

## FOOTING CONSTRUCTION REPORT - ISSUE B

**REF:** 161111

**DATE:** 5<sup>th</sup> April 2018

**OWNER:**

**CLIENT:** Mr. Kenneth Wong

**SITE:** No. 574 – 578 Anzac Highway, Glenelg East

**BUILDING/STRUCTURE:** Proposed Double Storey Articulated “Hebel” Panel Residences (12 of)

Please note: The calculations and details outlined within this report give specific recommendations for the abovementioned building/structure. Amendments to the construction or design must not be made without written approval from the Engineer. Report validity period is twenty four months (based on current Australian Standards and Regulations).

**ATTACHMENTS:** Footing Plan FP-5-A, Structural Calculations (SC1).

**FOOTING TYPE:** Reinforced concrete raft footings, founded 200mm into natural ground.

**SITE INSPECTIONS:** Inspections will incur additional fees:

1. After excavation of the footing beams prior to the placement of reinforcement.
2. After preparation of the reinforcement prior to the pouring of concrete.
3. As otherwise instructed by the engineer or requested by the client/contractor.

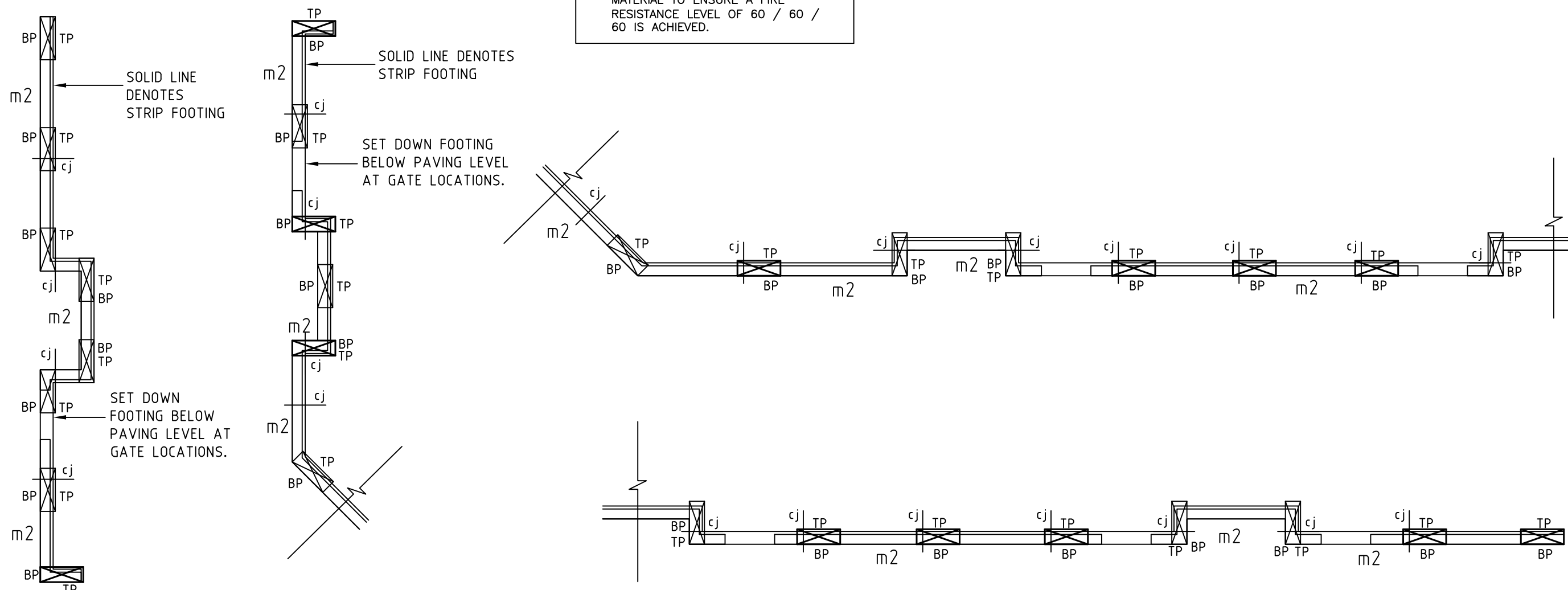
**ADDITIONAL NOTES:**

- 1-8. As previous.
9. Reason for Addendum – Fence footing calculations and details provided.



Kosta Paraskevopoulos

Per KP SQUARED ENGINEERING PTY LTD



## FOOTING NOTES

1. THIS DRAWING MUST BE READ IN CONJUNCTION WITH THE ARCHITECTURAL DRAWINGS AND DETAILS CONTAINED WITHIN THIS REPORT.
2. MINIMUM CHARACTERISTIC CONCRETE STRENGTH TO BE  $f'c = 20\text{Mpa}$ .
3. SLAB ON GROUND TO BE 100mm THICK & REINFORCED WITH ONE LAYER OF SL82 PLACED 25mm FROM THE TOP FACE UNLESS NOTED OTHERWISE.
4. SLAB THICKNESS & FOOTING DEPTH MUST BE MAINTAINED AT ALL SETDOWNS (PROVIDE STEPS AS PER STANDARD DETAILS).
5. LAPS IN MESH TO BE ONE FULL SQUARE PLUS 25MM.
6. WHERE BRITTLE FLOOR COVERINGS ARE TO BE USED, PROVIDE SL92T & SL72B.
7. DENOTES TRENCHED PIER, 1000 LONG BY THE WIDTH OF THE FOOTING, FOUNDED A MINIMUM OF 200MM INTO NATURAL GROUND.
8. THE SPACING OF LIGATURES MUST BE REDUCED TO  $300c/c$  BETWEEN TRENCHED PIERS.

9. DENOTES 125 THICK SLAB REINFORCED WITH SL82 TOP & SL72 BOTTOM.
10. THIS IS A CLASS 'E-D, P (TREES)' SITE - LAGGING & FLEXIBLE CONNECTIONS REQUIRED AS PER THE SITE CLASSIFICATION - REFER TO STANDARD DETAILS.
11. DENOTES ARTICULATION JOINT IN THE HEBEL/MASONRY TO FULL HEIGHT. REFER TO STRUCTURAL DRAWINGS FOR DETAILS.
12. DENOTES 4N12 DOWELS (2T,2B) 600 LONG OVERALL, DRILL & EPOXY GROUT 200 INTO EXISTING FOOTING.
13. FLEXIBLE SEWER & STORMWATER CONNECTIONS ARE REQUIRED FOR THIS SITE.
14. THE OWNER'S ATTENTION IS DRAWN TO THE CSIRO'S INFORMATION SHEET 'GUIDE TO HOMEOWNERS ON FOUNDATION MAINTENANCE & FOOTING PERFORMANCE' (COPY IS ATTACHED).
15. INDICATES WET AREAS SET DOWN - GENERALLY 25MM, 50MM IN SHOWER AREA.
16. DENOTES CRACK CONTROL BARS: 3N12 2M LONG OR 2N16.
17. REFER TO ARCHITECTURALS DRAWINGS FOR ALL SETTING OUT AND DIMENSIONS.
18. DENOTES SET DOWN IN ACCORDANCE WITH ARCHITECTURAL DETAILS.

## FOOTING SCHEDULE

FOOTING	WIDTH, W	DEPTH, D	REINFORCEMENT	LIGATURES
m2	300	550	4N12T&4N12B	W7 @300c/c
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-

ISSUE	DATE	AMENDMENT	APPROVED
—	—	—	—
—	—	—	—
—	—	—	—
A	05/04/18	FOR APPROVAL/CONSTRUCTION	KP

K P S Q U E D  
A R E D  
E N G I N E E R I N G

SUITE 4, GROUND LEVEL  
166-168 GRANGE ROAD,  
FLINDERS PARK SA 5025  
PH: 0413 991 106

PROJECT  
PROPOSED RESIDENCES  
AT: NO. 574-578 ANZAC HIGHWAY,  
GLENELG EAST  
FOR: MR. K. WONG

DRAWING TITLE FOOTING PLAN				
SCALE 1:100	DRAWN KP	ENGINEER KP	DATE 05/04/2018	
CHECKED KP	PROJECT No. 161111	DRAWING No. FP-5	ISSUE A	SHEET SIZE A3

Date: 05/04/2018

Job Number: 161111

Page Number: SC1

### FENCE FOOTING DESIGN.

DESIGN FOR WIND SPEED = 28 m/s.

$$q_z = 0.47 \text{ kPa.}$$

→ PROVIDE 1M6 ROD AT EACH BRICK PIKE.

CHECK FOOTING FOR OVERTURNING.

$$C_{p1} = 1.2 \rightarrow p_1 = 1.2 \times 0.47 \text{ kPa} = 0.56 \text{ kPa}$$

$$\text{Hat base} = 0.56 \times 2 \text{ m} = 1.12 \text{ kNm.}$$

$R_2 = \frac{1}{2} q_z 0.32 D^3 \rightarrow \text{try } 300 \text{ WIDE} \times 1200$   
DEEP PIERS @ BRICK PIKE LOCATIONS.

$$R_2 = \frac{1}{2} \times 150 \times 0.32 \times 1.2 \times 0.3 = 8.64 \text{ kN}$$

$$M_{\text{res}} = 0.56 R_2 D = 5.8 \text{ kNm.}$$

CHECK FOR  $q_1 \leq 100 \text{ kPa.}$

$$H = R_1 - R_2$$

$$I = \frac{2}{3} q_1 \times 0.68 \times 0.3 \times 1.2 = 8.64$$

$$q_1 = 59 \text{ kPa} \rightarrow \text{OK.}$$

→ ADOPT 300 WIDE  $\times$  1200 DEEP PIERS.

