROVED

*[Signature]*



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT: LOT 338 AVALANCHE PDE BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 18/7/23

APPROVED



## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unit 1 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 338 AVALANCHE PDE BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 18/7/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :

LOT 338 AVALANCHE PDE BALDIVIS

CLIENT :

KEC NOMINEES PTY LTD

SCALE

1:20

APPROVED

DATE

18/7/23

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

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2601397

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 341 CLOUDBURST AV BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096801  
**DATE OF ASSESSMENT** 17/7/23

**SITE RECORD**

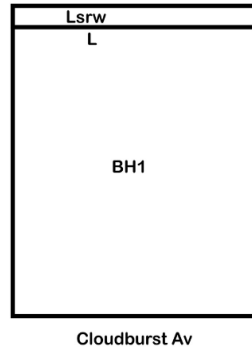


<b>SITE CLASSIFICATION</b>	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
<b>FOOTING DETAIL</b>	<b>CM3</b>
<b>SAND PAD</b>	<b>No sand pad required structurally</b>
<b>BUSHFIRE PRONE AREA</b>	<b>Yes</b> <i>(see NOTE 2.)</i>
<b>CORROSION CLASSIFICATION</b>	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
<b>WIND CLASSIFICATION</b>	<b>N2</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	Partial Shielding

## SOIL PROFILE

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

## APPROXIMATE BOREHOLE LOCATIONS



### NOTE 1 Explanatory Notes & Standard Recommendations

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

### NOTE 2 Bushfire - Prone Area

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

## ADDITIONAL NOTES / REQUIREMENTS

### Site Condition

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

### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J416765 dated 24/08/2022.

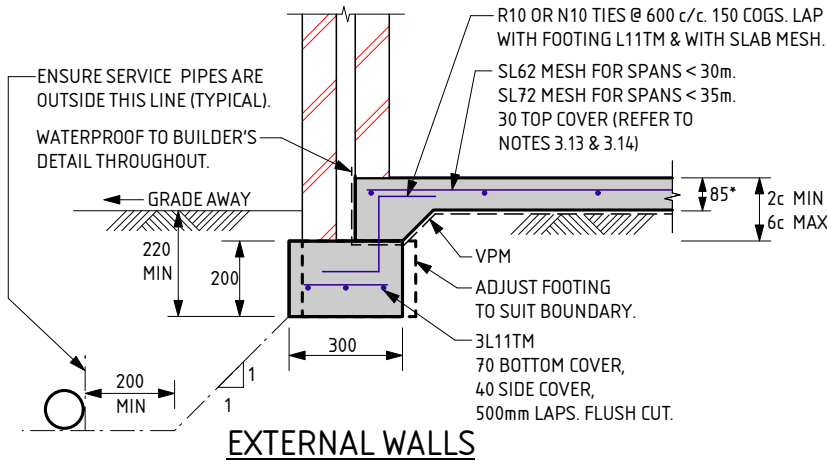
### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

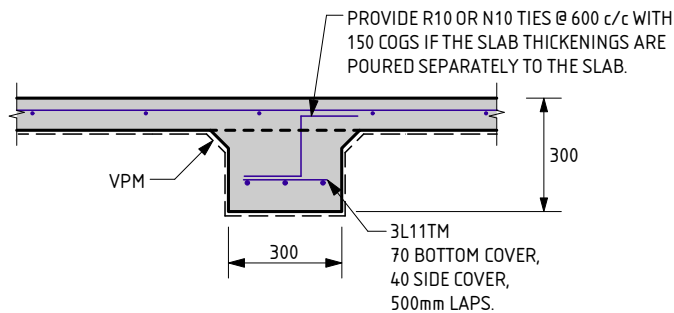
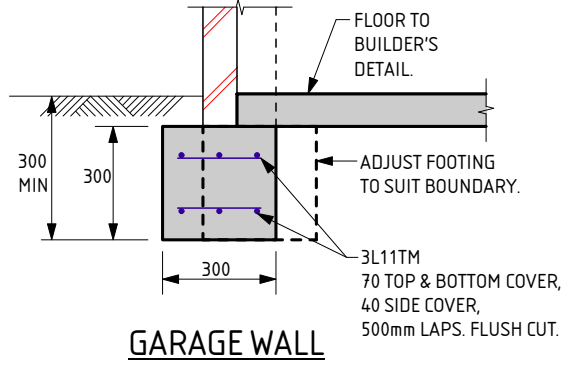
### Internal Thickening Inspection

This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

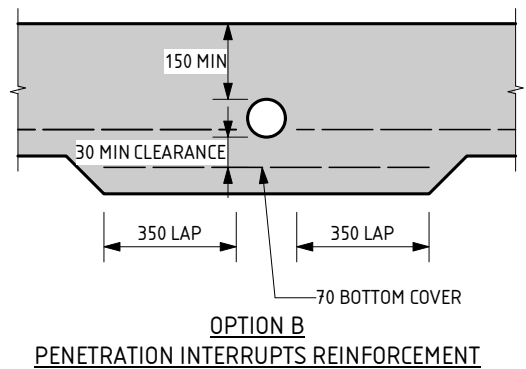
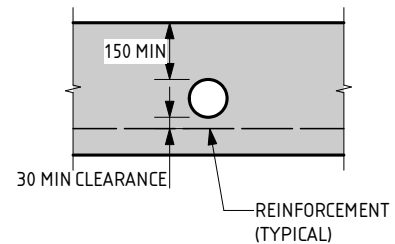
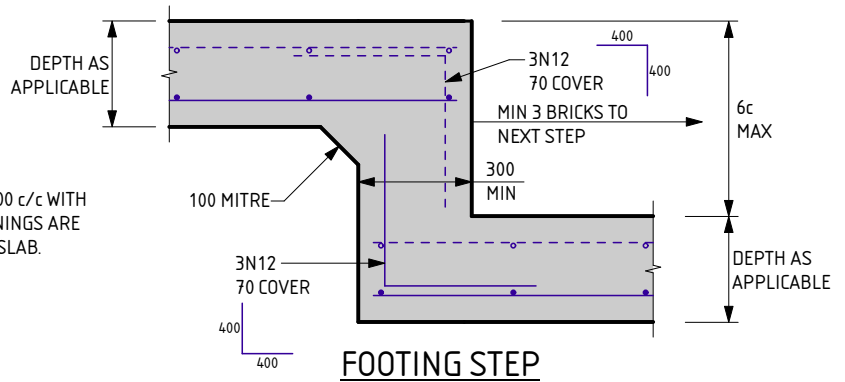
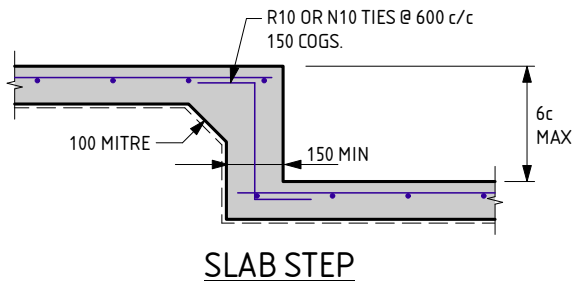
**-- END OF REPORT --**



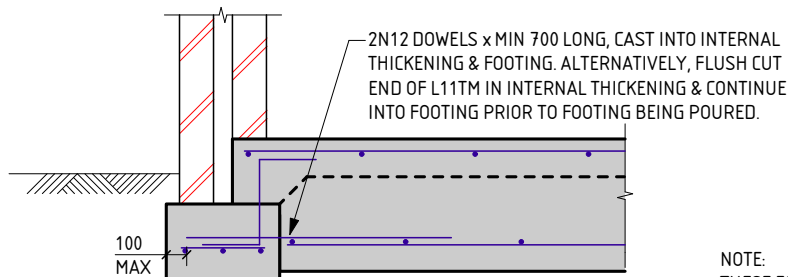
\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
IF 100mm SLAB USED, MESH TO BE:  
SL62 MESH FOR SPANS < 25m.  
SL72 MESH FOR SPANS < 30m.  
SL82 MESH FOR SPANS < 35m.



REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**SERVICE PIPE DIAGRAM**  
- MAXIMUM PENETRATION SIZE TO BE Ø150.



NOTE:  
THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
DATE LAST MODIFIED - 19/01/23

**CM3**  
CAVITY MASONRY

THIS DETAIL IS EQUIVALENT TO  
STRUCTERRE FOOTING DETAIL C4.0

**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, BALEATTA WA 6021

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

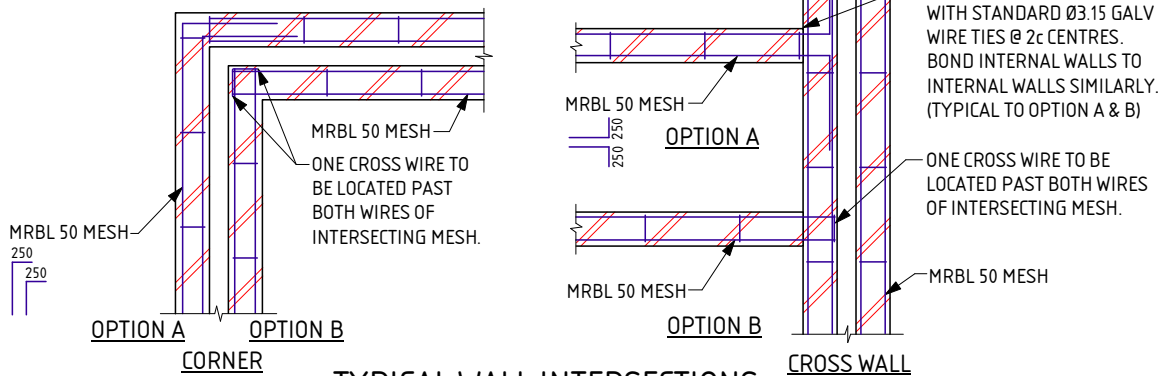
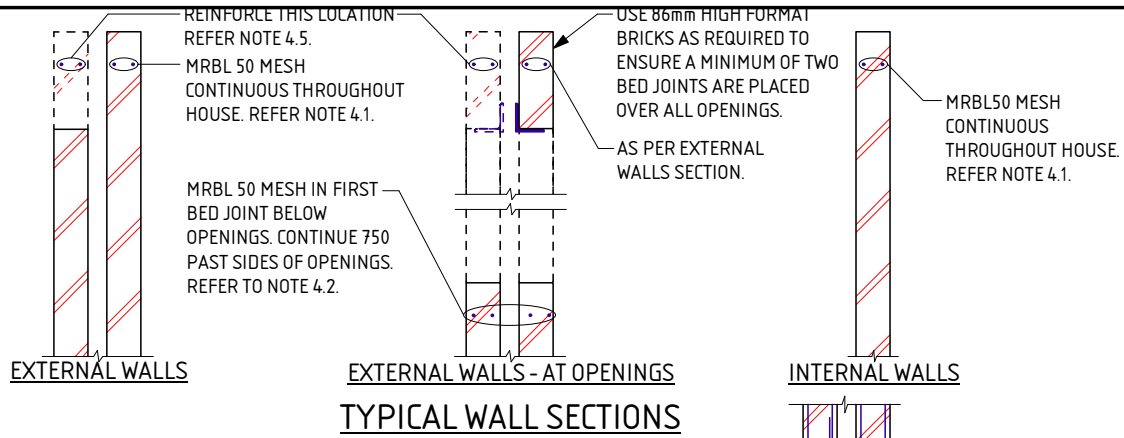
PROJECT:  
LOT 341 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 18/7/23

APPROVED



### REACTIVE SITE NOTES FOR CM1 - CM7

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

#### 1.0 SITE CLASSIFICATION

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

#### 3.0 FOOTINGS & SLABS

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

#### 4.0 MASONRY

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

#### 5.0 MAINTENANCE

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

#### 6.0 QUALITY CONTROL PROGRAM REQUIREMENTS

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT: LOT 341 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 18/7/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemia Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unitil 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 341 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 18/7/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :  
LOT 341 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE 1:20

DATE 18/7/23

APPROVED

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



**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2598886

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 342 CLOUDBURST AV BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096803  
**DATE OF ASSESSMENT** 21/4/23

**SITE RECORD**

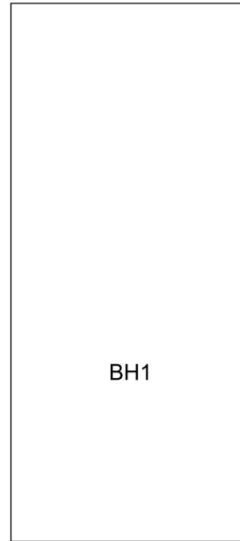


SITE CLASSIFICATION	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
FOOTING DETAIL	<b>CM3</b>
SAND PAD	<b>No sand pad required structurally</b>
BUSHFIRE PRONE AREA	<b>Yes</b> <i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	<b>N2</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	Partial Shielding

## SOIL PROFILE

BOREHOLE 1: 0 - 1200 FILL - sand - brown; 1200 - 2200 FILL - sand trace gravel (limestone) - brown; 2200 hard ground refusal.

## APPROXIMATE BOREHOLE LOCATIONS



CLOUDBURST AVE

### NOTE 1 Explanatory Notes & Standard Recommendations

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

### NOTE 2 Bushfire - Prone Area

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

## ADDITIONAL NOTES / REQUIREMENTS

### Site Condition

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

### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J416765 dated 24/08/2022.

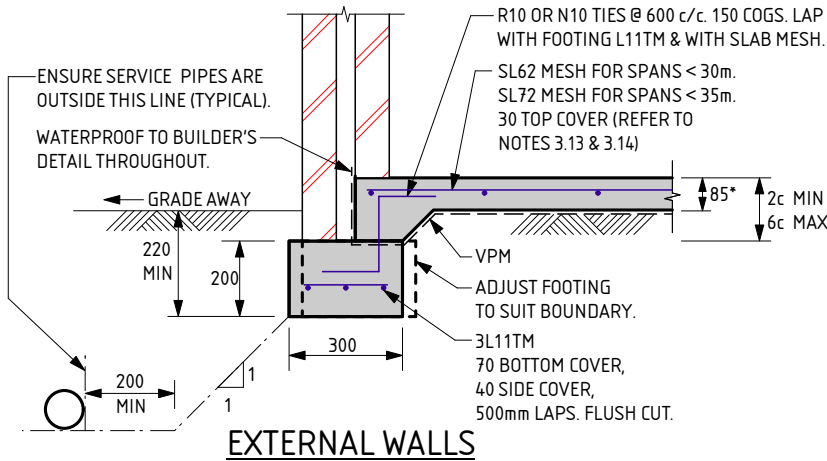
### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

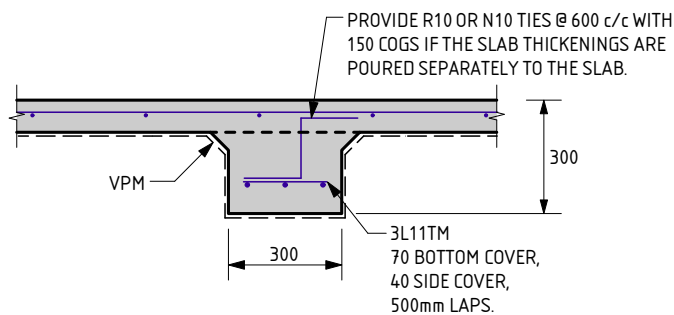
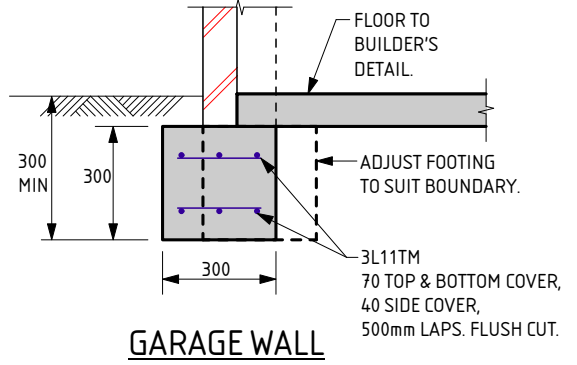
### Internal Thickening Inspection

This detail is subject to an internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

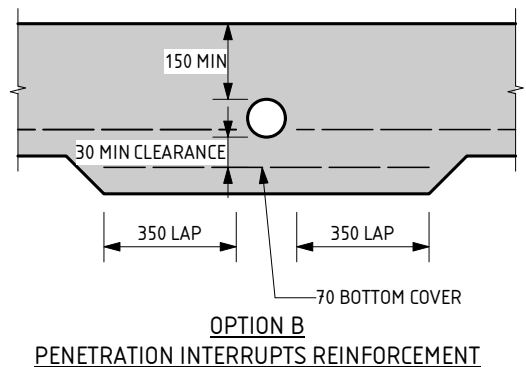
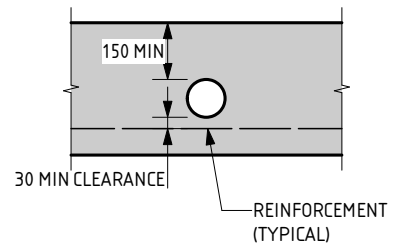
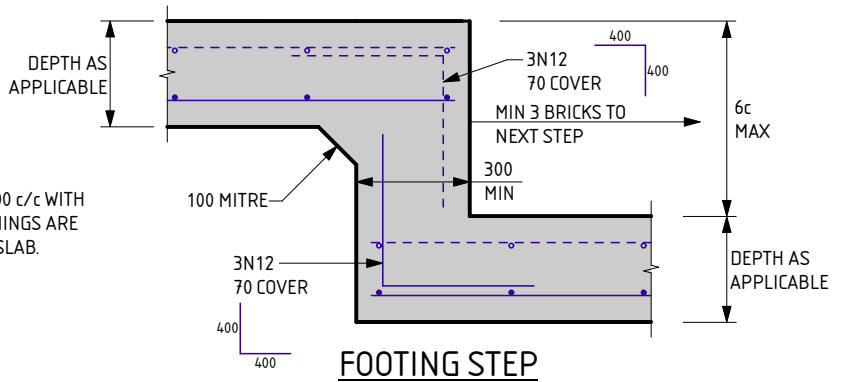
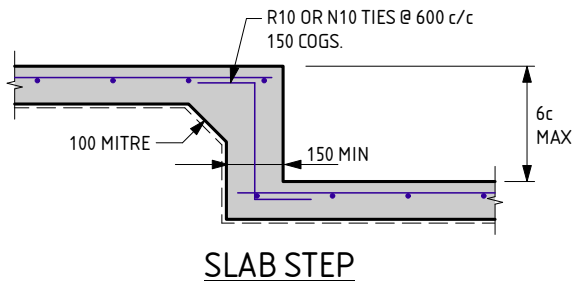
-- END OF REPORT --



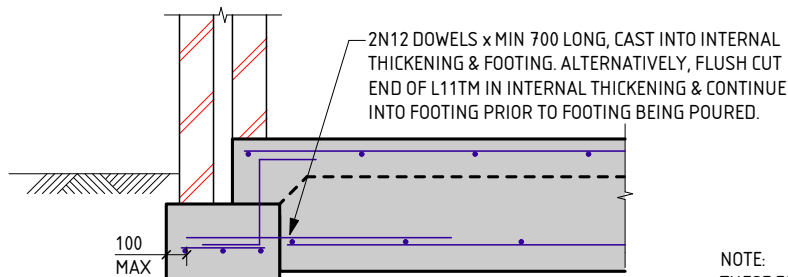
\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
IF 100mm SLAB USED, MESH TO BE:  
SL62 MESH FOR SPANS < 25m.  
SL72 MESH FOR SPANS < 30m.  
SL82 MESH FOR SPANS < 35m.



REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**SERVICE PIPE DIAGRAM**  
- MAXIMUM PENETRATION SIZE TO BE Ø150.



NOTE:  
THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
DATE LAST MODIFIED - 19/01/23

**CM3**  
CAVITY MASONRY

THIS DETAIL IS EQUIVALENT TO  
STRUCTERRE FOOTING DETAIL C4.0

**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, BALEATTA W.A. 6021

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

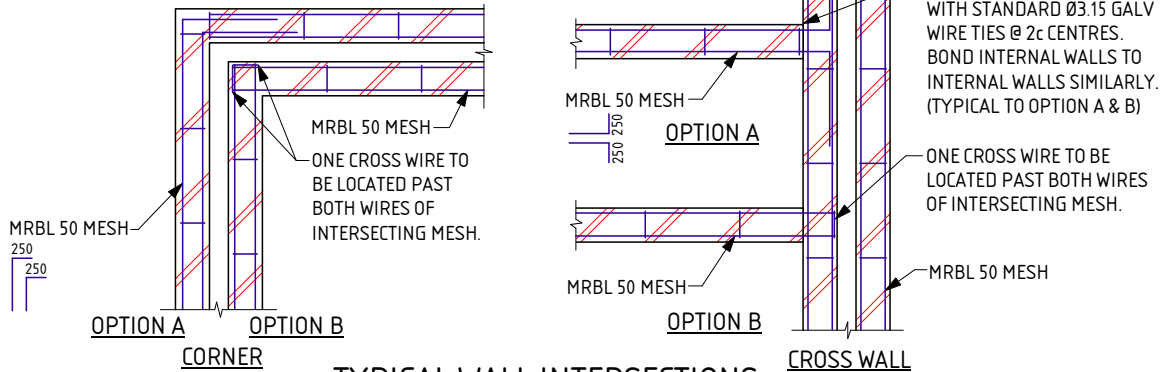
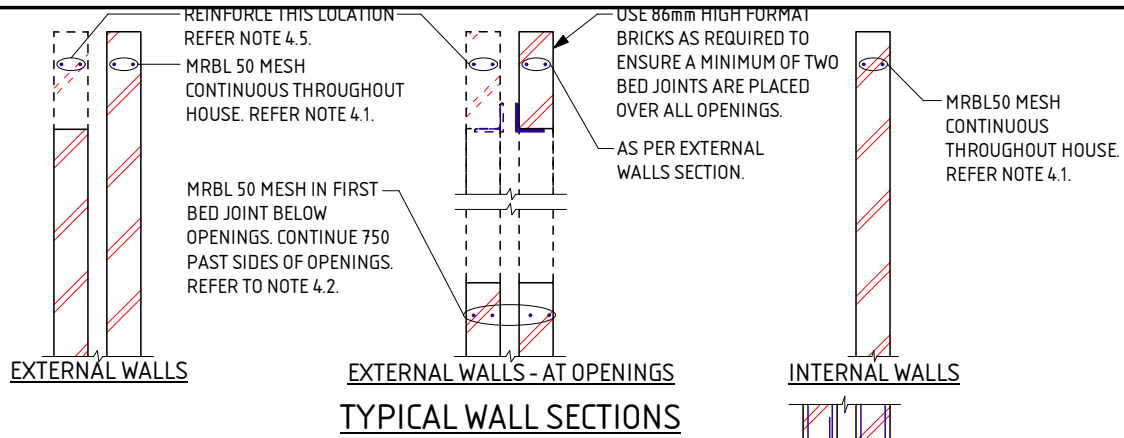
PROJECT:  
LOT 342 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE 1:20

DATE 24/4/23

APPROVED



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT: LOT 342 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 24/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemia Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unit 1 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 342 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 24/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.


### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT : LOT 342 CLOUDBURST AV BALDIVIS	
CLIENT : KEC NOMINEES PTY LTD	
SCALE 1:20	APPROVED 
DATE 24/4/23	

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2598888

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 343 CLOUDBURST AV BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096804  
**DATE OF ASSESSMENT** 21/4/23

**SITE RECORD**

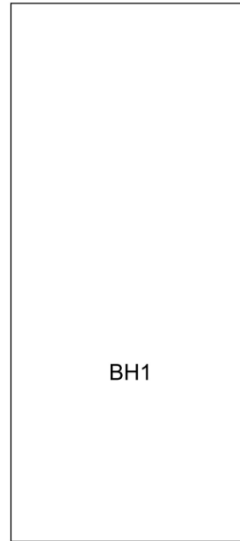


SITE CLASSIFICATION	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
FOOTING DETAIL	<b>CM3</b>
SAND PAD	<b>No sand pad required structurally</b>
BUSHFIRE PRONE AREA	<b>Yes</b> <i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	<b>N2</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	Partial Shielding

## SOIL PROFILE

BOREHOLE 1: 0 - 1200 FILL - sand - brown; 1200 - 2300 FILL - sand trace gravel (limestone) - brown; 2300 hard ground refusal.

## APPROXIMATE BOREHOLE LOCATIONS



CLOUDBURST AVE

### NOTE 1 Explanatory Notes & Standard Recommendations

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

### NOTE 2 Bushfire - Prone Area

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

## ADDITIONAL NOTES / REQUIREMENTS

### Site Condition

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

### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J416765 dated 24/08/2022.

### Internal Thickenings

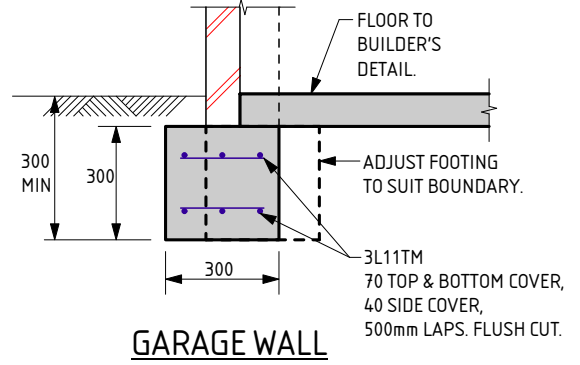
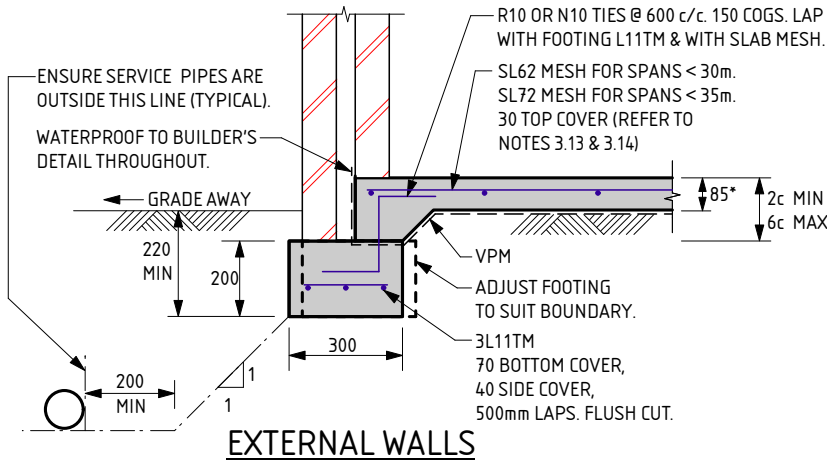
Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

### Internal Thickening Inspection

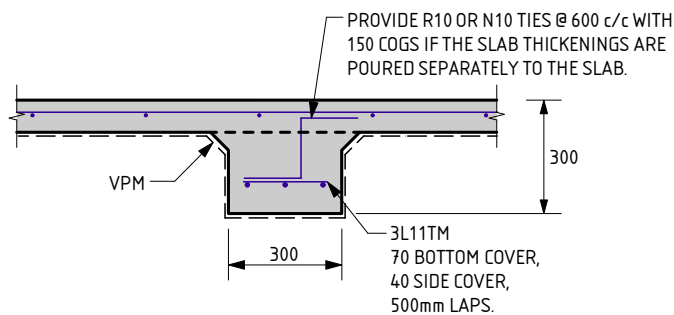
This detail is subject to an internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

-- END OF REPORT --

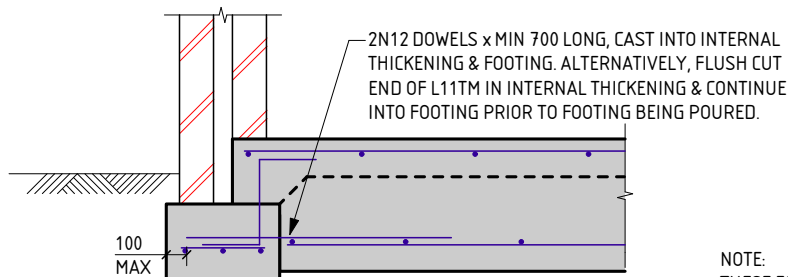
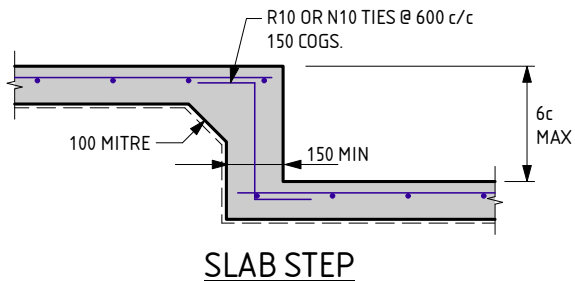




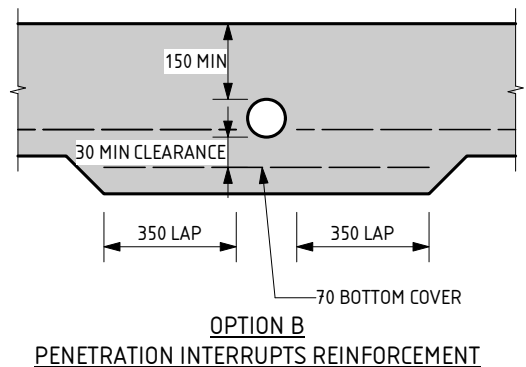
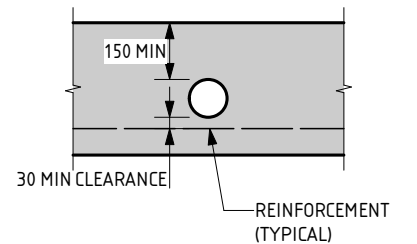
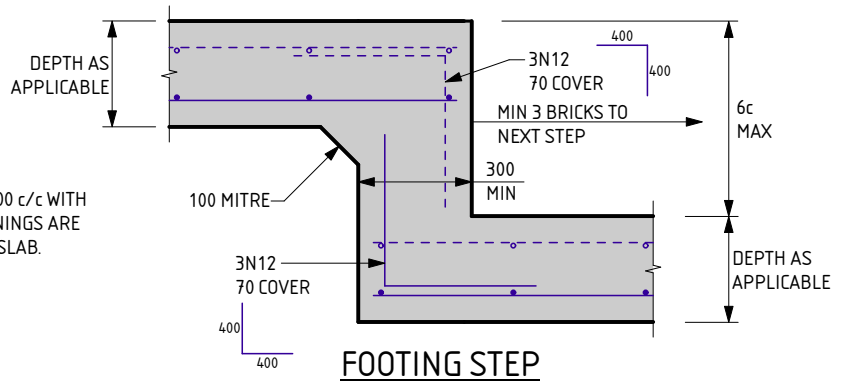
\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
IF 100mm SLAB USED, MESH TO BE:  
SL62 MESH FOR SPANS < 25m.  
SL72 MESH FOR SPANS < 30m.  
SL82 MESH FOR SPANS < 35m.



REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



THIS DETAIL IS EQUIVALENT TO  
STRUCTERRE FOOTING DETAIL C4.0



### SERVICE PIPE DIAGRAM

- MAXIMUM PENETRATION SIZE TO BE Ø150.

NOTE:  
THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
DATE LAST MODIFIED - 19/01/23

**CM3**  
CAVITY MASONRY

**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, BALEATTA WA 6021

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

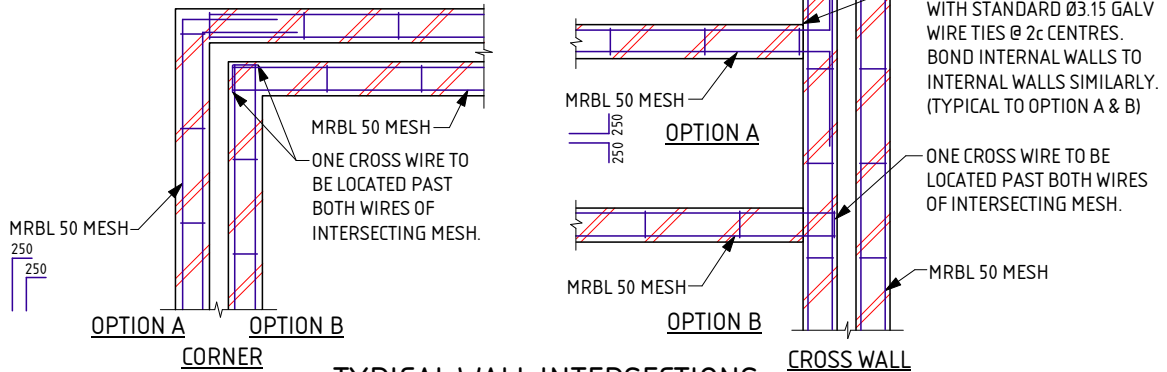
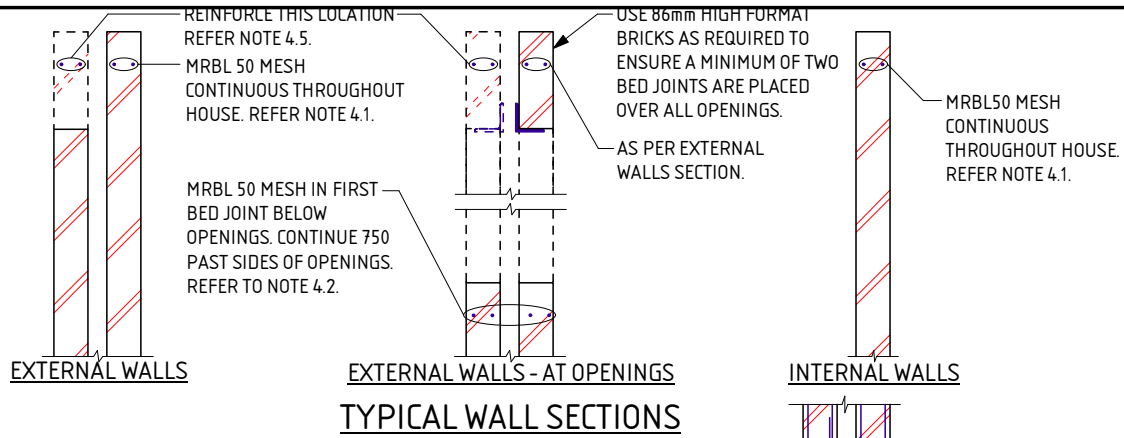
PROJECT:  
LOT 343 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE 1:20

DATE 24/4/23

APPROVED



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

PROJECT : <b>LOT 343 CLOUDBURST AV BALDIVIS</b>	
CLIENT : <b>KEC NOMINEES PTY LTD</b>	
SCALE : <b>1:20</b>	APPROVED
DATE : <b>24/4/23</b>	

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unit 1 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 343 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 24/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :  
LOT 343 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 24/4/23

APPROVED

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

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2598889

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 344 CLOUDBURST AV BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096805  
**DATE OF ASSESSMENT** 21/4/23

**SITE RECORD**

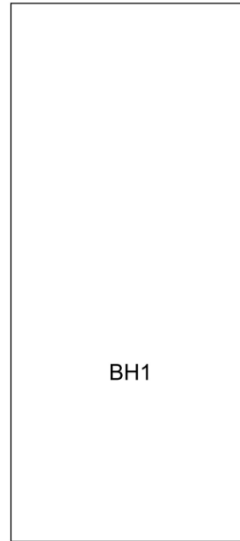


<b>SITE CLASSIFICATION</b>	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
<b>FOOTING DETAIL</b>	<b>CM3</b>
<b>SAND PAD</b>	<b>No sand pad required structurally</b>
<b>BUSHFIRE PRONE AREA</b>	<b>Yes</b> <i>(see NOTE 2.)</i>
<b>CORROSION CLASSIFICATION</b>	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
<b>WIND CLASSIFICATION</b>	<b>N2</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	Partial Shielding

## SOIL PROFILE

BOREHOLE 1: 0 - 1200 FILL - sand - brown; 1200 - 2300 FILL - sand trace gravel (limestone) - brown; 2300 hard ground refusal.

## APPROXIMATE BOREHOLE LOCATIONS



CLOUDBURST AVE

### NOTE 1 Explanatory Notes & Standard Recommendations

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

### NOTE 2 Bushfire - Prone Area

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

## ADDITIONAL NOTES / REQUIREMENTS

### Site Condition

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

### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J416765 dated 24/08/2022.

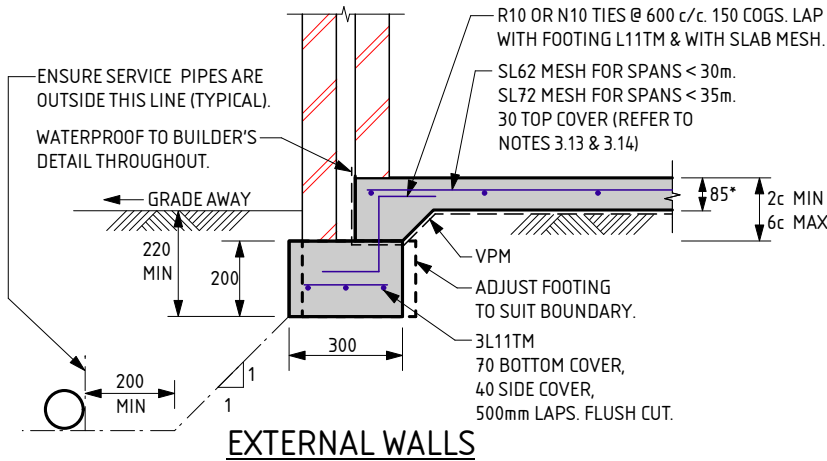
### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

### Internal Thickening Inspection

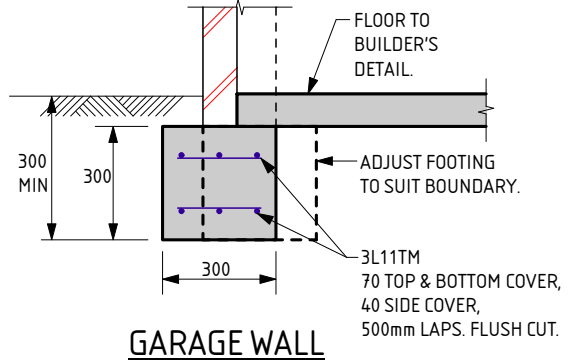
This detail is subject to an internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

-- END OF REPORT --

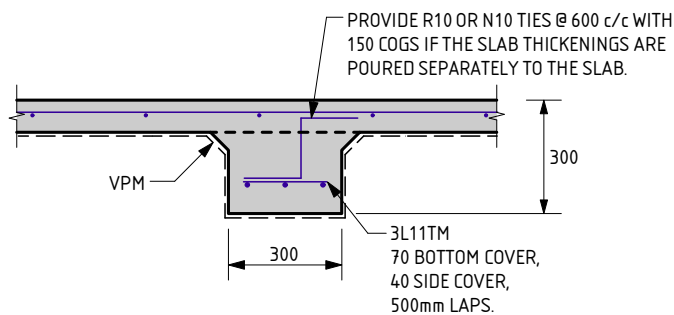


### EXTERNAL WALLS

\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
IF 100mm SLAB USED, MESH TO BE:  
SL62 MESH FOR SPANS < 25m.  
SL72 MESH FOR SPANS < 30m.  
SL82 MESH FOR SPANS < 35m.

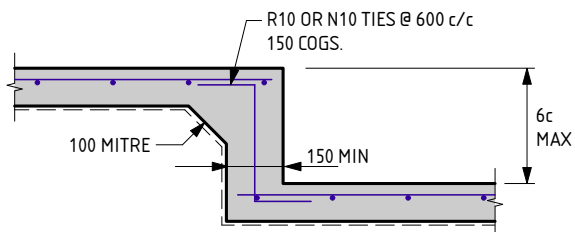


### GARAGE WALL

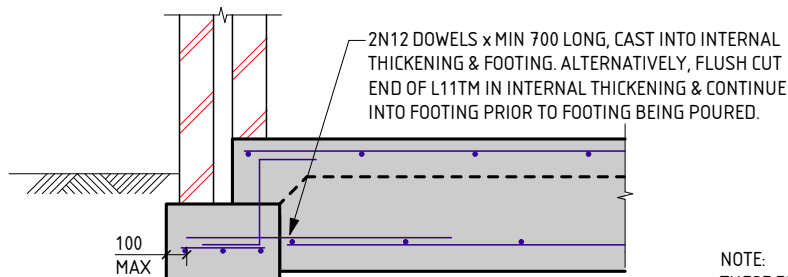


### INTERNAL THICKENING

REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.

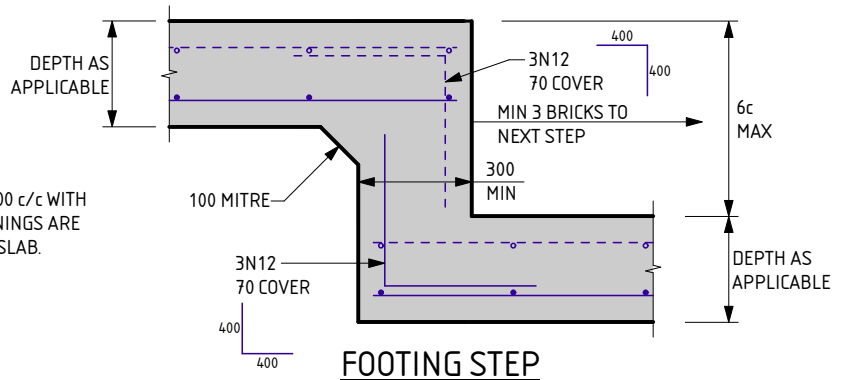


### SLAB STEP

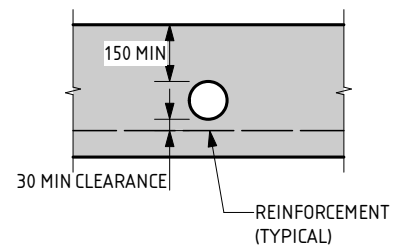


### EXTERNAL FOOTING TO INTERNAL THICKENING

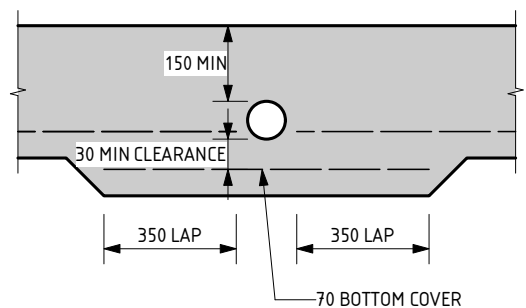
THIS DETAIL IS EQUIVALENT TO  
STRUCTERRE FOOTING DETAIL C4\*



### FOOTING STEP



### OPTION A PENETRATION CLEAR OF REINFORCEMENT



### OPTION B PENETRATION INTERRUPTS REINFORCEMENT

### SERVICE PIPE DIAGRAM

- MAXIMUM PENETRATION SIZE TO BE Ø150.

NOTE:  
THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
DATE LAST MODIFIED - 19/01/23

**CM3**  
CAVITY MASONRY

**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, BALEATTA W.A. 6021

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

PROJECT:  
LOT 344 CLOUDBURST AV BALDIVIS

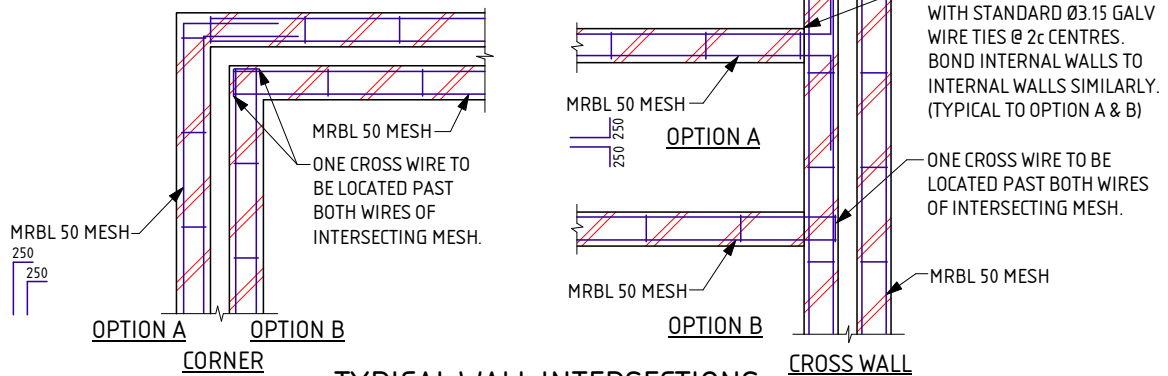
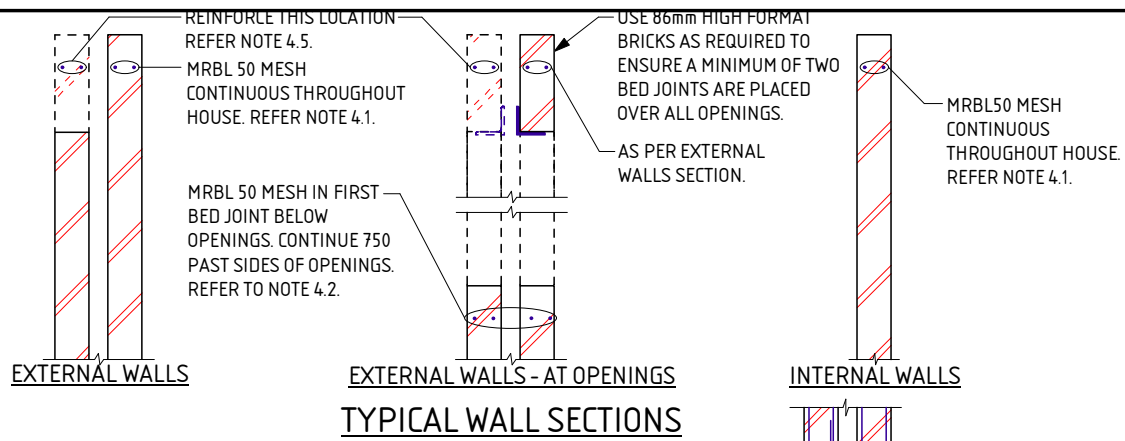
CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 24/4/23

APPROVED

*[Signature]*



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT: LOT 344 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 24/4/23

APPROVED



# EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

## EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unit 1 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 344 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 24/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :  
LOT 344 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 24/4/23

APPROVED

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

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2598891

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 345 CLOUDBURST AV BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096806  
**DATE OF ASSESSMENT** 21/4/23

**SITE RECORD**

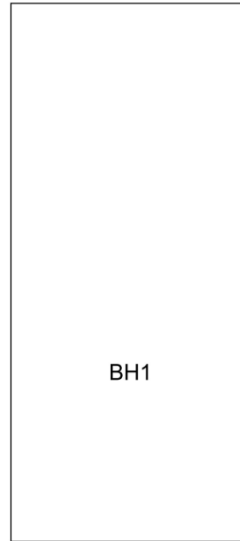


SITE CLASSIFICATION	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
FOOTING DETAIL	<b>CM3</b>
SAND PAD	<b>No sand pad required structurally</b>
BUSHFIRE PRONE AREA	<b>Yes</b> <i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	<b>N2</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	Partial Shielding

## SOIL PROFILE

BOREHOLE 1: 0 - 1200 FILL - sand - brown; 1200 - 2300 FILL - sand trace gravel (limestone) - brown; 2300 hard ground refusal.

## APPROXIMATE BOREHOLE LOCATIONS



CLOUDBURST AVE

### NOTE 1 Explanatory Notes & Standard Recommendations

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

### NOTE 2 Bushfire - Prone Area

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

## ADDITIONAL NOTES / REQUIREMENTS

### Site Condition

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

### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J416765 dated 24/08/2022.

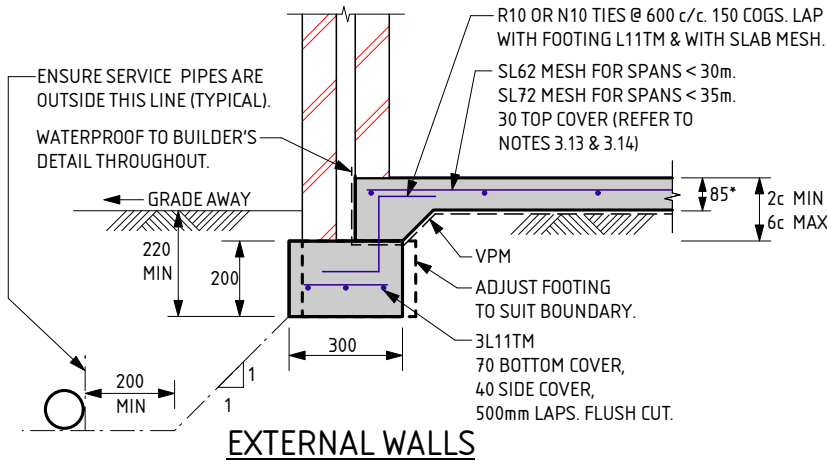
### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

### Internal Thickening Inspection

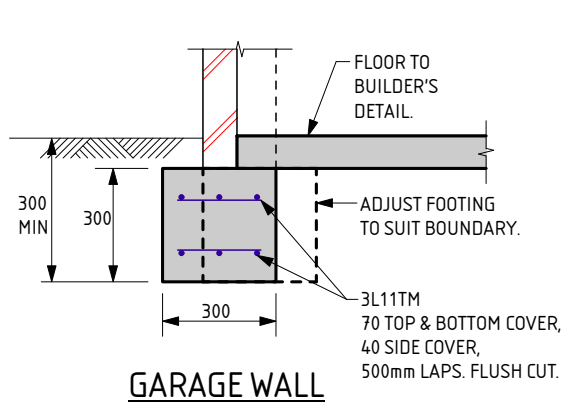
This detail is subject to an internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

-- END OF REPORT --

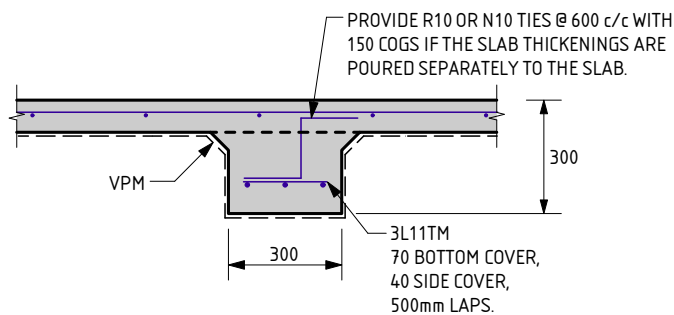


**EXTERNAL WALLS**

\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
 IF 100mm SLAB USED, MESH TO BE:  
 SL62 MESH FOR SPANS < 25m.  
 SL72 MESH FOR SPANS < 30m.  
 SL82 MESH FOR SPANS < 35m.

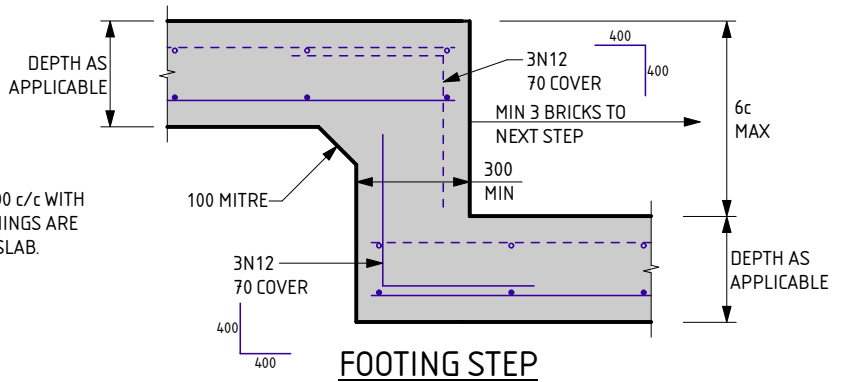


**GARAGE WALL**

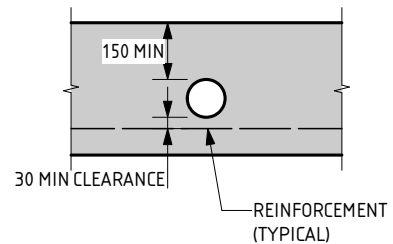


**INTERNAL THICKENING**

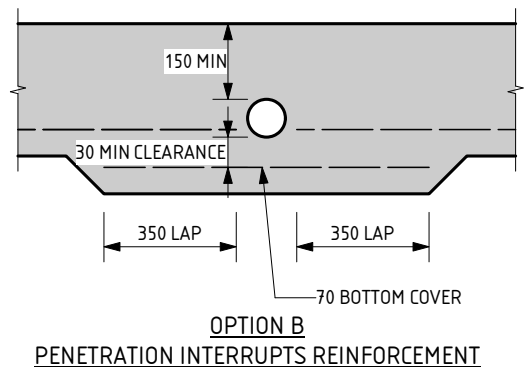
REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**FOOTING STEP**



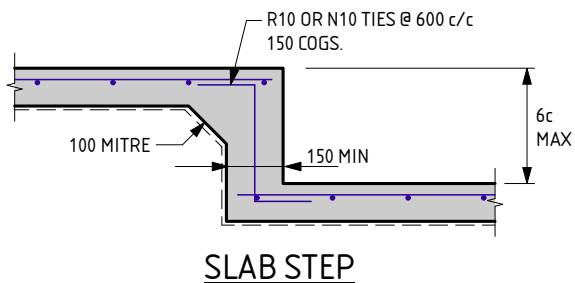
**OPTION A  
PENETRATION CLEAR OF REINFORCEMENT**



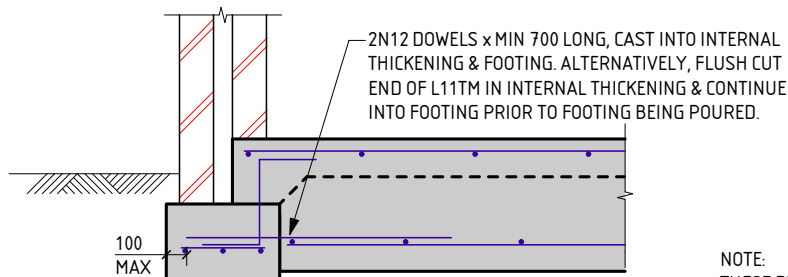
**OPTION B  
PENETRATION INTERRUPTS REINFORCEMENT**

**SERVICE PIPE DIAGRAM**

- MAXIMUM PENETRATION SIZE TO BE Ø150.



**SLAB STEP**



**EXTERNAL FOOTING TO INTERNAL THICKENING**

THIS DETAIL IS EQUIVALENT TO  
 STRUCTERRE FOOTING DETAIL C4.0

NOTE:  
 THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
 DATE LAST MODIFIED - 19/01/23

**CM3**  
 CAVITY MASONRY



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

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

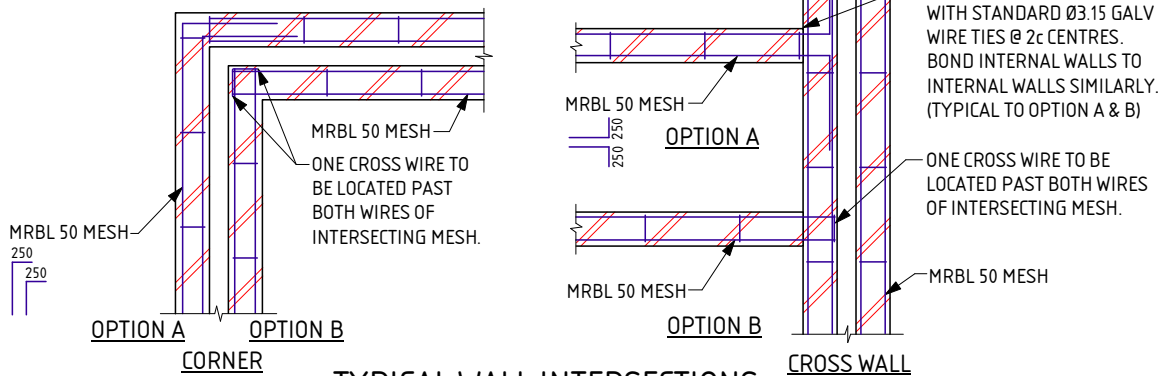
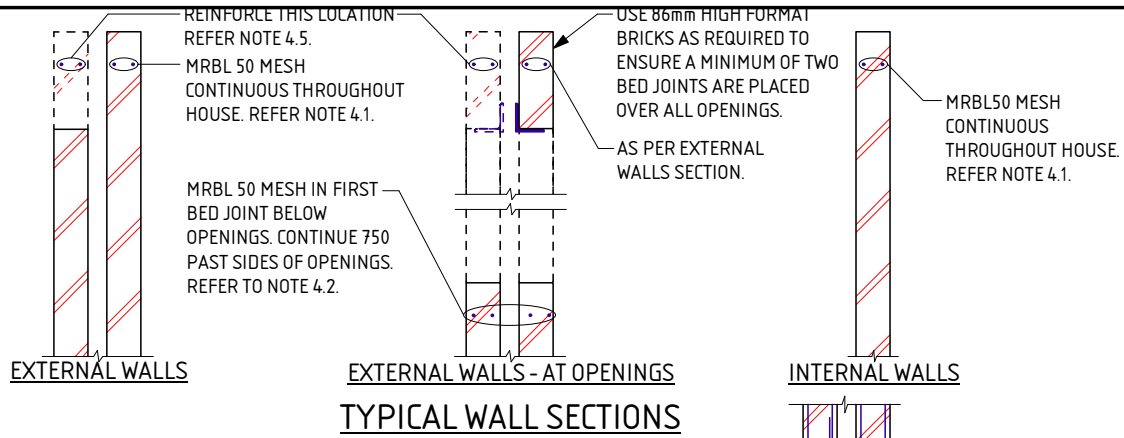
PROJECT: LOT 345 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 24/4/23

APPROVED



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

PROJECT : <b>LOT 345 CLOUDBURST AV BALDIVIS</b>	
CLIENT : <b>KEC NOMINEES PTY LTD</b>	
SCALE : <b>1:20</b>	APPROVED
DATE : <b>24/4/23</b>	

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

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

PROJECT :  
LOT 345 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 24/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :  
LOT 345 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 24/4/23

APPROVED

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



**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2598894

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 346 CLOUDBURST AV BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096808  
**DATE OF ASSESSMENT** 21/4/23

**SITE RECORD**

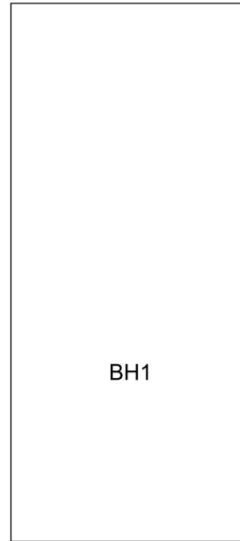


<b>SITE CLASSIFICATION</b>	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
<b>FOOTING DETAIL</b>	<b>CM3</b>
<b>SAND PAD</b>	<b>No sand pad required structurally</b>
<b>BUSHFIRE PRONE AREA</b>	<b>Yes</b> <i>(see NOTE 2.)</i>
<b>CORROSION CLASSIFICATION</b>	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
<b>WIND CLASSIFICATION</b>	<b>N2</b> <i>(in accordance with AS4055)</i>
<b>-TERRAIN CATEGORY</b>	2
<b>-TOPOGRAPHIC</b>	T0
<b>-SHIELDING</b>	Partial Shielding

## SOIL PROFILE

BOREHOLE 1: 0 - 1200 FILL - sand - brown; 1200 - 2200 FILL - sand trace gravel (limestone) - brown; 2200 hard ground refusal.

## APPROXIMATE BOREHOLE LOCATIONS



CLOUDBURST AVE

### NOTE 1 Explanatory Notes & Standard Recommendations

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

### NOTE 2 Bushfire - Prone Area

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

## ADDITIONAL NOTES / REQUIREMENTS

### Site Condition

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

### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J416765 dated 24/08/2022.

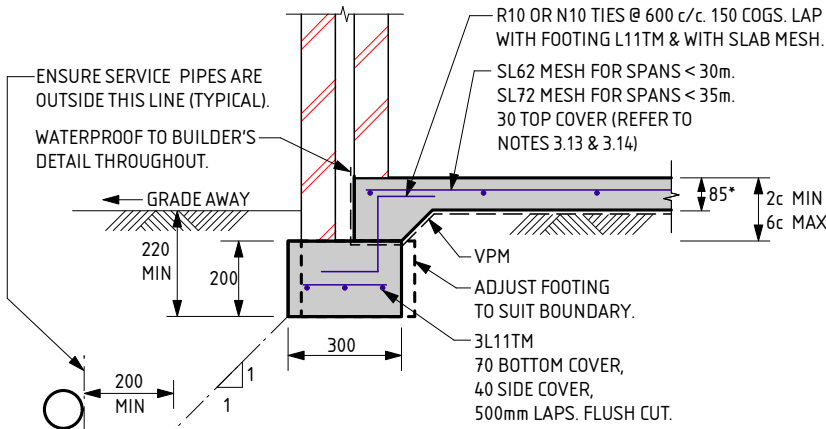
### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

### Internal Thickening Inspection

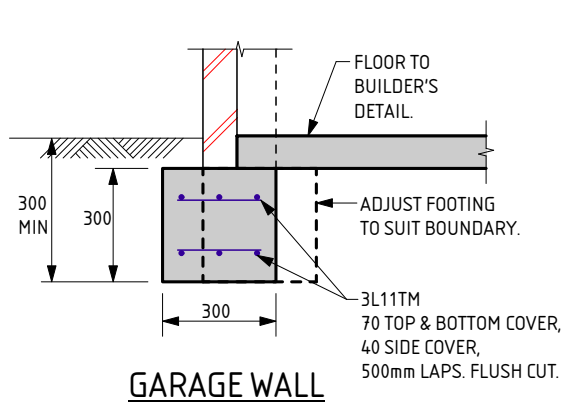
This detail is subject to an internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

-- END OF REPORT --

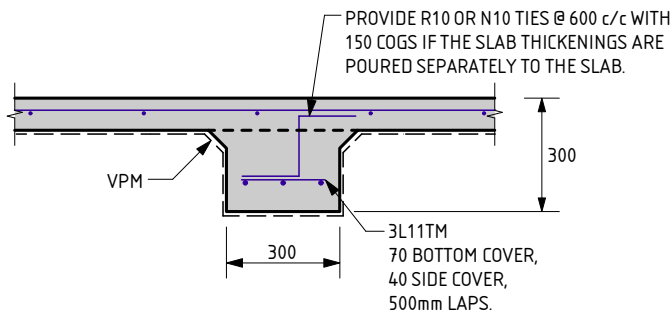


**EXTERNAL WALLS**

\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
 IF 100mm SLAB USED, MESH TO BE:  
 SL62 MESH FOR SPANS < 25m.  
 SL72 MESH FOR SPANS < 30m.  
 SL82 MESH FOR SPANS < 35m.

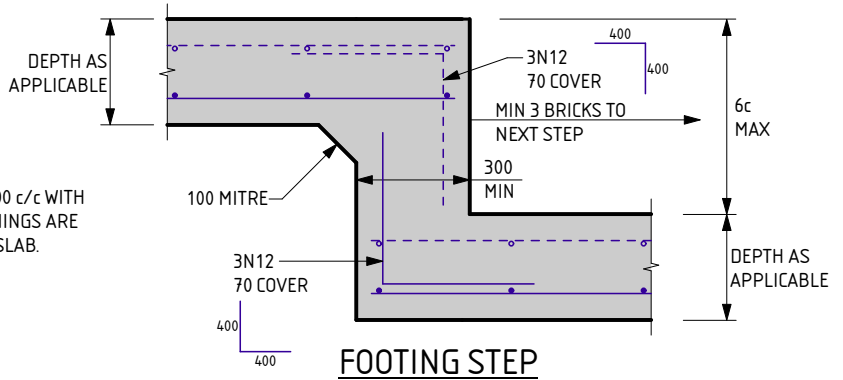


**GARAGE WALL**

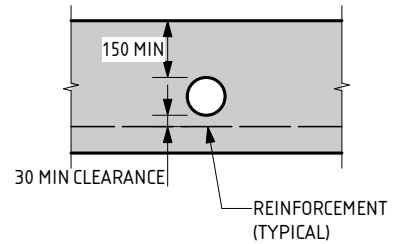


**INTERNAL THICKENING**

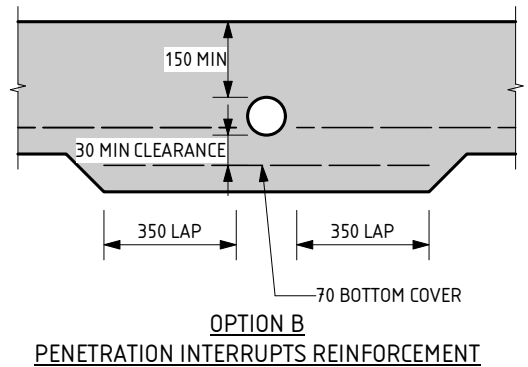
REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**FOOTING STEP**



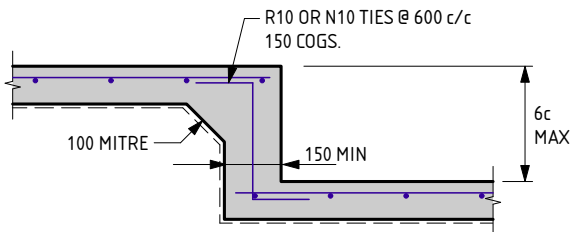
**OPTION A PENETRATION CLEAR OF REINFORCEMENT**



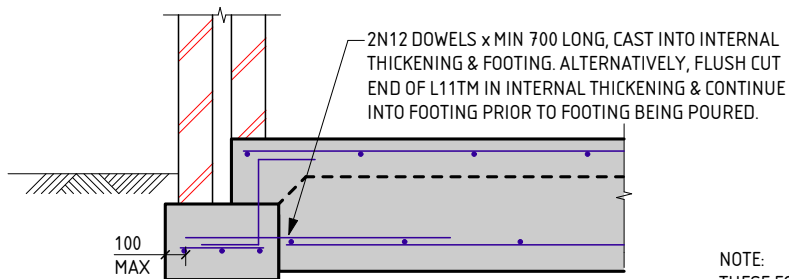
**OPTION B PENETRATION INTERRUPTS REINFORCEMENT**

**SERVICE PIPE DIAGRAM**

- MAXIMUM PENETRATION SIZE TO BE Ø150.



**SLAB STEP**



**EXTERNAL FOOTING TO INTERNAL THICKENING**

THIS DETAIL IS EQUIVALENT TO STRUCTERRE FOOTING DETAIL C4.0

NOTE: THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT. DATE LAST MODIFIED - 19/01/23

**CM3**  
CAVITY MASONRY



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

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

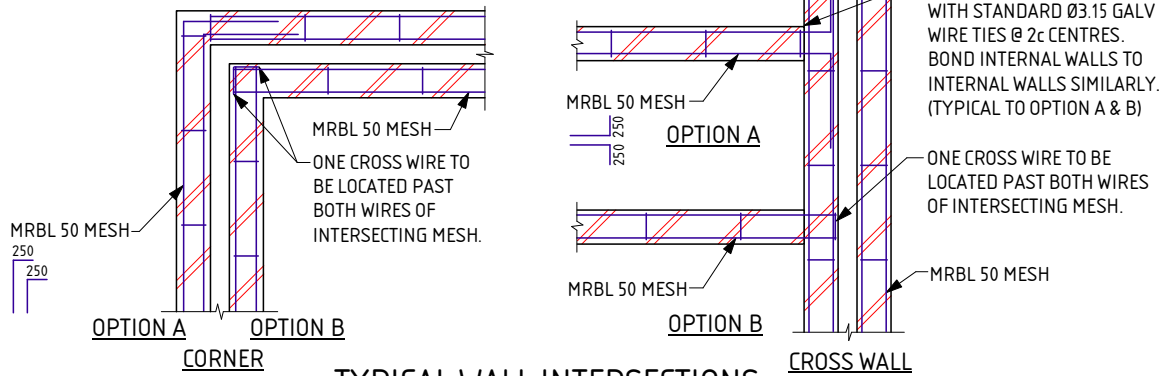
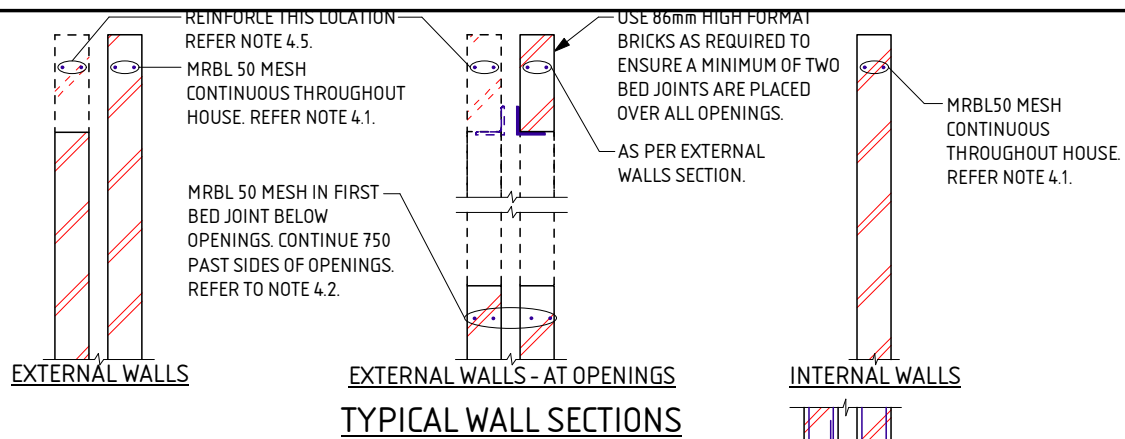
PROJECT: LOT 346 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 24/4/23

APPROVED



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

PROJECT : <b>LOT 346 CLOUDBURST AV BALDIVIS</b>	
CLIENT : <b>KEC NOMINEES PTY LTD</b>	
SCALE : <b>1:20</b>	APPROVED
DATE : <b>24/4/23</b>	

# EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

## EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unit 1 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 346 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 24/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :  
LOT 346 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 24/4/23

APPROVED

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

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2598896

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 347 CLOUDBURST AV BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096809  
**DATE OF ASSESSMENT** 21/4/23

**SITE RECORD**

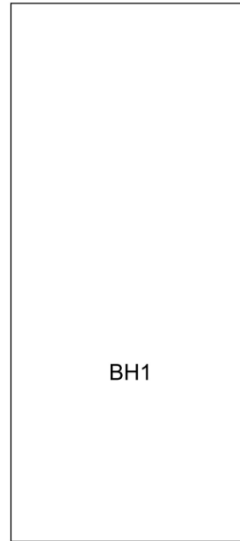


<b>SITE CLASSIFICATION</b>	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
<b>FOOTING DETAIL</b>	<b>CM3</b>
<b>SAND PAD</b>	<b>No sand pad required structurally</b>
<b>BUSHFIRE PRONE AREA</b>	<b>Yes</b> <i>(see NOTE 2.)</i>
<b>CORROSION CLASSIFICATION</b>	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
<b>WIND CLASSIFICATION</b>	<b>N2</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	Partial Shielding

## SOIL PROFILE

BOREHOLE 1: 0 - 2000 FILL - sand - brown; 2000 - 2200 FILL - sand trace gravel (limestone) - brown / grey; 2200 hard ground refusal.

## APPROXIMATE BOREHOLE LOCATIONS



CLOUDBURST AVE

### NOTE 1 Explanatory Notes & Standard Recommendations

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

### NOTE 2 Bushfire - Prone Area

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

## ADDITIONAL NOTES / REQUIREMENTS

### Site Condition

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

### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J416765 dated 24/08/2022.

### Internal Thickenings

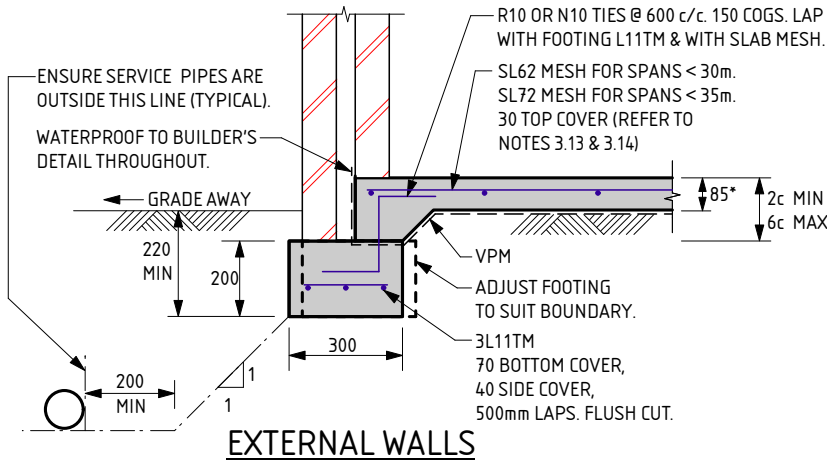
Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

### Internal Thickening Inspection

This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

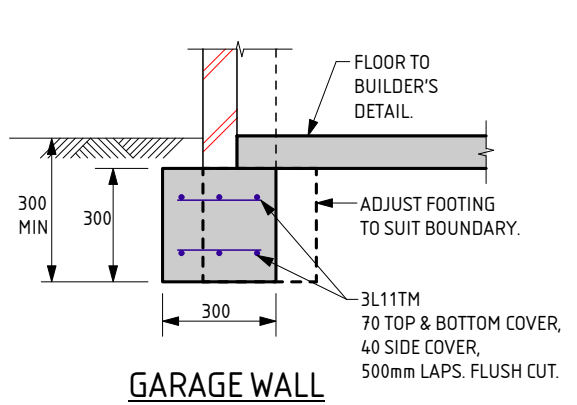
-- END OF REPORT --



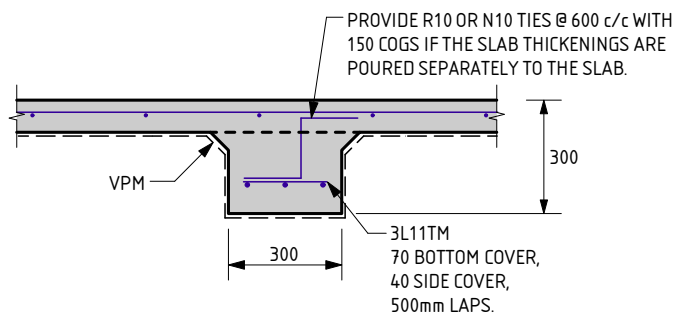


**EXTERNAL WALLS**

\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
 IF 100mm SLAB USED, MESH TO BE:  
 SL62 MESH FOR SPANS < 25m.  
 SL72 MESH FOR SPANS < 30m.  
 SL82 MESH FOR SPANS < 35m.

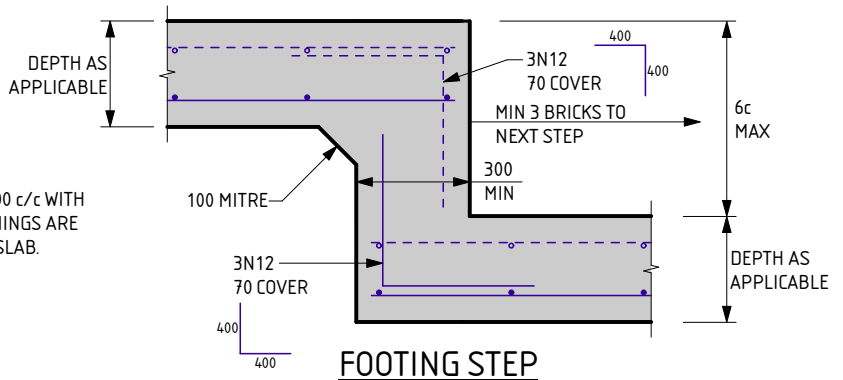


**GARAGE WALL**

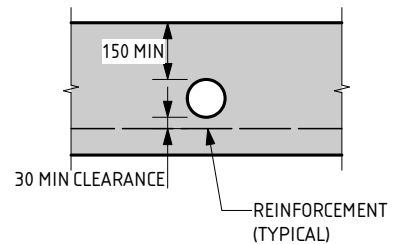


**INTERNAL THICKENING**

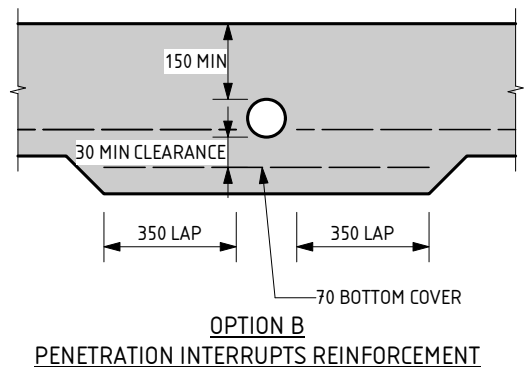
REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**FOOTING STEP**



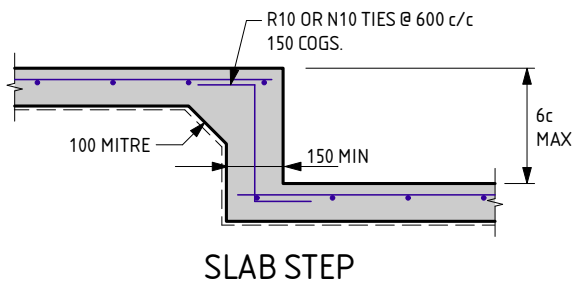
**OPTION A  
PENETRATION CLEAR OF REINFORCEMENT**



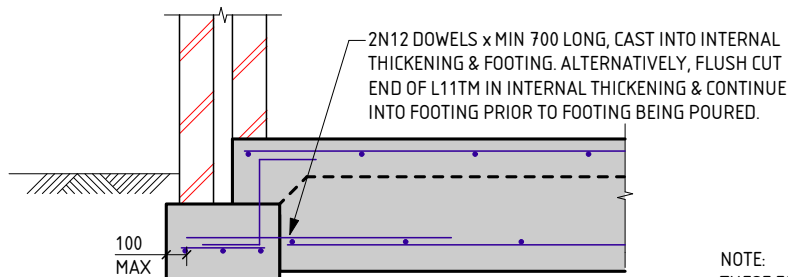
**OPTION B  
PENETRATION INTERRUPTS REINFORCEMENT**

**SERVICE PIPE DIAGRAM**

- MAXIMUM PENETRATION SIZE TO BE Ø150.



**SLAB STEP**



**EXTERNAL FOOTING TO INTERNAL THICKENING**

THIS DETAIL IS EQUIVALENT TO  
 STRUCTERRE FOOTING DETAIL C4.0

NOTE:  
 THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
 DATE LAST MODIFIED - 19/01/23

**CM3**  
 CAVITY MASONRY



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

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

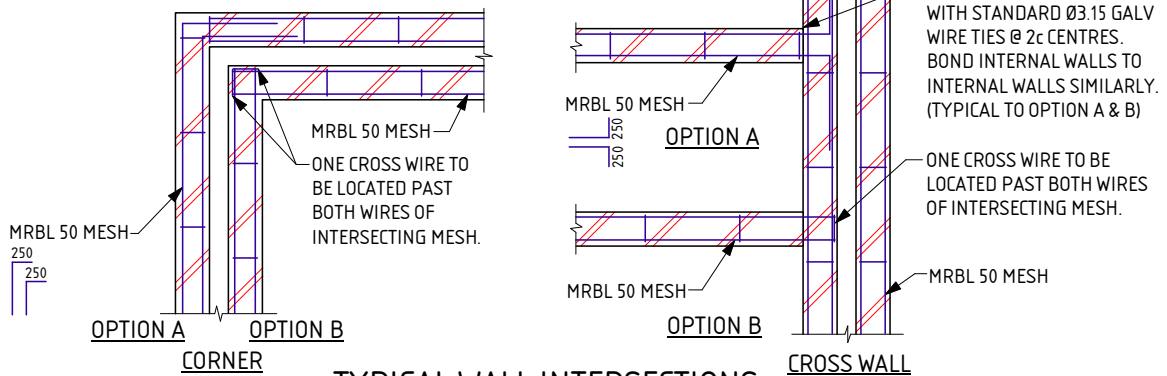
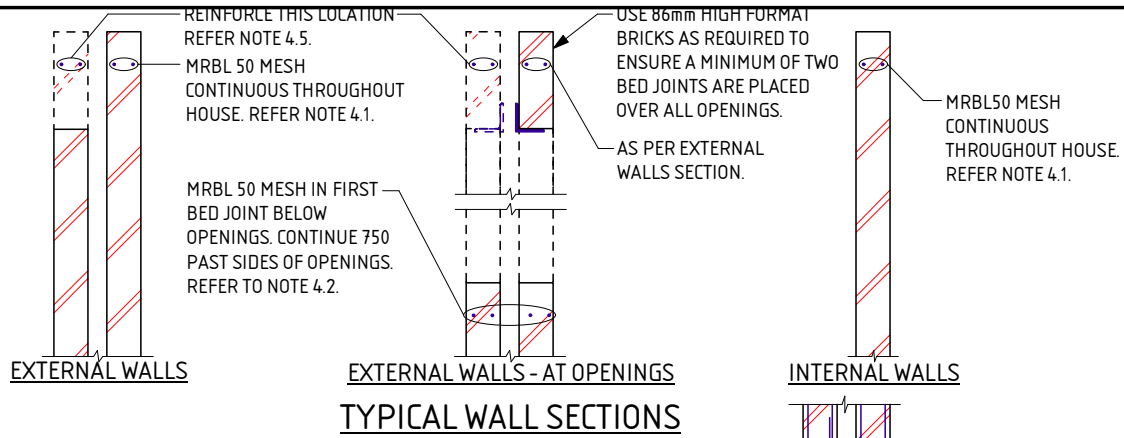
PROJECT: LOT 347 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 24/4/23

APPROVED



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT: LOT 347 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 24/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

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

PROJECT :  
LOT 347 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 24/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :  
LOT 347 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 24/4/23

APPROVED

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

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2598902

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 348 CLOUDBURST AV BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096810  
**DATE OF ASSESSMENT** 21/4/23

**SITE RECORD**

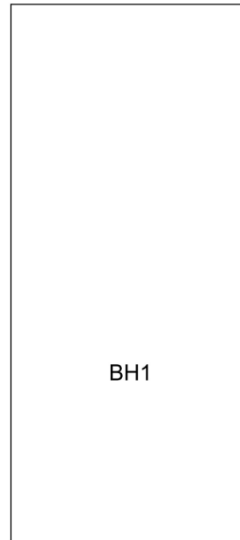


SITE CLASSIFICATION	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
FOOTING DETAIL	<b>CM3</b>
SAND PAD	<b>No sand pad required structurally</b>
BUSHFIRE PRONE AREA	<b>Yes</b> <i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	<b>N2</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	Partial Shielding

## SOIL PROFILE

BOREHOLE 1: 0 - 2400 FILL - sand - brown; 2400 hard ground refusal.

## APPROXIMATE BOREHOLE LOCATIONS



CLOUDBURST AVE

### NOTE 1 Explanatory Notes & Standard Recommendations

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

### NOTE 2 Bushfire - Prone Area

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

## ADDITIONAL NOTES / REQUIREMENTS

### Site Condition

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

### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J416765 dated 24/08/2022.

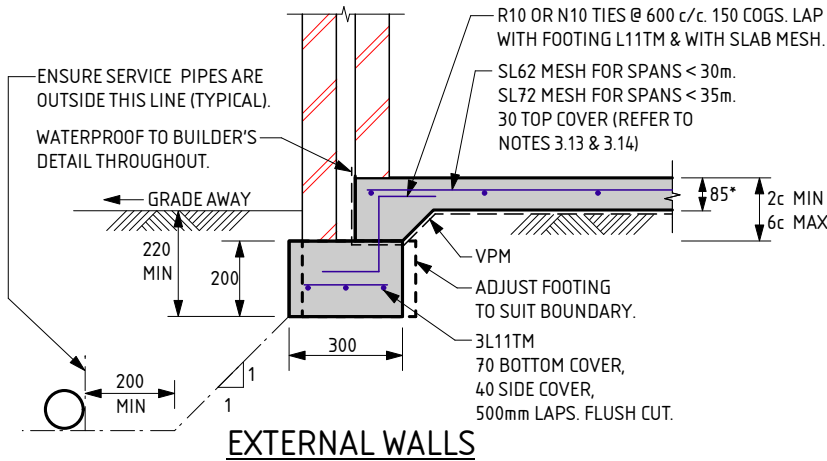
### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

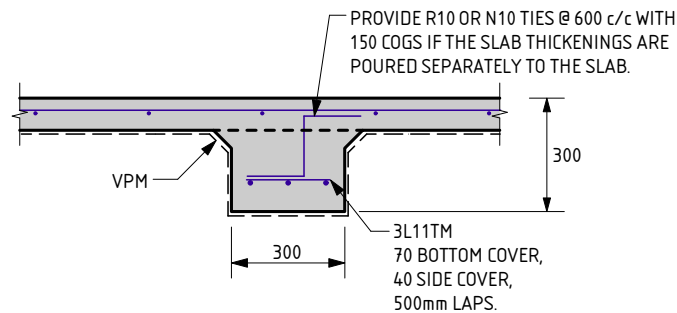
### Internal Thickening Inspection

This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

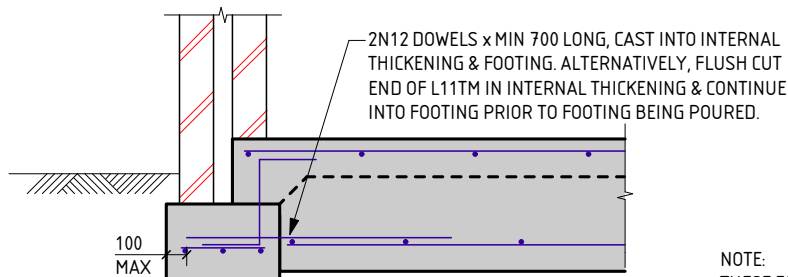
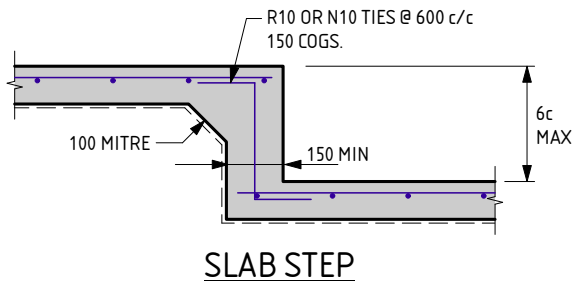
**-- END OF REPORT --**



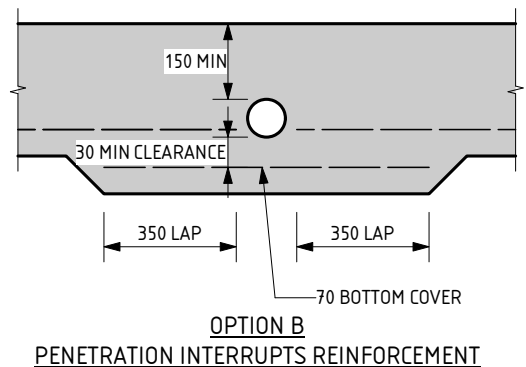
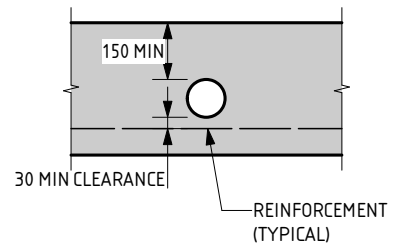
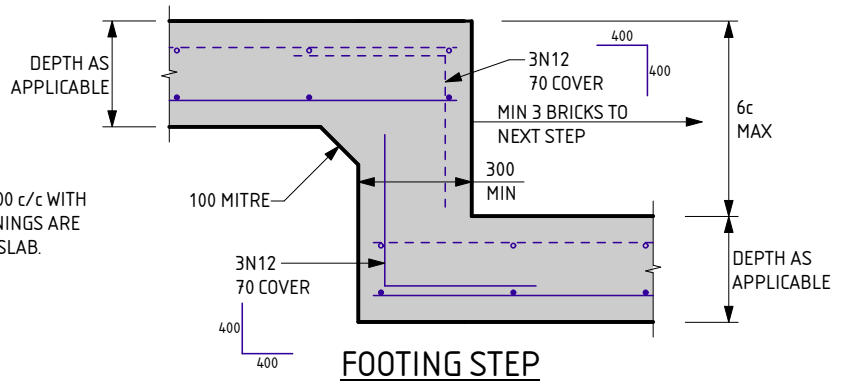
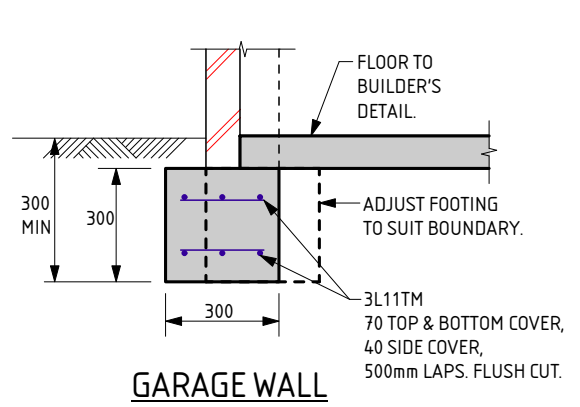
\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
IF 100mm SLAB USED, MESH TO BE:  
SL62 MESH FOR SPANS < 25m.  
SL72 MESH FOR SPANS < 30m.  
SL82 MESH FOR SPANS < 35m.



REFER TO STRUCterre'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCterre PRIOR TO CONCRETE POUR.



THIS DETAIL IS EQUIVALENT TO  
STRUCterre FOOTING DETAIL C4.0



**SERVICE PIPE DIAGRAM**  
- MAXIMUM PENETRATION SIZE TO BE Ø150.

NOTE:  
THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
DATE LAST MODIFIED - 19/01/23

**CM3**  
CAVITY MASONRY

**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, BALEATTA WA 6021

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

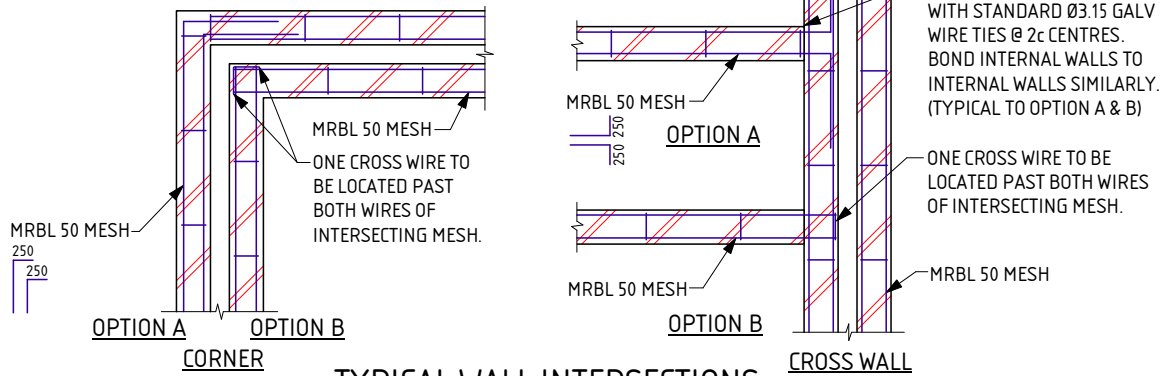
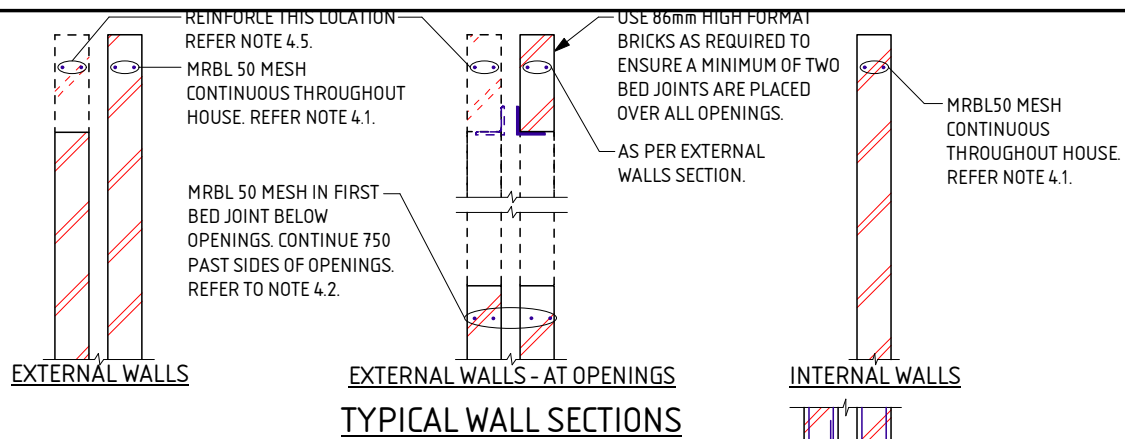
PROJECT:  
LOT 348 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE 1:20

DATE 24/4/23

APPROVED



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE - 10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT: LOT 348 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 24/4/23

APPROVED



## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemia Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unit 1 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 348 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 24/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :

LOT 348 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE 1:20

DATE 24/4/23

APPROVED

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

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2598911

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 349 CLOUDBURST AV BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096811  
**DATE OF ASSESSMENT** 21/4/23

**SITE RECORD**

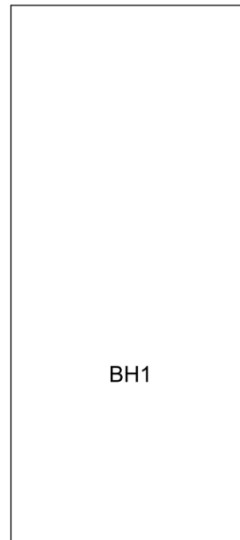


<b>SITE CLASSIFICATION</b>	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
<b>FOOTING DETAIL</b>	<b>CM3</b>
<b>SAND PAD</b>	<b>No sand pad required structurally</b>
<b>BUSHFIRE PRONE AREA</b>	<b>Yes</b> <i>(see NOTE 2.)</i>
<b>CORROSION CLASSIFICATION</b>	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
<b>WIND CLASSIFICATION</b>	<b>N2</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	Partial Shielding

## SOIL PROFILE

BOREHOLE 1: 0 - 2500 FILL - sand - brown; 2500 end of hole.

## APPROXIMATE BOREHOLE LOCATIONS



CLOUDBURST AVE

### NOTE 1 Explanatory Notes & Standard Recommendations

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

### NOTE 2 Bushfire - Prone Area

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

## ADDITIONAL NOTES / REQUIREMENTS

### Site Condition

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

### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J416765 dated 24/08/2022.

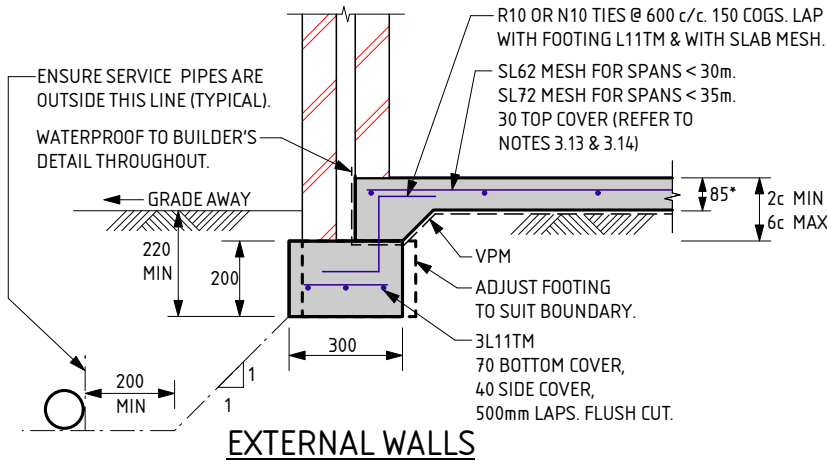
### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

### Internal Thickening Inspection

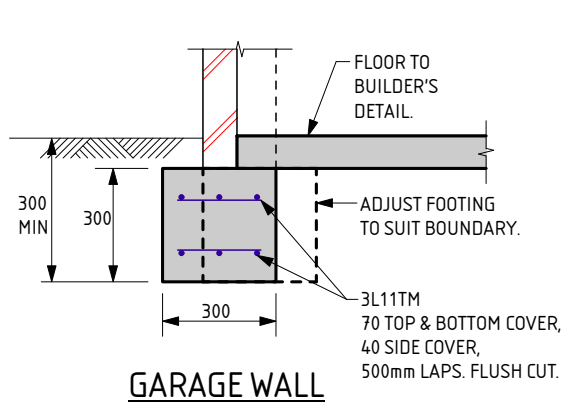
This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

**-- END OF REPORT --**

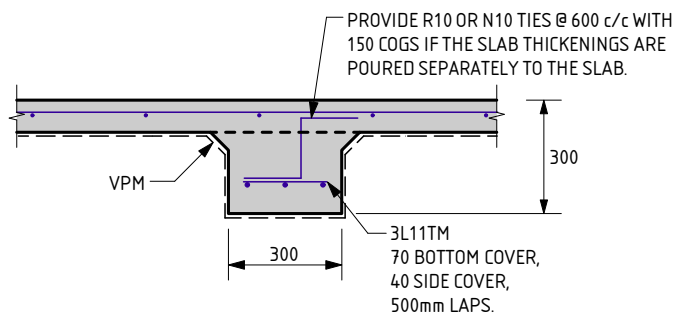


**EXTERNAL WALLS**

\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
 IF 100mm SLAB USED, MESH TO BE:  
 SL62 MESH FOR SPANS < 25m.  
 SL72 MESH FOR SPANS < 30m.  
 SL82 MESH FOR SPANS < 35m.

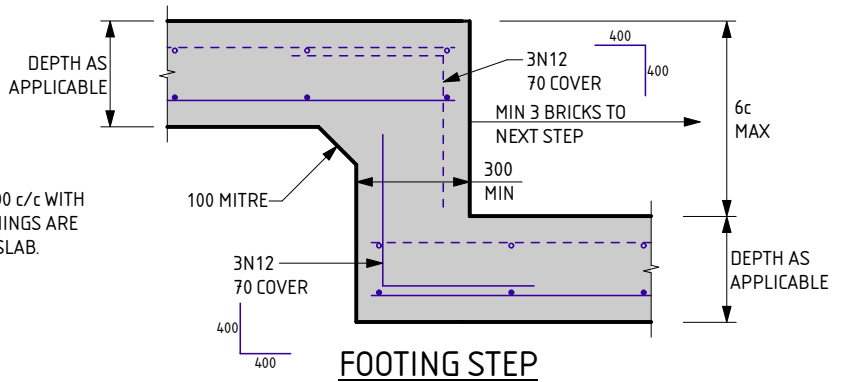


**GARAGE WALL**

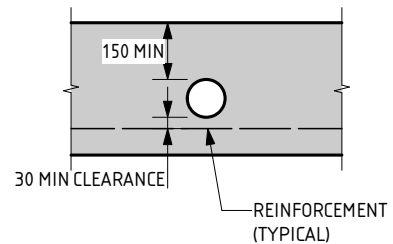


**INTERNAL THICKENING**

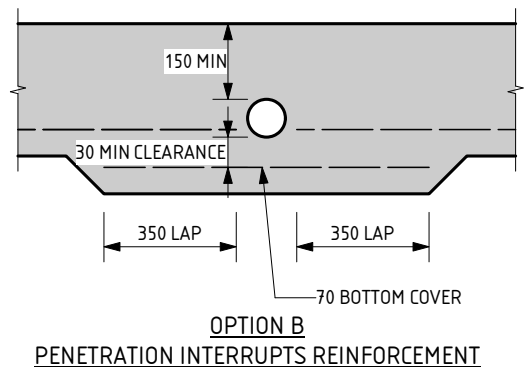
REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**FOOTING STEP**



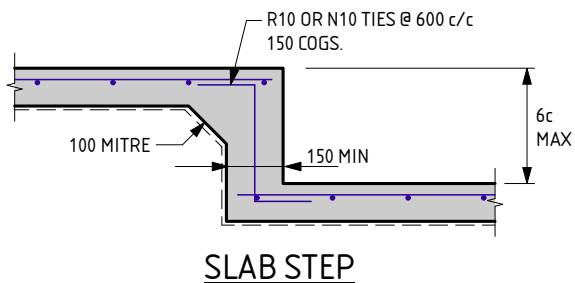
**OPTION A  
PENETRATION CLEAR OF REINFORCEMENT**



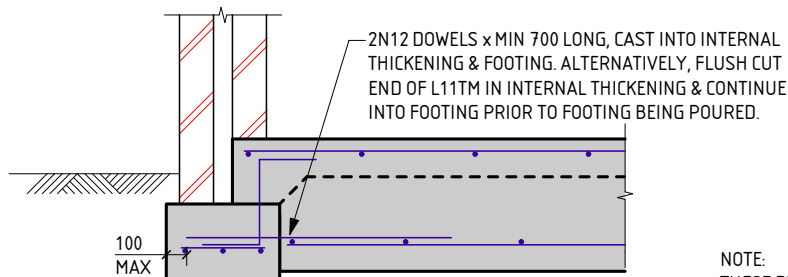
**OPTION B  
PENETRATION INTERRUPTS REINFORCEMENT**

**SERVICE PIPE DIAGRAM**

- MAXIMUM PENETRATION SIZE TO BE Ø150.



**SLAB STEP**



**EXTERNAL FOOTING TO INTERNAL THICKENING**

THIS DETAIL IS EQUIVALENT TO  
 STRUCTERRE FOOTING DETAIL C4.0

NOTE:  
 THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
 DATE LAST MODIFIED - 19/01/23

**CM3**  
 CAVITY MASONRY



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

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

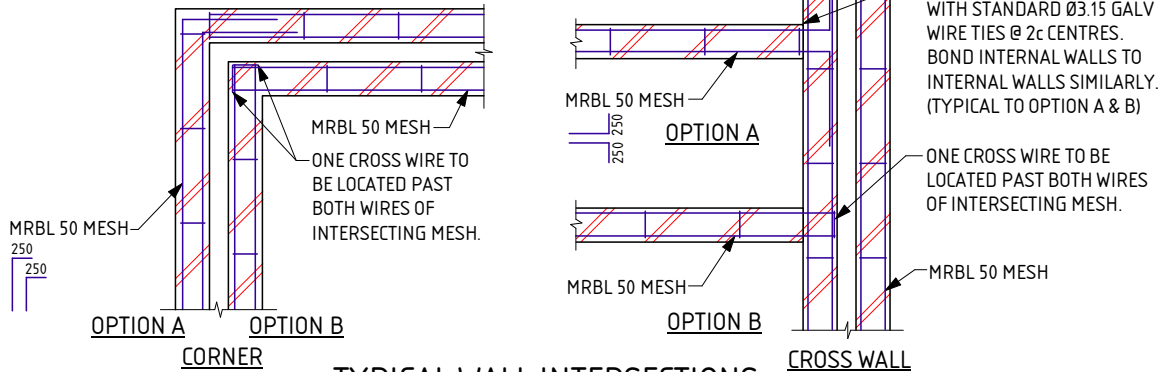
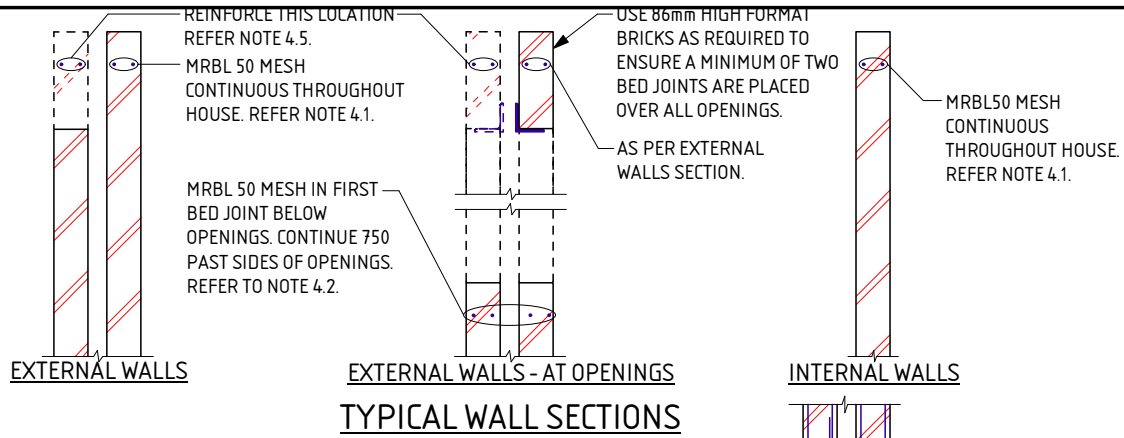
PROJECT: LOT 349 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 24/4/23

APPROVED



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT: LOT 349 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 24/4/23

APPROVED

# EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

## EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemia Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unit 1 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 349 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 24/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :

LOT 349 CLOUDBURST AV BALDIVIS

CLIENT :

KEC NOMINEES PTY LTD

SCALE

1:20

APPROVED

DATE

24/4/23

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



**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2598912

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 350 CLOUDBURST AV BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096812  
**DATE OF ASSESSMENT** 21/4/23

**SITE RECORD**

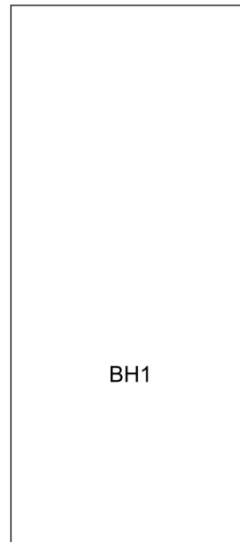


SITE CLASSIFICATION	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
FOOTING DETAIL	<b>CM3</b>
SAND PAD	<b>No sand pad required structurally</b>
BUSHFIRE PRONE AREA	<b>Yes</b> <i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	<b>N2</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	Partial Shielding

## SOIL PROFILE

BOREHOLE 1: 0 - 2400 FILL - sand - brown; 2400 hard ground refusal.

## APPROXIMATE BOREHOLE LOCATIONS



CLOUDBURST AVE

### NOTE 1 Explanatory Notes & Standard Recommendations

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

### NOTE 2 Bushfire - Prone Area

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

## ADDITIONAL NOTES / REQUIREMENTS

### Site Condition

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

### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J416765 dated 24/08/2022.

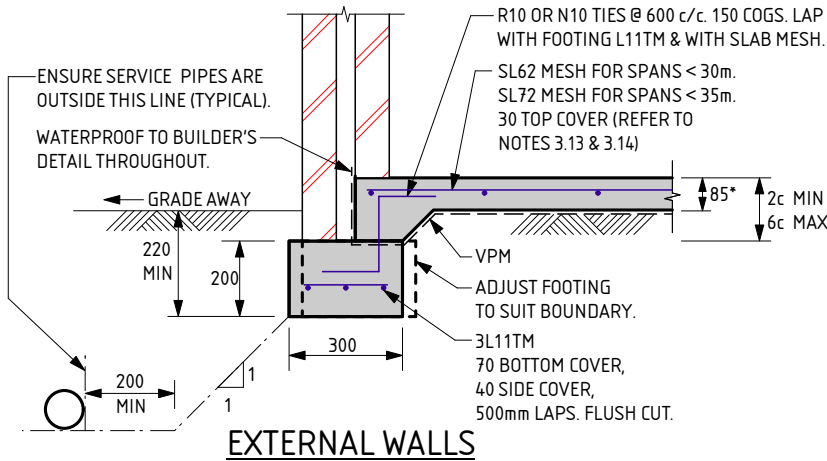
### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

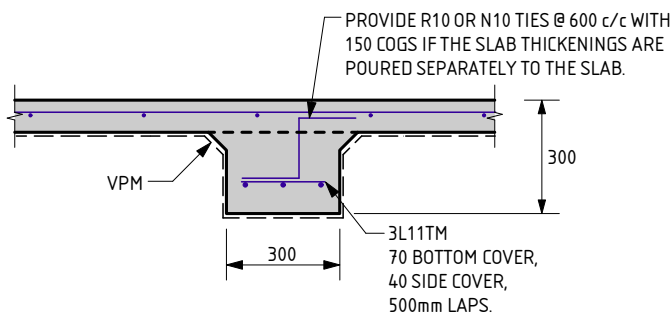
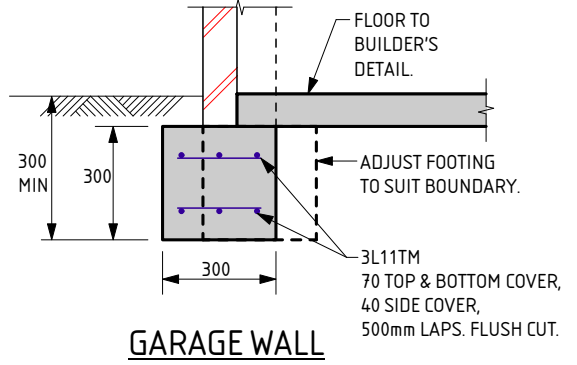
### Internal Thickening Inspection

This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

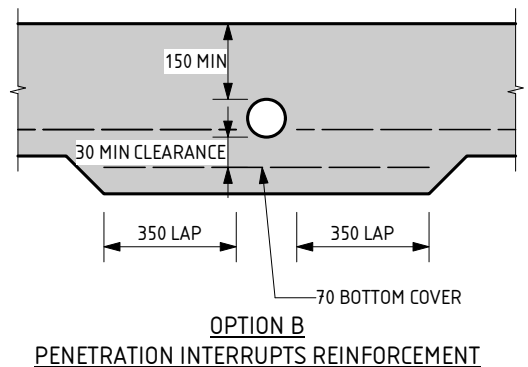
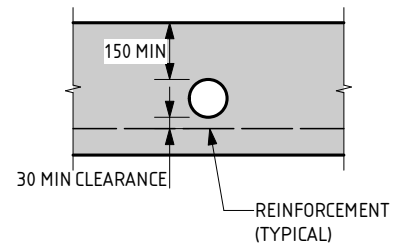
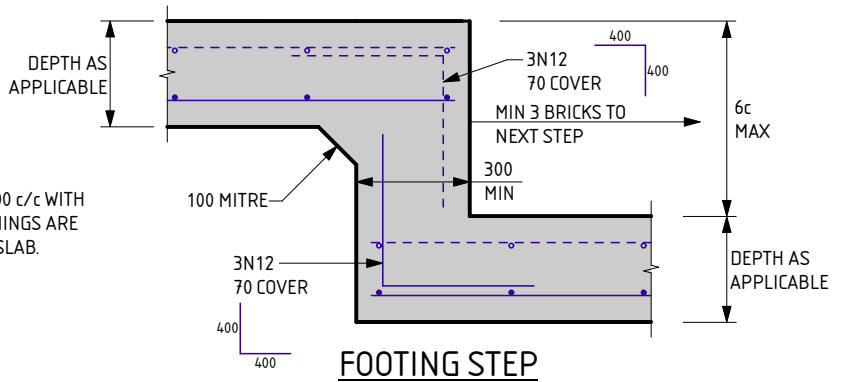
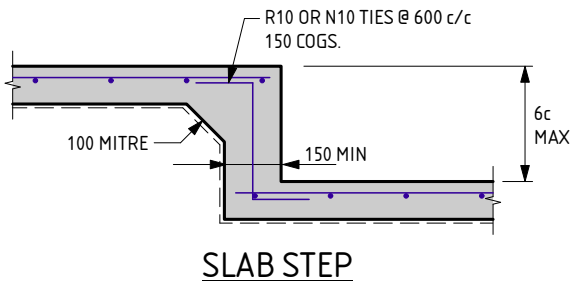
**-- END OF REPORT --**



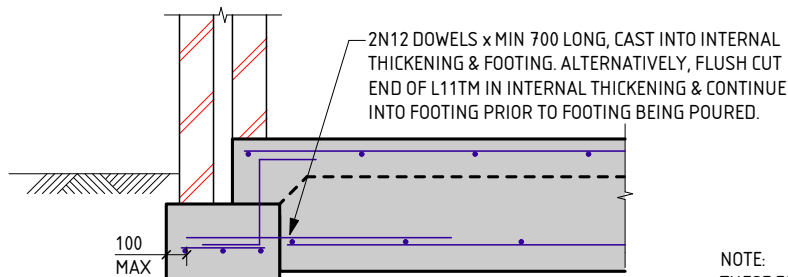
\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
IF 100mm SLAB USED, MESH TO BE:  
SL62 MESH FOR SPANS < 25m.  
SL72 MESH FOR SPANS < 30m.  
SL82 MESH FOR SPANS < 35m.



REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**SERVICE PIPE DIAGRAM**  
- MAXIMUM PENETRATION SIZE TO BE Ø150.



### EXTERNAL FOOTING TO INTERNAL THICKENING

THIS DETAIL IS EQUIVALENT TO  
STRUCTERRE FOOTING DETAIL C4.0

NOTE:  
THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
DATE LAST MODIFIED - 19/01/23

**CM3**  
CAVITY MASONRY

**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, BALEATTA W.A. 6021

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

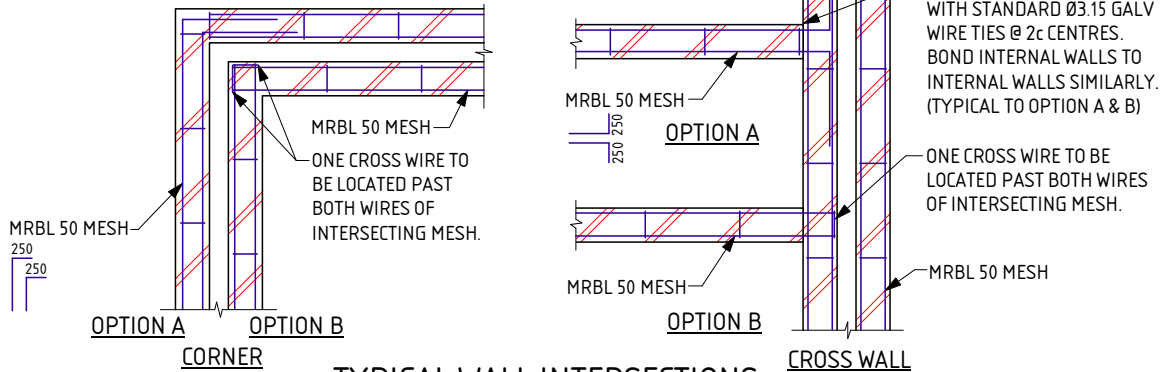
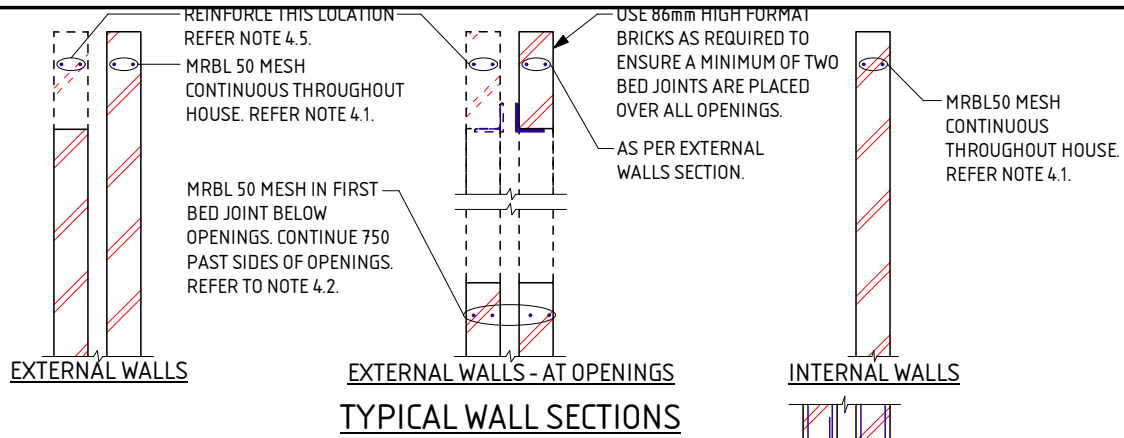
PROJECT:  
LOT 350 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE 1:20

DATE 24/4/23

APPROVED



### REACTIVE SITE NOTES FOR CM1 - CM7

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

#### 1.0 SITE CLASSIFICATION

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

#### 3.0 FOOTINGS & SLABS

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

#### 4.0 MASONRY

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

#### 5.0 MAINTENANCE

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

#### 6.0 QUALITY CONTROL PROGRAM REQUIREMENTS

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT: LOT 350 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 24/4/23

APPROVED

# EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

## EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

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

PROJECT :  
LOT 350 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 24/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :  
LOT 350 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 24/4/23

APPROVED

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

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2598913

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 351 CLOUDBURST AV BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096814  
**DATE OF ASSESSMENT** 21/4/23

**SITE RECORD**

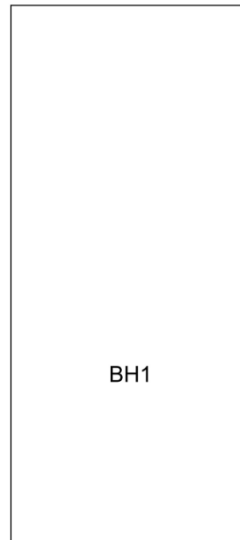


<b>SITE CLASSIFICATION</b>	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
<b>FOOTING DETAIL</b>	<b>CM3</b>
<b>SAND PAD</b>	<b>No sand pad required structurally</b>
<b>BUSHFIRE PRONE AREA</b>	<b>Yes</b> <i>(see NOTE 2.)</i>
<b>CORROSION CLASSIFICATION</b>	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
<b>WIND CLASSIFICATION</b>	<b>N2</b> <i>(in accordance with AS4055)</i>
<b>-TERRAIN CATEGORY</b>	2
<b>-TOPOGRAPHIC</b>	T0
<b>-SHIELDING</b>	Partial Shielding

## SOIL PROFILE

BOREHOLE 1: 0 - 2500 FILL - sand - brown; 2500 end of hole.

## APPROXIMATE BOREHOLE LOCATIONS



CLOUDBURST AVE

### NOTE 1 Explanatory Notes & Standard Recommendations

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

### NOTE 2 Bushfire - Prone Area

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

## ADDITIONAL NOTES / REQUIREMENTS

### Site Condition

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

### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J416765 dated 24/08/2022.

### Internal Thickenings

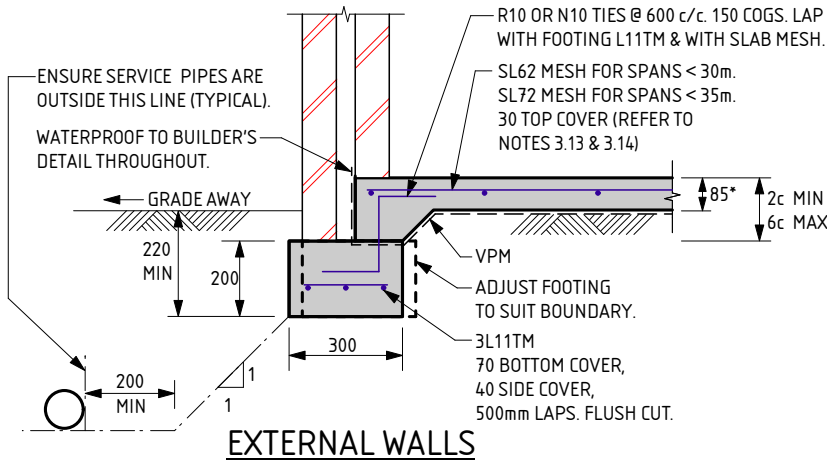
Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

### Internal Thickening Inspection

This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

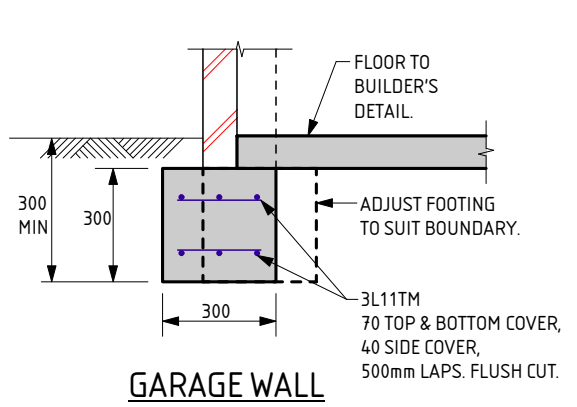
**-- END OF REPORT --**



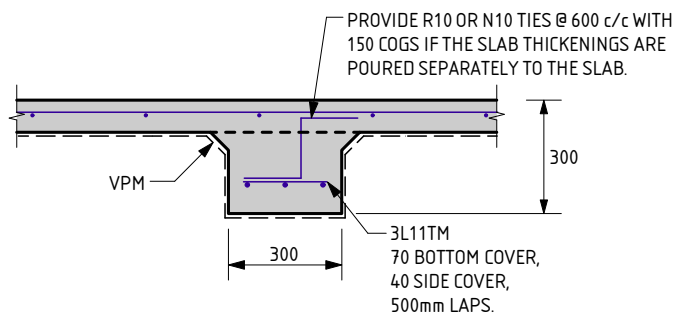


**EXTERNAL WALLS**

\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
 IF 100mm SLAB USED, MESH TO BE:  
 SL62 MESH FOR SPANS < 25m.  
 SL72 MESH FOR SPANS < 30m.  
 SL82 MESH FOR SPANS < 35m.

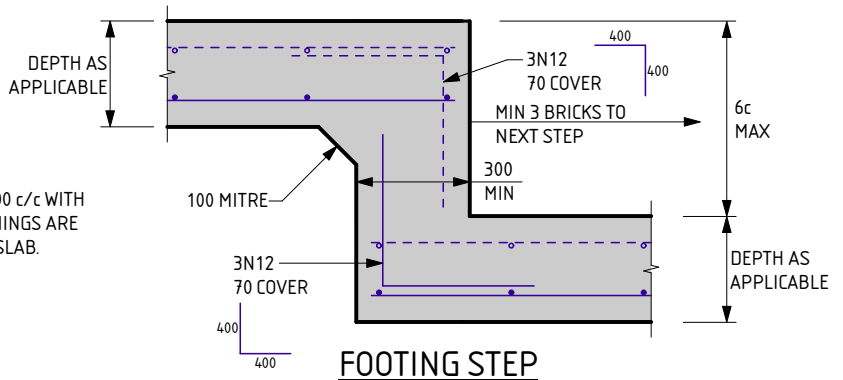


**GARAGE WALL**

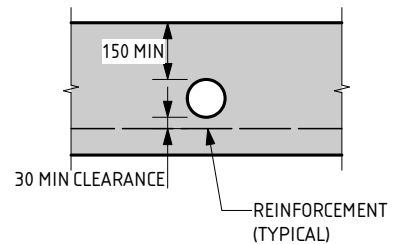


**INTERNAL THICKENING**

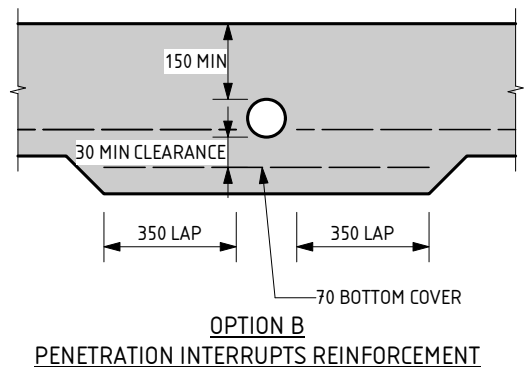
REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**FOOTING STEP**



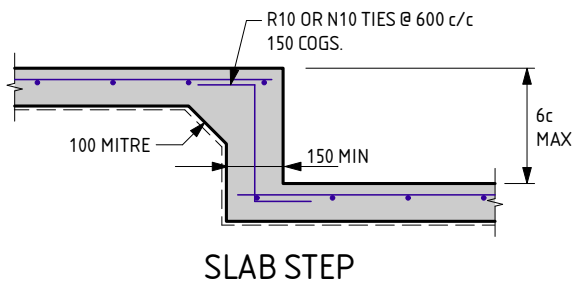
**OPTION A  
PENETRATION CLEAR OF REINFORCEMENT**



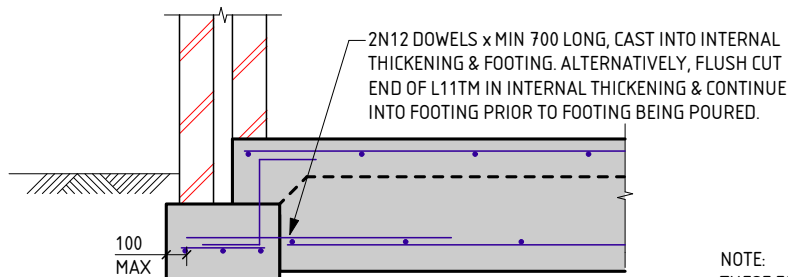
**OPTION B  
PENETRATION INTERRUPTS REINFORCEMENT**

**SERVICE PIPE DIAGRAM**

- MAXIMUM PENETRATION SIZE TO BE Ø150.



**SLAB STEP**



**EXTERNAL FOOTING TO INTERNAL THICKENING**

THIS DETAIL IS EQUIVALENT TO  
 STRUCTERRE FOOTING DETAIL C4.0

NOTE:  
 THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
 DATE LAST MODIFIED - 19/01/23

**CM3**  
 CAVITY MASONRY



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

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

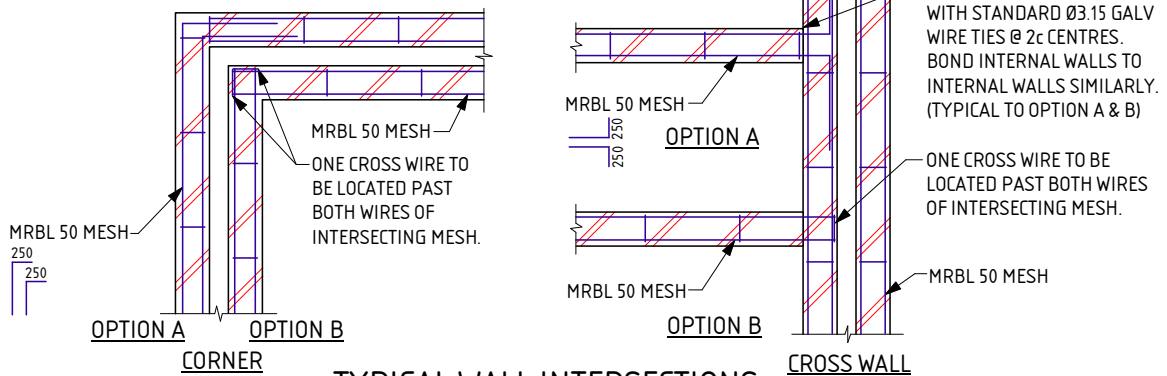
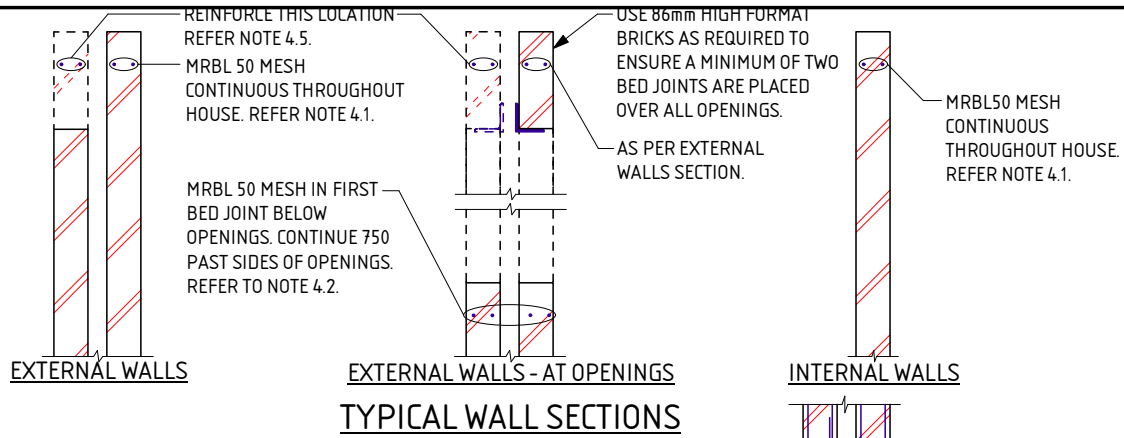
PROJECT: LOT 351 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 24/4/23

APPROVED



### REACTIVE SITE NOTES FOR CM1 - CM7

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

#### 1.0 SITE CLASSIFICATION

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

#### 3.0 FOOTINGS & SLABS

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

#### 4.0 MASONRY

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

#### 5.0 MAINTENANCE

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

#### 6.0 QUALITY CONTROL PROGRAM REQUIREMENTS

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT: LOT 351 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 24/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

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

PROJECT :  
LOT 351 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 24/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :

LOT 351 CLOUDBURST AV BALDIVIS

CLIENT :

KEC NOMINEES PTY LTD

SCALE

1:20

APPROVED

DATE

24/4/23

A handwritten signature in blue ink, appearing to be 'M. J. ...', is written over the 'APPROVED' field.

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2598897

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 352 CLOUDBURST AV BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096815  
**DATE OF ASSESSMENT** 21/4/23

**SITE RECORD**

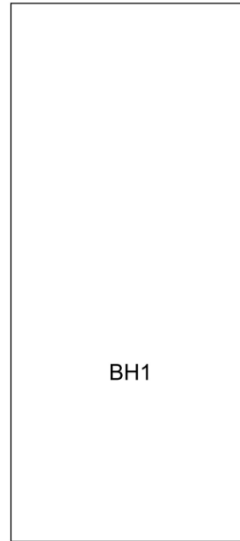


SITE CLASSIFICATION	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
FOOTING DETAIL	<b>CM3</b>
SAND PAD	<b>No sand pad required structurally</b>
BUSHFIRE PRONE AREA	<b>Yes</b> <i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	<b>N2</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	Partial Shielding

## SOIL PROFILE

BOREHOLE 1: 0 - 1200 FILL - sand - brown; 1200 - 1500 FILL - sand trace gravel (limestone) - brown;  
1500 - 2500 FILL - sand - brown; 2500 end of hole.

## APPROXIMATE BOREHOLE LOCATIONS



CLOUDBURST AVE

### NOTE 1 Explanatory Notes & Standard Recommendations

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

### NOTE 2 Bushfire - Prone Area

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

## ADDITIONAL NOTES / REQUIREMENTS

### Site Condition

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

### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J416765 dated 24/08/2022.

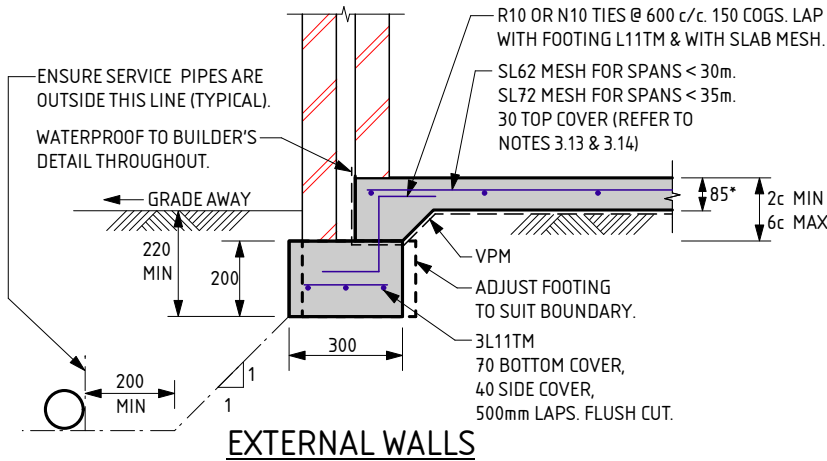
### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

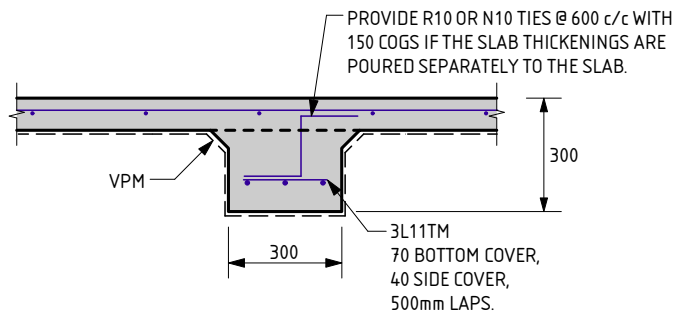
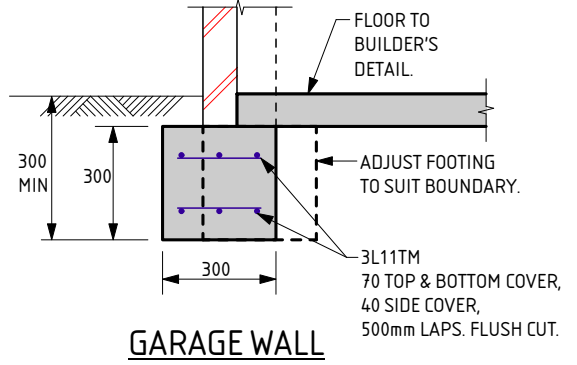
### Internal Thickening Inspection

This detail is subject to an internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

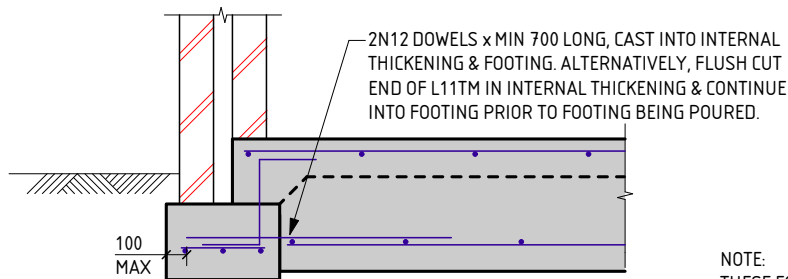
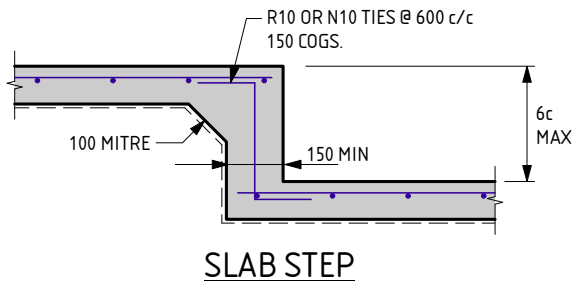
**-- END OF REPORT --**



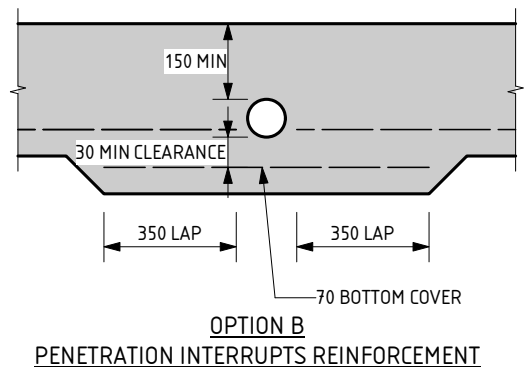
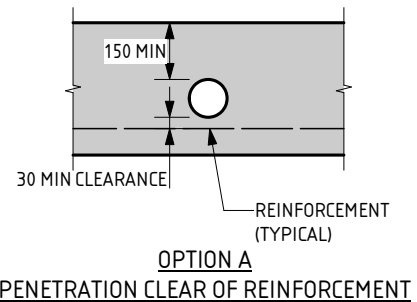
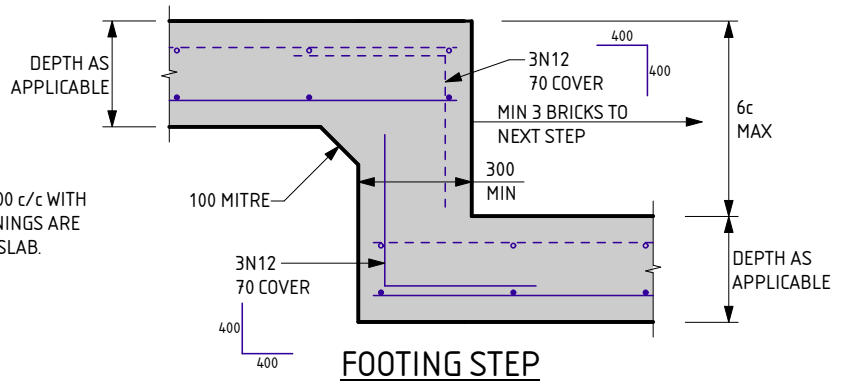
\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
IF 100mm SLAB USED, MESH TO BE:  
SL62 MESH FOR SPANS < 25m.  
SL72 MESH FOR SPANS < 30m.  
SL82 MESH FOR SPANS < 35m.



REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



THIS DETAIL IS EQUIVALENT TO  
STRUCTERRE FOOTING DETAIL C4.0



**SERVICE PIPE DIAGRAM**  
- MAXIMUM PENETRATION SIZE TO BE Ø150.

NOTE:  
THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
DATE LAST MODIFIED - 19/01/23

**CM3**  
CAVITY MASONRY

**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, BALEATTA W.A. 6021

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

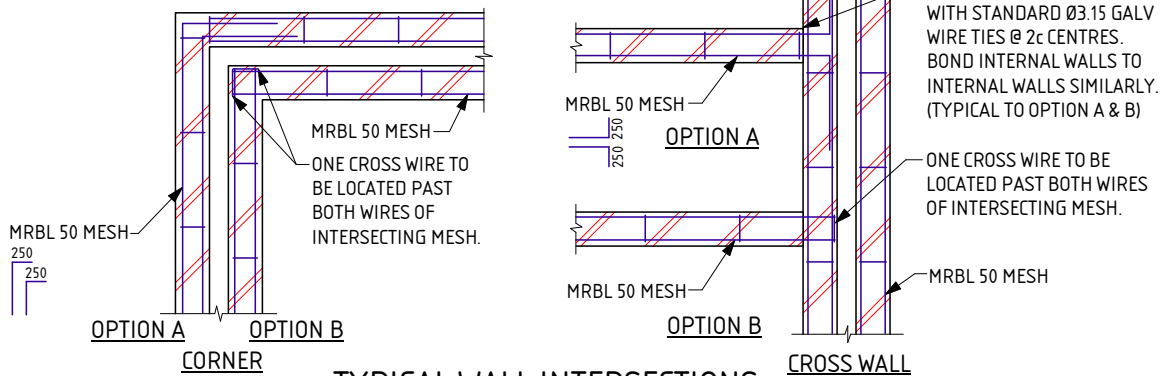
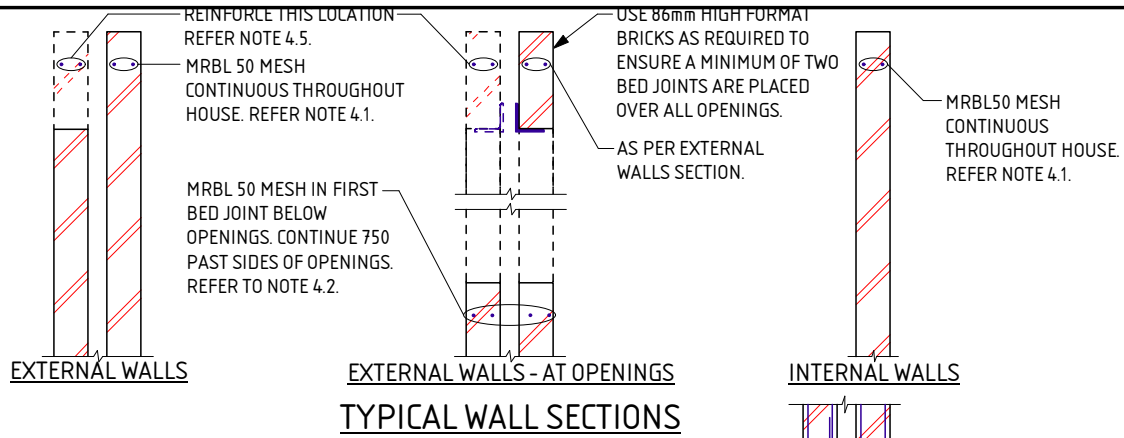
PROJECT:  
LOT 352 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE 1:20

DATE 24/4/23

APPROVED



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT: LOT 352 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 24/4/23

APPROVED



## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemia Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unit 1 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 352 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 24/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :

LOT 352 CLOUDBURST AV BALDIVIS

CLIENT :

KEC NOMINEES PTY LTD

SCALE

1:20

APPROVED

DATE

24/4/23

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

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2598926

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 353 CLOUDBURST AV BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096816  
**DATE OF ASSESSMENT** 21/4/23

**SITE RECORD**

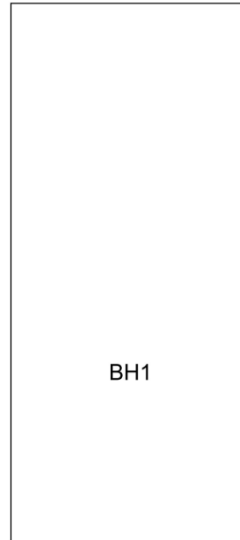


SITE CLASSIFICATION	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
FOOTING DETAIL	<b>CM3</b>
SAND PAD	<b>No sand pad required structurally</b>
BUSHFIRE PRONE AREA	<b>Yes</b> <i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	<b>N2</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	Partial Shielding

## SOIL PROFILE

BOREHOLE 1: 0 - 2200 FILL - sand trace gravel (limestone) - brown; 2200 hard ground refusal.

## APPROXIMATE BOREHOLE LOCATIONS



CLOUDBURST AVE

### NOTE 1 Explanatory Notes & Standard Recommendations

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

### NOTE 2 Bushfire - Prone Area

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

## ADDITIONAL NOTES / REQUIREMENTS

### Site Condition

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

### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J416765 dated 24/08/2022.

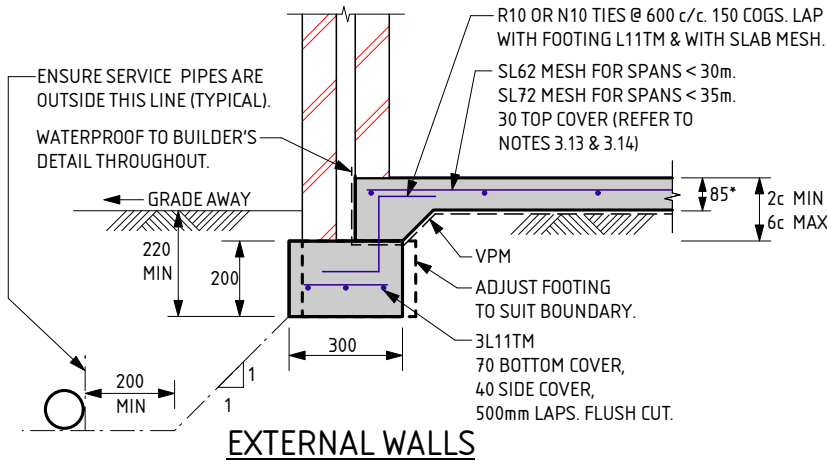
### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

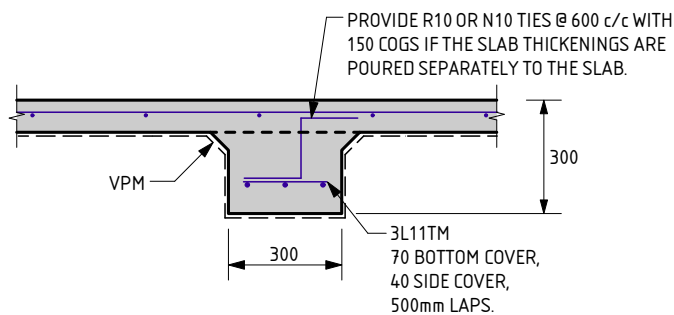
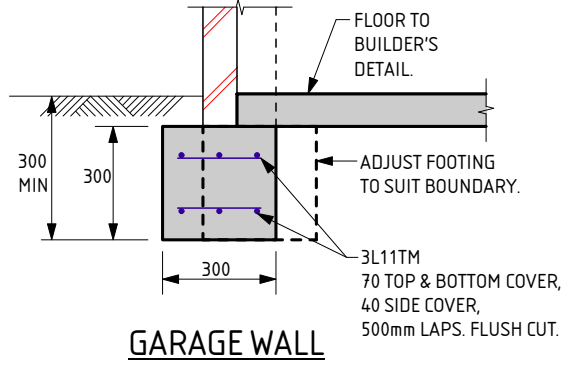
### Internal Thickening Inspection

This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

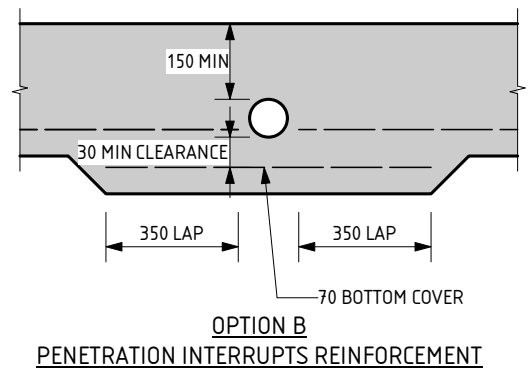
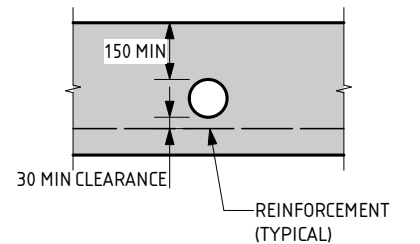
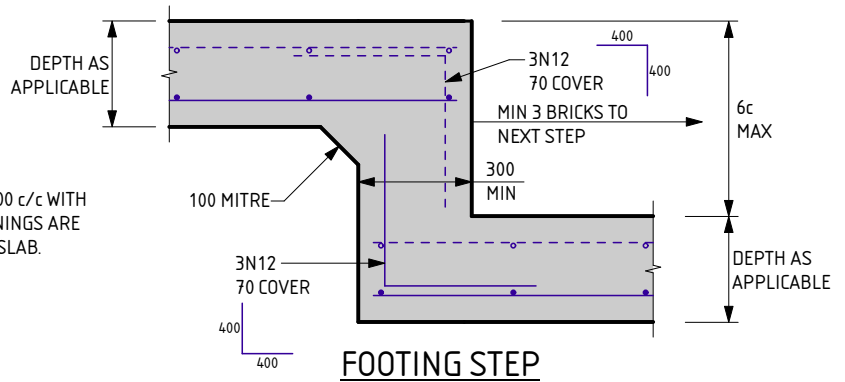
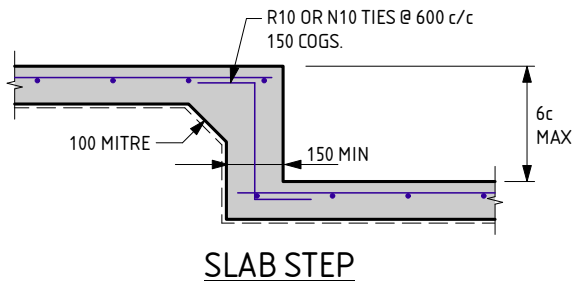
**-- END OF REPORT --**



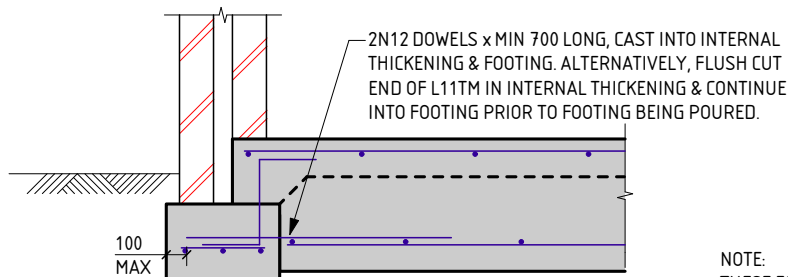
\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
IF 100mm SLAB USED, MESH TO BE:  
SL62 MESH FOR SPANS < 25m.  
SL72 MESH FOR SPANS < 30m.  
SL82 MESH FOR SPANS < 35m.



REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**SERVICE PIPE DIAGRAM**  
- MAXIMUM PENETRATION SIZE TO BE Ø150.



NOTE:  
THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
DATE LAST MODIFIED - 19/01/23

**CM3**  
CAVITY MASONRY

THIS DETAIL IS EQUIVALENT TO  
STRUCTERRE FOOTING DETAIL C4.0

**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, BALEGATTA WA 6021

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

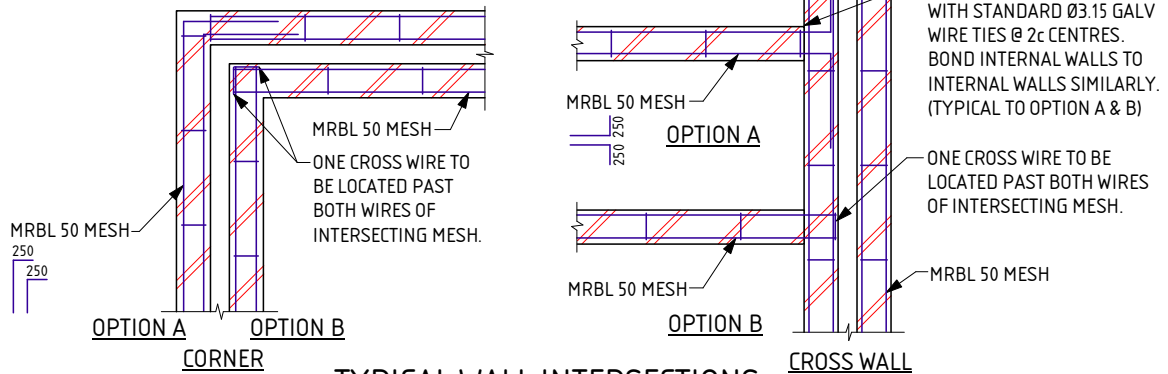
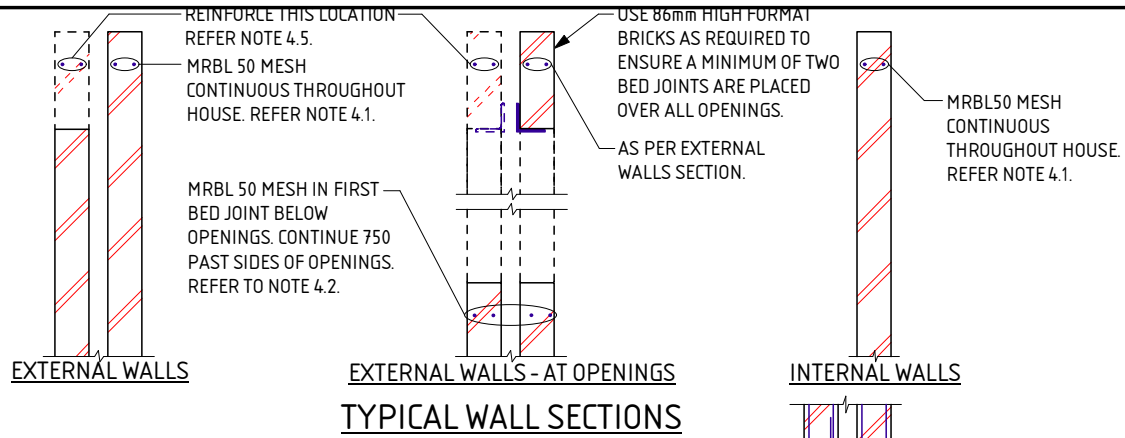
PROJECT:  
LOT 353 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE 1:20

DATE 24/4/23

APPROVED



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

PROJECT : <b>LOT 353 CLOUDBURST AV BALDIVIS</b>	
CLIENT : <b>KEC NOMINEES PTY LTD</b>	
SCALE : <b>1:20</b>	APPROVED
DATE : <b>24/4/23</b>	

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemia Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unit 1 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 353 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 24/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :

LOT 353 CLOUDBURST AV BALDIVIS

CLIENT :

KEC NOMINEES PTY LTD

SCALE

1:20

APPROVED

DATE

24/4/23

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



**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2601425

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 354 AVALANCHE PDE BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096844  
**DATE OF ASSESSMENT** 17/7/23

**SITE RECORD**

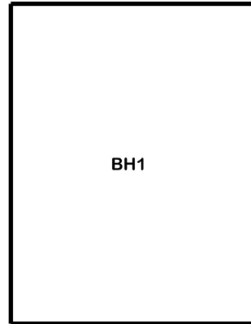


**SITE CLASSIFICATION** **S - EQUIVALENT** *(in accordance with AS2870)*  
**FOOTING DETAIL** **CM3**  
**SAND PAD** **No sand pad required structurally**  
**BUSHFIRE PRONE AREA** **Yes** *(see NOTE 2.)*  
**CORROSION CLASSIFICATION** **R3** *(Durability Class in accordance with AS3700)*  
**WIND CLASSIFICATION** **N2** *(in accordance with AS4055)*  
    **-TERRAIN CATEGORY** 2  
    **-TOPOGRAPHIC** T0  
    **-SHIELDING** No Shielding

## SOIL PROFILE

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

## APPROXIMATE BOREHOLE LOCATIONS



Avalanche Parade

### NOTE 1 Explanatory Notes & Standard Recommendations

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

### NOTE 2 Bushfire - Prone Area

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

## ADDITIONAL NOTES / REQUIREMENTS

### Site Condition

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

### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J416765 dated 24/08/2022.

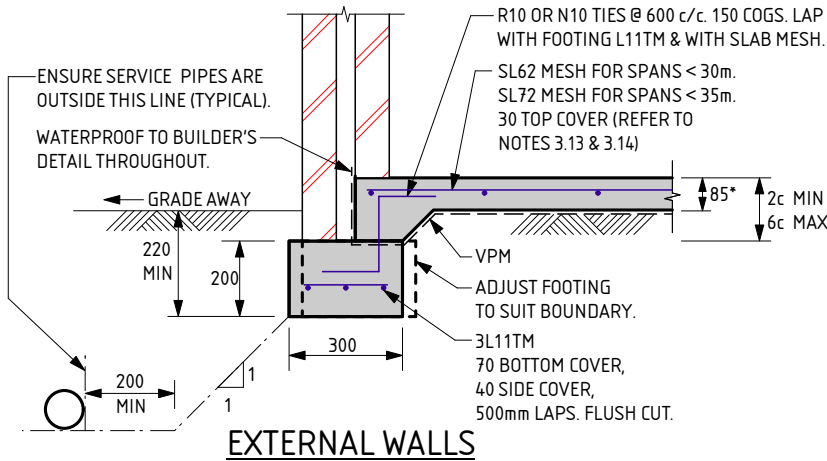
### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

### Internal Thickening Inspection

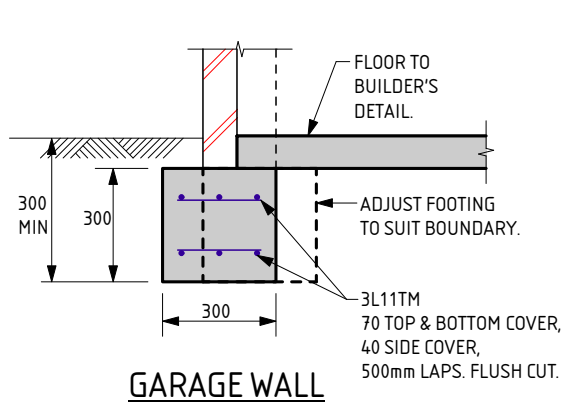
This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

**-- END OF REPORT --**

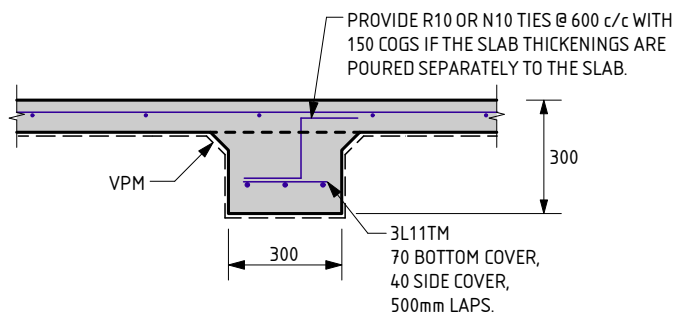


**EXTERNAL WALLS**

\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
 IF 100mm SLAB USED, MESH TO BE:  
 SL62 MESH FOR SPANS < 25m.  
 SL72 MESH FOR SPANS < 30m.  
 SL82 MESH FOR SPANS < 35m.

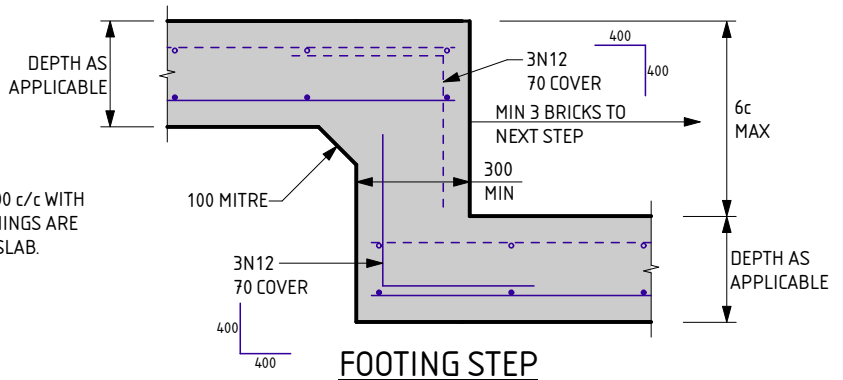


**GARAGE WALL**

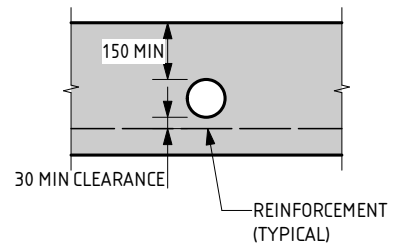


**INTERNAL THICKENING**

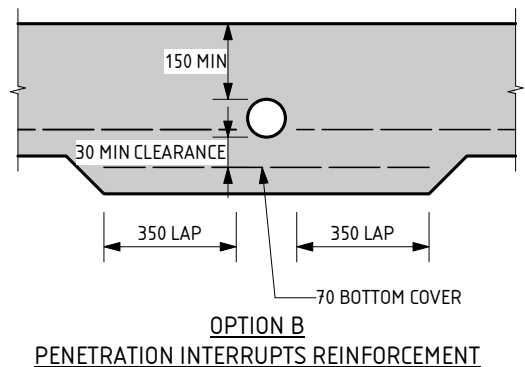
REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**FOOTING STEP**



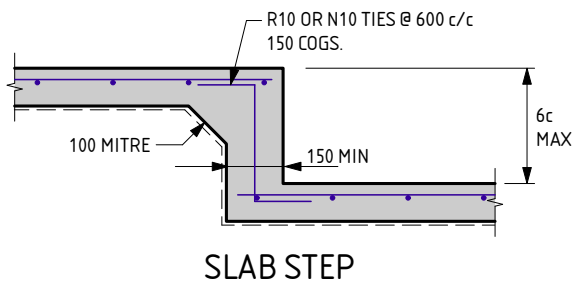
**OPTION A  
PENETRATION CLEAR OF REINFORCEMENT**



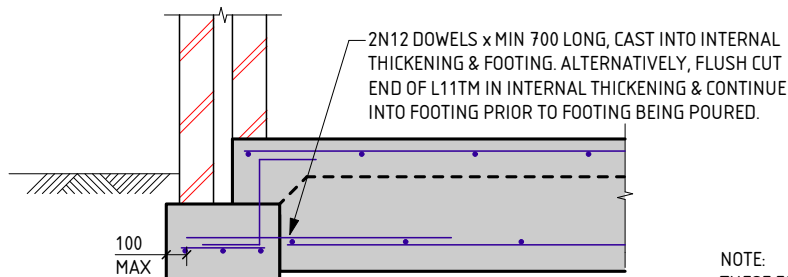
**OPTION B  
PENETRATION INTERRUPTS REINFORCEMENT**

**SERVICE PIPE DIAGRAM**

- MAXIMUM PENETRATION SIZE TO BE Ø150.



**SLAB STEP**



**EXTERNAL FOOTING TO INTERNAL THICKENING**

THIS DETAIL IS EQUIVALENT TO  
 STRUCTERRE FOOTING DETAIL C4.0

NOTE:  
 THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
 DATE LAST MODIFIED - 19/01/23

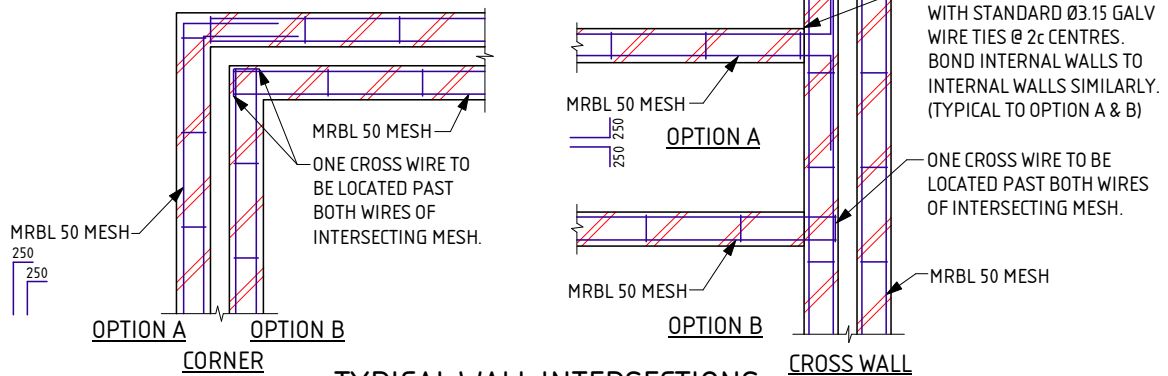
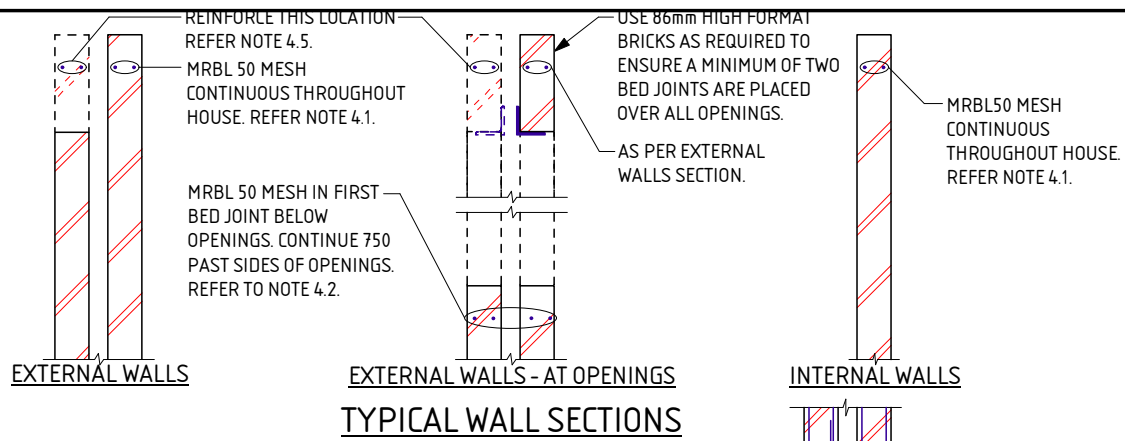
**CM3**  
 CAVITY MASONRY



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

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

PROJECT: LOT 354 AVALANCHE PDE BALDIVIS	
CLIENT: KEC NOMINEES PTY LTD	
SCALE: 1:20	APPROVED 
DATE: 18/7/23	



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT: LOT 354 AVALANCHE PDE BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 18/7/23

APPROVED

# EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

## EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

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

PROJECT :  
LOT 354 AVALANCHE PDE BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 18/7/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :

LOT 354 AVALANCHE PDE BALDIVIS

CLIENT :

KEC NOMINEES PTY LTD

SCALE

1:20

APPROVED

DATE

18/7/23

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

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2601426

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 355 AVALANCHE PDE BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096842  
**DATE OF ASSESSMENT** 17/7/23

**SITE RECORD**

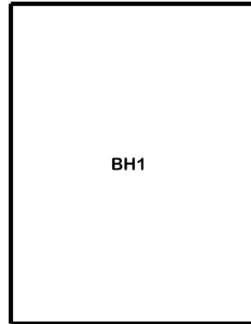


<b>SITE CLASSIFICATION</b>	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
<b>FOOTING DETAIL</b>	<b>CM3</b>
<b>SAND PAD</b>	<b>No sand pad required structurally</b>
<b>BUSHFIRE PRONE AREA</b>	<b>Yes</b> <i>(see NOTE 2.)</i>
<b>CORROSION CLASSIFICATION</b>	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
<b>WIND CLASSIFICATION</b>	<b>N2</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	No Shielding

## SOIL PROFILE

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

## APPROXIMATE BOREHOLE LOCATIONS



Avalanche Parade

### NOTE 1 Explanatory Notes & Standard Recommendations

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

### NOTE 2 Bushfire - Prone Area

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

## ADDITIONAL NOTES / REQUIREMENTS

### Site Condition

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

### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J416765 dated 24/08/2022.

### Internal Thickenings

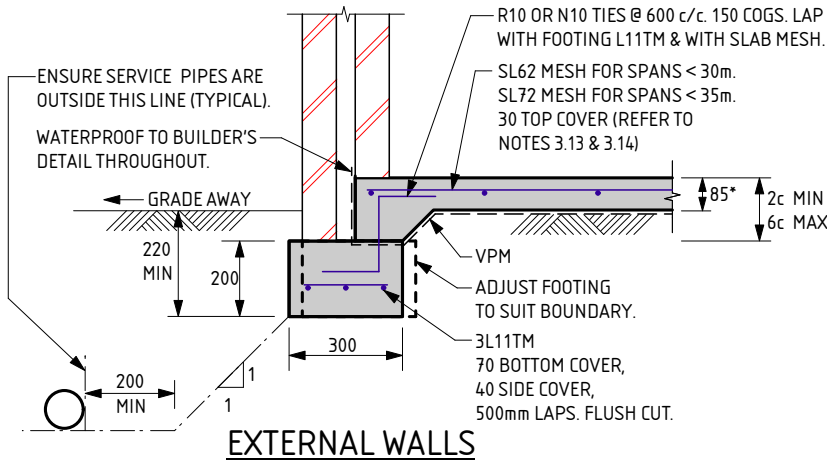
Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

### Internal Thickening Inspection

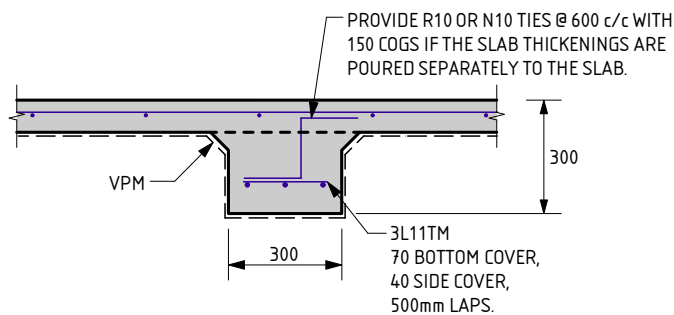
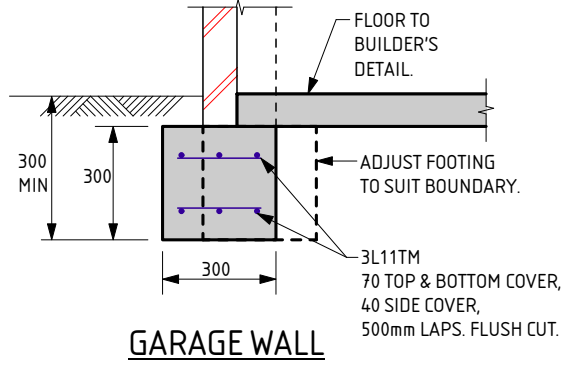
This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

**-- END OF REPORT --**

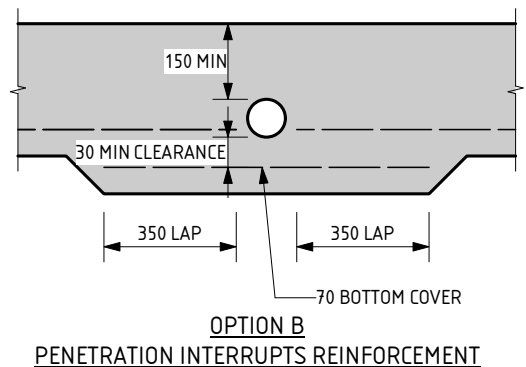
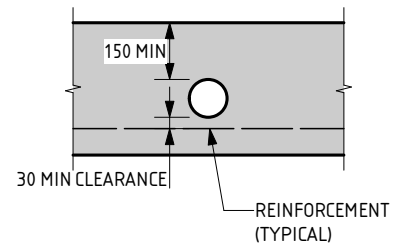
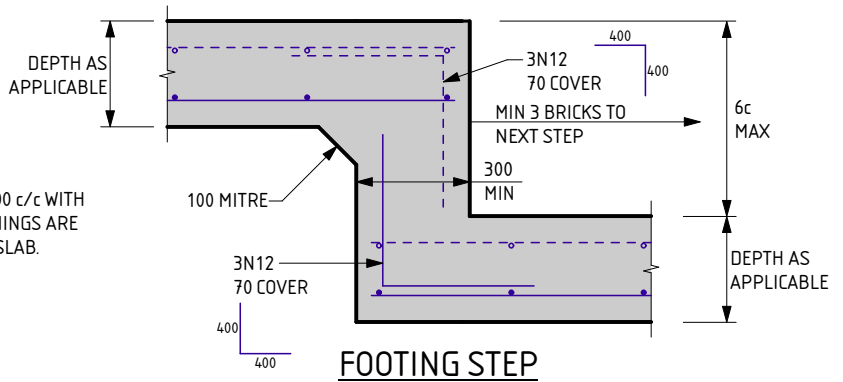
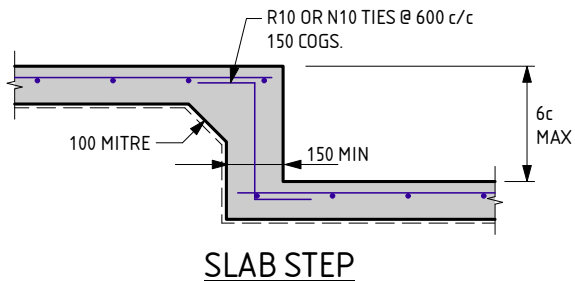




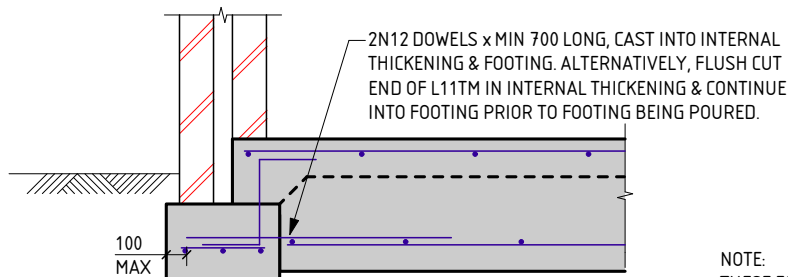
\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
IF 100mm SLAB USED, MESH TO BE:  
SL62 MESH FOR SPANS < 25m.  
SL72 MESH FOR SPANS < 30m.  
SL82 MESH FOR SPANS < 35m.



REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**SERVICE PIPE DIAGRAM**  
- MAXIMUM PENETRATION SIZE TO BE Ø150.



NOTE:  
THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
DATE LAST MODIFIED - 19/01/23

**CM3**  
CAVITY MASONRY

THIS DETAIL IS EQUIVALENT TO  
STRUCTERRE FOOTING DETAIL C4.0

**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, BALEATTA W.A. 6021

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

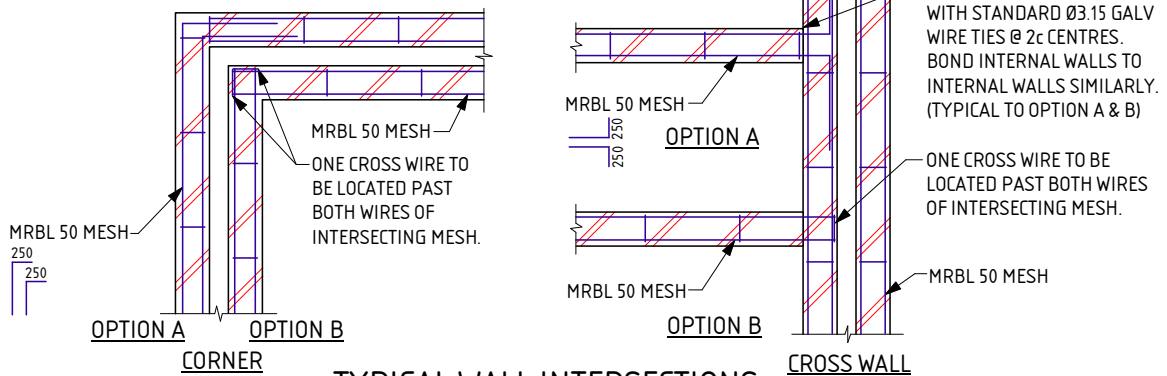
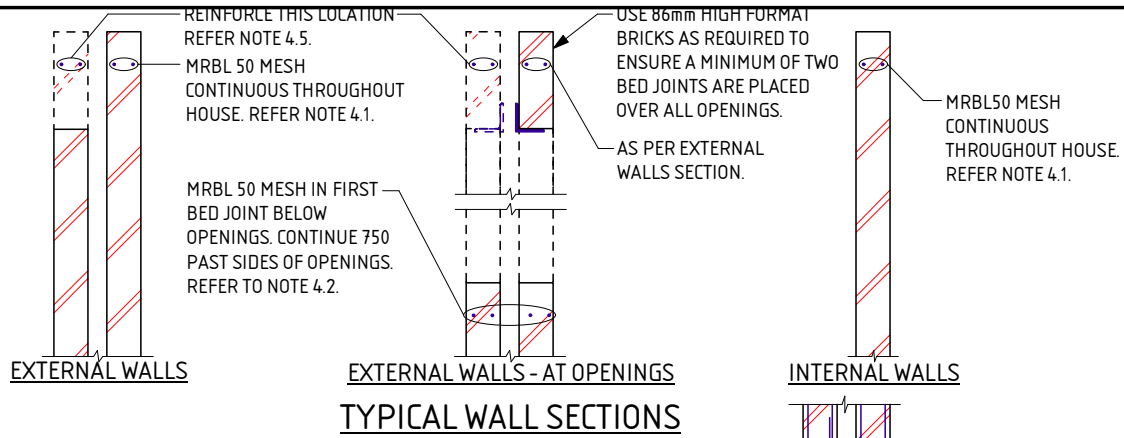
PROJECT:  
LOT 355 AVALANCHE PDE BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 18/7/23

APPROVED



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT: LOT 355 AVALANCHE PDE BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 18/7/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unit 1 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 355 AVALANCHE PDE BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 18/7/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :

LOT 355 AVALANCHE PDE BALDIVIS

CLIENT :

KEC NOMINEES PTY LTD

SCALE

1:20

APPROVED

DATE

18/7/23

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

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2601427

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 356 AVALANCHE PDE BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096839  
**DATE OF ASSESSMENT** 17/7/23

**SITE RECORD**

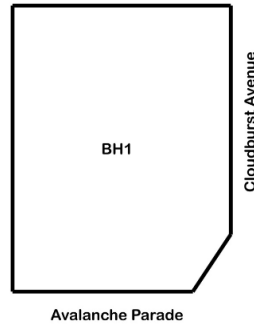


**SITE CLASSIFICATION** **S - EQUIVALENT** *(in accordance with AS2870)*  
**FOOTING DETAIL** **CM3**  
**SAND PAD** **No sand pad required structurally**  
**BUSHFIRE PRONE AREA** **Yes** *(see NOTE 2.)*  
**CORROSION CLASSIFICATION** **R3** *(Durability Class in accordance with AS3700)*  
**WIND CLASSIFICATION** **N2** *(in accordance with AS4055)*  
    -TERRAIN CATEGORY 2  
    -TOPOGRAPHIC T0  
    -SHIELDING No Shielding

## SOIL PROFILE

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

## APPROXIMATE BOREHOLE LOCATIONS



### NOTE 1 Explanatory Notes & Standard Recommendations

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

### NOTE 2 Bushfire - Prone Area

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

## ADDITIONAL NOTES / REQUIREMENTS

### Site Condition

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

### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J416765 dated 24/08/2022.

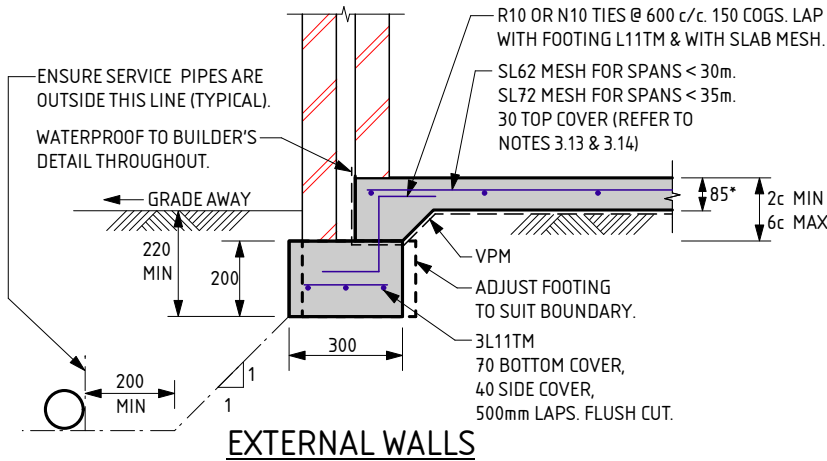
### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

### Internal Thickening Inspection

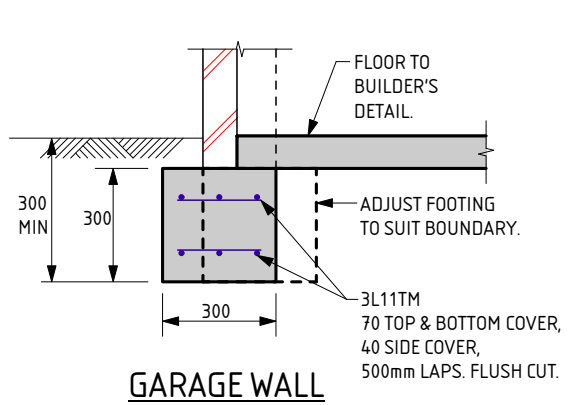
This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

**-- END OF REPORT --**

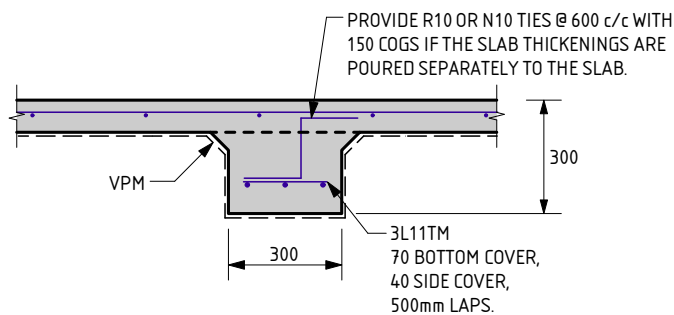


**EXTERNAL WALLS**

\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
 IF 100mm SLAB USED, MESH TO BE:  
 SL62 MESH FOR SPANS < 25m.  
 SL72 MESH FOR SPANS < 30m.  
 SL82 MESH FOR SPANS < 35m.

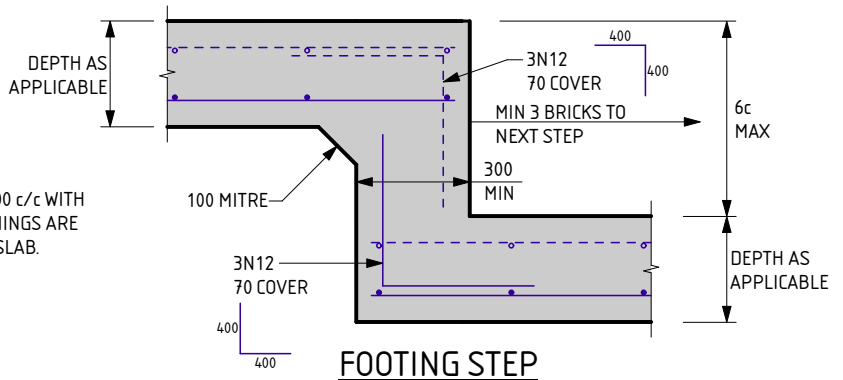


**GARAGE WALL**

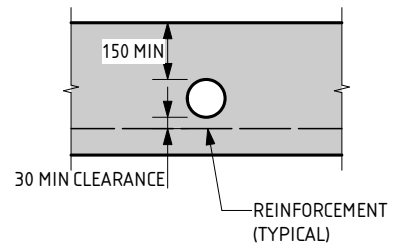


**INTERNAL THICKENING**

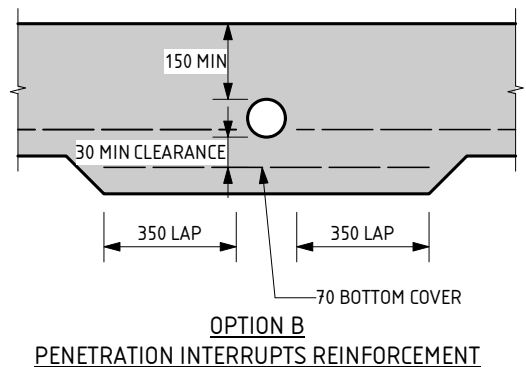
REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**FOOTING STEP**



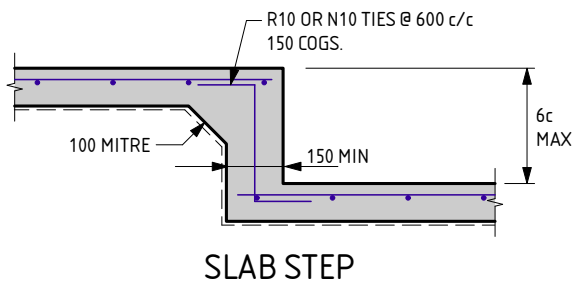
**OPTION A  
PENETRATION CLEAR OF REINFORCEMENT**



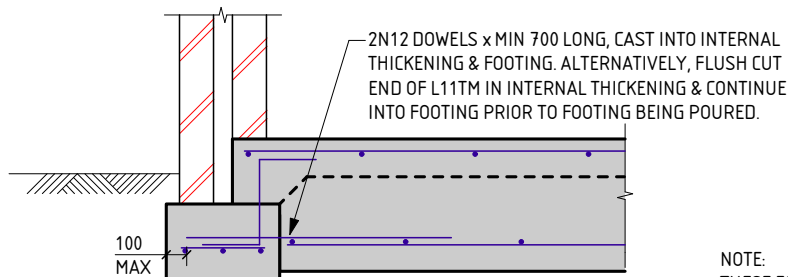
**OPTION B  
PENETRATION INTERRUPTS REINFORCEMENT**

**SERVICE PIPE DIAGRAM**

- MAXIMUM PENETRATION SIZE TO BE Ø150.



**SLAB STEP**



**EXTERNAL FOOTING TO INTERNAL THICKENING**

THIS DETAIL IS EQUIVALENT TO  
 STRUCTERRE FOOTING DETAIL C4.0

NOTE:  
 THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
 DATE LAST MODIFIED - 19/01/23

**CM3**  
 CAVITY MASONRY



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

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

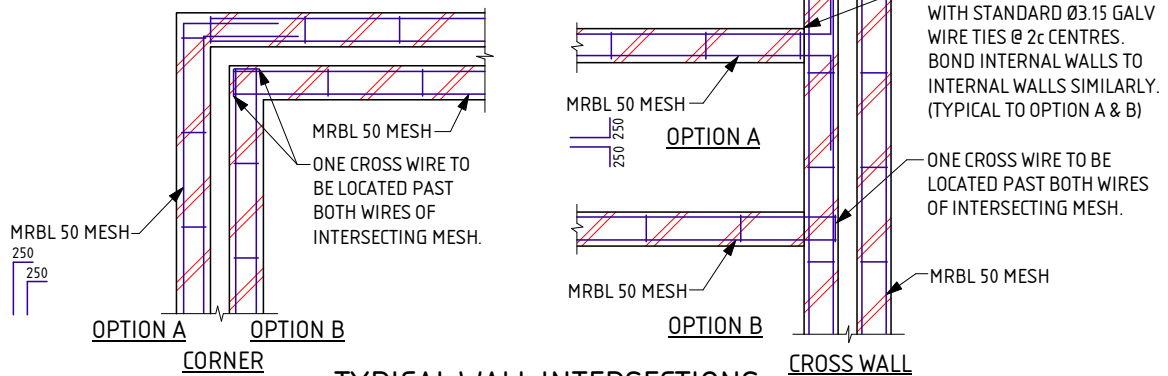
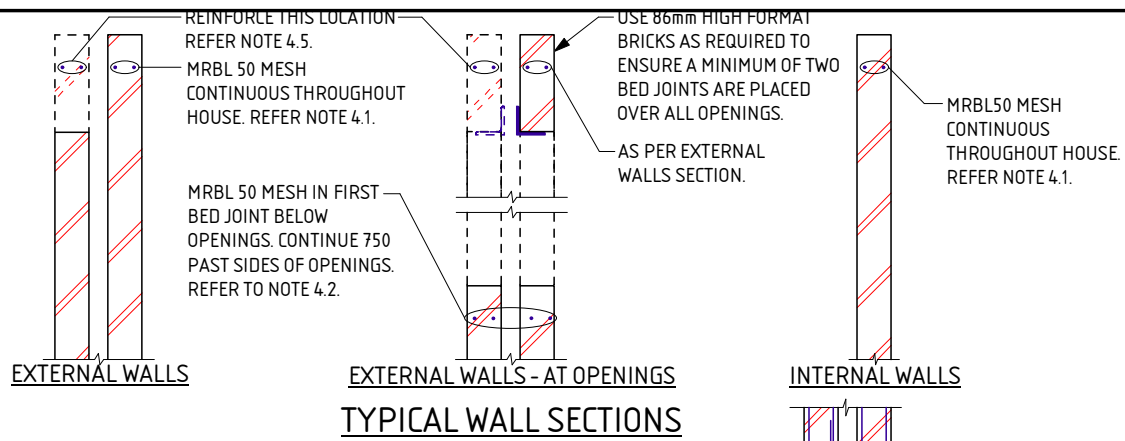
PROJECT: LOT 356 AVALANCHE PDE BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 18/7/23

APPROVED



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT: LOT 356 AVALANCHE PDE BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 18/7/23

APPROVED



## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemia Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unit 1 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 356 AVALANCHE PDE BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 18/7/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :

LOT 356 AVALANCHE PDE BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE 1:20

DATE 18/7/23

APPROVED

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

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2598951

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 357 ROSSBY BVD BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096775  
**DATE OF ASSESSMENT** 24/4/23

**SITE RECORD**

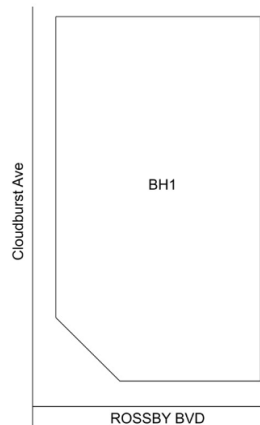


<b>SITE CLASSIFICATION</b>	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
<b>FOOTING DETAIL</b>	<b>CM3</b>
<b>SAND PAD</b>	<b>No sand pad required structurally</b>
<b>BUSHFIRE PRONE AREA</b>	<b>Yes</b> <i>(see NOTE 2.)</i>
<b>CORROSION CLASSIFICATION</b>	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
<b>WIND CLASSIFICATION</b>	<b>N2</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	No Shielding

## SOIL PROFILE

BOREHOLE 1: 0 - 2500 FILL - sand - 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.

### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J413721 dated 08/07/2022.

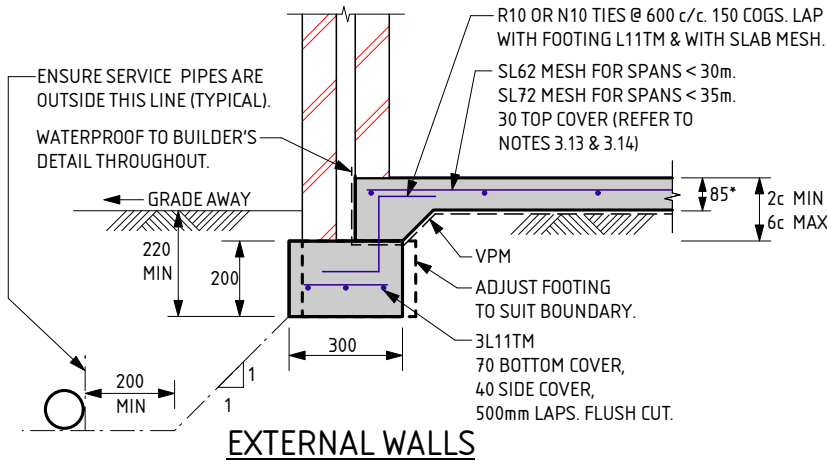
### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

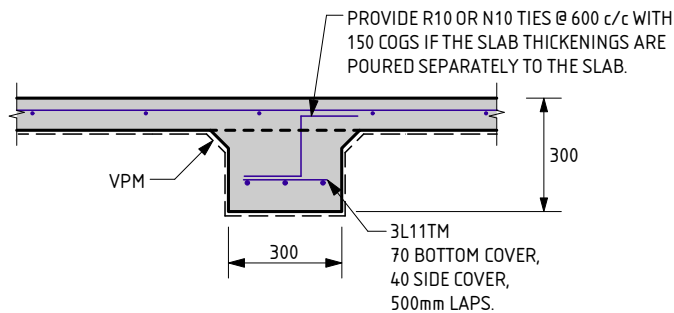
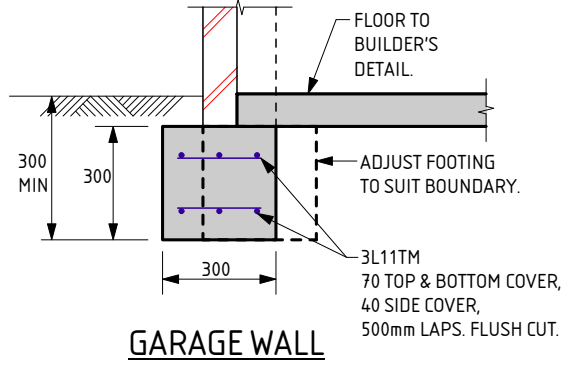
### Internal Thickening Inspection

This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

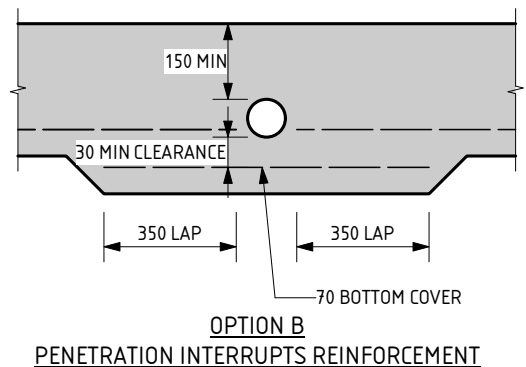
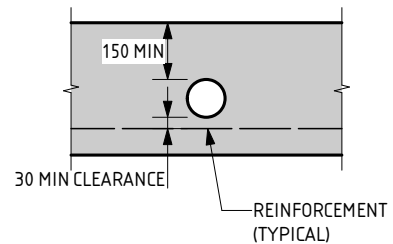
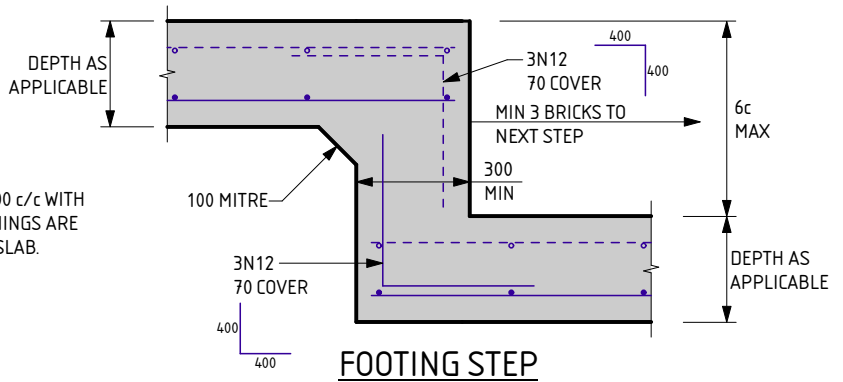
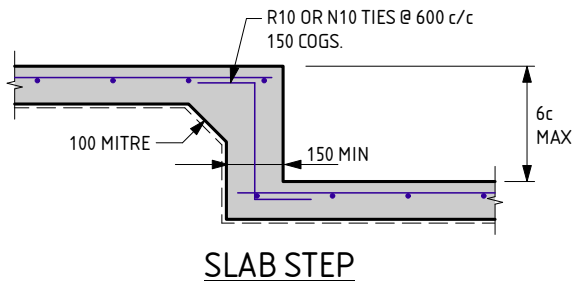
**-- END OF REPORT --**



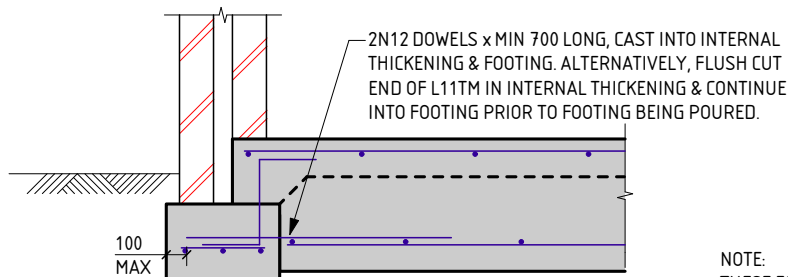
\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
IF 100mm SLAB USED, MESH TO BE:  
SL62 MESH FOR SPANS < 25m.  
SL72 MESH FOR SPANS < 30m.  
SL82 MESH FOR SPANS < 35m.



REFER TO STRUCterre'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCterre PRIOR TO CONCRETE POUR.



**SERVICE PIPE DIAGRAM**  
- MAXIMUM PENETRATION SIZE TO BE Ø150.



**EXTERNAL FOOTING TO INTERNAL THICKENING**

THIS DETAIL IS EQUIVALENT TO  
STRUCterre FOOTING DETAIL C4.0

NOTE:  
THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
DATE LAST MODIFIED - 19/01/23

**CM3**  
CAVITY MASONRY

**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, BALEATTA W.A. 6021

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

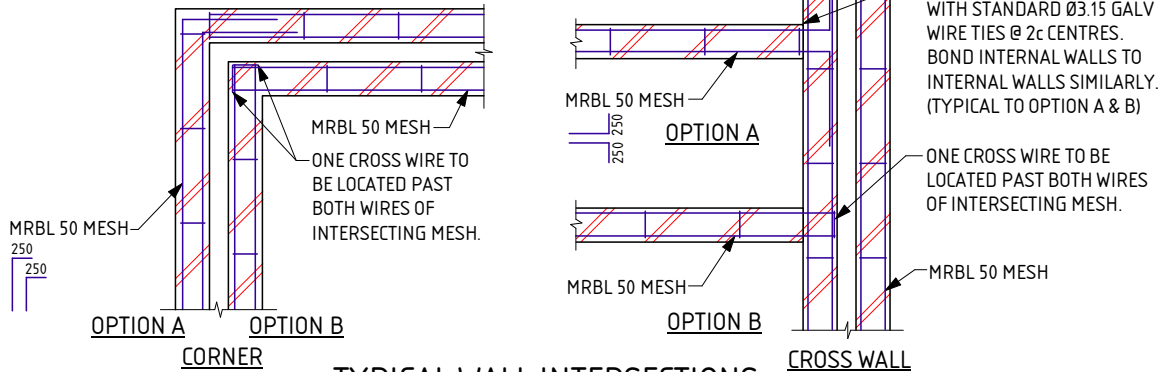
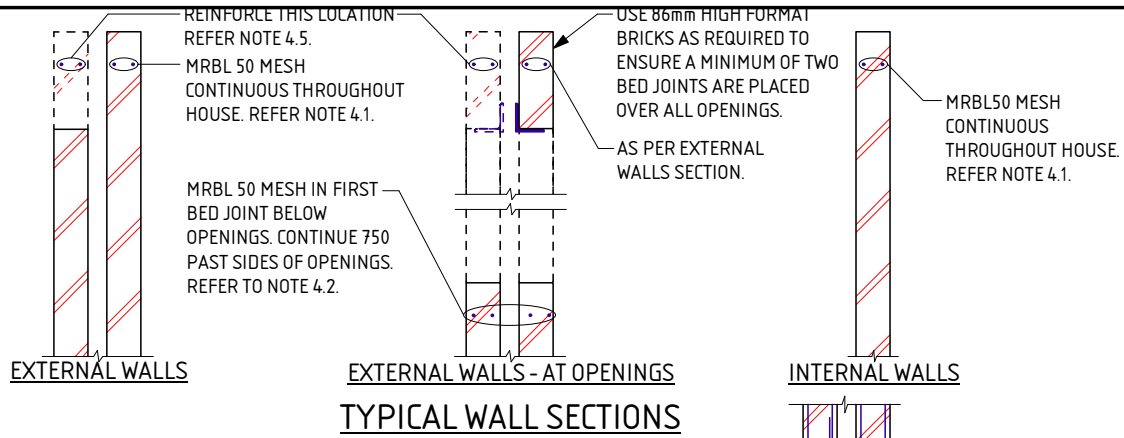
PROJECT:  
LOT 357 ROSSBY BVD BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 24/4/23

APPROVED



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

PROJECT: LOT 357 ROSSBY BVD BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 24/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unitil 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 357 ROSSBY BVD BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 24/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :

LOT 357 ROSSBY BVD BALDIVIS

CLIENT :

KEC NOMINEES PTY LTD

SCALE

1:20

APPROVED

DATE

24/4/23

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



**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2598865

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 359 CLOUDBURST AV BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096776  
**DATE OF ASSESSMENT** 20/4/23

**SITE RECORD**

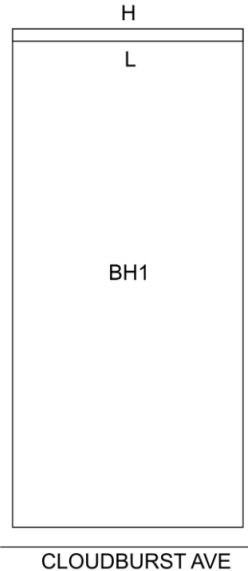


<b>SITE CLASSIFICATION</b>	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
<b>FOOTING DETAIL</b>	<b>CM3</b>
<b>SAND PAD</b>	<b>No sand pad required structurally</b>
<b>BUSHFIRE PRONE AREA</b>	<b>Yes</b> <i>(see NOTE 2.)</i>
<b>CORROSION CLASSIFICATION</b>	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
<b>WIND CLASSIFICATION</b>	<b>N2</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	No Shielding

## SOIL PROFILE

BOREHOLE 1: 0 - 2300 FILL - sand - brown; 2300 - 2500 FILL - sand trace gravel (limestone) - 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.

### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J413721 dated 08/07/2022.

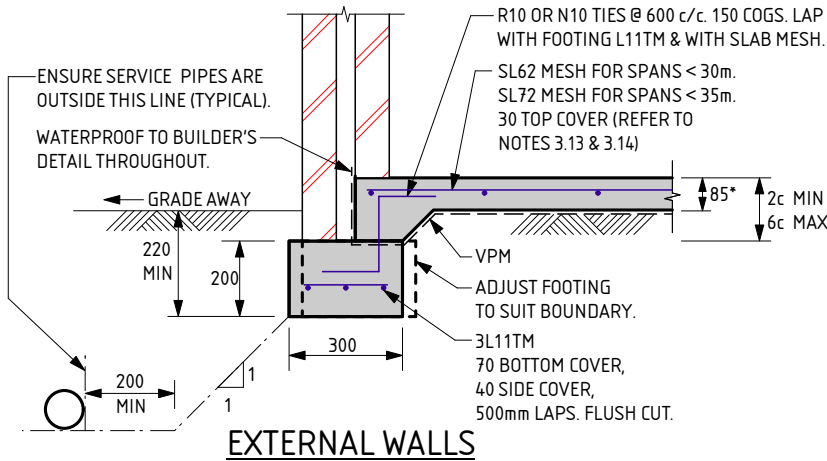
### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

### Internal Thickening Inspection

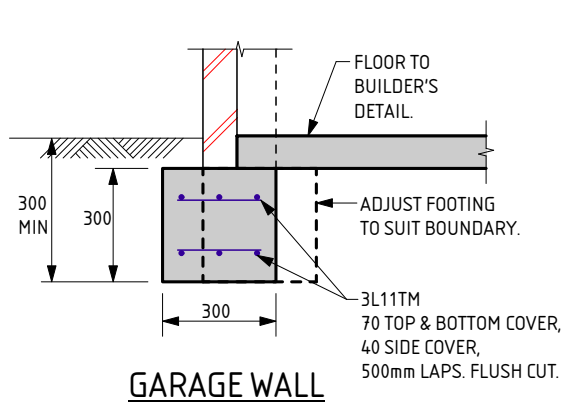
This detail is subject to an internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

-- END OF REPORT --

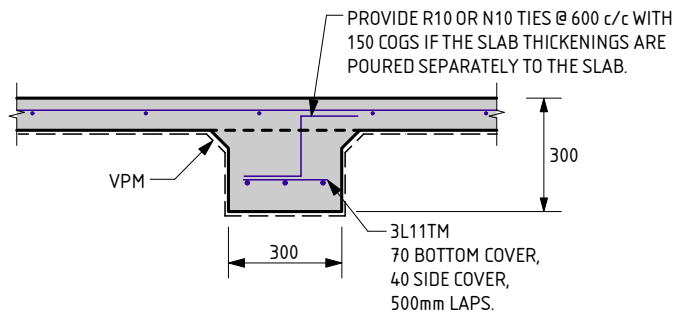


**EXTERNAL WALLS**

\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
 IF 100mm SLAB USED, MESH TO BE:  
 SL62 MESH FOR SPANS < 25m.  
 SL72 MESH FOR SPANS < 30m.  
 SL82 MESH FOR SPANS < 35m.

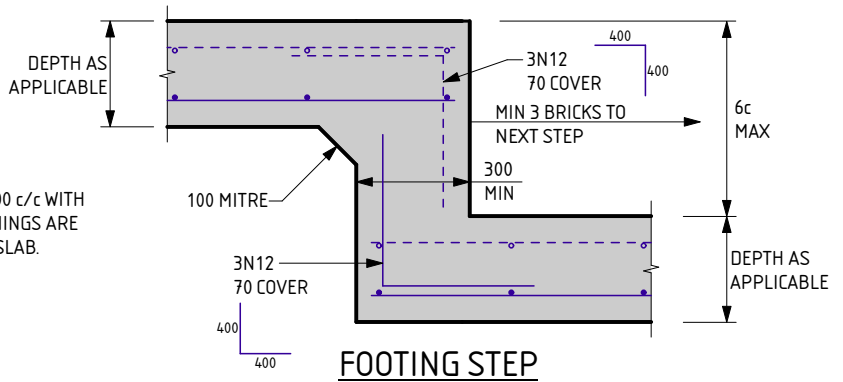


**GARAGE WALL**

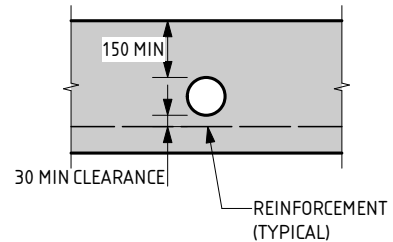


**INTERNAL THICKENING**

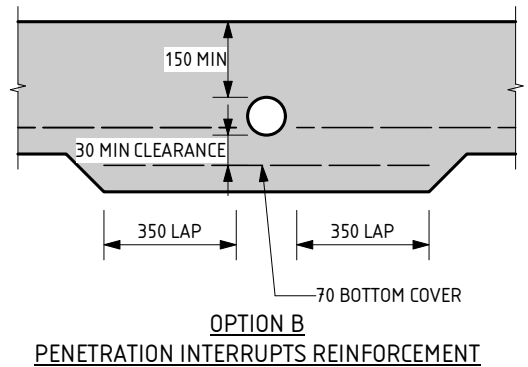
REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**FOOTING STEP**



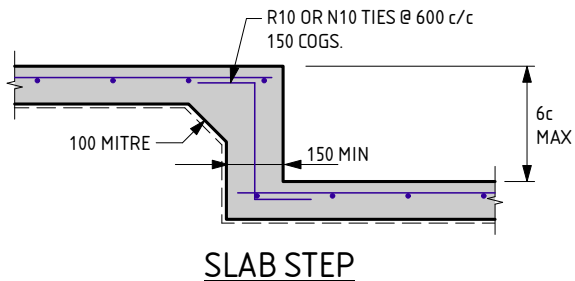
**OPTION A  
PENETRATION CLEAR OF REINFORCEMENT**



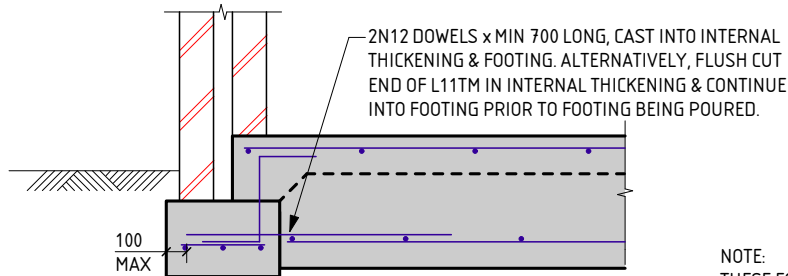
**OPTION B  
PENETRATION INTERRUPTS REINFORCEMENT**

**SERVICE PIPE DIAGRAM**

- MAXIMUM PENETRATION SIZE TO BE Ø150.



**SLAB STEP**



**EXTERNAL FOOTING TO INTERNAL THICKENING**

THIS DETAIL IS EQUIVALENT TO  
 STRUCTERRE FOOTING DETAIL C4.0

NOTE:  
 THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
 DATE LAST MODIFIED - 19/01/23

**CM3**  
 CAVITY MASONRY



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

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

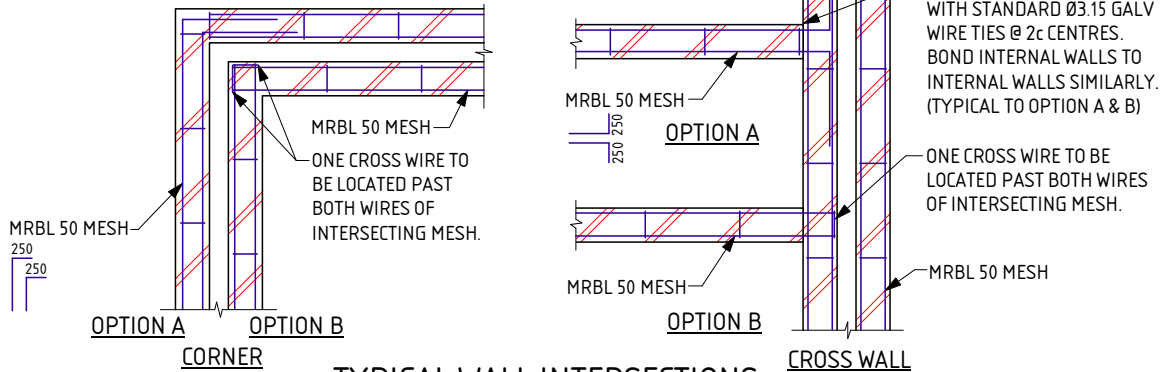
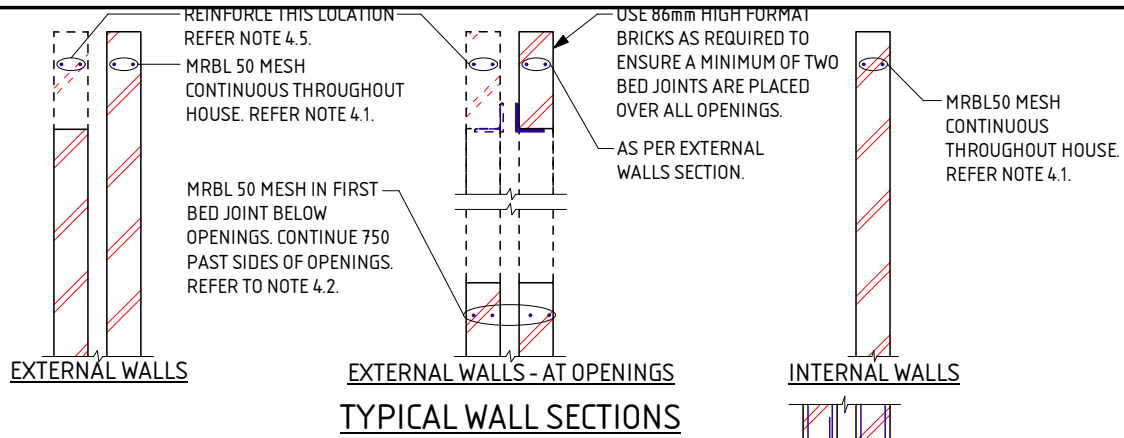
PROJECT: LOT 359 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 21/4/23

APPROVED



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT: LOT 359 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 21/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unit 1 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 359 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 21/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :

LOT 359 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE 1:20

DATE 21/4/23

APPROVED

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

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2598864

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 360 CLOUDBURST AV BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096777  
**DATE OF ASSESSMENT** 20/4/23

**SITE RECORD**

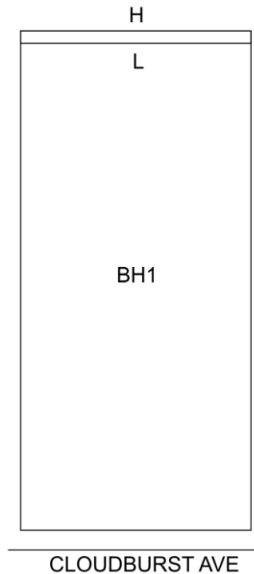


<b>SITE CLASSIFICATION</b>	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
<b>FOOTING DETAIL</b>	<b>CM3</b>
<b>SAND PAD</b>	<b>No sand pad required structurally</b>
<b>BUSHFIRE PRONE AREA</b>	<b>Yes</b> <i>(see NOTE 2.)</i>
<b>CORROSION CLASSIFICATION</b>	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
<b>WIND CLASSIFICATION</b>	<b>N2</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	No Shielding

## SOIL PROFILE

BOREHOLE 1: 0 - 2300 FILL - sand - brown; 2300 - 2500 SAND - 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.

### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J413721 dated 08/07/2022.

### Internal Thickenings

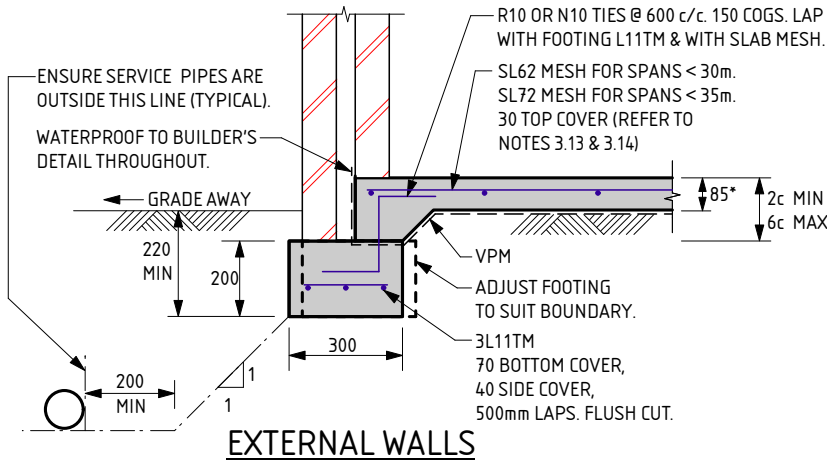
Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

### Internal Thickening Inspection

This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

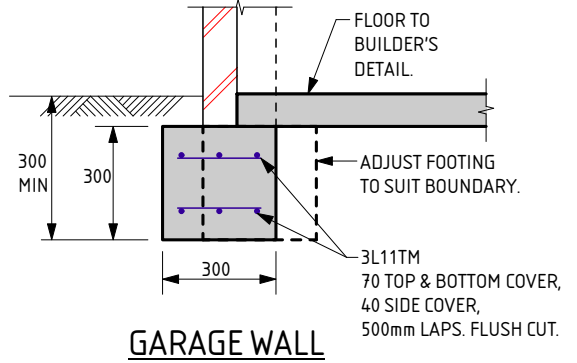
**-- END OF REPORT --**



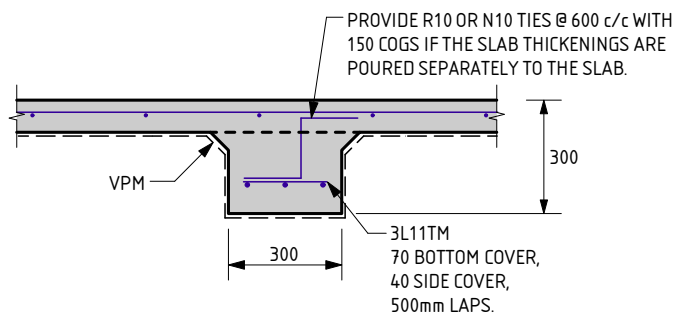


**EXTERNAL WALLS**

\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
 IF 100mm SLAB USED, MESH TO BE:  
 SL62 MESH FOR SPANS < 25m.  
 SL72 MESH FOR SPANS < 30m.  
 SL82 MESH FOR SPANS < 35m.

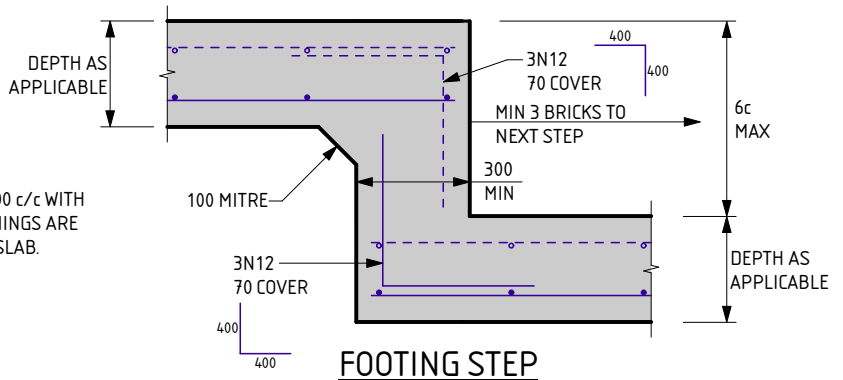


**GARAGE WALL**

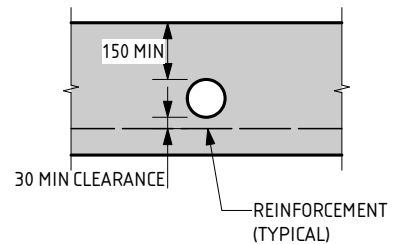


**INTERNAL THICKENING**

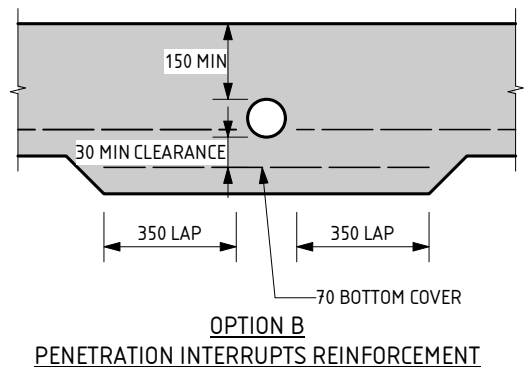
REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**FOOTING STEP**



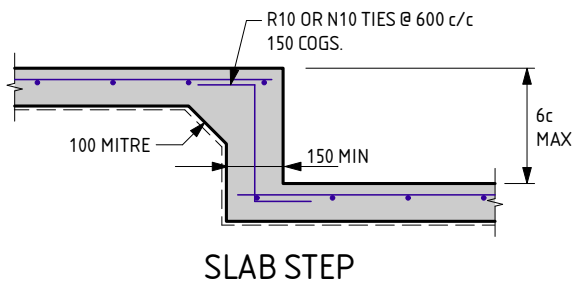
**OPTION A  
PENETRATION CLEAR OF REINFORCEMENT**



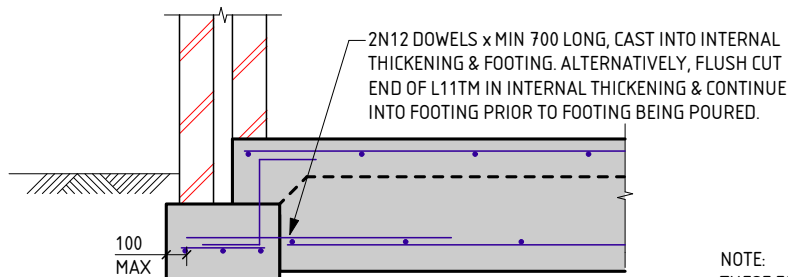
**OPTION B  
PENETRATION INTERRUPTS REINFORCEMENT**

**SERVICE PIPE DIAGRAM**

- MAXIMUM PENETRATION SIZE TO BE Ø150.



**SLAB STEP**



**EXTERNAL FOOTING TO INTERNAL THICKENING**

THIS DETAIL IS EQUIVALENT TO  
 STRUCTERRE FOOTING DETAIL C4.0

NOTE:  
 THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
 DATE LAST MODIFIED - 19/01/23

**CM3**  
 CAVITY MASONRY



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

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

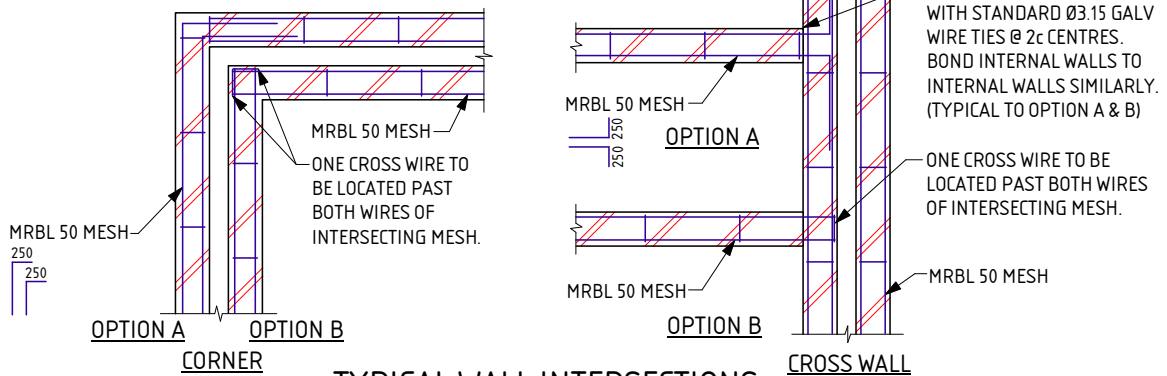
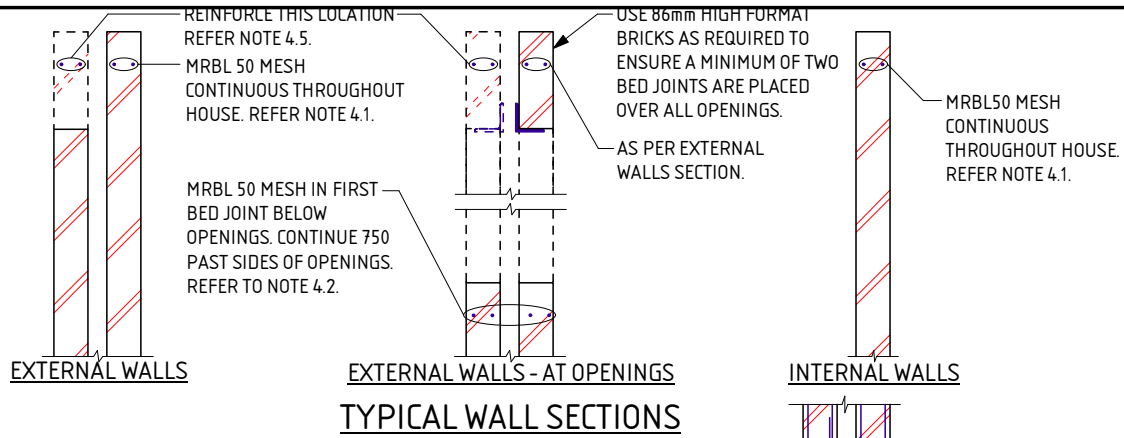
PROJECT: LOT 360 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 21/4/23

APPROVED



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT : <b>LOT 360 CLOUDBURST AV BALDIVIS</b>	
CLIENT : <b>KEC NOMINEES PTY LTD</b>	
SCALE : <b>1:20</b>	APPROVED
DATE : <b>21/4/23</b>	

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unit 1 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 360 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 21/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :  
LOT 360 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 21/4/23

APPROVED

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

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2598863

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 361 CLOUDBURST AV BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096779  
**DATE OF ASSESSMENT** 20/4/23

**SITE RECORD**

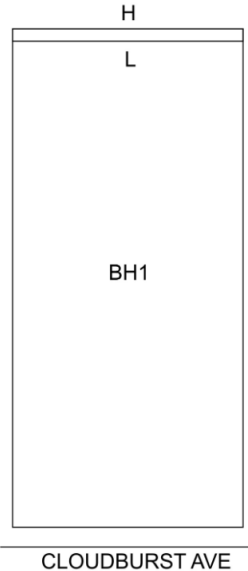


<b>SITE CLASSIFICATION</b>	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
<b>FOOTING DETAIL</b>	<b>CM3</b>
<b>SAND PAD</b>	<b>No sand pad required structurally</b>
<b>BUSHFIRE PRONE AREA</b>	<b>Yes</b> <i>(see NOTE 2.)</i>
<b>CORROSION CLASSIFICATION</b>	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
<b>WIND CLASSIFICATION</b>	<b>N2</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	No Shielding

## SOIL PROFILE

BOREHOLE 1: 0 - 2000 FILL - sand - brown; 2000 - 2200 FILL - sand trace gravel (limestone) - 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.

### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J413721 dated 08/07/2022.

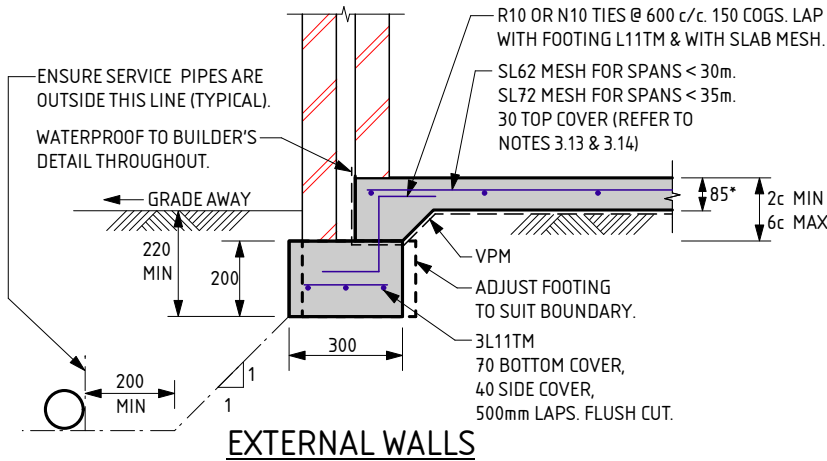
### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

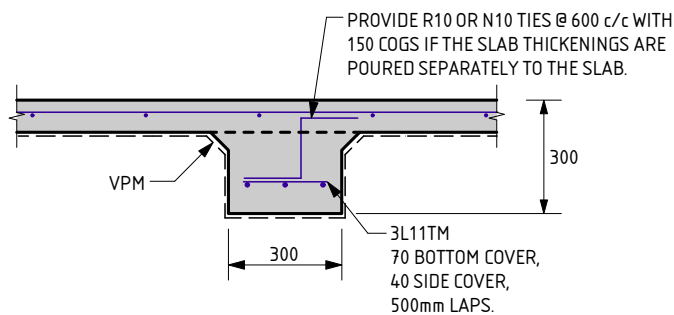
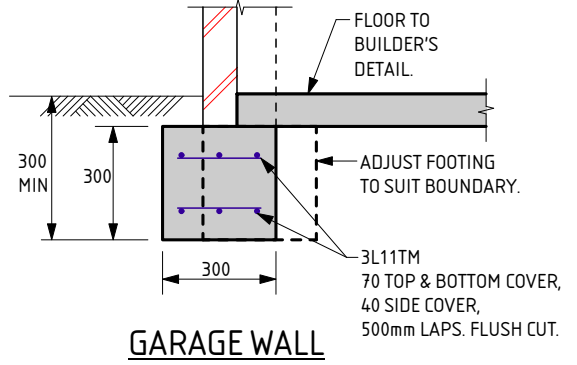
### Internal Thickening Inspection

This detail is subject to an internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

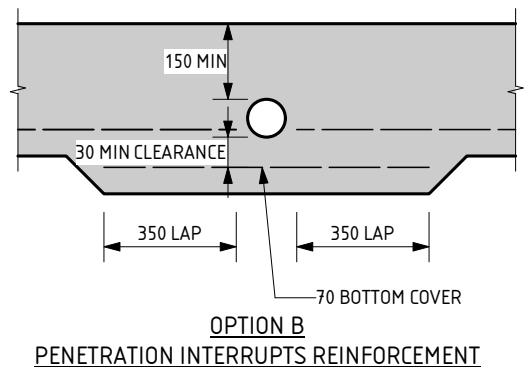
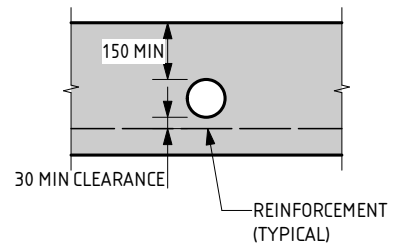
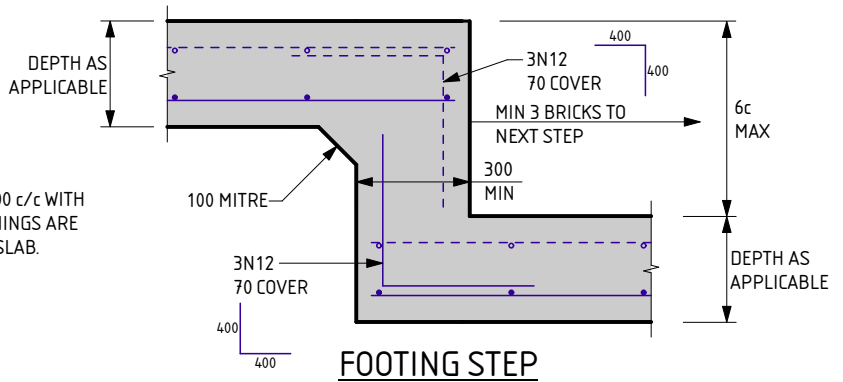
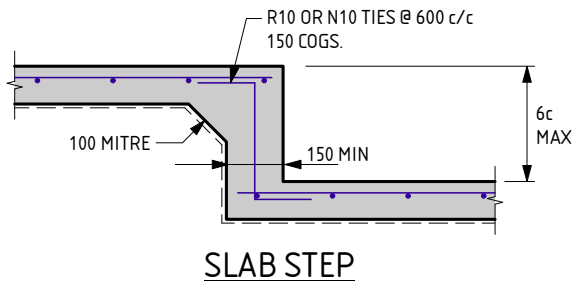
-- END OF REPORT --



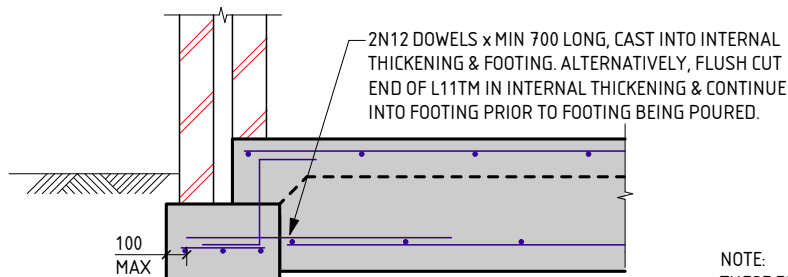
\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
IF 100mm SLAB USED, MESH TO BE:  
SL62 MESH FOR SPANS < 25m.  
SL72 MESH FOR SPANS < 30m.  
SL82 MESH FOR SPANS < 35m.



REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**SERVICE PIPE DIAGRAM**  
- MAXIMUM PENETRATION SIZE TO BE Ø150.



NOTE:  
THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
DATE LAST MODIFIED - 19/01/23

**CM3**  
CAVITY MASONRY

THIS DETAIL IS EQUIVALENT TO  
STRUCTERRE FOOTING DETAIL C4.0

**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, BALEGATTA WA 6021

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

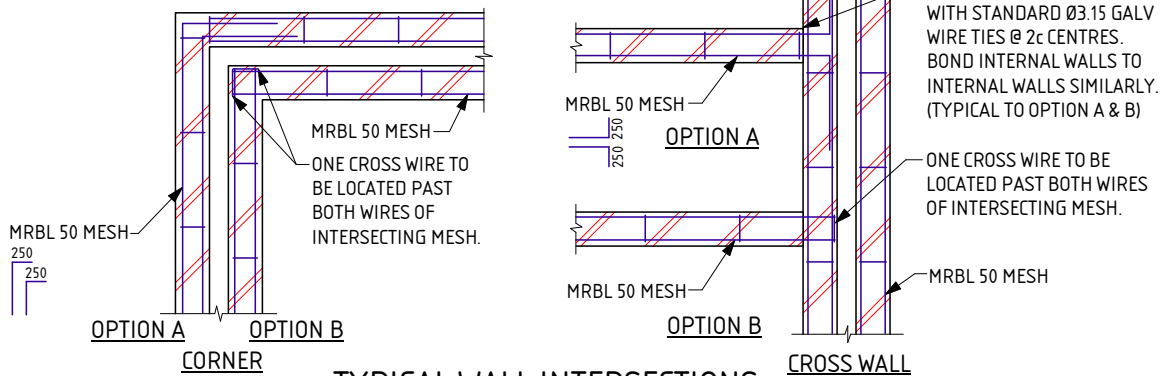
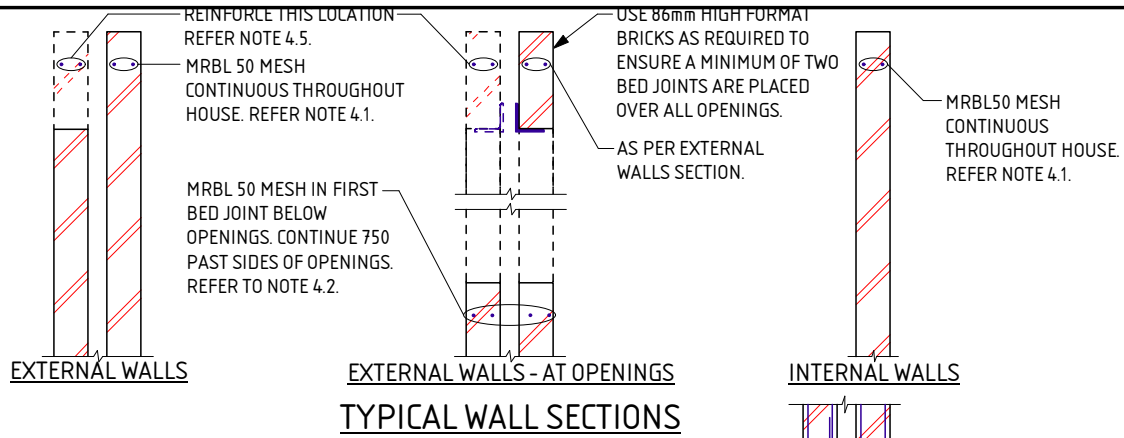
PROJECT:  
LOT 361 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE 1:20

DATE 21/4/23

APPROVED



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT : <b>LOT 361 CLOUDBURST AV BALDIVIS</b>	
CLIENT : <b>KEC NOMINEES PTY LTD</b>	
SCALE : <b>1:20</b>	APPROVED
DATE : <b>21/4/23</b>	



## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemia Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unit 1 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 361 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 21/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT:  
LOT 361 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE 1:20

DATE 21/4/23

APPROVED

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

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2598862

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 362 CLOUDBURST AV BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096780  
**DATE OF ASSESSMENT** 20/4/23

**SITE RECORD**

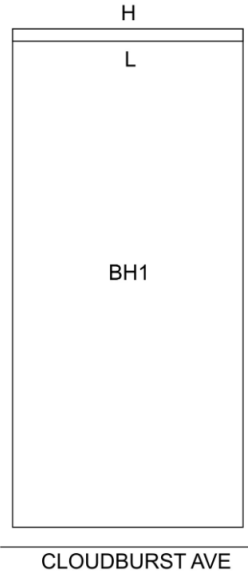


<b>SITE CLASSIFICATION</b>	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
<b>FOOTING DETAIL</b>	<b>CM3</b>
<b>SAND PAD</b>	<b>No sand pad required structurally</b>
<b>BUSHFIRE PRONE AREA</b>	<b>Yes</b> <i>(see NOTE 2.)</i>
<b>CORROSION CLASSIFICATION</b>	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
<b>WIND CLASSIFICATION</b>	<b>N2</b> <i>(in accordance with AS4055)</i>
<b>-TERRAIN CATEGORY</b>	2
<b>-TOPOGRAPHIC</b>	T0
<b>-SHIELDING</b>	No Shielding

## SOIL PROFILE

BOREHOLE 1: 0 - 2300 FILL - sand trace gravel (limestone) - brown; 2300 - 2500 SAND - 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.

### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J413721 dated 08/07/2022.

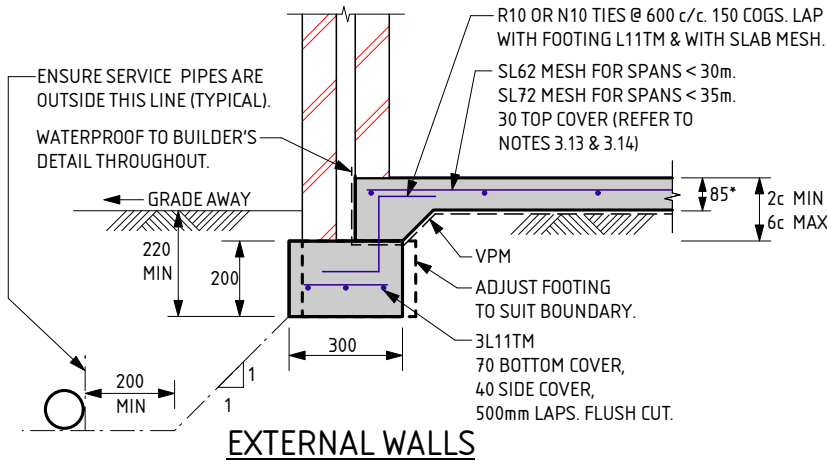
### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

### Internal Thickening Inspection

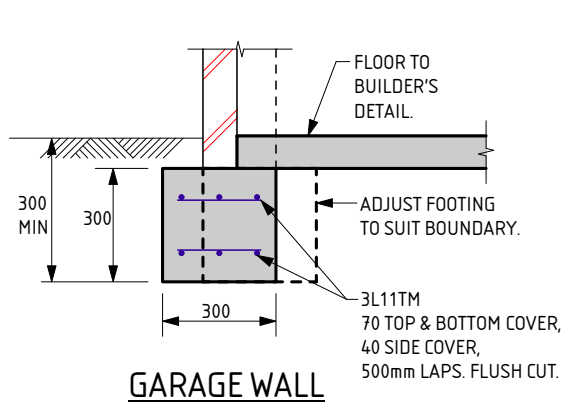
This detail is subject to an internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

**-- END OF REPORT --**

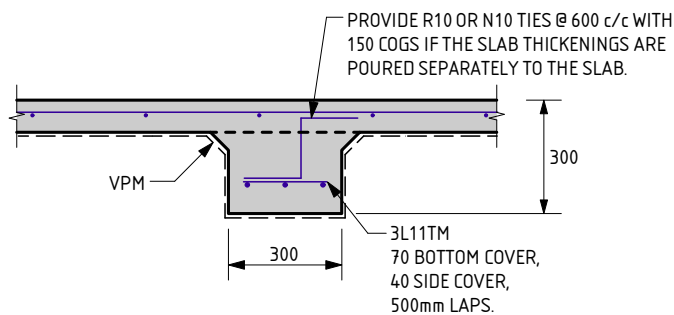


**EXTERNAL WALLS**

\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
 IF 100mm SLAB USED, MESH TO BE:  
 SL62 MESH FOR SPANS < 25m.  
 SL72 MESH FOR SPANS < 30m.  
 SL82 MESH FOR SPANS < 35m.

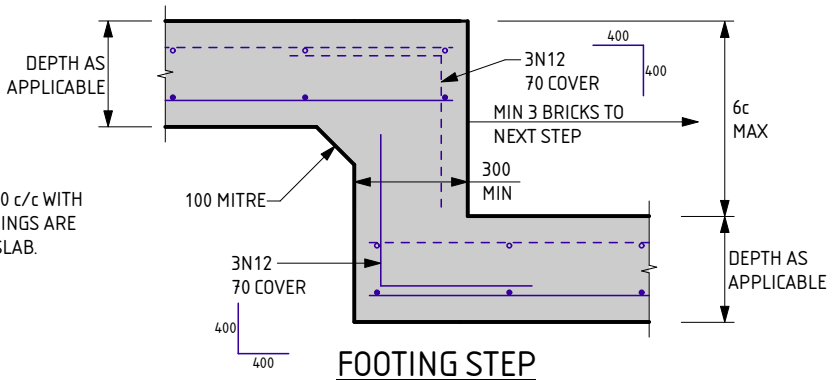


**GARAGE WALL**

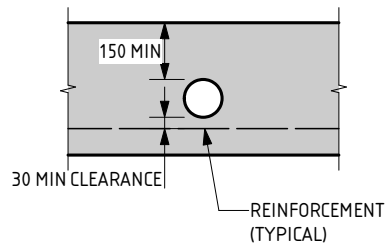


**INTERNAL THICKENING**

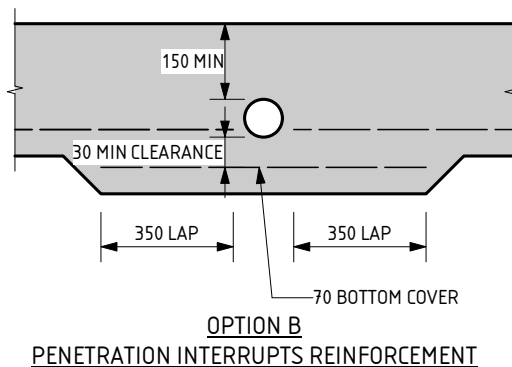
REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**FOOTING STEP**



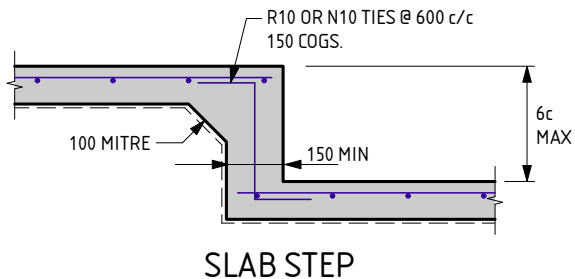
**OPTION A  
PENETRATION CLEAR OF REINFORCEMENT**



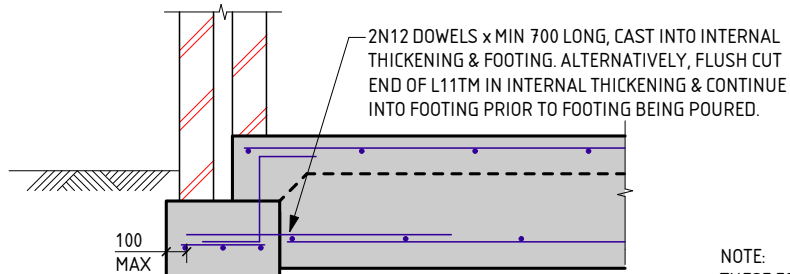
**OPTION B  
PENETRATION INTERRUPTS REINFORCEMENT**

**SERVICE PIPE DIAGRAM**

- MAXIMUM PENETRATION SIZE TO BE Ø150.



**SLAB STEP**



**EXTERNAL FOOTING TO INTERNAL THICKENING**

THIS DETAIL IS EQUIVALENT TO  
 STRUCTERRE FOOTING DETAIL C4.0

NOTE:  
 THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
 DATE LAST MODIFIED - 19/01/23

**CM3**  
 CAVITY MASONRY



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

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

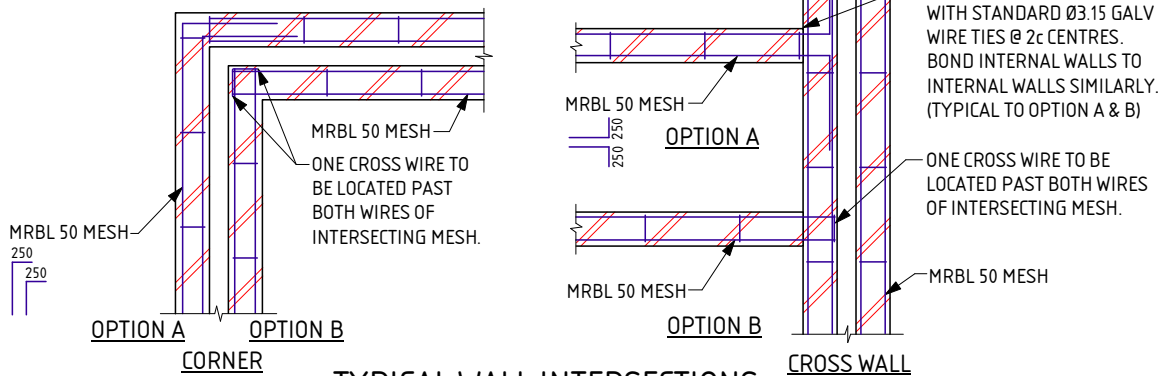
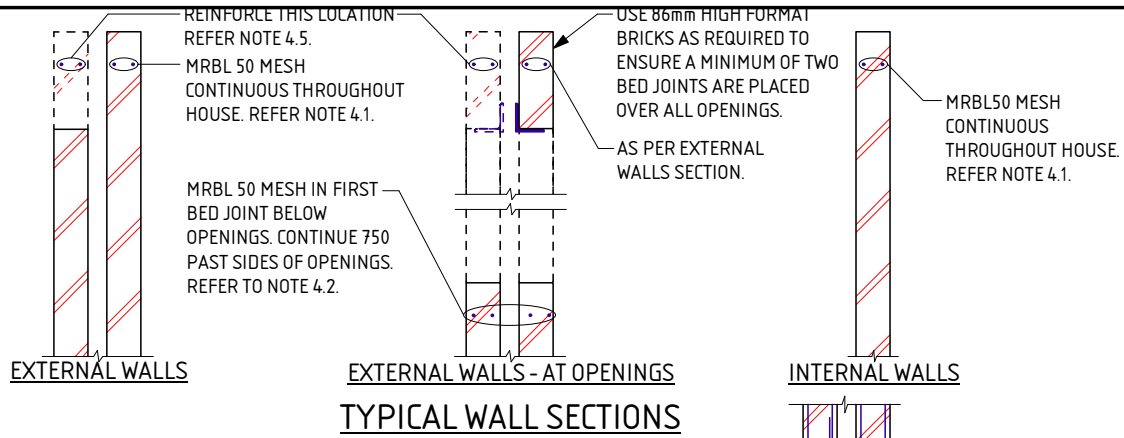
PROJECT: LOT 362 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 21/4/23

APPROVED



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT: LOT 362 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 21/4/23

APPROVED

# EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

## EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unit 1 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 362 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 21/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :  
LOT 362 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE 1:20

DATE 21/4/23

APPROVED

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



**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2598861

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 363 CLOUDBURST AV BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096781  
**DATE OF ASSESSMENT** 20/4/23

**SITE RECORD**

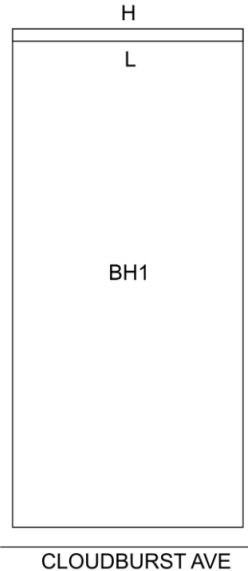


SITE CLASSIFICATION	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
FOOTING DETAIL	<b>CM3</b>
SAND PAD	<b>No sand pad required structurally</b>
BUSHFIRE PRONE AREA	<b>Yes</b> <i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	<b>N2</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	No Shielding

## SOIL PROFILE

BOREHOLE 1: 0 - 2000 FILL - sand trace gravel (limestone) - brown; 2000 GRAVEL (limestone) 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.

### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J413721 dated 08/07/2022.

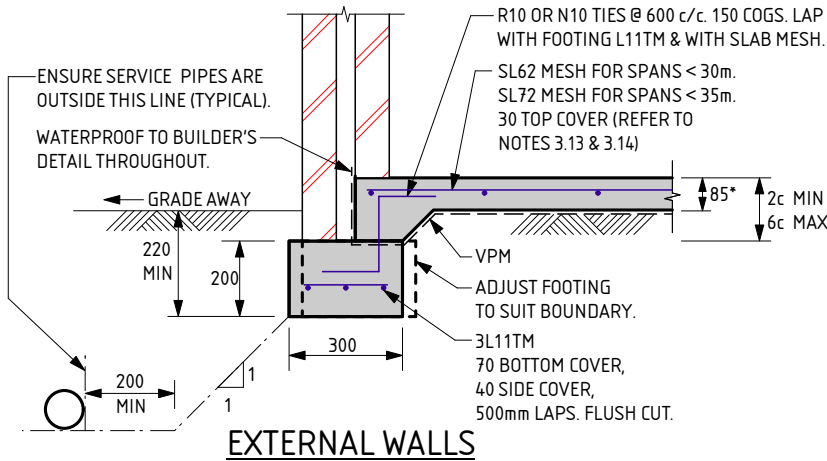
### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

### Internal Thickening Inspection

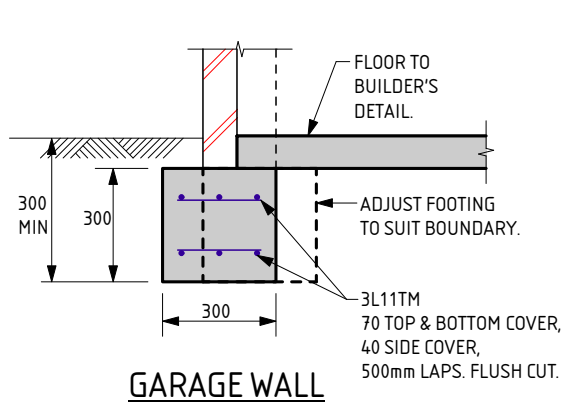
This detail is subject to an internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

-- END OF REPORT --

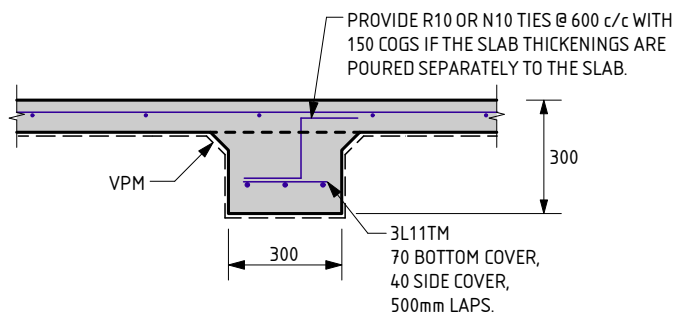


**EXTERNAL WALLS**

\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
 IF 100mm SLAB USED, MESH TO BE:  
 SL62 MESH FOR SPANS < 25m.  
 SL72 MESH FOR SPANS < 30m.  
 SL82 MESH FOR SPANS < 35m.

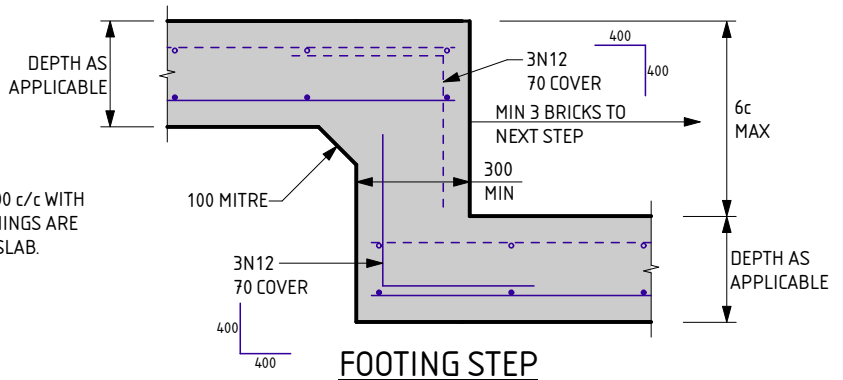


**GARAGE WALL**

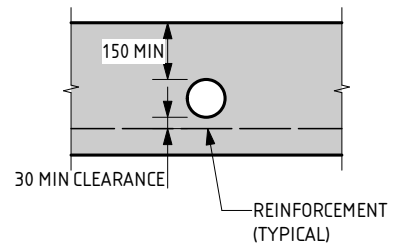


**INTERNAL THICKENING**

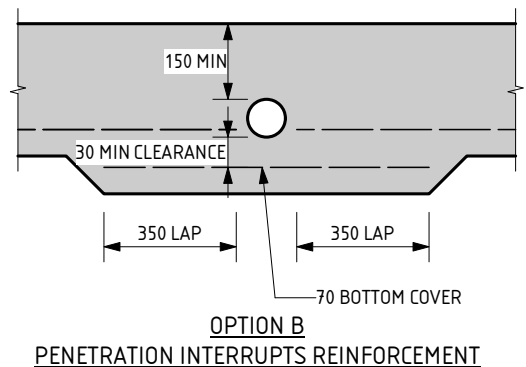
REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**FOOTING STEP**



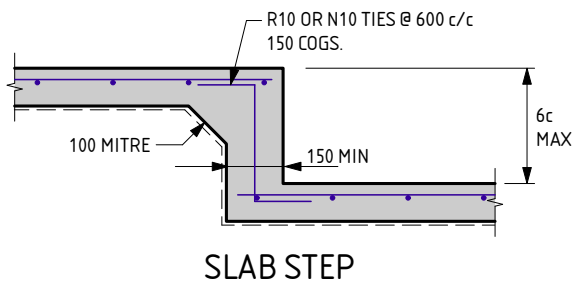
**OPTION A  
PENETRATION CLEAR OF REINFORCEMENT**



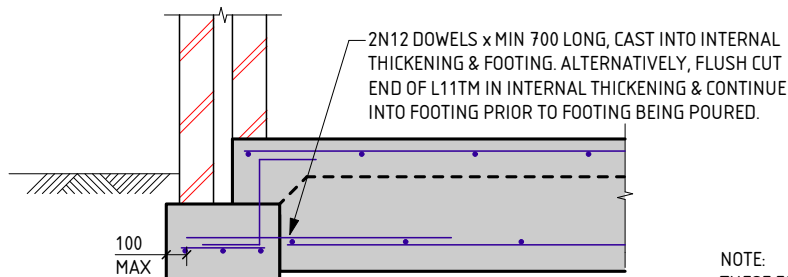
**OPTION B  
PENETRATION INTERRUPTS REINFORCEMENT**

**SERVICE PIPE DIAGRAM**

- MAXIMUM PENETRATION SIZE TO BE Ø150.



**SLAB STEP**



**EXTERNAL FOOTING TO INTERNAL THICKENING**

THIS DETAIL IS EQUIVALENT TO  
 STRUCTERRE FOOTING DETAIL C4.0

NOTE:  
 THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
 DATE LAST MODIFIED - 19/01/23

**CM3**  
 CAVITY MASONRY



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

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

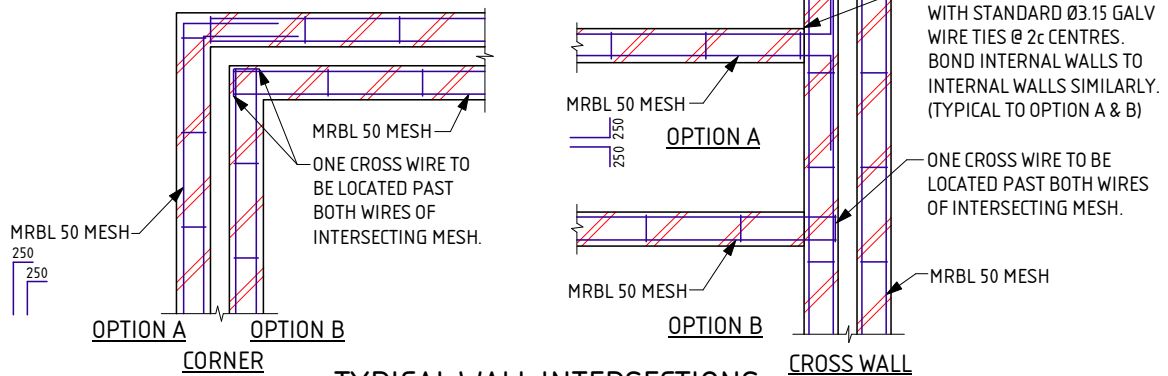
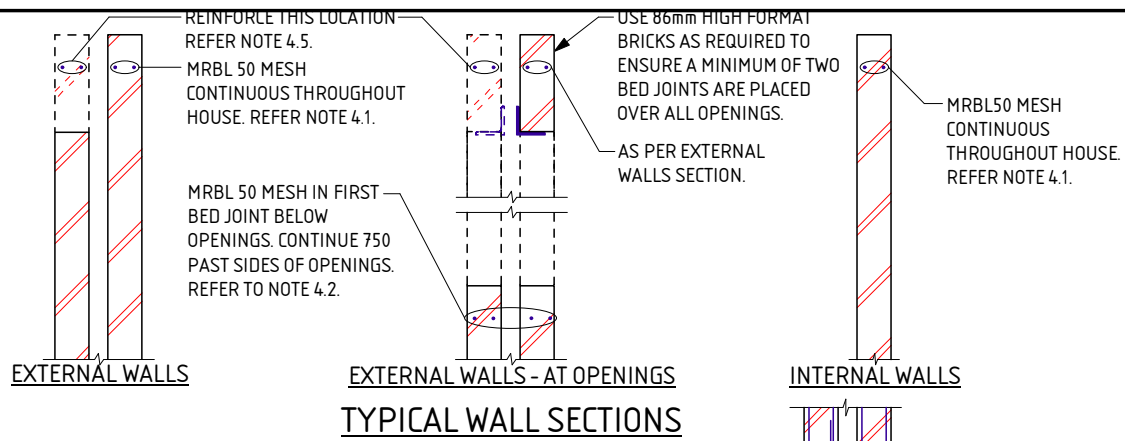
PROJECT: LOT 363 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 21/4/23

APPROVED



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

PROJECT : <b>LOT 363 CLOUDBURST AV BALDIVIS</b>	
CLIENT : <b>KEC NOMINEES PTY LTD</b>	
SCALE : <b>1:20</b>	APPROVED
DATE : <b>21/4/23</b>	

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemia Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unit 1 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 363 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 21/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT:  
LOT 363 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE 1:20

DATE 21/4/23

APPROVED

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

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2598860

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 364 CLOUDBURST AV BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096782  
**DATE OF ASSESSMENT** 20/4/23

**SITE RECORD**



<b>SITE CLASSIFICATION</b>	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
<b>FOOTING DETAIL</b>	<b>CM3</b>
<b>SAND PAD</b>	<b>No sand pad required structurally</b>
<b>BUSHFIRE PRONE AREA</b>	<b>Yes</b> <i>(see NOTE 2.)</i>
<b>CORROSION CLASSIFICATION</b>	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
<b>WIND CLASSIFICATION</b>	<b>N1</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	Full Shielding

## SOIL PROFILE

BOREHOLE 1: 0 - 2500 FILL - sand trace gravel (limestone) - 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.

### Internal Thickenings

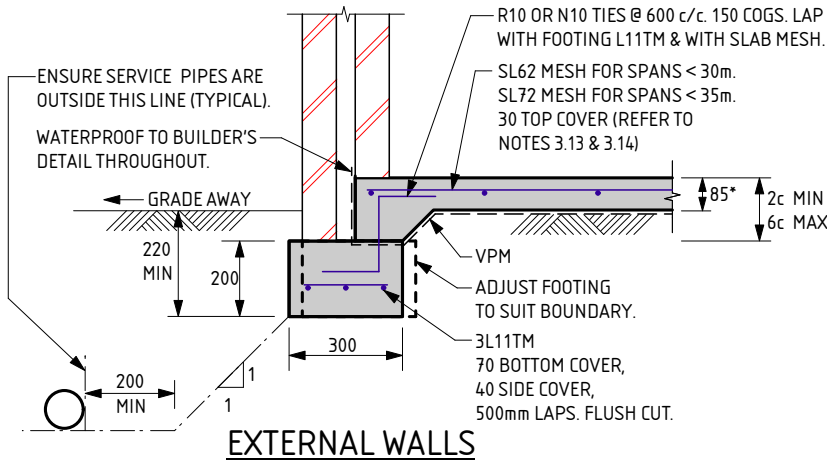
Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

### Internal Thickening Inspection

This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

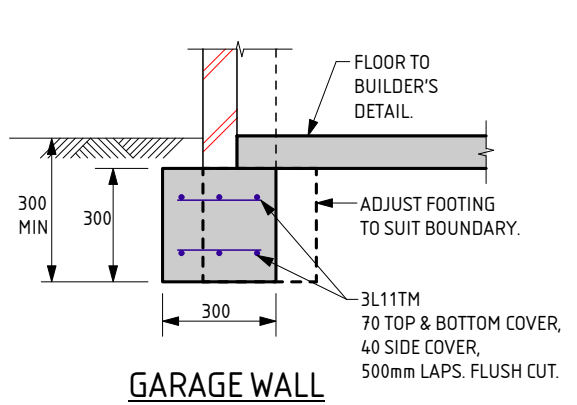
**-- END OF REPORT --**



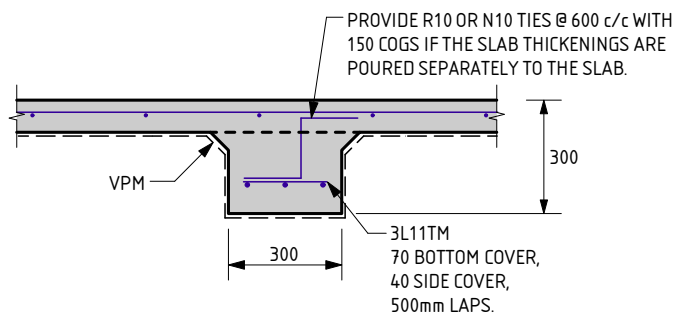


**EXTERNAL WALLS**

\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
 IF 100mm SLAB USED, MESH TO BE:  
 SL62 MESH FOR SPANS < 25m.  
 SL72 MESH FOR SPANS < 30m.  
 SL82 MESH FOR SPANS < 35m.

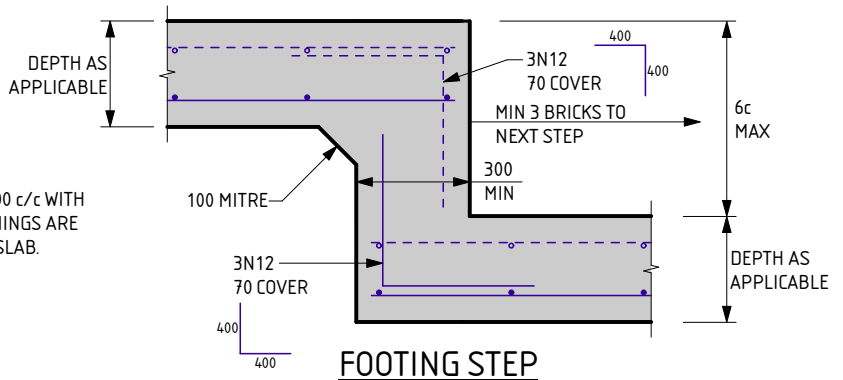


**GARAGE WALL**

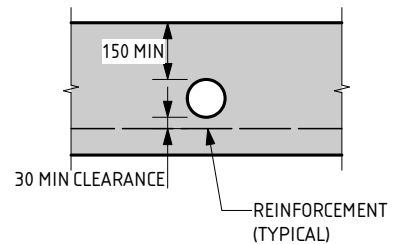


**INTERNAL THICKENING**

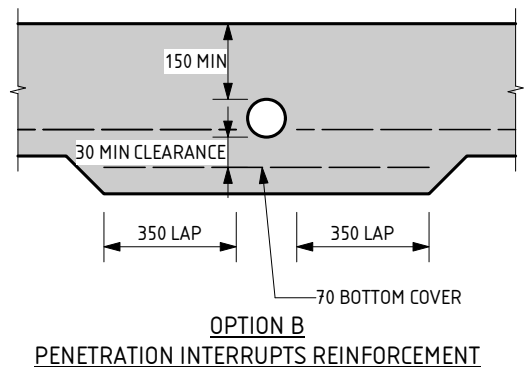
REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**FOOTING STEP**



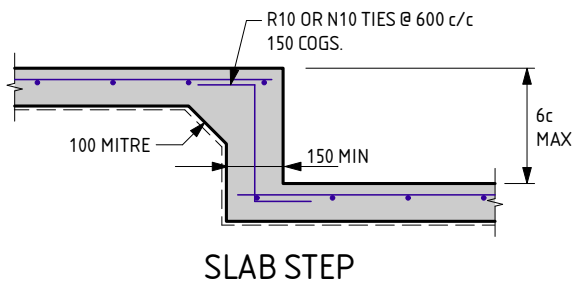
**OPTION A  
PENETRATION CLEAR OF REINFORCEMENT**



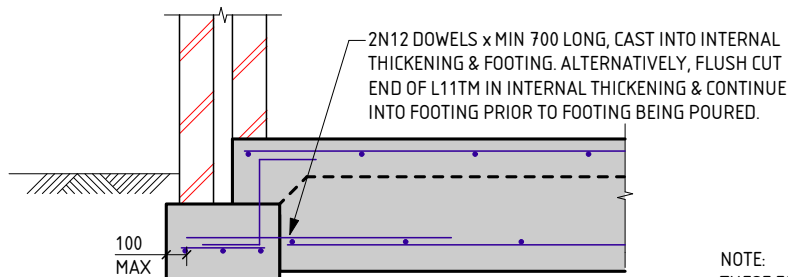
**OPTION B  
PENETRATION INTERRUPTS REINFORCEMENT**

**SERVICE PIPE DIAGRAM**

- MAXIMUM PENETRATION SIZE TO BE Ø150.



**SLAB STEP**



**EXTERNAL FOOTING TO INTERNAL THICKENING**

THIS DETAIL IS EQUIVALENT TO  
 STRUCTERRE FOOTING DETAIL C4.0

NOTE:  
 THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
 DATE LAST MODIFIED - 19/01/23

**CM3**  
 CAVITY MASONRY



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

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

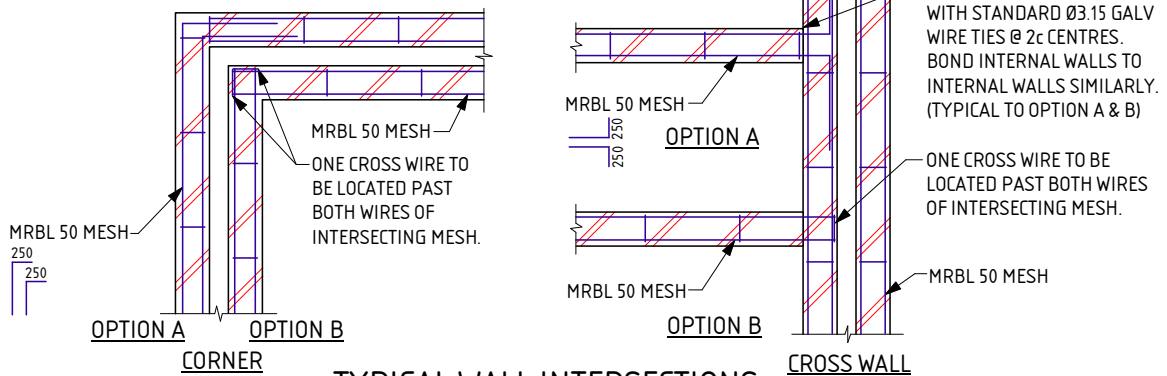
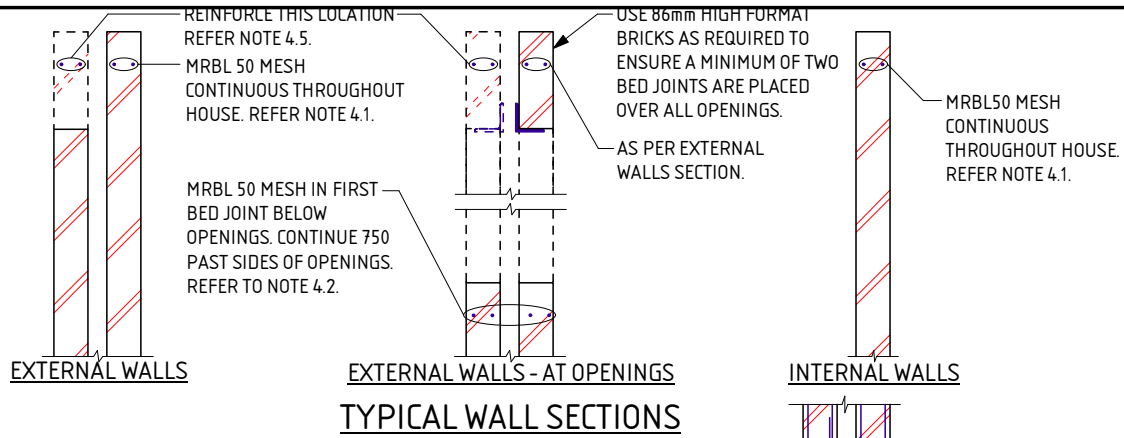
PROJECT: LOT 364 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 21/4/23

APPROVED



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT: LOT 364 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20  
 DATE: 21/4/23

APPROVED

# EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

## EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemia Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unitil 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 364 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 21/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :  
LOT 364 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 21/4/23

APPROVED

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

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2598859

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 365 CLOUDBURST AV BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096783  
**DATE OF ASSESSMENT** 20/4/23

**SITE RECORD**

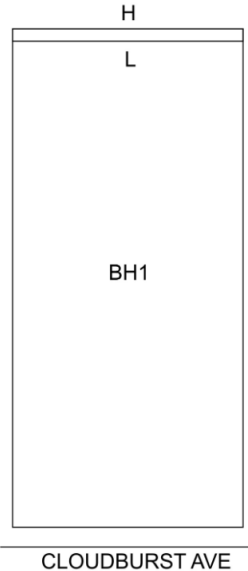


SITE CLASSIFICATION	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
FOOTING DETAIL	<b>CM3</b>
SAND PAD	<b>No sand pad required structurally</b>
BUSHFIRE PRONE AREA	<b>Yes</b> <i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	<b>N1</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	Full Shielding

## SOIL PROFILE

BOREHOLE 1: 0 - 2300 FILL - sand - brown; 2300 - 2500 FILL - sand trace gravel (limestone) - 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.

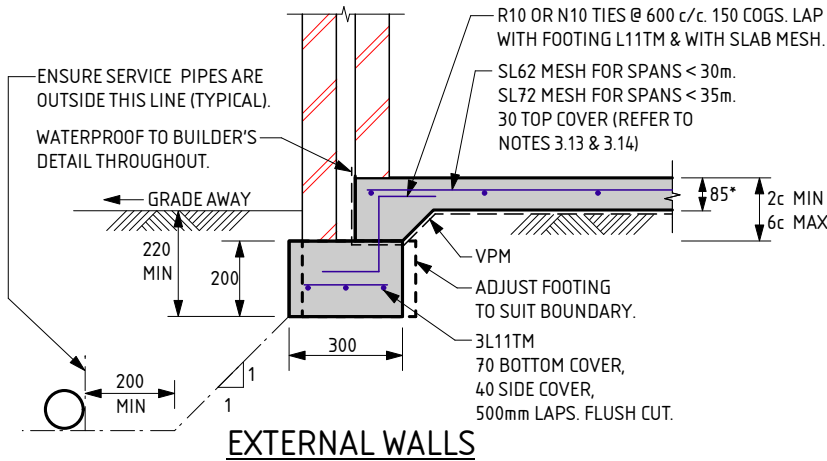
### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

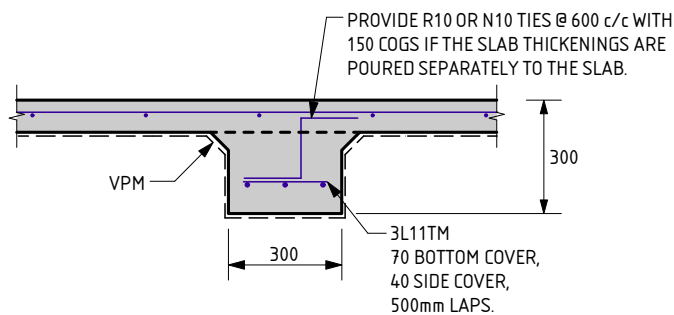
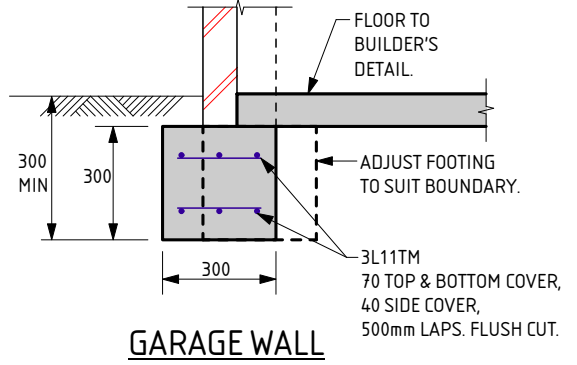
### Internal Thickening Inspection

This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

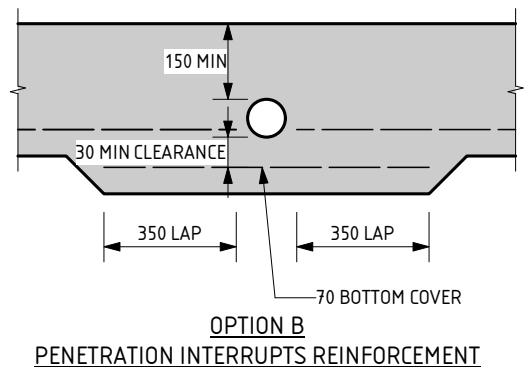
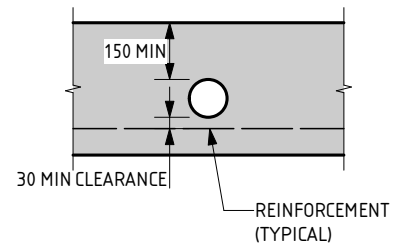
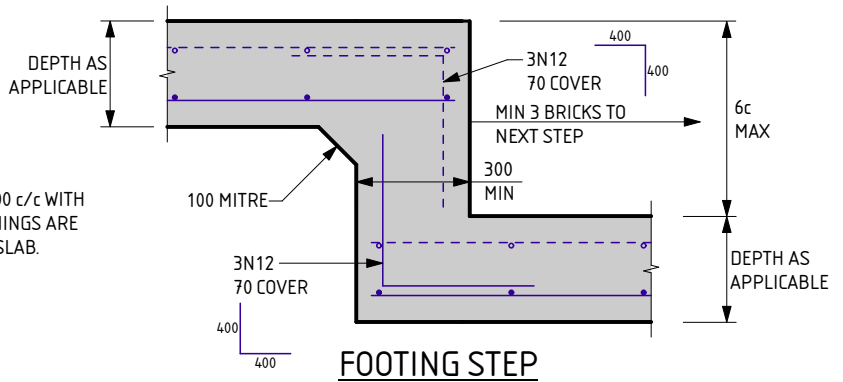
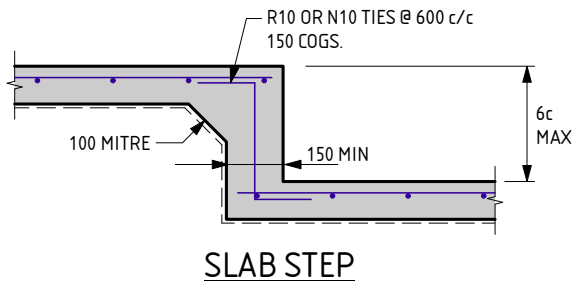
**-- END OF REPORT --**



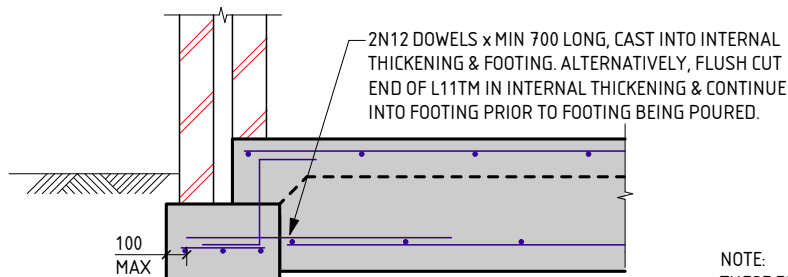
\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
IF 100mm SLAB USED, MESH TO BE:  
SL62 MESH FOR SPANS < 25m.  
SL72 MESH FOR SPANS < 30m.  
SL82 MESH FOR SPANS < 35m.



REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**SERVICE PIPE DIAGRAM**  
- MAXIMUM PENETRATION SIZE TO BE Ø150.



NOTE:  
THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
DATE LAST MODIFIED - 19/01/23

**CM3**  
CAVITY MASONRY

THIS DETAIL IS EQUIVALENT TO  
STRUCTERRE FOOTING DETAIL C4.0

**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, BALGATTA WA 6021

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

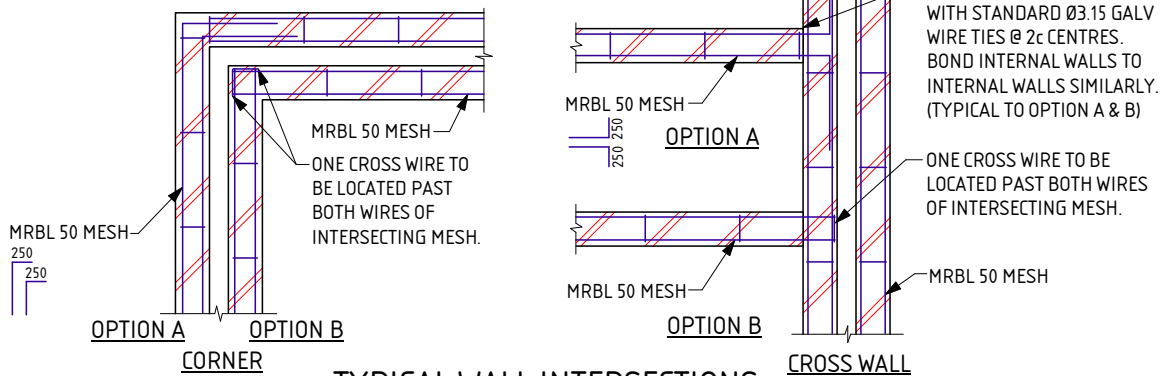
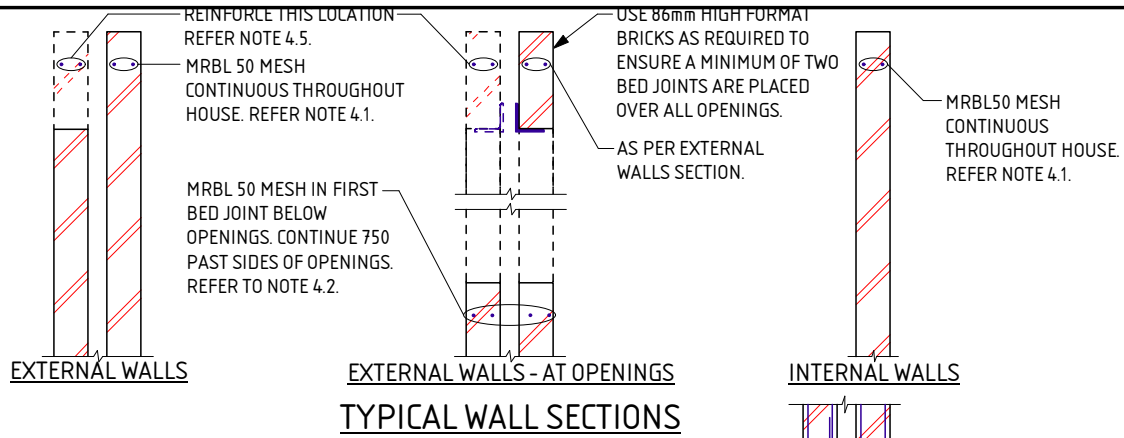
PROJECT:  
LOT 365 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 21/4/23

APPROVED



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT: LOT 365 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 21/4/23

APPROVED



## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemia Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unit 1 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 365 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 21/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT:  
LOT 365 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE 1:20

DATE 21/4/23

APPROVED

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

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2598887

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 366 CLOUDBURST AV BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096784  
**DATE OF ASSESSMENT** 20/4/23

**SITE RECORD**

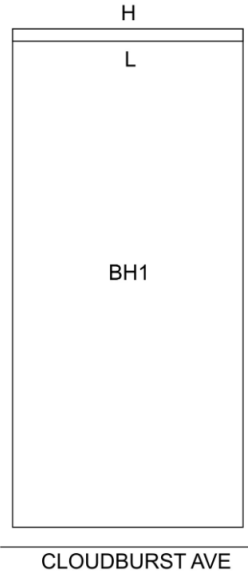


<b>SITE CLASSIFICATION</b>	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
<b>FOOTING DETAIL</b>	<b>CM3</b>
<b>SAND PAD</b>	<b>No sand pad required structurally</b>
<b>BUSHFIRE PRONE AREA</b>	<b>Yes</b> <i>(see NOTE 2.)</i>
<b>CORROSION CLASSIFICATION</b>	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
<b>WIND CLASSIFICATION</b>	<b>N1</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	Full Shielding

## SOIL PROFILE

BOREHOLE 1: 0 - 2300 FILL - sand - brown; 2300 - 2500 FILL - sand trace gravel (limestone) - 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.

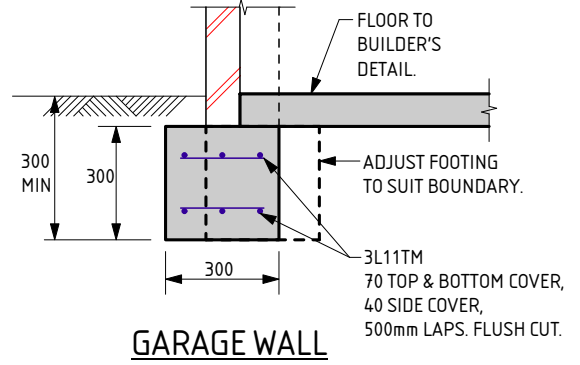
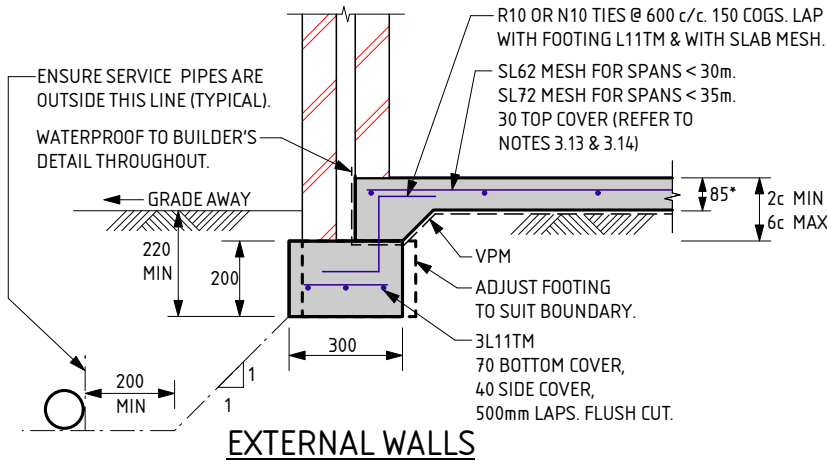
### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

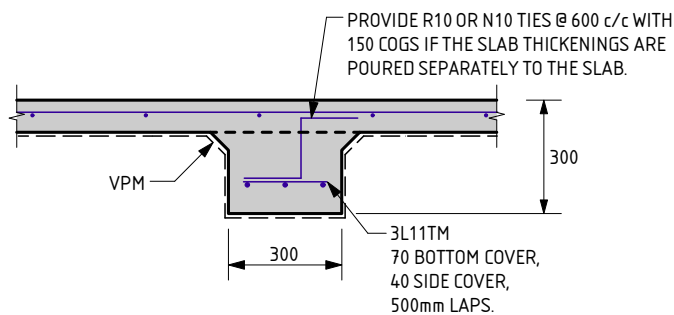
### Internal Thickening Inspection

This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

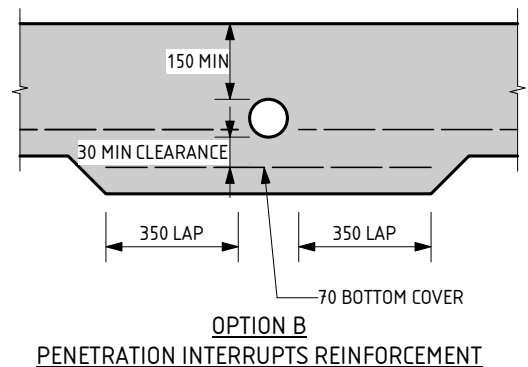
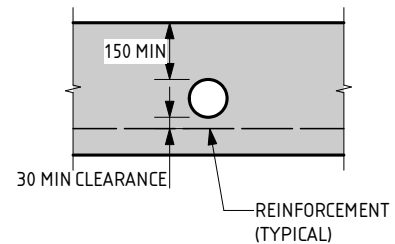
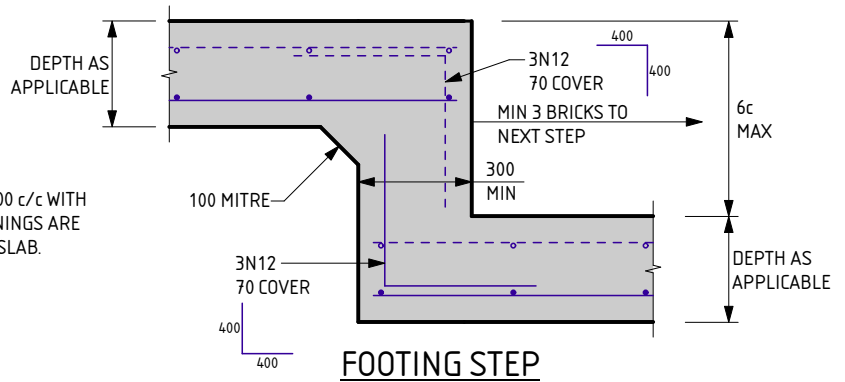
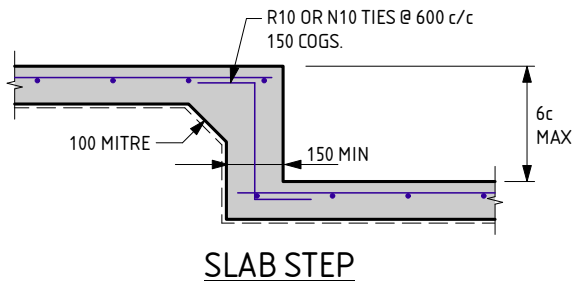
-- END OF REPORT --



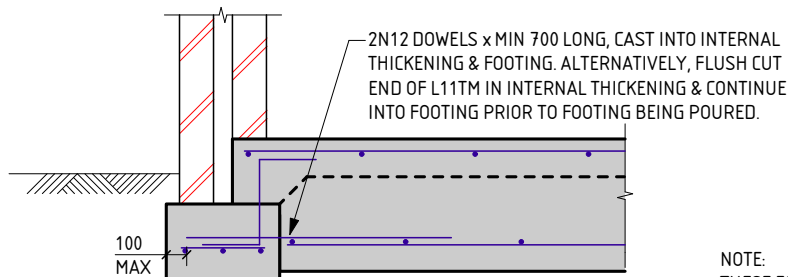
\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
IF 100mm SLAB USED, MESH TO BE:  
SL62 MESH FOR SPANS < 25m.  
SL72 MESH FOR SPANS < 30m.  
SL82 MESH FOR SPANS < 35m.



REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**SERVICE PIPE DIAGRAM**  
- MAXIMUM PENETRATION SIZE TO BE Ø150.



NOTE:  
THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
DATE LAST MODIFIED - 19/01/23

**CM3**  
CAVITY MASONRY

THIS DETAIL IS EQUIVALENT TO  
STRUCTERRE FOOTING DETAIL C4.0

**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, BALEATTA WA 6021

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

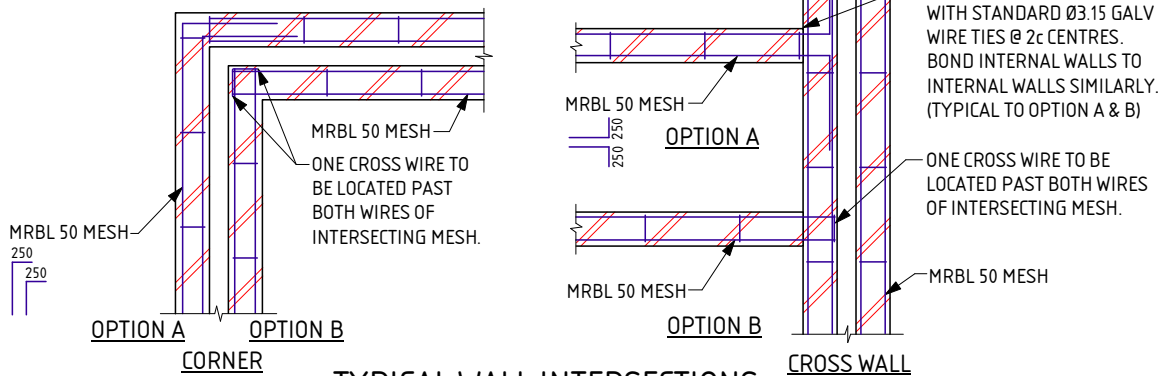
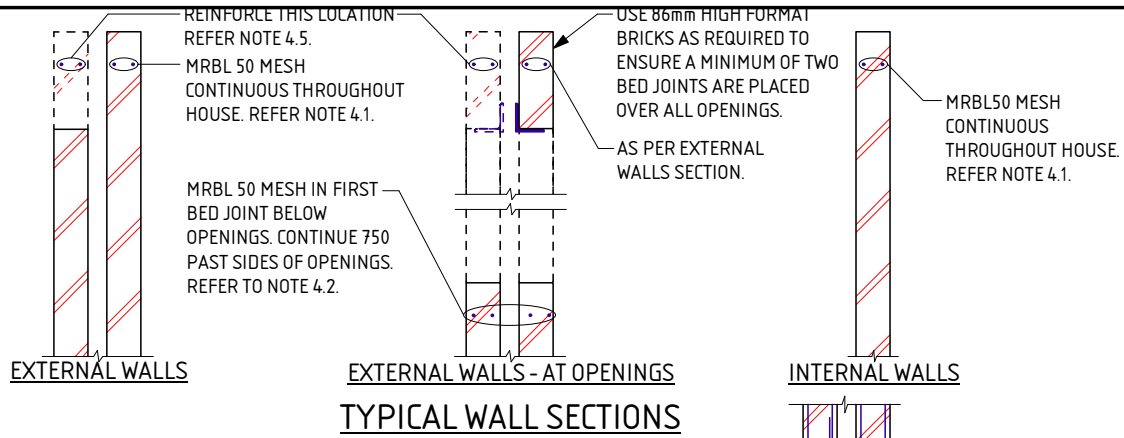
PROJECT:  
LOT 366 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 24/4/23

APPROVED



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT: LOT 366 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20  
 DATE: 24/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

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

PROJECT :  
LOT 366 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 24/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :  
LOT 366 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 24/4/23

APPROVED

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



**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2598858

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 367 CLOUDBURST AV BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096785  
**DATE OF ASSESSMENT** 20/4/23

**SITE RECORD**

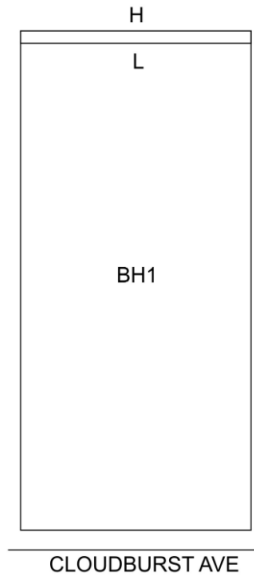


<b>SITE CLASSIFICATION</b>	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
<b>FOOTING DETAIL</b>	<b>CM3</b>
<b>SAND PAD</b>	<b>No sand pad required structurally</b>
<b>BUSHFIRE PRONE AREA</b>	<b>Yes</b> <i>(see NOTE 2.)</i>
<b>CORROSION CLASSIFICATION</b>	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
<b>WIND CLASSIFICATION</b>	<b>N1</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	Full Shielding

## SOIL PROFILE

BOREHOLE 1: 0 - 2500 FILL - sand - 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.

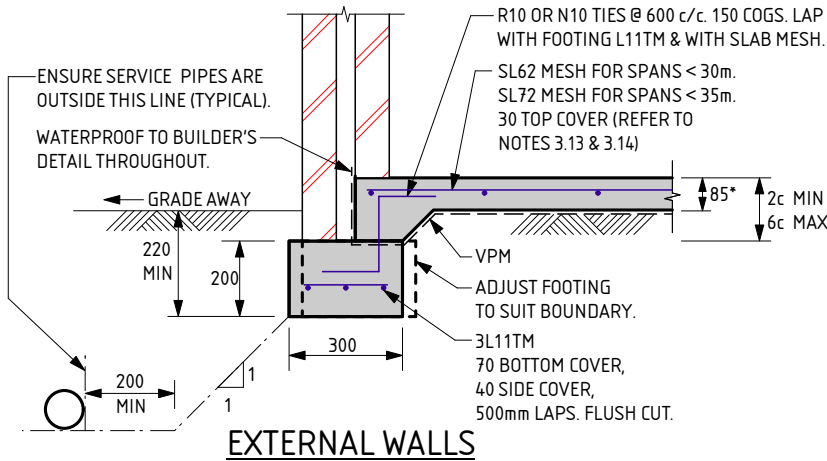
#### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

#### Internal Thickening Inspection

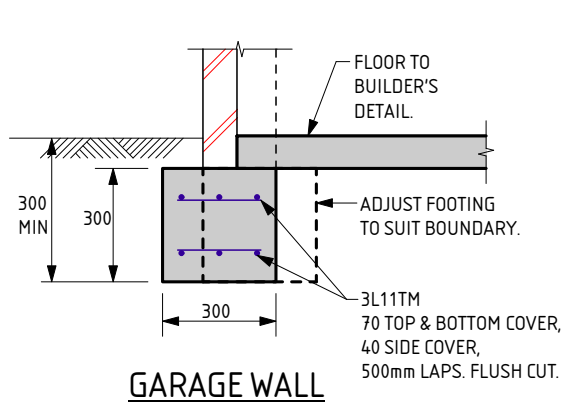
This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

**-- END OF REPORT --**

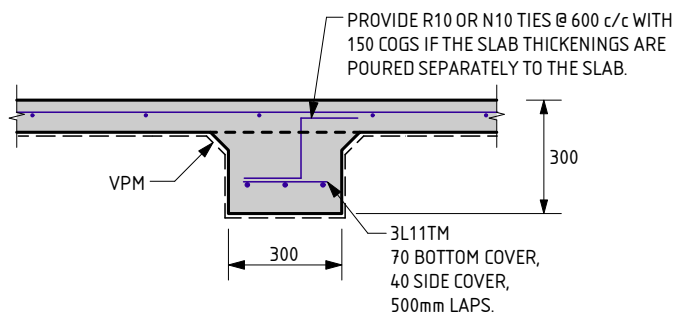


**EXTERNAL WALLS**

\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
 IF 100mm SLAB USED, MESH TO BE:  
 SL62 MESH FOR SPANS < 25m.  
 SL72 MESH FOR SPANS < 30m.  
 SL82 MESH FOR SPANS < 35m.

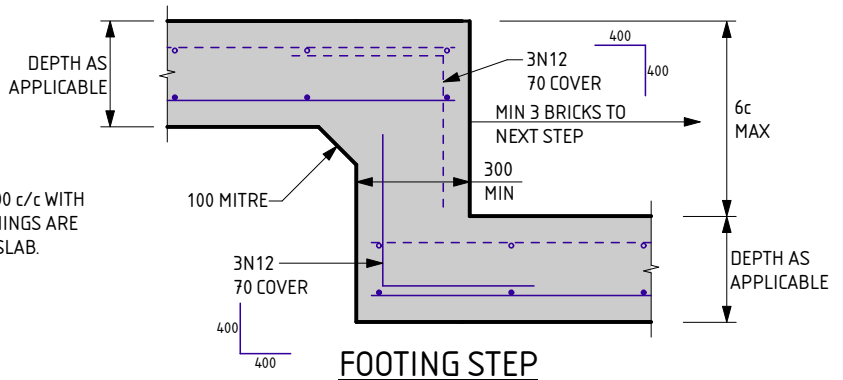


**GARAGE WALL**

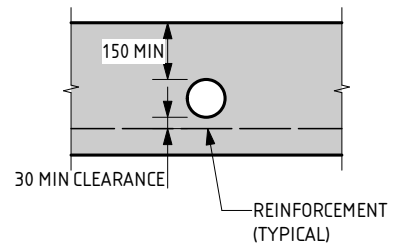


**INTERNAL THICKENING**

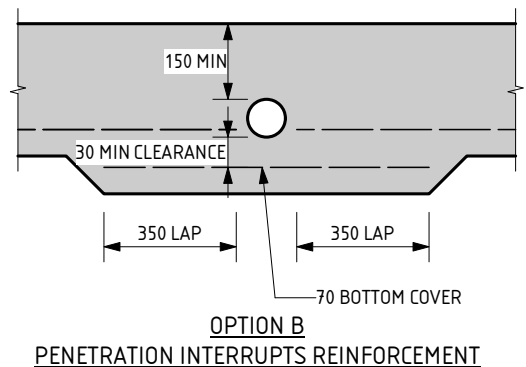
REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**FOOTING STEP**



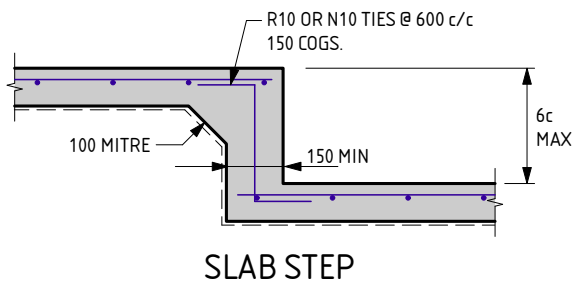
**OPTION A  
PENETRATION CLEAR OF REINFORCEMENT**



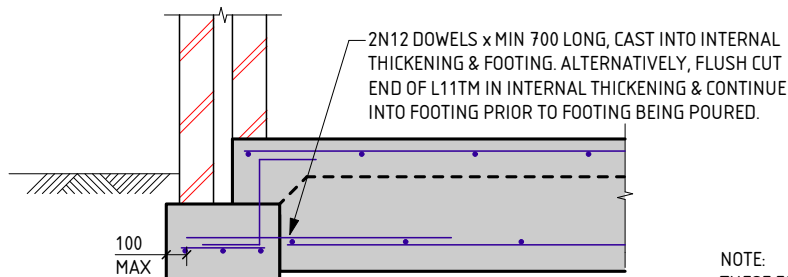
**OPTION B  
PENETRATION INTERRUPTS REINFORCEMENT**

**SERVICE PIPE DIAGRAM**

- MAXIMUM PENETRATION SIZE TO BE Ø150.



**SLAB STEP**



**EXTERNAL FOOTING TO INTERNAL THICKENING**

THIS DETAIL IS EQUIVALENT TO  
 STRUCTERRE FOOTING DETAIL C4.0

NOTE:  
 THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
 DATE LAST MODIFIED - 19/01/23

**CM3**  
 CAVITY MASONRY



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

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

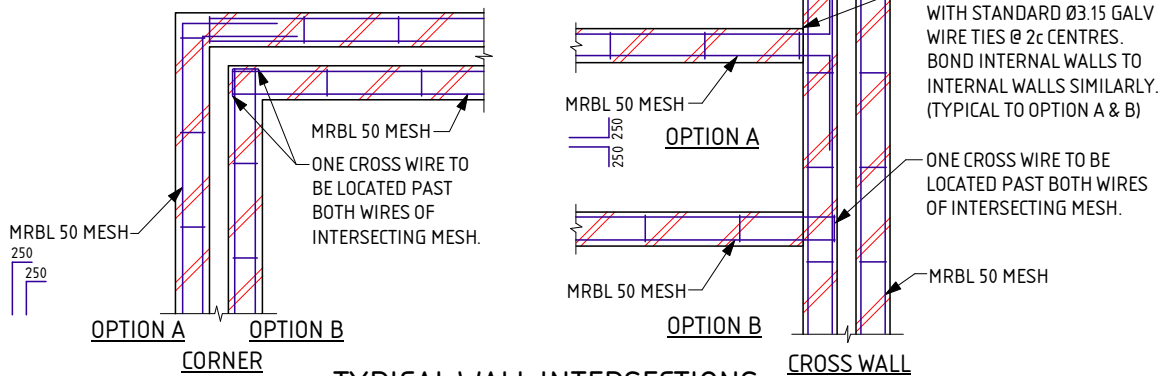
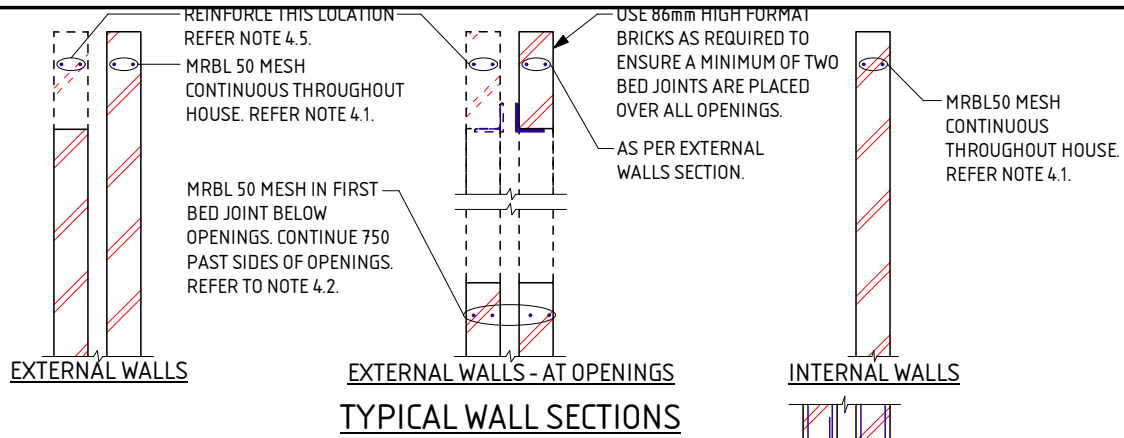
PROJECT: LOT 367 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 21/4/23

APPROVED



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

PROJECT : <b>LOT 367 CLOUDBURST AV BALDIVIS</b>	
CLIENT : <b>KEC NOMINEES PTY LTD</b>	
SCALE : <b>1:20</b>	APPROVED
DATE : <b>21/4/23</b>	

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemla Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unitil 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 367 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 21/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :  
LOT 367 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 21/4/23

APPROVED

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

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2598857

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 368 CLOUDBURST AV BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096786  
**DATE OF ASSESSMENT** 20/4/23

**SITE RECORD**

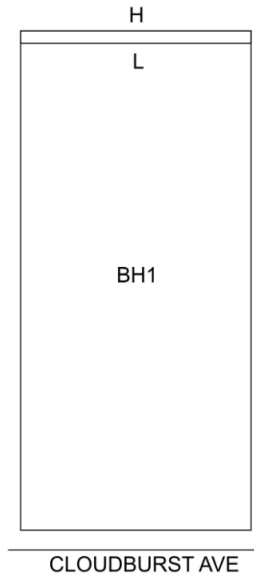


<b>SITE CLASSIFICATION</b>	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
<b>FOOTING DETAIL</b>	<b>CM3</b>
<b>SAND PAD</b>	<b>No sand pad required structurally</b>
<b>BUSHFIRE PRONE AREA</b>	<b>Yes</b> <i>(see NOTE 2.)</i>
<b>CORROSION CLASSIFICATION</b>	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
<b>WIND CLASSIFICATION</b>	<b>N1</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	Full Shielding

## SOIL PROFILE

BOREHOLE 1: 0 - 2200 FILL - sand - brown; 2200 - 2500 silty SAND - 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.

#### Internal Thickenings

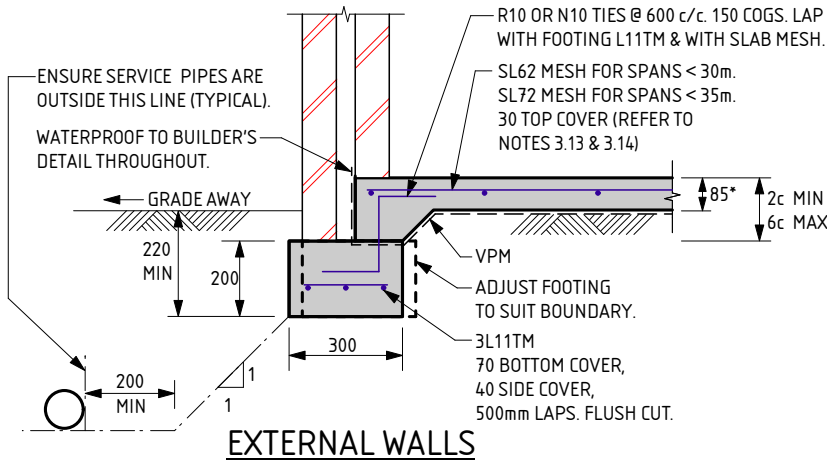
Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

#### Internal Thickening Inspection

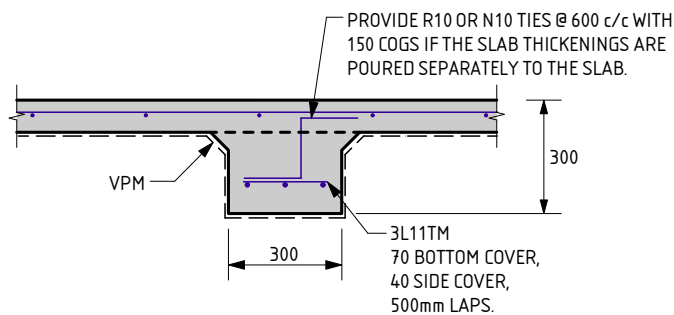
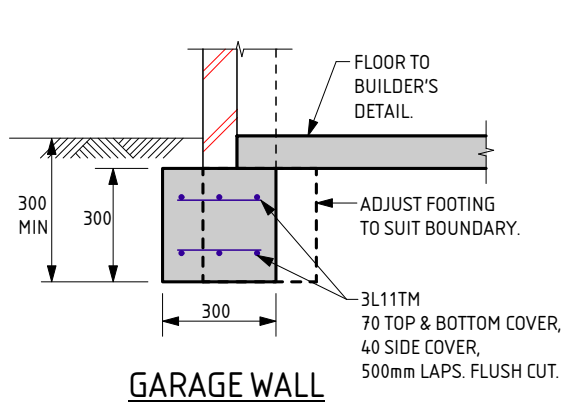
This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

**-- END OF REPORT --**

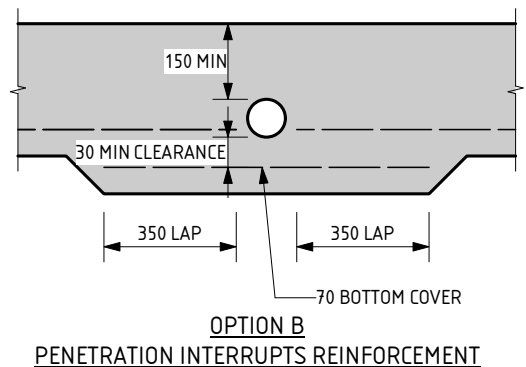
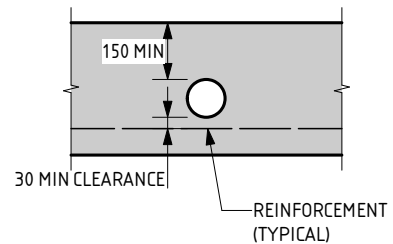
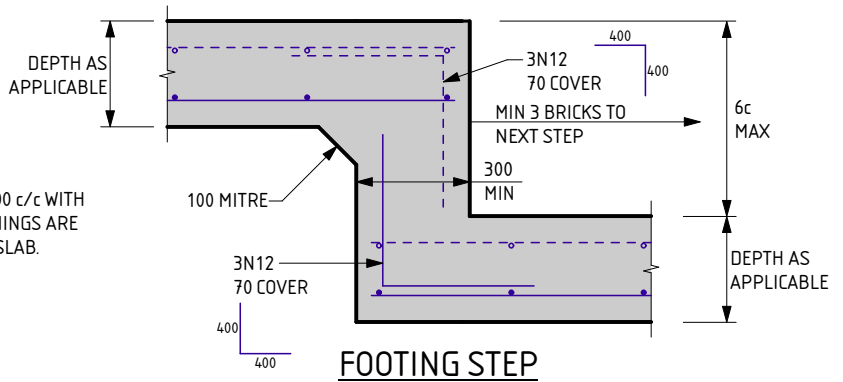
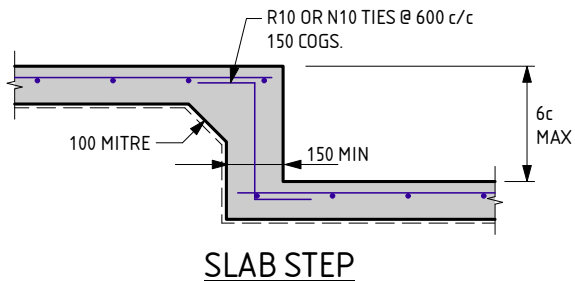




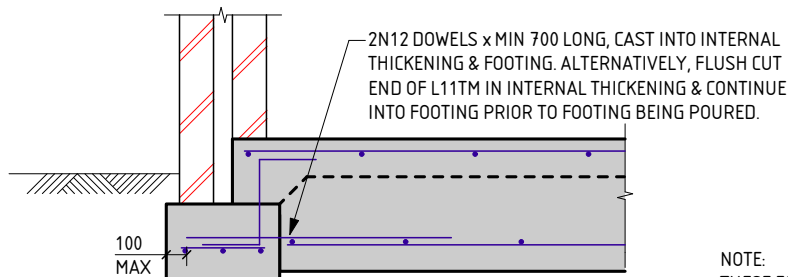
\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
IF 100mm SLAB USED, MESH TO BE:  
SL62 MESH FOR SPANS < 25m.  
SL72 MESH FOR SPANS < 30m.  
SL82 MESH FOR SPANS < 35m.



REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**SERVICE PIPE DIAGRAM**  
- MAXIMUM PENETRATION SIZE TO BE Ø150.



**EXTERNAL FOOTING TO INTERNAL THICKENING**

THIS DETAIL IS EQUIVALENT TO  
STRUCTERRE FOOTING DETAIL C4.0

NOTE:  
THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
DATE LAST MODIFIED - 19/01/23

**CM3**  
CAVITY MASONRY

**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, BALEATTA W.A. 6021

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

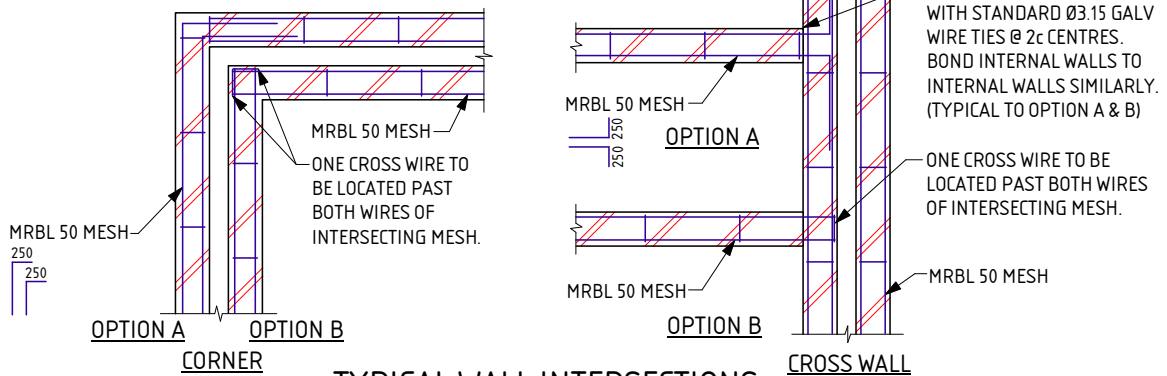
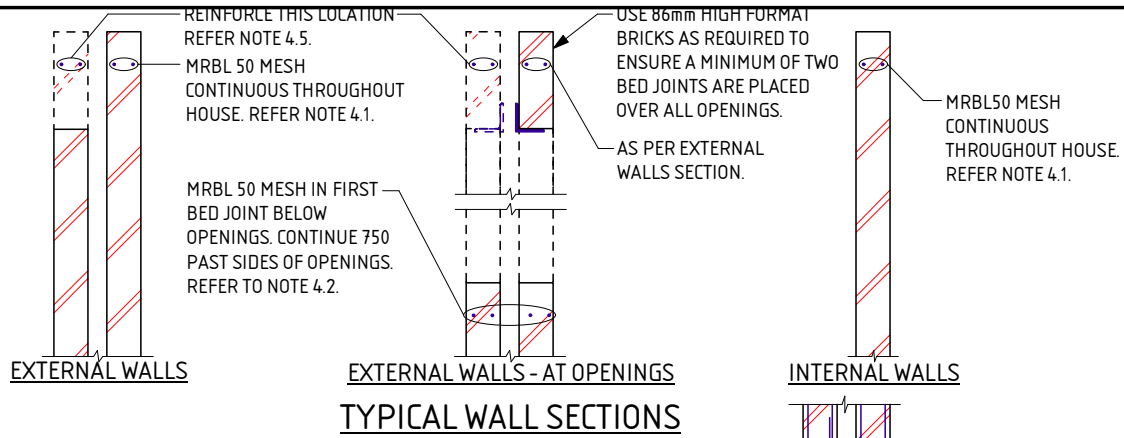
PROJECT:  
LOT 368 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 21/4/23

APPROVED



### REACTIVE SITE NOTES FOR CM1 - CM7

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

#### 1.0 SITE CLASSIFICATION

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

#### 3.0 FOOTINGS & SLABS

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

#### 3.8 CONCRETE TO CONFORM WITH AS 3600.

- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

#### 4.0 MASONRY

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

#### 5.0 MAINTENANCE

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

#### 6.0 QUALITY CONTROL PROGRAM REQUIREMENTS

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT :

LOT 368 CLOUDBURST AV BALDIVIS

CLIENT :

KEC NOMINEES PTY LTD

SCALE

1:20

APPROVED

DATE

21/4/23

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

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

PROJECT :  
LOT 368 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 21/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :

LOT 368 CLOUDBURST AV BALDIVIS

CLIENT :

KEC NOMINEES PTY LTD

SCALE

1:20

APPROVED

DATE

21/4/23

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

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2598856

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 369 CLOUDBURST AV BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096787  
**DATE OF ASSESSMENT** 20/4/23

**SITE RECORD**

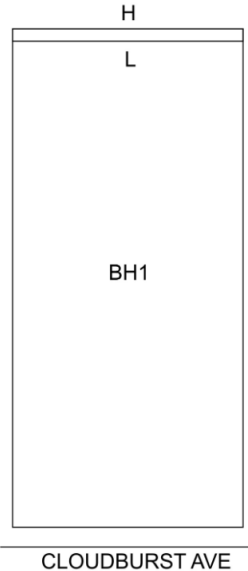


<b>SITE CLASSIFICATION</b>	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
<b>FOOTING DETAIL</b>	<b>CM3</b>
<b>SAND PAD</b>	<b>No sand pad required structurally</b>
<b>BUSHFIRE PRONE AREA</b>	<b>Yes</b> <i>(see NOTE 2.)</i>
<b>CORROSION CLASSIFICATION</b>	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
<b>WIND CLASSIFICATION</b>	<b>N1</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	Full Shielding

## SOIL PROFILE

BOREHOLE 1: 0 - 2300 FILL - sand - brown; 2300 - 2400 silty SAND - grey; 2400 - 2500 SAND - 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.

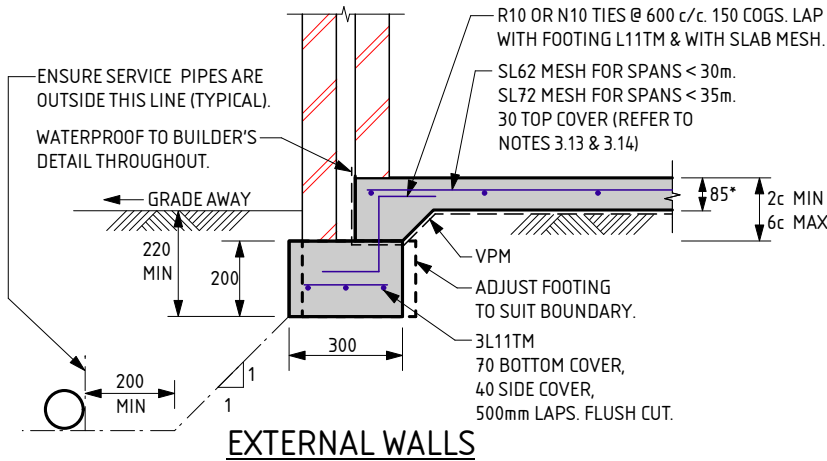
### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

### Internal Thickening Inspection

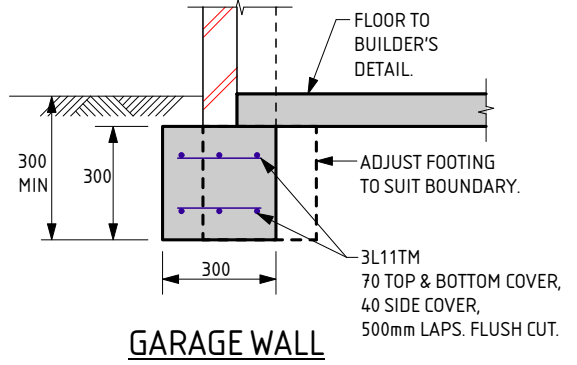
This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

**-- END OF REPORT --**

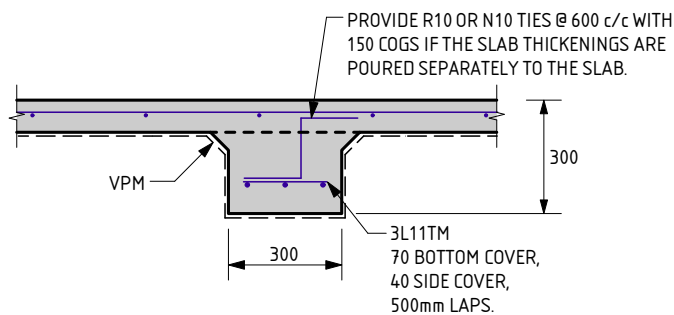


**EXTERNAL WALLS**

\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
 IF 100mm SLAB USED, MESH TO BE:  
 SL62 MESH FOR SPANS < 25m.  
 SL72 MESH FOR SPANS < 30m.  
 SL82 MESH FOR SPANS < 35m.

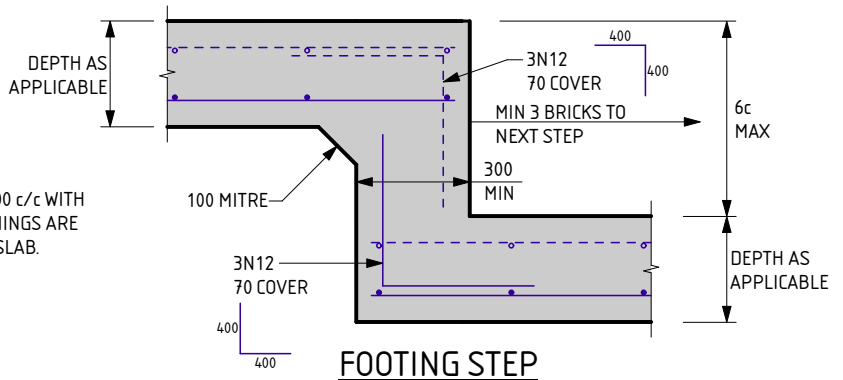


**GARAGE WALL**

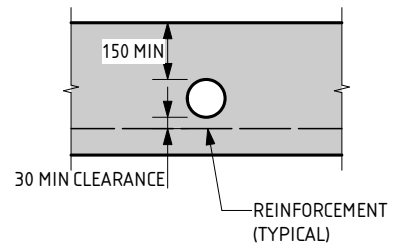


**INTERNAL THICKENING**

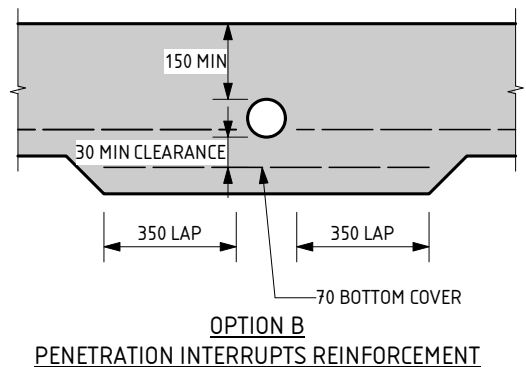
REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**FOOTING STEP**



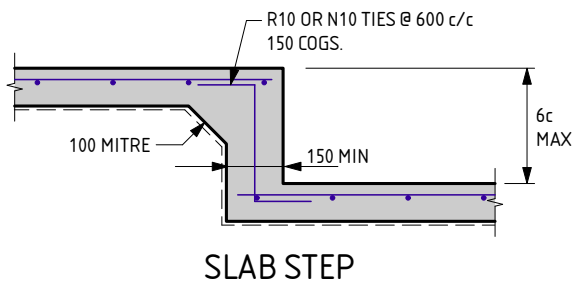
**OPTION A  
PENETRATION CLEAR OF REINFORCEMENT**



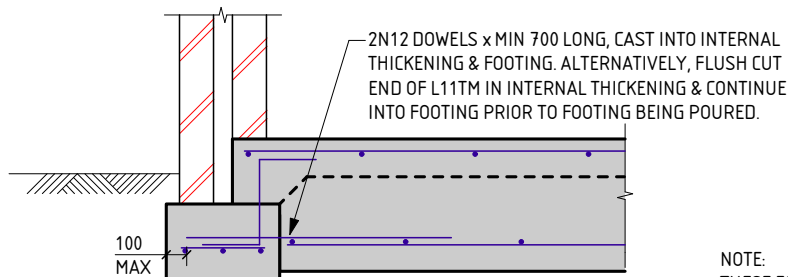
**OPTION B  
PENETRATION INTERRUPTS REINFORCEMENT**

**SERVICE PIPE DIAGRAM**

- MAXIMUM PENETRATION SIZE TO BE Ø150.



**SLAB STEP**



**EXTERNAL FOOTING TO INTERNAL THICKENING**

THIS DETAIL IS EQUIVALENT TO  
 STRUCTERRE FOOTING DETAIL C4.0

NOTE:  
 THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
 DATE LAST MODIFIED - 19/01/23

**CM3**  
 CAVITY MASONRY



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

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

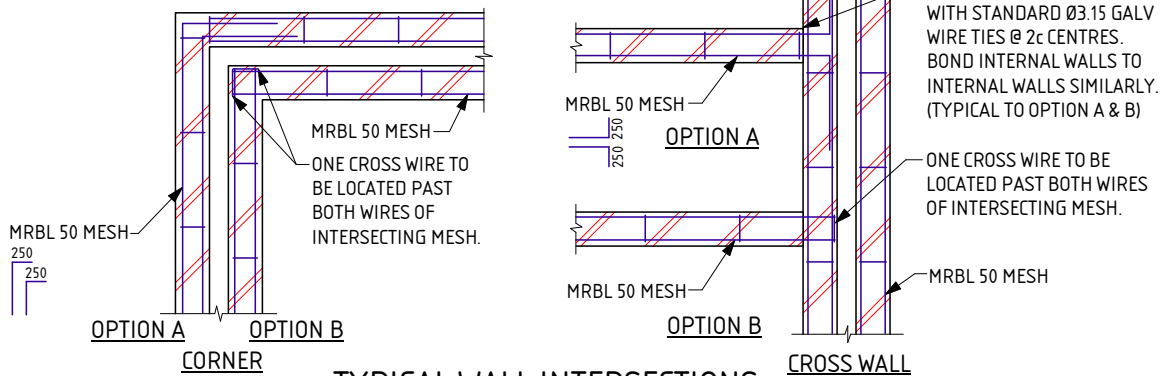
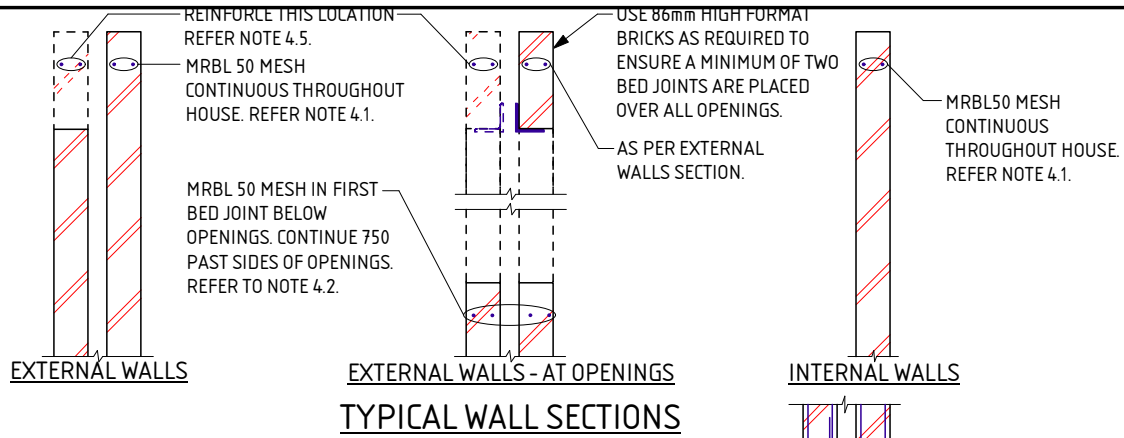
PROJECT: LOT 369 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 21/4/23

APPROVED



### REACTIVE SITE NOTES FOR CM1 - CM7

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

#### 1.0 SITE CLASSIFICATION

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

#### 3.0 FOOTINGS & SLABS

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

#### 4.0 MASONRY

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

#### 5.0 MAINTENANCE

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

#### 6.0 QUALITY CONTROL PROGRAM REQUIREMENTS

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT: LOT 369 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 21/4/23

APPROVED



## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

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

PROJECT :  
LOT 369 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 21/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT:  
LOT 369 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE 1:20

DATE 21/4/23

APPROVED

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

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2598855

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 370 CLOUDBURST AV BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096788  
**DATE OF ASSESSMENT** 20/4/23

**SITE RECORD**

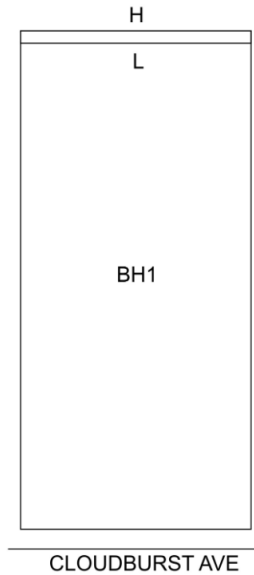


<b>SITE CLASSIFICATION</b>	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
<b>FOOTING DETAIL</b>	<b>CM3</b>
<b>SAND PAD</b>	<b>No sand pad required structurally</b>
<b>BUSHFIRE PRONE AREA</b>	<b>Yes</b> <i>(see NOTE 2.)</i>
<b>CORROSION CLASSIFICATION</b>	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
<b>WIND CLASSIFICATION</b>	<b>N1</b> <i>(in accordance with AS4055)</i>
<b>-TERRAIN CATEGORY</b>	2
<b>-TOPOGRAPHIC</b>	T0
<b>-SHIELDING</b>	Full Shielding

## SOIL PROFILE

BOREHOLE 1: 0 - 1200 FILL - sand - brown; 1200 - 2500 silty SAND - 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.

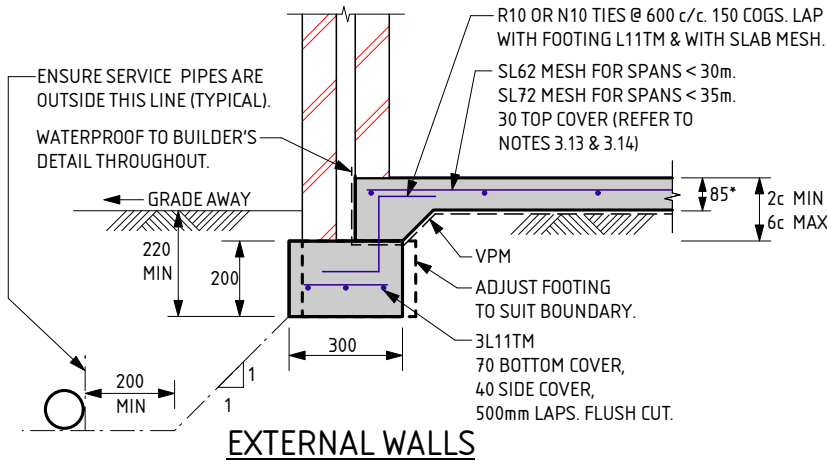
#### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

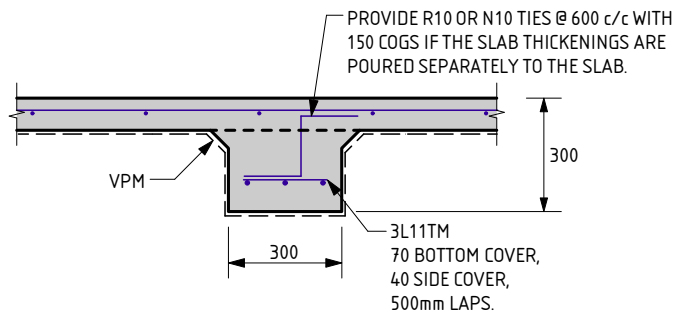
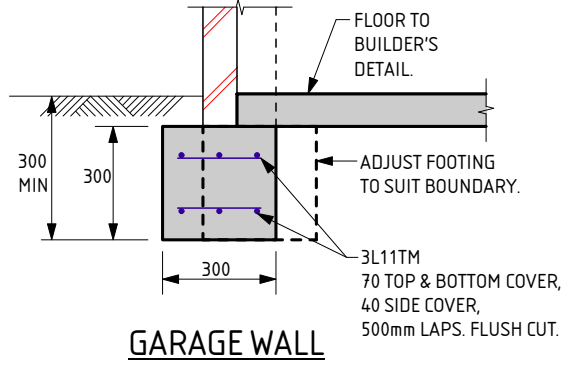
#### Internal Thickening Inspection

This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

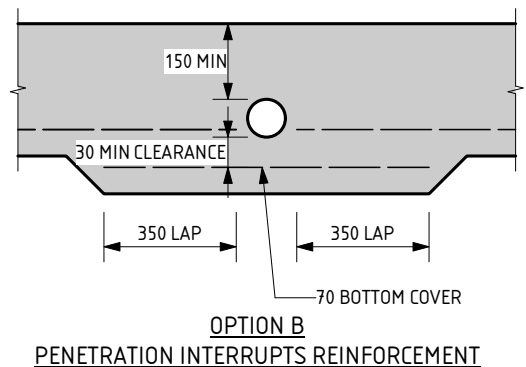
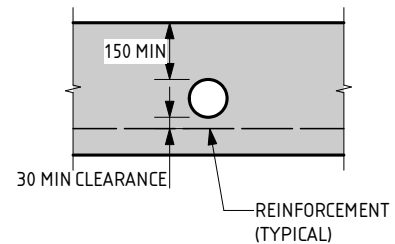
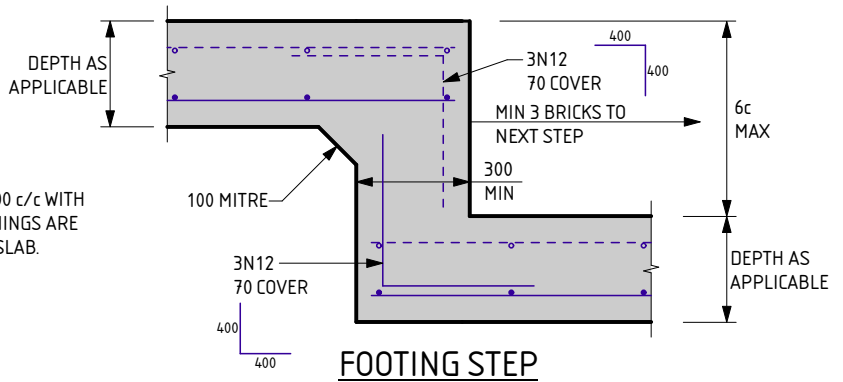
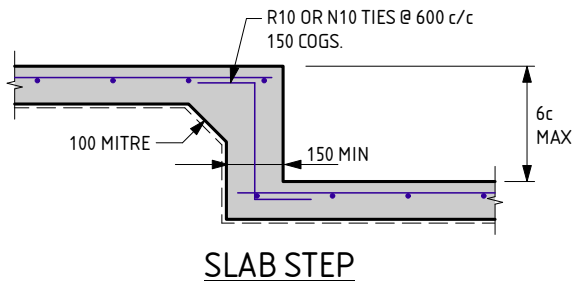
**-- END OF REPORT --**



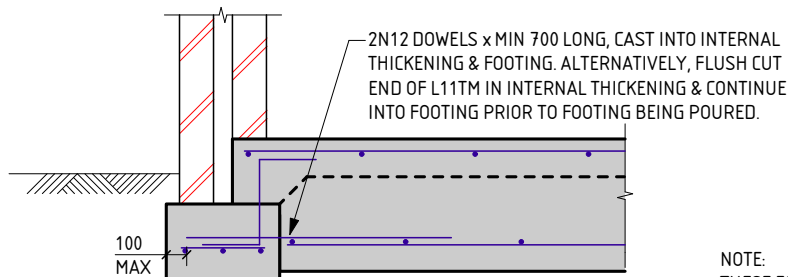
\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
IF 100mm SLAB USED, MESH TO BE:  
SL62 MESH FOR SPANS < 25m.  
SL72 MESH FOR SPANS < 30m.  
SL82 MESH FOR SPANS < 35m.



REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**SERVICE PIPE DIAGRAM**  
- MAXIMUM PENETRATION SIZE TO BE Ø150.



NOTE:  
THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
DATE LAST MODIFIED - 19/01/23

**CM3**  
CAVITY MASONRY

THIS DETAIL IS EQUIVALENT TO  
STRUCTERRE FOOTING DETAIL C4.0

**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, BALEGATTA WA 6021

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

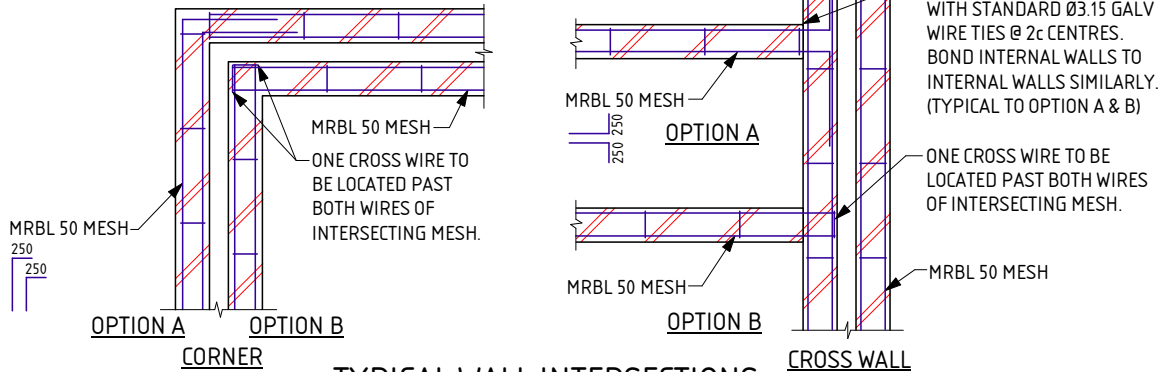
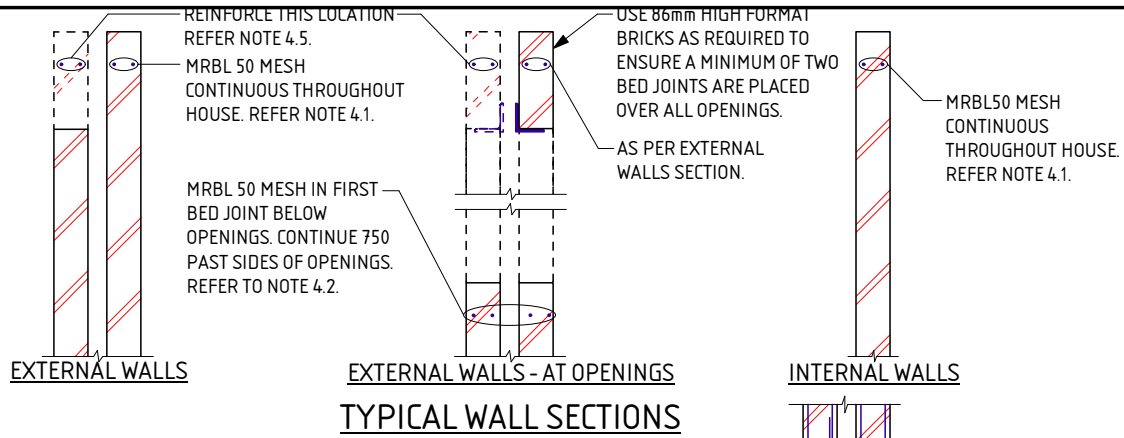
PROJECT:  
LOT 370 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 21/4/23

APPROVED



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT : <b>LOT 370 CLOUDBURST AV BALDIVIS</b>	
CLIENT : <b>KEC NOMINEES PTY LTD</b>	
SCALE : <b>1:20</b>	APPROVED
DATE : <b>21/4/23</b>	

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

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

PROJECT :  
LOT 370 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 21/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT:  
LOT 370 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE 1:20

DATE 21/4/23

APPROVED

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



**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2598853

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 371 CLOUDBURST AV BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096791  
**DATE OF ASSESSMENT** 20/4/23

**SITE RECORD**



SITE CLASSIFICATION	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
FOOTING DETAIL	<b>CM3</b>
SAND PAD	<b>No sand pad required structurally</b>
BUSHFIRE PRONE AREA	<b>Yes</b> <i>(see NOTE 2.)</i>
CORROSION CLASSIFICATION	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
WIND CLASSIFICATION	<b>N1</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	Full Shielding

## SOIL PROFILE

BOREHOLE 1: 0 - 1200 FILL - sand - brown; 1200 - 1500 FILL - sand trace gravel (limestone) - brown; 1500 - 2300 FILL - sand - brown; 2300 - 2400 silty SAND - grey; 2400 - 2500 SAND - 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.

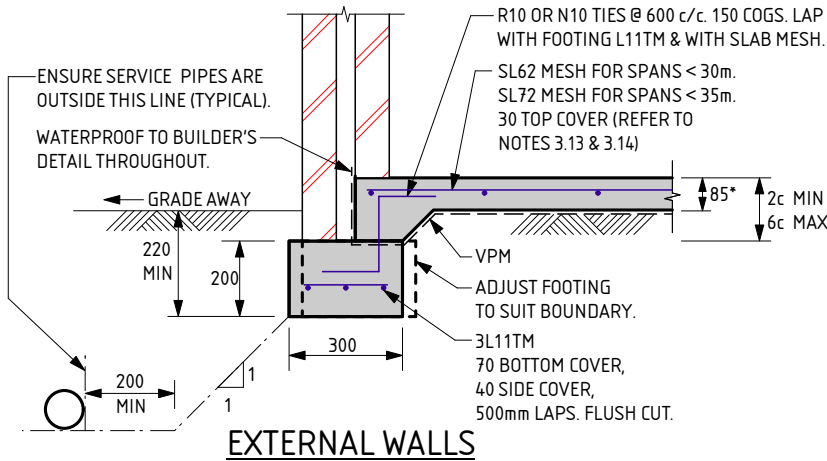
### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

### Internal Thickening Inspection

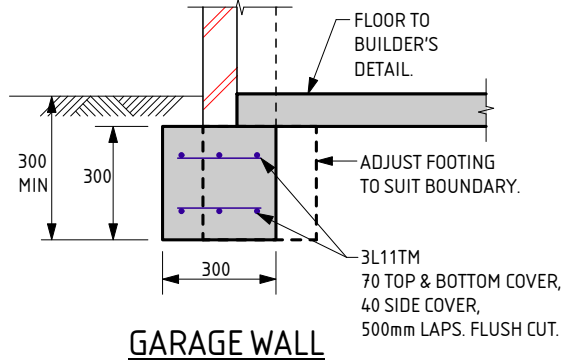
This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

**-- END OF REPORT --**

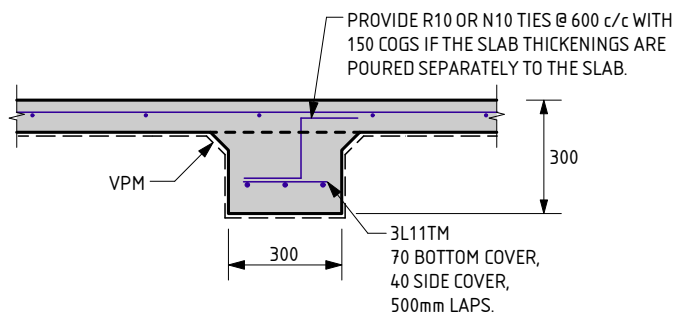


**EXTERNAL WALLS**

\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
 IF 100mm SLAB USED, MESH TO BE:  
 SL62 MESH FOR SPANS < 25m.  
 SL72 MESH FOR SPANS < 30m.  
 SL82 MESH FOR SPANS < 35m.

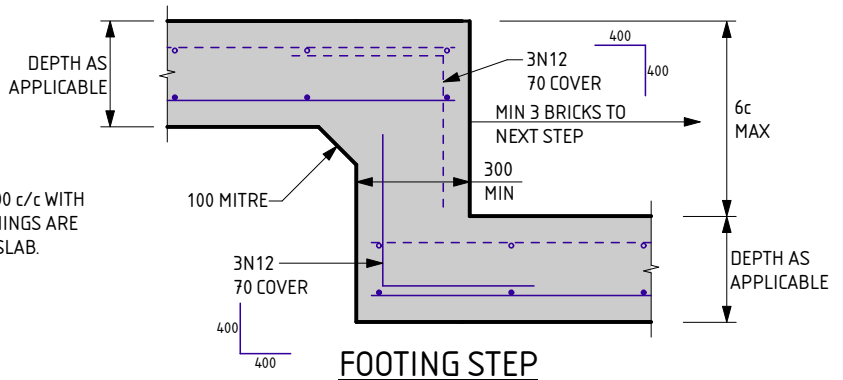


**GARAGE WALL**

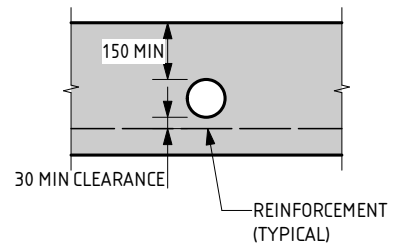


**INTERNAL THICKENING**

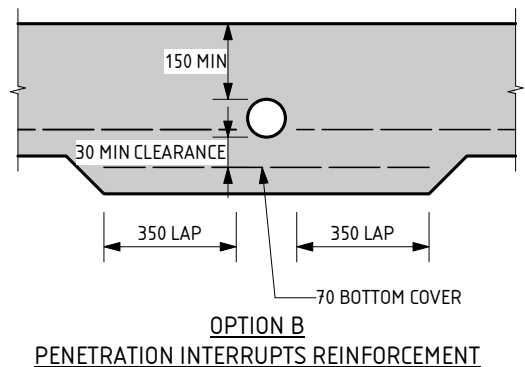
REFER TO STRUCterre'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCterre PRIOR TO CONCRETE POUR.



**FOOTING STEP**



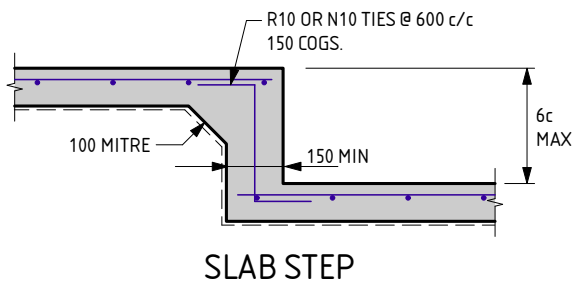
**OPTION A  
PENETRATION CLEAR OF REINFORCEMENT**



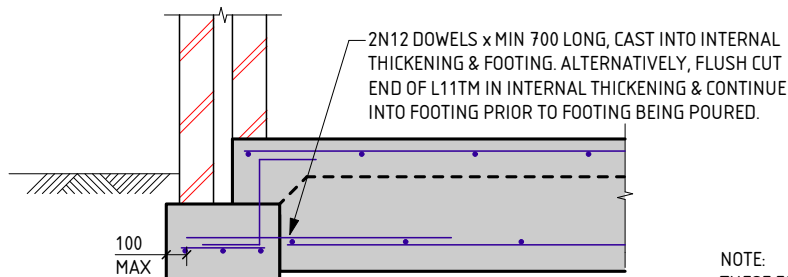
**OPTION B  
PENETRATION INTERRUPTS REINFORCEMENT**

**SERVICE PIPE DIAGRAM**

- MAXIMUM PENETRATION SIZE TO BE Ø150.



**SLAB STEP**



**EXTERNAL FOOTING TO INTERNAL THICKENING**

THIS DETAIL IS EQUIVALENT TO STRUCterre FOOTING DETAIL C4.0

NOTE:  
 THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
 DATE LAST MODIFIED - 19/01/23

**CM3**  
 CAVITY MASONRY



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

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

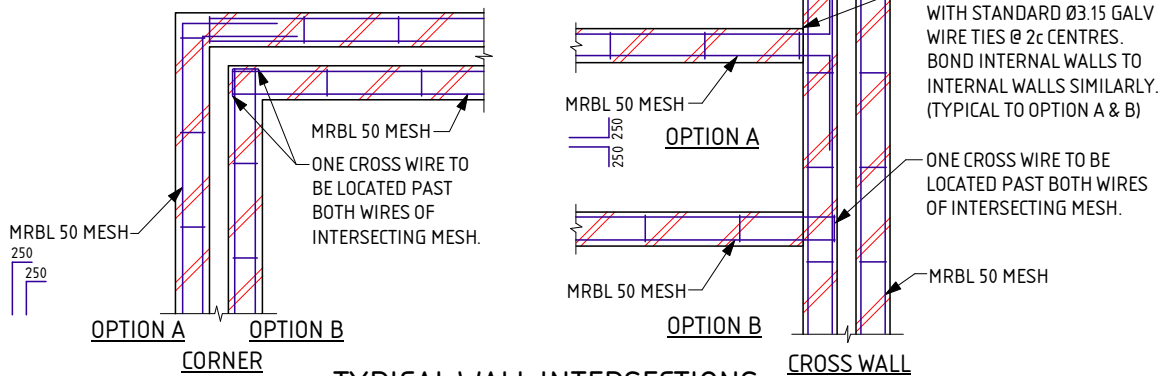
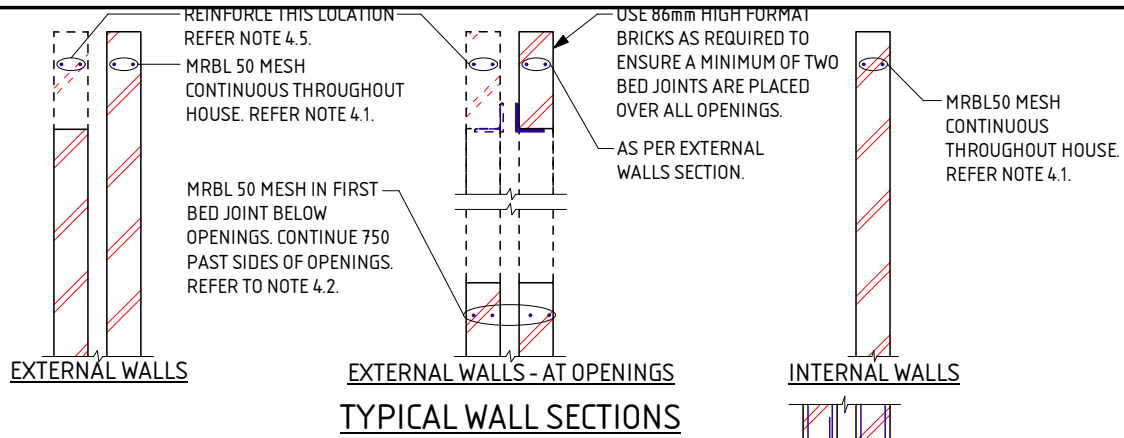
PROJECT: LOT 371 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 21/4/23

APPROVED



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT: LOT 371 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 21/4/23

APPROVED

# EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

## EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemia Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unitil 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 371 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 21/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT:  
LOT 371 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE 1:20

DATE 21/4/23

APPROVED

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

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2598854

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 372 CLOUDBURST AV BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096792  
**DATE OF ASSESSMENT** 20/4/23

**SITE RECORD**

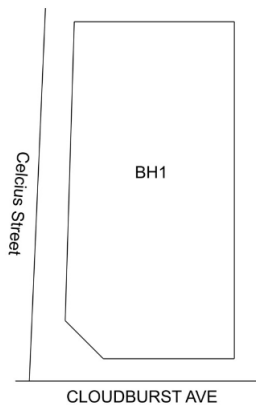


<b>SITE CLASSIFICATION</b>	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
<b>FOOTING DETAIL</b>	<b>CM3</b>
<b>SAND PAD</b>	<b>No sand pad required structurally</b>
<b>BUSHFIRE PRONE AREA</b>	<b>Yes</b> <i>(see NOTE 2.)</i>
<b>CORROSION CLASSIFICATION</b>	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
<b>WIND CLASSIFICATION</b>	<b>N1</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	Full Shielding

## SOIL PROFILE

BOREHOLE 1: 0 - 1200 FILL - sand - brown; 1200 - 1500 FILL - sand trace gravel (limestone) - brown; 1500 - 2300 FILL - sand - brown; 2300 - 2400 silty SAND - grey; 2400 - 2500 SAND - 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.

### Internal Thickenings

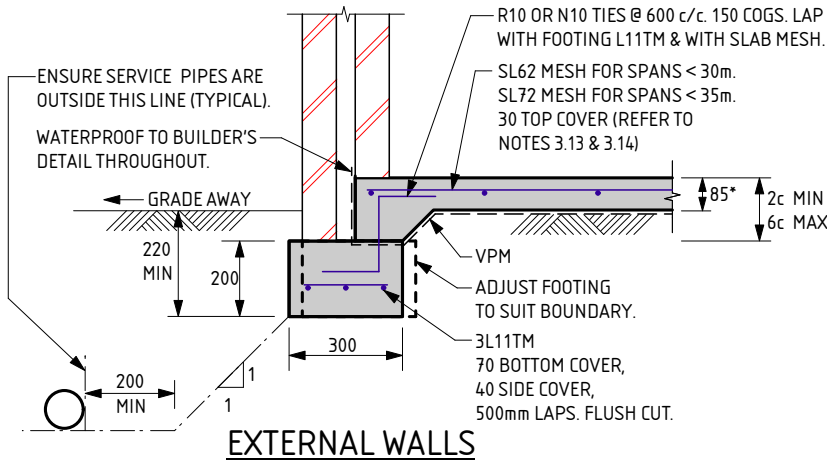
Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

### Internal Thickening Inspection

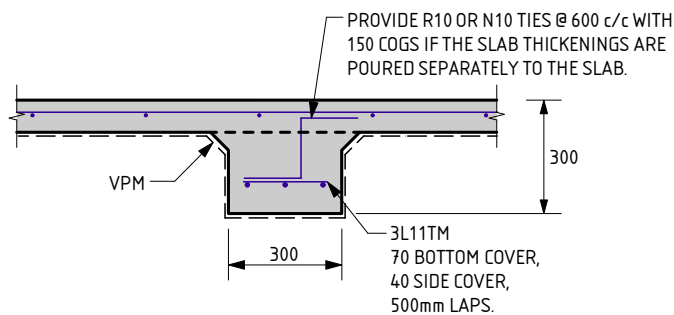
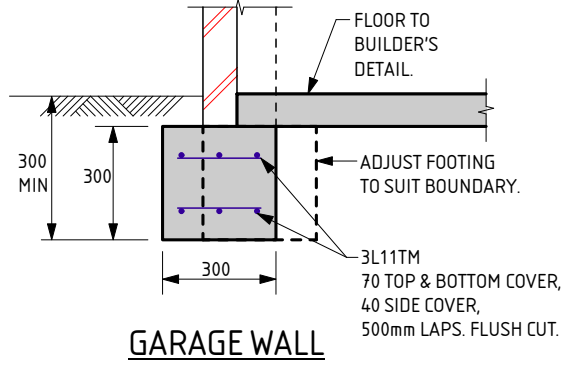
This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

**-- END OF REPORT --**

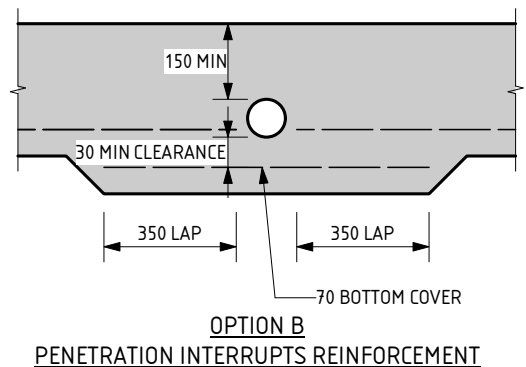
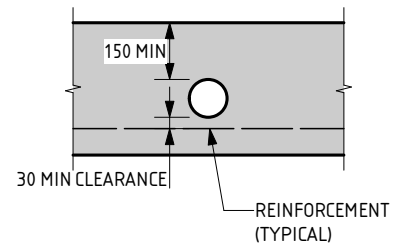
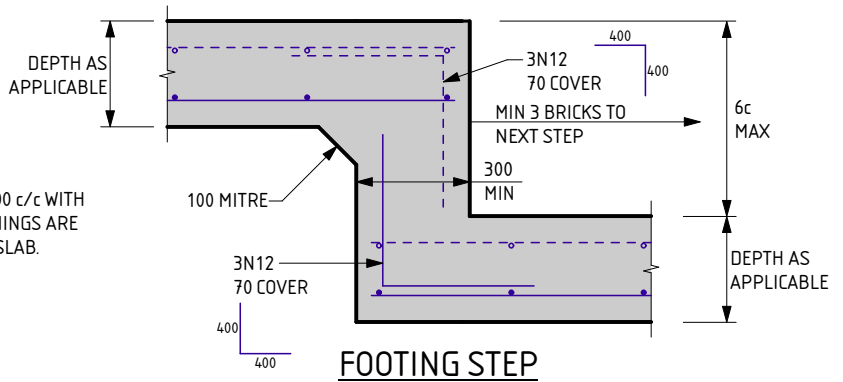
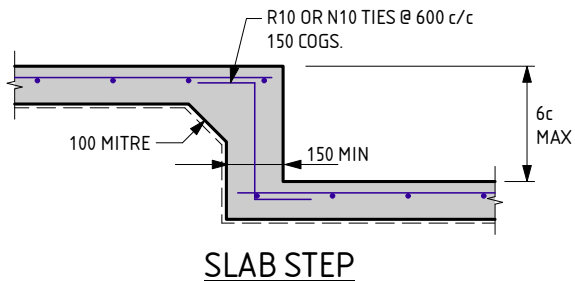




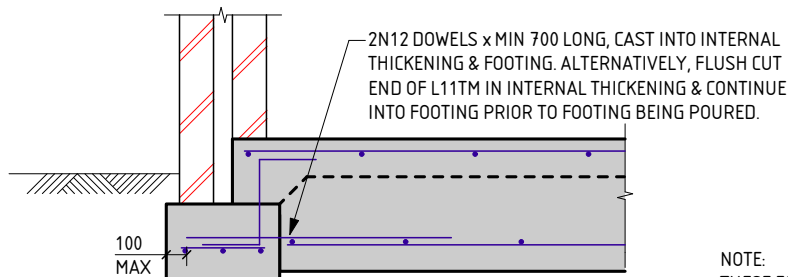
\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
IF 100mm SLAB USED, MESH TO BE:  
SL62 MESH FOR SPANS < 25m.  
SL72 MESH FOR SPANS < 30m.  
SL82 MESH FOR SPANS < 35m.



REFER TO STRUCterre'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCterre PRIOR TO CONCRETE POUR.



**SERVICE PIPE DIAGRAM**  
- MAXIMUM PENETRATION SIZE TO BE Ø150.



NOTE:  
THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
DATE LAST MODIFIED - 19/01/23

**CM3**  
CAVITY MASONRY

THIS DETAIL IS EQUIVALENT TO  
STRUCterre FOOTING DETAIL C4.0

**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, BALEATTA WA 6021

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

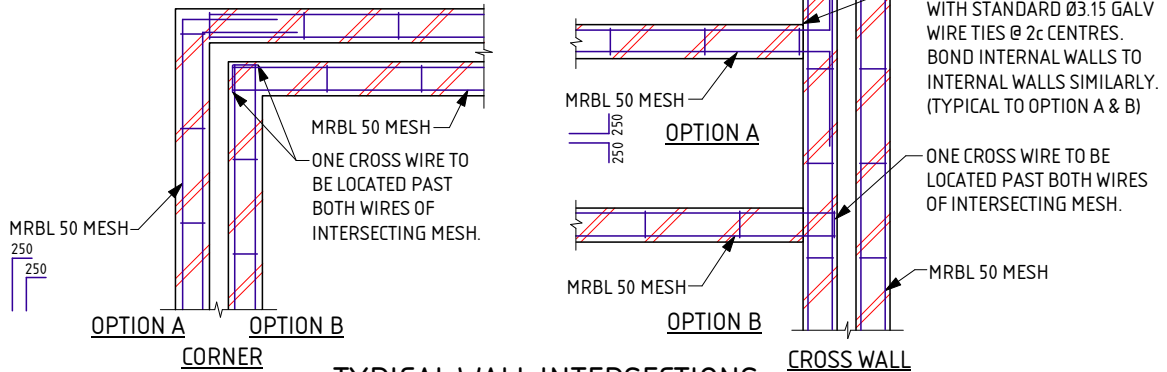
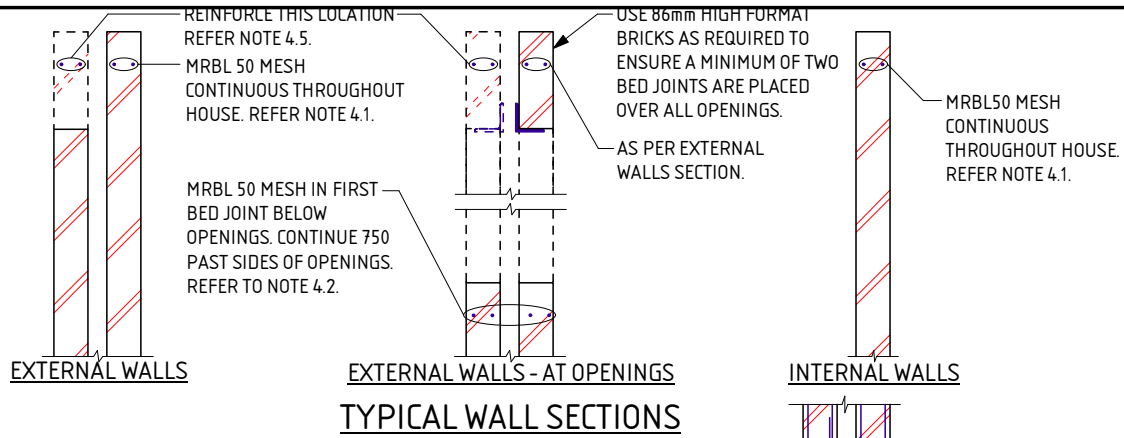
PROJECT:  
LOT 372 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 21/4/23

APPROVED



### REACTIVE SITE NOTES FOR CM1 - CM7

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

#### 1.0 SITE CLASSIFICATION

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

#### 3.0 FOOTINGS & SLABS

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

#### 4.0 MASONRY

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

#### 5.0 MAINTENANCE

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

#### 6.0 QUALITY CONTROL PROGRAM REQUIREMENTS

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT: LOT 372 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 21/4/23

APPROVED

# EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

## EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemia Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unit 1 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 372 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 21/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :

LOT 372 CLOUDBURST AV BALDIVIS

CLIENT :

KEC NOMINEES PTY LTD

SCALE

1:20

APPROVED

DATE

21/4/23

A handwritten signature in blue ink, appearing to be 'M. J. ...', is written over the 'APPROVED' field.

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2601402

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 428 CLOUDBURST AV BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096799  
**DATE OF ASSESSMENT** 17/7/23

**SITE RECORD**

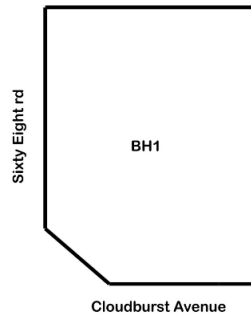


<b>SITE CLASSIFICATION</b>	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
<b>FOOTING DETAIL</b>	<b>CM3</b>
<b>SAND PAD</b>	<b>No sand pad required structurally</b>
<b>BUSHFIRE PRONE AREA</b>	<b>Yes</b> <i>(see NOTE 2.)</i>
<b>CORROSION CLASSIFICATION</b>	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
<b>WIND CLASSIFICATION</b>	<b>N2</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	No Shielding

## SOIL PROFILE

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

## APPROXIMATE BOREHOLE LOCATIONS



### NOTE 1 Explanatory Notes & Standard Recommendations

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

### NOTE 2 Bushfire - Prone Area

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

### ADDITIONAL NOTES / REQUIREMENTS

#### Site Condition

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

#### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J416765 dated 24/08/2022.

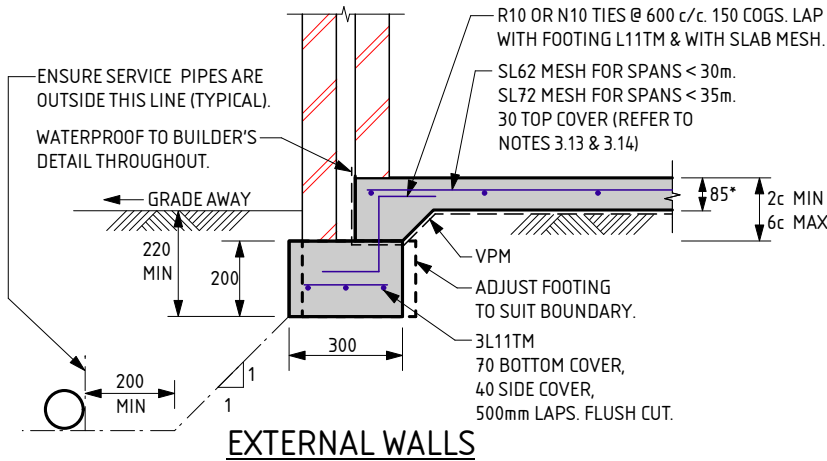
#### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

#### Internal Thickening Inspection

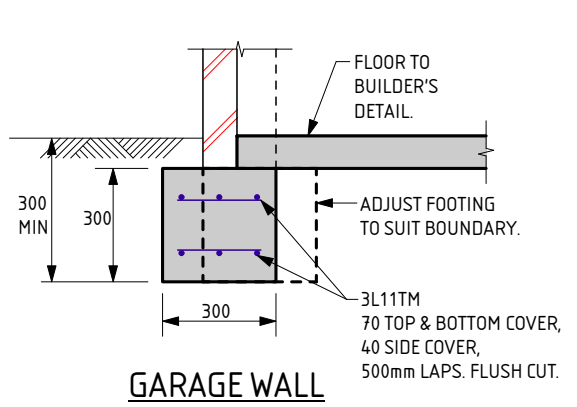
This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

**-- END OF REPORT --**

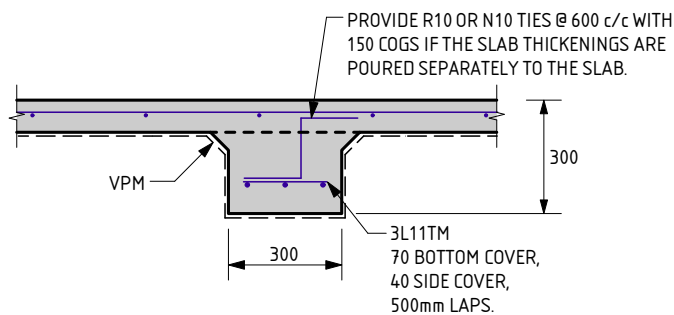


**EXTERNAL WALLS**

\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
 IF 100mm SLAB USED, MESH TO BE:  
 SL62 MESH FOR SPANS < 25m.  
 SL72 MESH FOR SPANS < 30m.  
 SL82 MESH FOR SPANS < 35m.

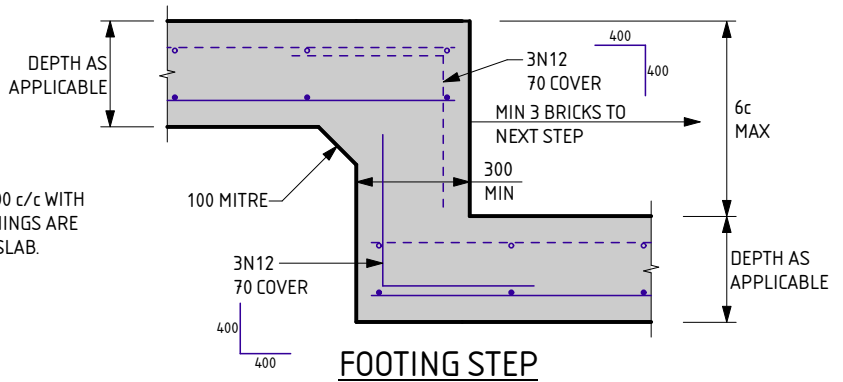


**GARAGE WALL**

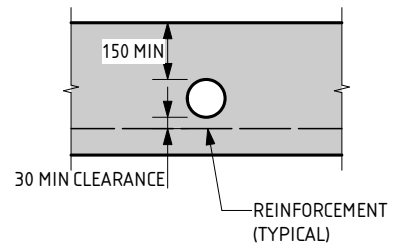


**INTERNAL THICKENING**

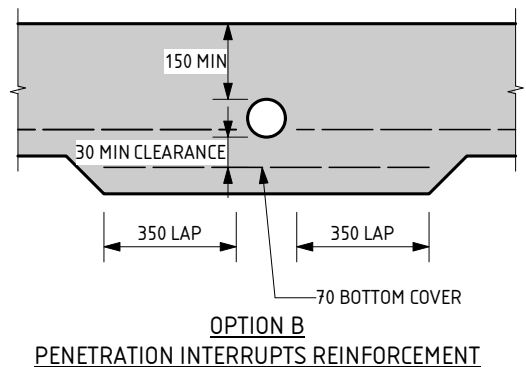
REFER TO STRUCterre'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCterre PRIOR TO CONCRETE POUR.



**FOOTING STEP**



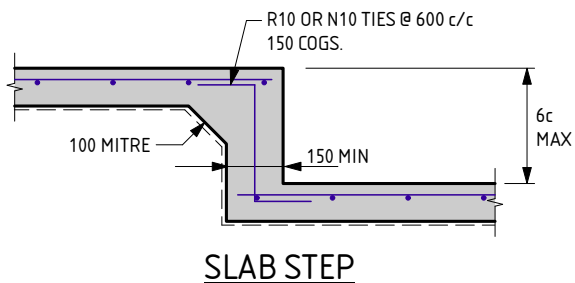
**OPTION A  
PENETRATION CLEAR OF REINFORCEMENT**



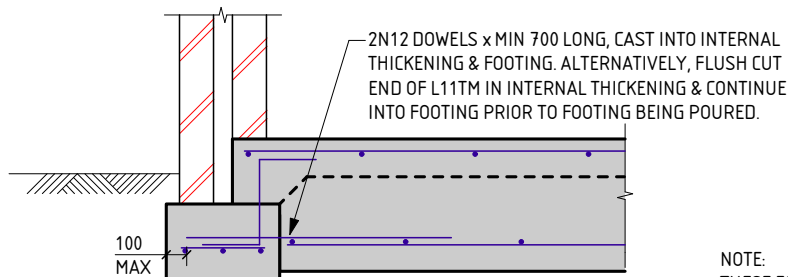
**OPTION B  
PENETRATION INTERRUPTS REINFORCEMENT**

**SERVICE PIPE DIAGRAM**

- MAXIMUM PENETRATION SIZE TO BE Ø150.



**SLAB STEP**



**EXTERNAL FOOTING TO INTERNAL THICKENING**

THIS DETAIL IS EQUIVALENT TO  
 STRUCterre FOOTING DETAIL C4.0

NOTE:  
 THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
 DATE LAST MODIFIED - 19/01/23

**CM3**  
 CAVITY MASONRY



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

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

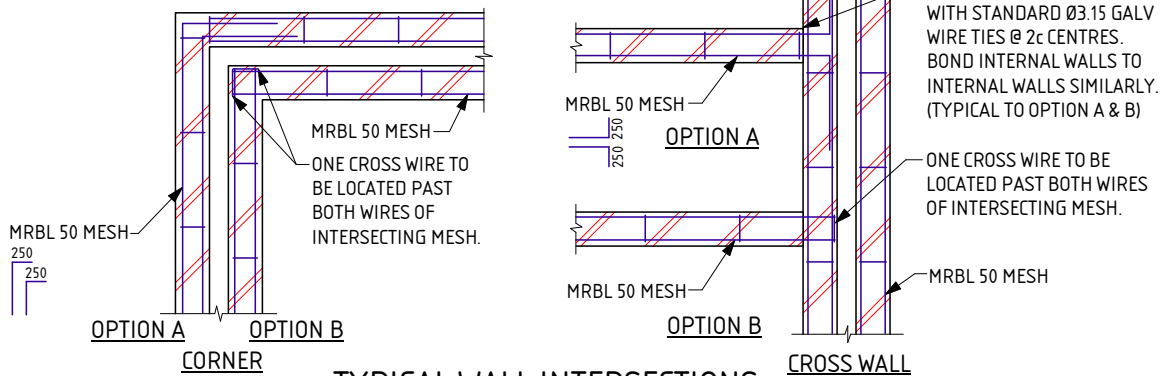
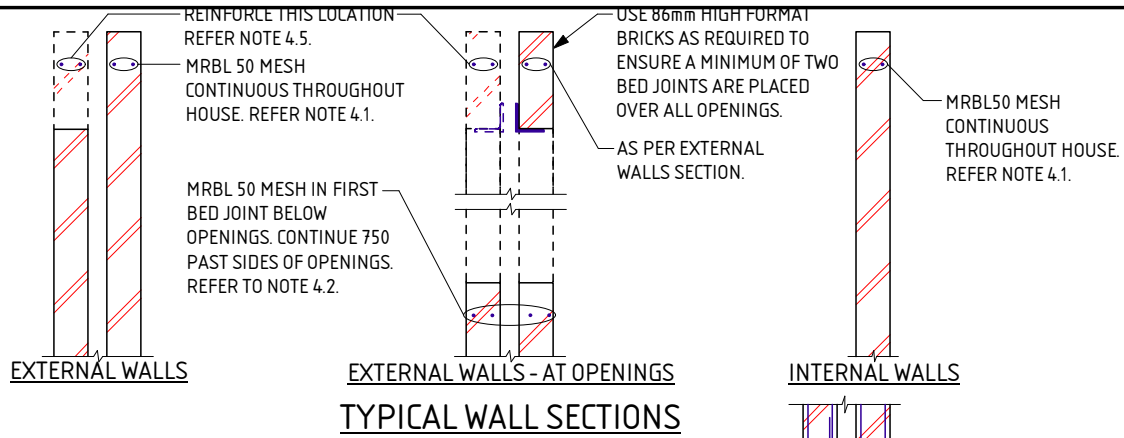
PROJECT: LOT 428 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 18/7/23

APPROVED



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

PROJECT : <b>LOT 428 CLOUDBURST AV BALDIVIS</b>	
CLIENT : <b>KEC NOMINEES PTY LTD</b>	
SCALE : <b>1:20</b>	APPROVED
DATE : <b>18/7/23</b>	



## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

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

PROJECT :  
LOT 428 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 18/7/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :  
LOT 428 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE 1:20

DATE 18/7/23

APPROVED

A handwritten signature in blue ink, appearing to be 'M. J. ...', is written over the 'APPROVED' text.

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2601403

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 429 CLOUDBURST AV BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096798  
**DATE OF ASSESSMENT** 17/7/23

**SITE RECORD**

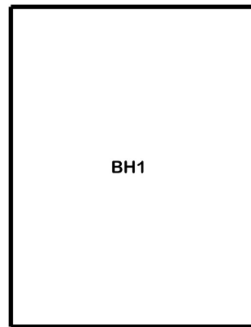


<b>SITE CLASSIFICATION</b>	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
<b>FOOTING DETAIL</b>	<b>CM3</b>
<b>SAND PAD</b>	<b>No sand pad required structurally</b>
<b>BUSHFIRE PRONE AREA</b>	<b>Yes</b> <i>(see NOTE 2.)</i>
<b>CORROSION CLASSIFICATION</b>	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
<b>WIND CLASSIFICATION</b>	<b>N2</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	Partial Shielding

## SOIL PROFILE

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

## APPROXIMATE BOREHOLE LOCATIONS



Cloudburst Avenue

### NOTE 1 Explanatory Notes & Standard Recommendations

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

### NOTE 2 Bushfire - Prone Area

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

## ADDITIONAL NOTES / REQUIREMENTS

### Site Condition

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

### Structerre Geotech Reference #2

The Site Classification is based on the Structerre Geotechnical Report J416765 dated 24/08/2022.

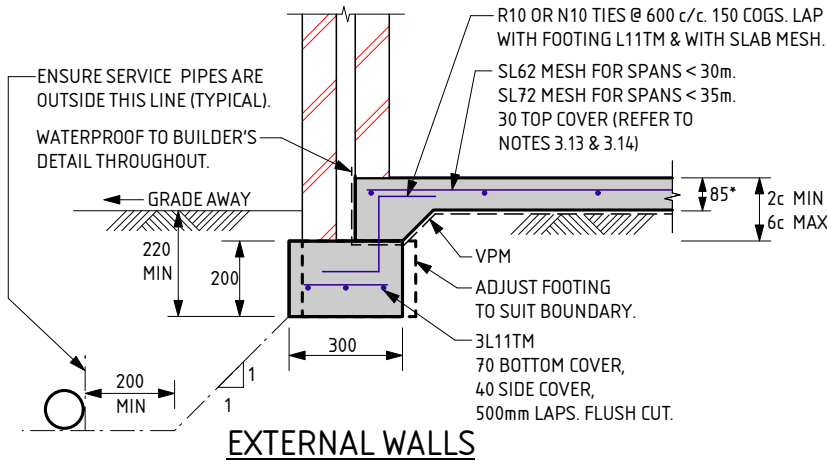
### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

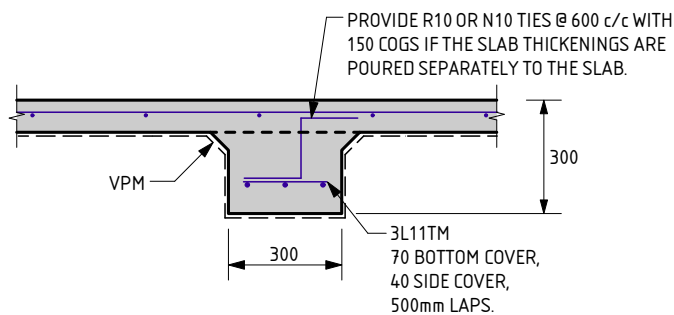
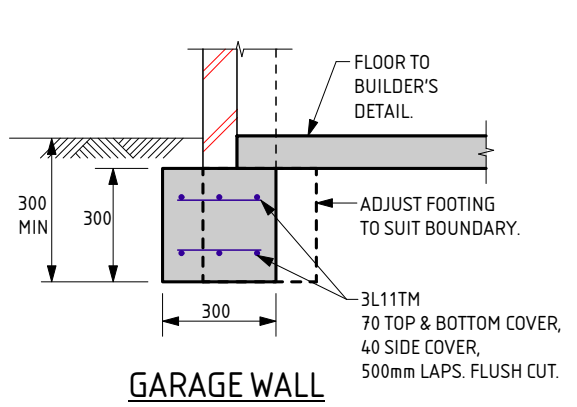
### Internal Thickening Inspection

This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

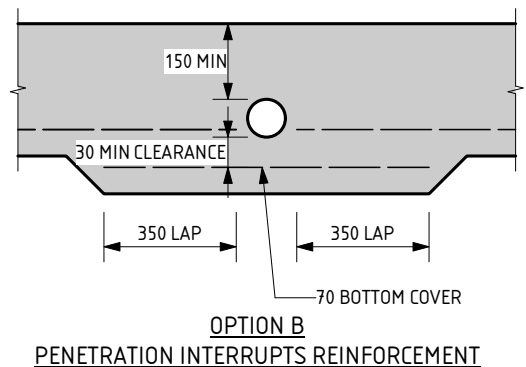
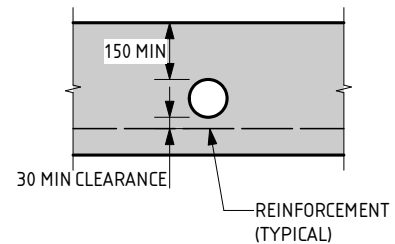
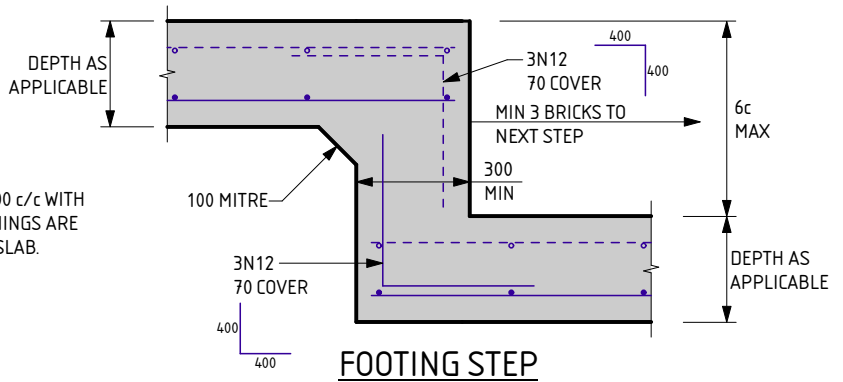
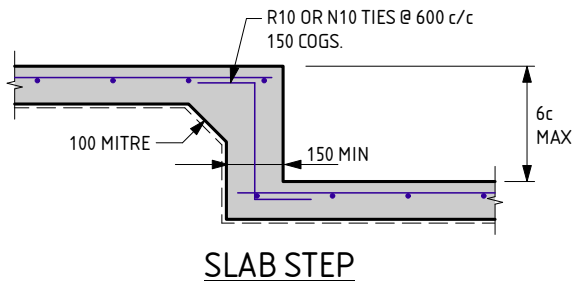
**-- END OF REPORT --**



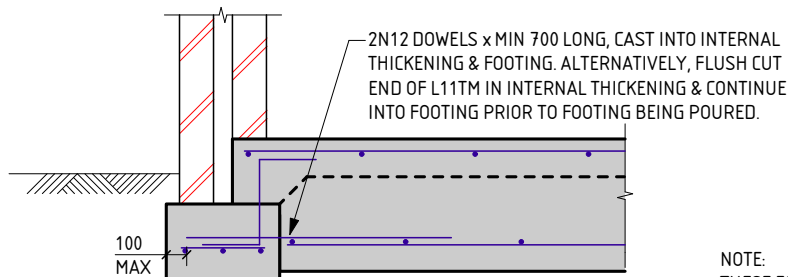
\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
IF 100mm SLAB USED, MESH TO BE:  
SL62 MESH FOR SPANS < 25m.  
SL72 MESH FOR SPANS < 30m.  
SL82 MESH FOR SPANS < 35m.



REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**SERVICE PIPE DIAGRAM**  
- MAXIMUM PENETRATION SIZE TO BE Ø150.



**EXTERNAL FOOTING TO INTERNAL THICKENING**

THIS DETAIL IS EQUIVALENT TO  
STRUCTERRE FOOTING DETAIL C4.0

NOTE:  
THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
DATE LAST MODIFIED - 19/01/23

**CM3**  
CAVITY MASONRY

**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, BALEATTA W.A. 6021

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

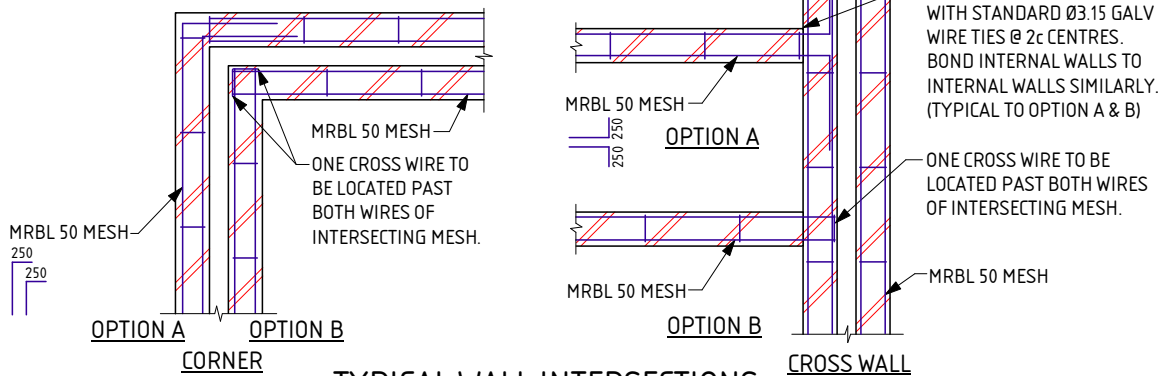
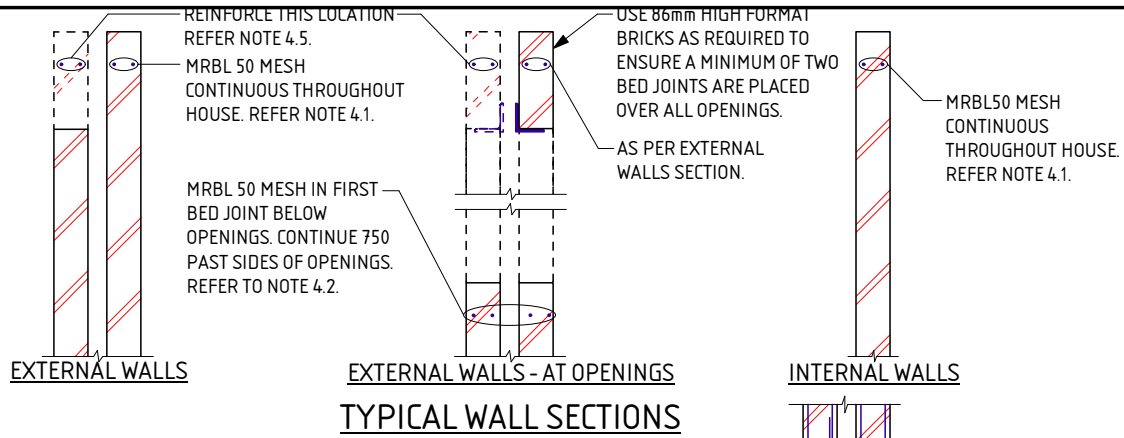
PROJECT:  
LOT 429 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 18/7/23

APPROVED



**REACTIVE SITE NOTES FOR CM1 - CM7**

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

**1.0 SITE CLASSIFICATION**

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

**3.0 FOOTINGS & SLABS**

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

**4.0 MASONRY**

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

**5.0 MAINTENANCE**

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

**6.0 QUALITY CONTROL PROGRAM REQUIREMENTS**

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT: LOT 429 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 18/7/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



Zemia Pty. Ltd. (ABN: 71 349 772 837) ATF the Young Purich and Higham  
Unit 1 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 429 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 18/7/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :

LOT 429 CLOUDBURST AV BALDIVIS

CLIENT :

KEC NOMINEES PTY LTD

SCALE

1:20

APPROVED

DATE

18/7/23

A handwritten signature in blue ink, appearing to be 'M. J. ...', is written over the 'APPROVED' field.

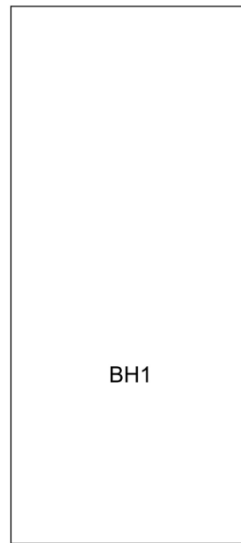




## SOIL PROFILE

BOREHOLE 1: 0 - 1200 FILL - sand - brown; 1200 - 1500 FILL - sand trace gravel (limestone) - brown; 1500 - 2300 FILL - sand - brown; 2300 - 2400 silty SAND - grey; 2400 - 2500 SAND - grey; 2500 end of hole.

## APPROXIMATE BOREHOLE LOCATIONS



CLOUDBURST AVE

### 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.

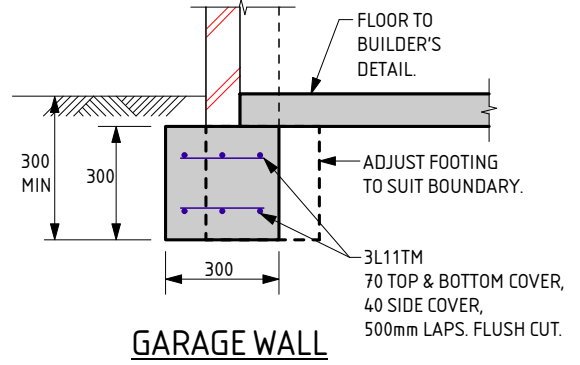
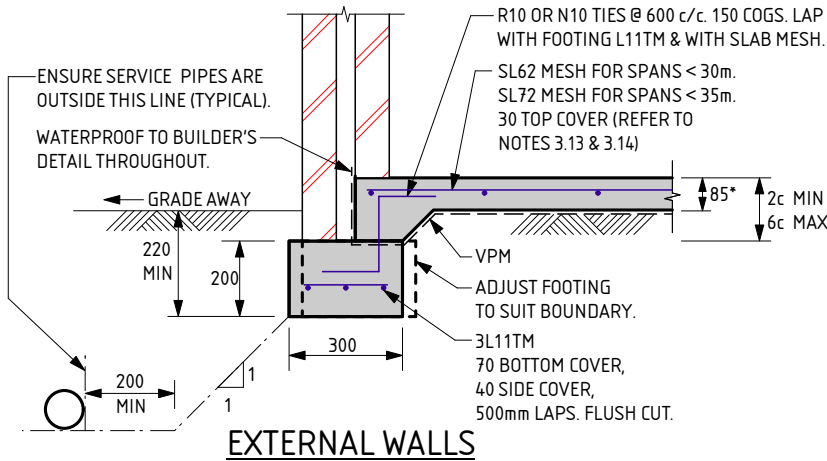
### Internal Thickenings

Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

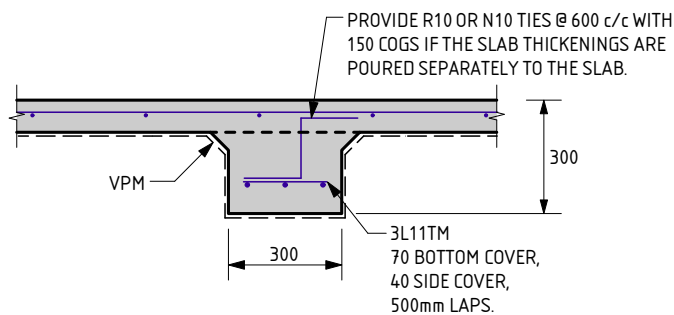
### Internal Thickening Inspection

This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

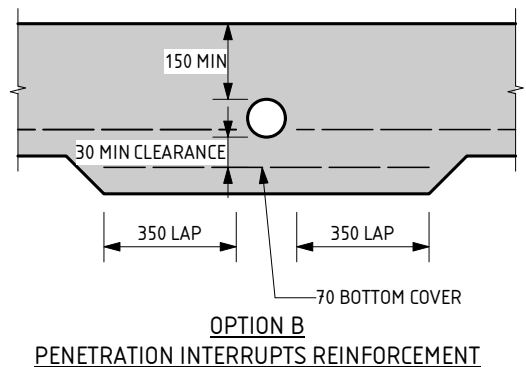
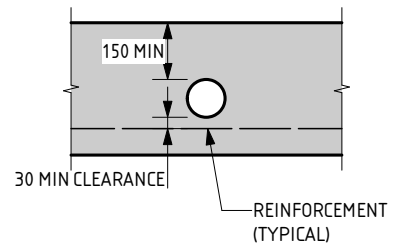
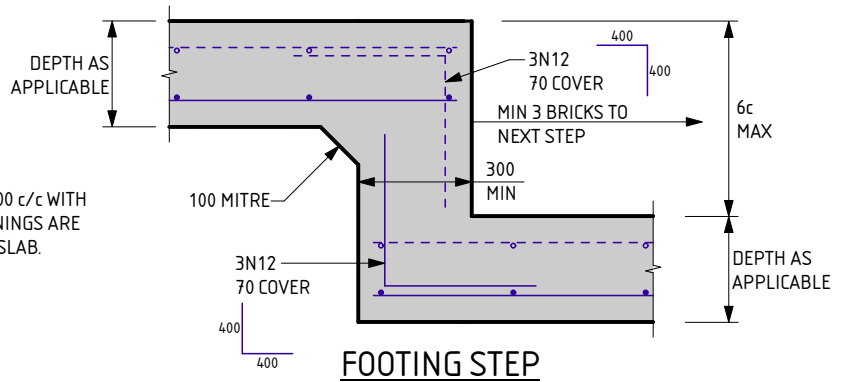
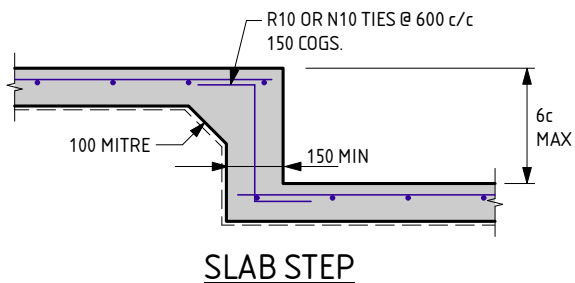
**-- END OF REPORT --**



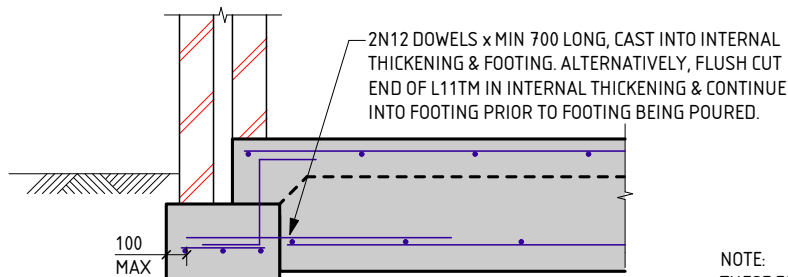
\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
IF 100mm SLAB USED, MESH TO BE:  
SL62 MESH FOR SPANS < 25m.  
SL72 MESH FOR SPANS < 30m.  
SL82 MESH FOR SPANS < 35m.



REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**SERVICE PIPE DIAGRAM**  
- MAXIMUM PENETRATION SIZE TO BE Ø150.



**EXTERNAL FOOTING TO INTERNAL THICKENING**

THIS DETAIL IS EQUIVALENT TO  
STRUCTERRE FOOTING DETAIL C4.0

NOTE:  
THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
DATE LAST MODIFIED - 19/01/23

**CM3**  
CAVITY MASONRY

**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, BALEATTA W.A. 6021

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

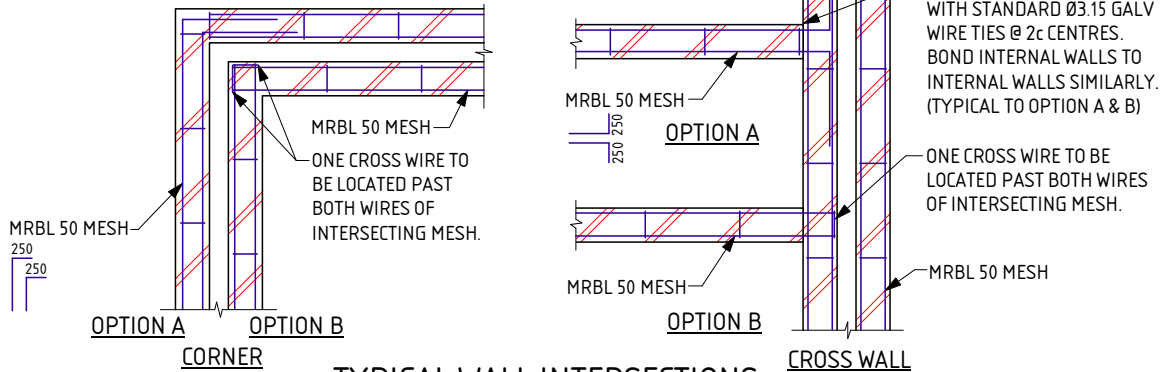
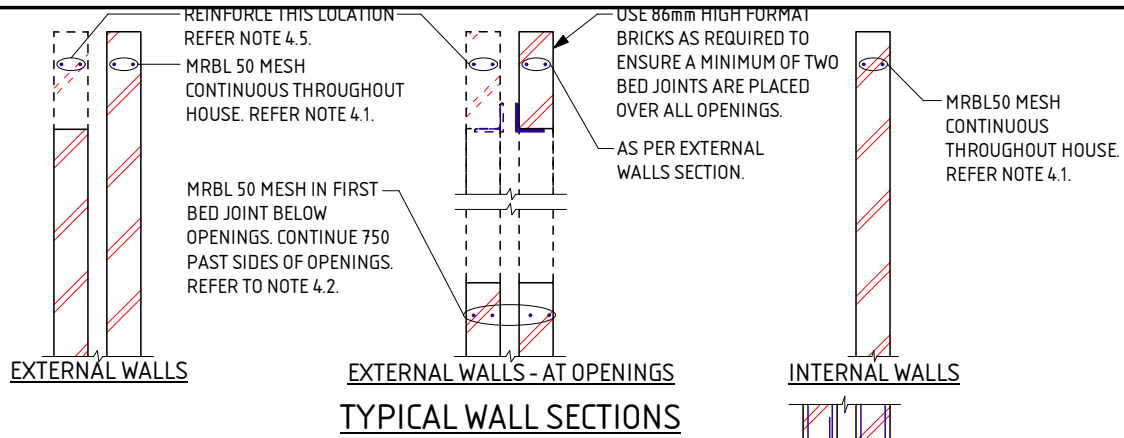
PROJECT:  
LOT 430 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 24/4/23

APPROVED



### REACTIVE SITE NOTES FOR CM1 - CM7

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

#### 1.0 SITE CLASSIFICATION

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

#### 3.0 FOOTINGS & SLABS

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 D500L 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

#### 3.8 CONCRETE TO CONFORM WITH AS 3600.

- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

#### 4.0 MASONRY

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

#### 5.0 MAINTENANCE

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

#### 6.0 QUALITY CONTROL PROGRAM REQUIREMENTS

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT :

LOT 430 CLOUDBURST AV BALDIVIS

CLIENT :

KEC NOMINEES PTY LTD

SCALE

1:20

APPROVED

DATE

24/4/23

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

### EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

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

PROJECT :  
LOT 430 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 24/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT :  
LOT 430 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 24/4/23

APPROVED

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

**SITE CLASSIFICATION REPORT**  
CERTIFICATE 2598898

**CLIENT** KEC NOMINEES PTY LTD  
**JOB ADDRESS** LOT 431 CLOUDBURST AV BALDIVIS  
**CLIENT JOB NO.**  
**OWNER**  
**STRUCTERRE JOB NO.** S1096795  
**DATE OF ASSESSMENT** 20/4/23

**SITE RECORD**

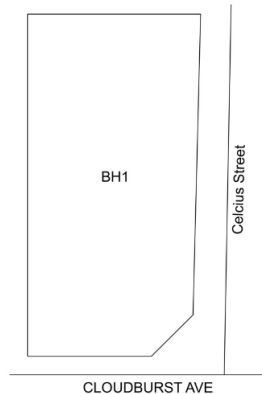


<b>SITE CLASSIFICATION</b>	<b>S - EQUIVALENT</b> <i>(in accordance with AS2870)</i>
<b>FOOTING DETAIL</b>	<b>CM3</b>
<b>SAND PAD</b>	<b>No sand pad required structurally</b>
<b>BUSHFIRE PRONE AREA</b>	<b>Yes</b> <i>(see NOTE 2.)</i>
<b>CORROSION CLASSIFICATION</b>	<b>R3</b> <i>(Durability Class in accordance with AS3700)</i>
<b>WIND CLASSIFICATION</b>	<b>N1</b> <i>(in accordance with AS4055)</i>
-TERRAIN CATEGORY	2
-TOPOGRAPHIC	T0
-SHIELDING	Full Shielding

## SOIL PROFILE

BOREHOLE 1: 0 - 1200 FILL - sand - brown; 1200 - 1500 FILL - sand trace gravel (limestone) - brown; 1500 - 2300 FILL - sand - brown; 2300 - 2400 silty SAND - grey; 2400 - 2500 SAND - 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.

### Internal Thickenings

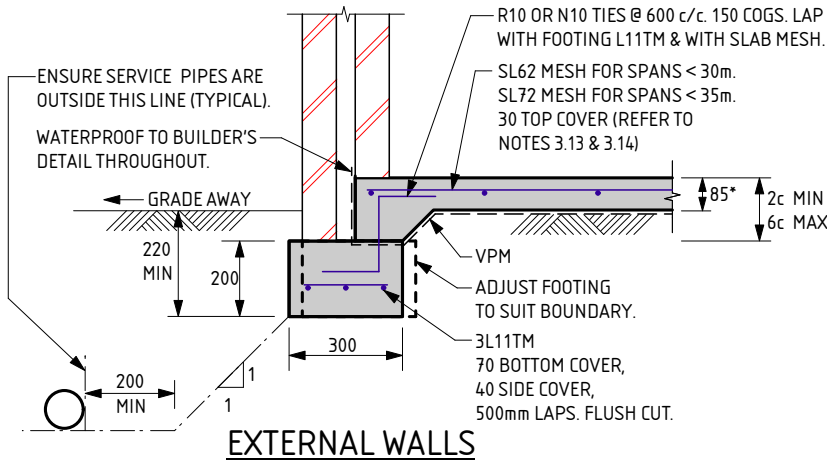
Internal thickenings are required for the proposed residence as specified on the recommended footing detail. Please provide a copy of the architectural drawings to this Office, so that the internal thickenings can be designed and drawn in accordance with AS2870.

### Internal Thickening Inspection

This detail is subject to a internal thickening layout inspection. It is recommended that an inspection be conducted by a representative from this Office prior to concrete pour.

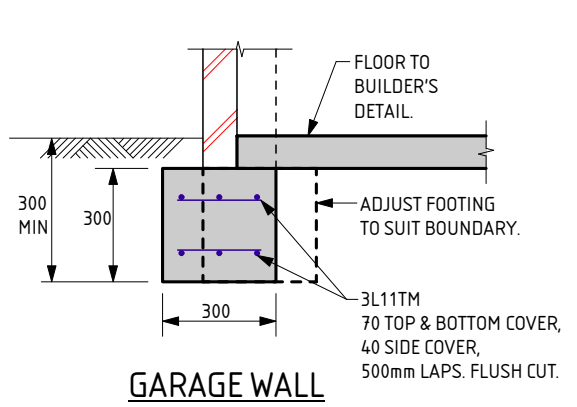
**-- END OF REPORT --**



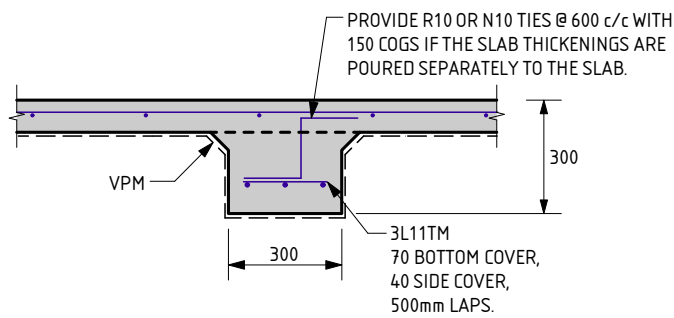


**EXTERNAL WALLS**

\* 100mm SLAB MAY BE INSTALLED INSTEAD OF 85mm.  
 IF 100mm SLAB USED, MESH TO BE:  
 SL62 MESH FOR SPANS < 25m.  
 SL72 MESH FOR SPANS < 30m.  
 SL82 MESH FOR SPANS < 35m.

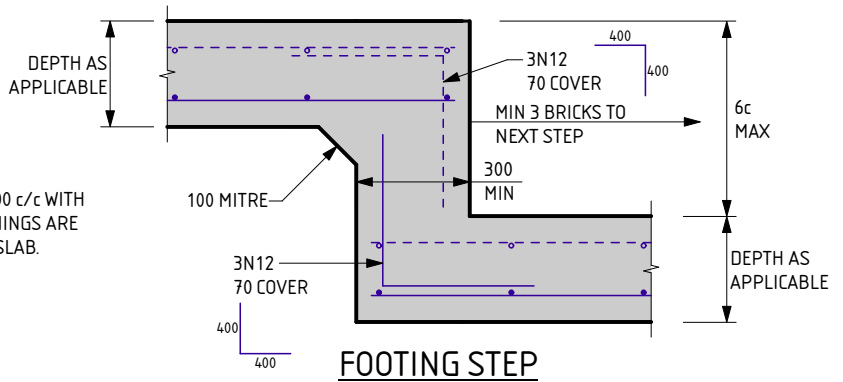


**GARAGE WALL**

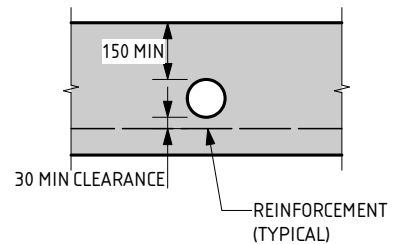


**INTERNAL THICKENING**

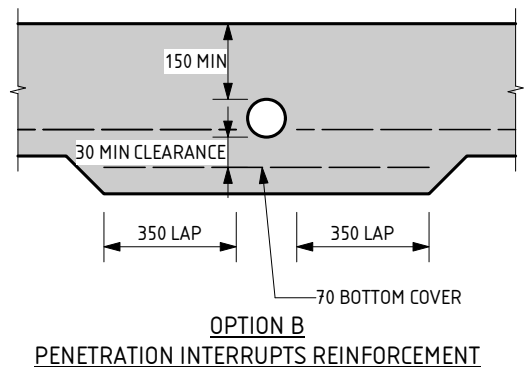
REFER TO STRUCTERRE'S DRAWINGS FOR PLACEMENT OF INTERNAL THICKENINGS. LOCATIONS TO BE CONFIRMED ON SITE BY STRUCTERRE PRIOR TO CONCRETE POUR.



**FOOTING STEP**



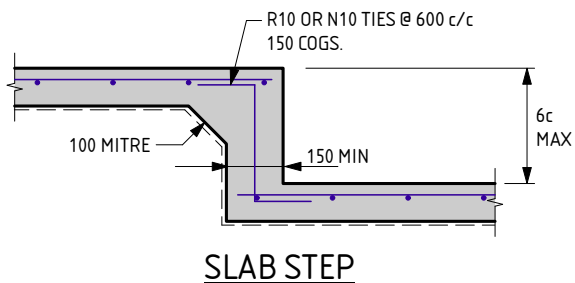
**OPTION A  
PENETRATION CLEAR OF REINFORCEMENT**



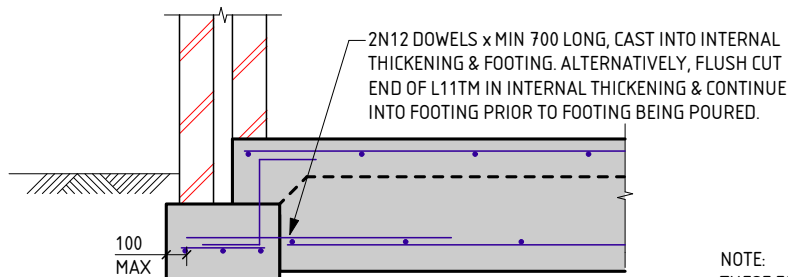
**OPTION B  
PENETRATION INTERRUPTS REINFORCEMENT**

**SERVICE PIPE DIAGRAM**

- MAXIMUM PENETRATION SIZE TO BE Ø150.



**SLAB STEP**



**EXTERNAL FOOTING TO INTERNAL THICKENING**

THIS DETAIL IS EQUIVALENT TO  
 STRUCTERRE FOOTING DETAIL C4.0

NOTE:  
 THESE FOOTING DETAILS ARE TO BE READ IN CONJUNCTION WITH THE REACTIVE SITE NOTES.

THE APPROVED SIGNATURE ON THIS DETAIL ENDORSES ITS USE FOR SINGLE STOREY BUILDINGS ON BUILDING PLATFORMS WITH UP TO 11mm OF SURFACE MOVEMENT.  
 DATE LAST MODIFIED - 19/01/23

**CM3**  
 CAVITY MASONRY



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

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

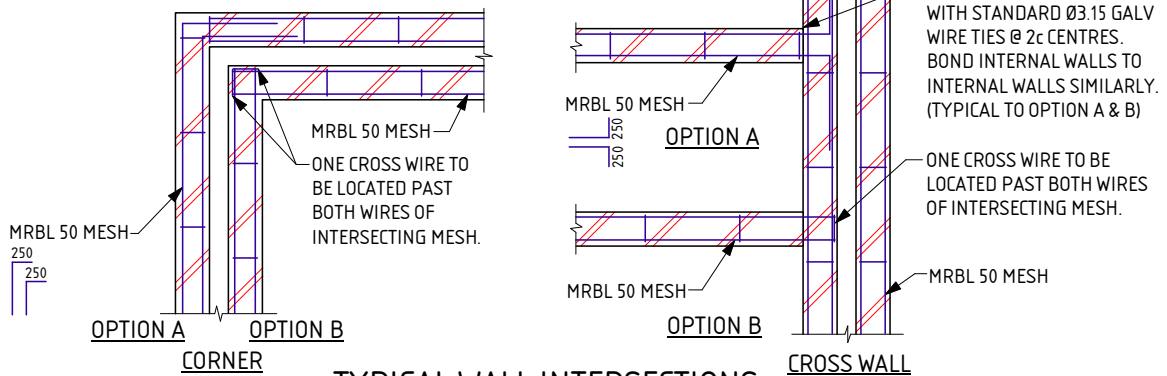
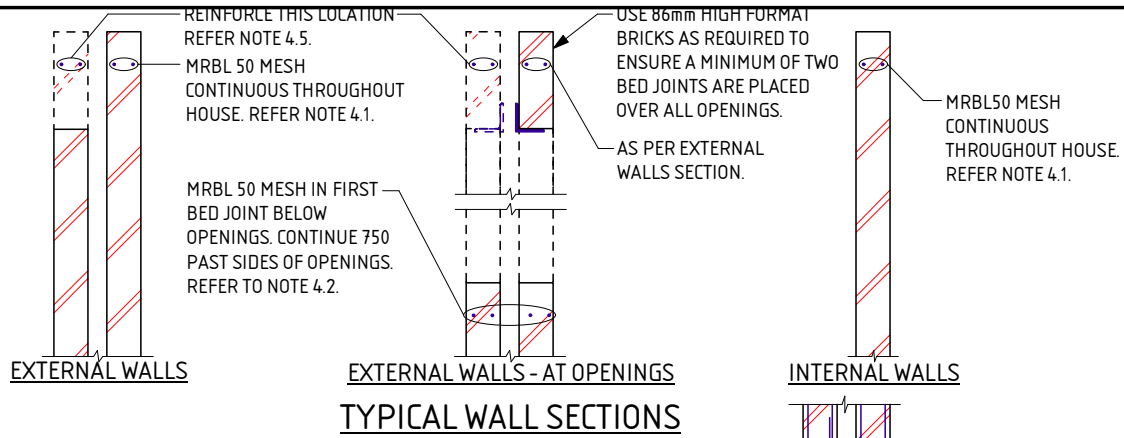
PROJECT: LOT 431 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 24/4/23

APPROVED



### REACTIVE SITE NOTES FOR CM1 - CM7

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

#### 1.0 SITE CLASSIFICATION

- 1.1 REFER TO ATTACHED CERTIFICATE OF INSPECTION FOR SITE CLASSIFICATION. THE SITE CLASSIFICATION NOTED, IS AS DEFINED IN AS2870 - RESIDENTIAL SLABS & FOOTINGS.
- 1.2 THE SITE CLASSIFICATION HAS BEEN DETERMINED BY INVESTIGATION OF THE SITE, AS PER THE ATTACHED CERTIFICATE OF INSPECTION. REFER TO THE ATTACHED CERTIFICATE 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 PAD AREA.
  - b) REMOVE ALL RUBBISH AND DELETERIOUS FILL (SUCH AS CLAY 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 ANY CUT TO THE SITE, OTHER THAN TOPSOIL STRIPPING, WILL REQUIRE THE PREPARED CUT BASE TO BE INSPECTED AND APPROVED BY THE ENGINEER.
- 2.5 MAXIMUM SAND PAD DEPTH NOT TO EXCEED 150% OF MINIMUM PAD DEPTH OR 2000mm WITHOUT THE ENGINEER'S APPROVAL.
- 2.6 IF APPLICABLE 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 THE DEPTH OF THE PAD OR TO DISCRETION OF ENGINEER.
- 2.7 COMPACTION TESTING TO BE PERFORMED BY STRUCTERRE.

#### 3.0 FOOTINGS & SLABS

- 3.1 FOOTINGS ARE TO BE PLACED DIRECTLY INTO SAND PAD OF SPECIFIED THICKNESS.
- 3.2 ALL STORMWATER MUST BE DISCHARGED INTO COUNCIL DRAINS OR A MINIMUM OF 3m FOR S CLASS SITES, 4m FOR M CLASS SITES AND 5m FOR H1 & H2 CLASS SITES, AWAY FROM THE RESIDENCE AND/OR ADJACENT BUILDINGS INTO SOAKWELLS. IF THIS RESTRICTION CANNOT BE ACHIEVED REFER BACK TO THIS OFFICE FOR AN ALTERNATIVE DESIGN. WHERE THE SITE HAS BEEN CLASSIFIED AS AN 'EQUIVALENT' SITE CLASSIFICATION, REFER TO 'EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES' FOR STORMWATER DRAINAGE REQUIREMENTS UNLESS SPECIFIED OTHERWISE.
- 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 85mm SLAB THICKNESS. FOLD MESH DOWN TO MAINTAIN COVER, PLACE DIAGONAL BARS AT RE-ENTRANT CORNER FOR STEPS OVER 30mm. BARS TO BE N12x 1200 LONG.
- 3.6 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 TABLE 3.4.4.4 "CORROSION PROTECTION" OF THE BUILDING CODE OF AUSTRALIA.
- 3.7 LAP ALL MESH TWO TRANSVERSE WIRES PLUS 25mm OR TO MANUFACTURER'S SPECIFICATIONS.

- 3.8 CONCRETE TO CONFORM WITH AS 3600.
- 3.9 BLENDED CEMENT TO CONFORM WITH AS1317.
- 3.10 ALL CONCRETE TO BE N20/20/100.
- 3.11 FOR ISOLATED PAD FOOTINGS, REFER BACK TO ENGINEER.
- 3.12 FOOTING POSITION UNDER BRICKWORK CAN BE ADJUSTED TO SUIT PARAPET WALLS.
- 3.13 FOR SLAB SPANS > 35m REFER TO ENGINEER FOR MESH SIZE.
- 3.14 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.
- 3.15 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.
- 3.16 PLACE SLAB THICKENING (300 WIDE x 250 DEEP) UNDER INTERNAL WALLS (90 OR 110) HIGHER THAN 3.7m WHERE GREATER THAN 1m FROM INTERNAL THICKENING. PROVIDE SAME TRENCH MESH AS INTERNAL THICKENING DETAIL, WHERE REQUIRED.
- 3.17 PIERCING THE VAPOUR BARRIER (VPM) USING LEVELLING PINS ON FREE DRAINING SAND PADS IS ALLOWABLE.
- 3.18 CURE SLAB AS DETERMINED BY ENGINEER.
- 3.19 THE SLAB IS CONSIDERED SUITABLE AS A PHYSICAL BARRIER AGAINST INGRESS OF TERMITES. IF THE FOOTING AND SLAB IS PLACED IN 2 POURS, THE PHYSICAL BARRIER ALSO INCLUDES THE FOOTING AND SLAB JUNCTION.
- 3.20 THIS DESIGN IS IN ACCORDANCE WITH AS2870 SECTIONS 4.4 AND 4.6, AND THE EXPECTED PERFORMANCE IS AS PER CLAUSE 1.3 OF AS2870.

#### 4.0 MASONRY

- 4.1 PLACE MRBL50 MESH IN TOP BED JOINT CONTINUOUS THROUGHOUT ALL BRICKWORK.
- 4.2 REINFORCE BED JOINT BELOW WINDOW SILLS WITH MRBL50 MESH. CONTINUE 750 PAST SIDES OF OPENING.
- 4.3 LAP 250 AT SPLICES AND AROUND CORNERS AND COG 250 INTO INTERSECTING WALLS. 20mm COVER TO ALL WIRES.
- 4.4 ALL MESH IN EXTERNAL FACE OF EXTERNAL LEAF TO BE GALVANIZED TO AS/NZS 4680.
- 4.5 WHEN BRICKWORK EXTENDS ABOVE OPENINGS TO EXTERNAL LEAF REINFORCE AS PER CLAUSE 4.1, 4.2 & 4.3.
- 4.6 TYPICAL WALL SECTIONS ARE SHOWN FOR 28c INTERNAL CEILINGS. WHERE THERE ARE 3 OR MORE BED JOINTS OVER THE OPENING, REINFORCE BED JOINT OVER OPENING WITH MRBL50 MESH. CONTINUE 750 PAST SIDE OF OPENING.
- 4.7 ALL PERPENDS TO BE FULLY MORTARED.
- 4.8 A BRICK COURSE, AS REFERRED TO IN THIS DOCUMENT IS STANDARD 86mm HIGH.
- 4.9 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.

#### 5.0 MAINTENANCE

- 5.1 IT IS CONSIDERED THAT THIS DESIGN IS SUITABLE FOR THE FOUNDATION CONDITIONS TO BE ENCOUNTERED AND WILL ADEQUATELY CONTROL ANY CRACKING OF BRICKWORK AND CONCRETE, SUBJECT TO THE MAINTENANCE PROCEDURES BELOW BEING SATISFIED.
- 5.2 BUILDER TO ENSURE THAT CLIENT BE INFORMED OF NECESSITY TO MAINTAIN DRAINS IN GOOD WORKING ORDER AT ALL TIMES.
- 5.3 BUILDER TO ADVISE CLIENT TO CONSULT AN ENGINEER BEFORE PLANTING TREES OR SHRUBS WITHIN 2.5m, OR A DISTANCE EQUAL TO THE ANTICIPATED MAXIMUM HEIGHT OF THE TREE, OF THE BUILDING.
- 5.4 SITE TO BE MAINTAINED AS PER CSIRO INFORMATION PAMPHLET BTF 18 & STRUCTERRE'S CLAY FACT SHEET.
- 5.5 AS2870 AND 'CSIRO PAMPHLET BTF 18' COVER THE EXPECTED PERFORMANCE AND RESPONSIBILITIES OF ALL PARTIES WITH THE USE OF THESE DETAILS.

#### 6.0 QUALITY CONTROL PROGRAM REQUIREMENTS

- 6.1 WORKING SLAB DEPTH AS INDICATED ON THE DETAIL. SLAB DEPTH TOLERANCE ALLOWABLE -10mm, +15mm.
- 6.2 WHERE DEPTH IS BELOW NOMINATED DEPTH, MAX AREA ALLOWED TO BE ≤ 5% OF THE TOTAL AREA.
- 6.3 DEPTH TESTING LOCATIONS TO BE NO CLOSER THAN 1000mm APART.
- 6.4 SLAB DEPTH IS TO BE PART OF A QUALITY CONTROL INSPECTION REGIME.
- 6.5 SLAB AND FOOTING CAN BE POURED MONOLITHICALLY IF DESIRED.

DATE LAST MODIFIED - 19/01/23



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

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

PROJECT: LOT 431 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE: 1:20

DATE: 24/4/23

APPROVED

# EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT 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. IT IS RECOMMENDED OTHER PARTIES TO 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",
  - b. A WIND CLASSIFICATION IN ACCORDANCE WITH AS4055 "WIND LOADS FOR HOUSING",
  - c. A COASTAL CORROSION CLASSIFICATION,
  - d. ADDITIONAL EARTHWORK RECOMMENDATIONS WHERE APPLICABLE,
  - e. STANDARD FOOTING DESIGN FOR SINGLE STOREY SLAB ON GROUND CONSTRUCTION.
5. THE SITE CLASSIFICATION IS BASED ON THE SITE AS PRESENTED AT THE TIME OF THE ASSESSMENT. THE SITE CLASSIFICATION AND RECOMMENDATIONS INCLUDED IN THE REPORT ARE SUBJECT TO SATISFACTORY COMPLETION OF RECOMMENDED EARTHWORKS, (REFER NOTE 17) AS A MINIMUM. SHOULD CHANGES TO 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.
6. ALL RECOMMENDATIONS GIVEN IN THE SITE CLASSIFICATION REPORT HAVE BEEN DETERMINED FROM THE INFORMATION THAT WAS AVAILABLE TO THIS OFFICE AT THE TIME OF INVESTIGATION. IF FURTHER INFORMATION RELATING TO THE SITE OR DEVELOPMENT BECOMES AVAILABLE, THESE RECOMMENDATIONS ARE SUBJECT TO CHANGE.
7. EQUIVALENT CLASS SITES ARE BASED ON DIFFERENTIAL SURFACE MOVEMENT ARISING FROM ISSUE OTHER THAN SHRINK-SWELL (REACTIVITY) ONLY. THESE MAY INCLUDE SETTLEMENT AND/OR CONSOLIDATION THAT MAY OCCUR AS A RESULT OF THE UNDERLYING GROUND CONDITIONS.
8. 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. ANY ANOMALIES SHOULD BE REFERRED BACK TO THIS OFFICE FOR A REASSESSMENT.
9. A NUMBER OF BOREHOLES ARE CONDUCTED ACROSS THE SITE TO DETERMINE THE SOIL PROFILES AND PROVIDE A REPRESENTATION OF THE GROUND CONDITIONS.
10. 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

11. 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.
12. 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.
13. 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.
14. ON SAND SITES A SAND PAD IS NOT REQUIRED STRUCTURALLY, HOWEVER IF ROCK IS ENCOUNTERED, A MINIMUM 200mm SAND PAD BEYOND THE BASE OF FOOTING IS RECOMMENDED.
15. SAND PAD TO EXTEND BEYOND BUILDING AREA A MINIMUM OF 1.5 TIMES THE PAD DEPTH.
16. RECOMMENDED SAND PAD DEPTH IS ABOVE THE HIGHEST POINT, UNLESS OTHERWISE SPECIFIED.
17. IT IS REQUIRED THAT EARTHWORKS CONFIRM THAT THE MINIMUM DEPTH OF RECOMMENDED SAND PAD IS ACHIEVED.

## EARTHWORKS

18. 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.
19. 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.
20. 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

21. AN ASSESSMENT OF ANY EXISTING OR PROPOSED RETAINING WALLS HAS NOT BEEN CONDUCTED AS PART OF THIS SITE CLASSIFICATION REPORT.
22. IF THE PROPOSED BUILDING IS TO BE LOCATED CLOSER 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
23. UNLESS OTHERWISE SPECIFIED, ALL SOAKWELLS ARE TO BE LOCATED THE DEPTH OF THE SOAKWELL AWAY FROM THE BUILDING OR SETBACK A MINIMUM OF 1200mm, WHICHEVER IS GREATER, UNLESS SPECIFIED OTHERWISE. PLEASE REFER BACK TO THIS OFFICE IF THE SETBACK CANNOT BE ACHIEVED.

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

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

PROJECT :  
LOT 431 CLOUDBURST AV BALDIVIS

CLIENT : KEC NOMINEES PTY LTD

SCALE 1:20

DATE 24/4/23

APPROVED

## EXPLANATORY NOTES & STANDARD RECOMMENDATIONS - EQUIVALENT CLASS SITES (Sheet 2 of 2)

### WIND CLASSIFICATION

24. 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

25. NO ENVIRONMENTAL ASSESSMENT OF THIS SITE HAS BEEN UNDERTAKEN. SHOULD AN ENVIRONMENTAL ASSESSMENT BE REQUIRED, PLEASE CONTACT THIS OFFICE.

### SEISMIC

26. RECOMMENDED FOOTING DETAILS ARE SUITABLE FOR SEISMIC CONDITIONS WITH AN EARTHQUAKE HAZARD FACTOR OF  $\leq 0.11$ . 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 REQUIRED THAT A FULL SEISMIC DESIGN IS CONDUCTED.

### CORROSION CLASSIFICATION

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

DOC# SS001 - 1.1.10 SCR EQUIVALENT V1.1 - AUGUST 2021



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

PROJECT:  
LOT 431 CLOUDBURST AV BALDIVIS

CLIENT: KEC NOMINEES PTY LTD

SCALE 1:20

DATE 24/4/23

APPROVED

A handwritten signature in blue ink, consisting of a series of loops and a long horizontal stroke, is written over the 'APPROVED' field.