

Lot 35, Marong Run Stage 8 Marong

Geotechnical Investigation for
DPJ Civil Pty Ltd

Report 22C 0512 (Lot 35)
July 2022

Lot 35, Marong Run Stage 8 Marong

Geotechnical Investigation for DPJ Civil Pty Ltd

Revision

Revision	Authorised	Date
22C 0512 (Lot 35)	BAB	18/07/2022

Distribution (this version only)

Recipient	Format	Date
GTS	On file	18/07/2022
Darren Pitson DPJ Civil Pty Ltd	Email PDF darren@kpdgroup.com.au	18/07/2022



1 INTRODUCTION

DPJ Civil Pty Ltd commissioned Geotechnical Testing Services (GTS) to conduct a geotechnical investigation for the proposed development at Lot 35, Marong Run Stage 8, Marong.

The investigation has been conducted for the purpose of assessing general subsurface conditions at the site and consequently assigning a Site Classification in accordance with *AS2870 – 2011 Residential Slabs and Footings*.

2 INVESTIGATION

The investigation was conducted on the 12th July 2022 using a vehicle mounted drill rig to drill 2 boreholes to depths of 1.5 to 3.0 metres within the designated area. The soil profiles and borehole locations are presented at the end of this report.

At the time of this investigation, the type of development proposed is understood by GTS to be a new residential building. If the actual construction varies from this, then changes may be necessary to this classification report.

3 SITE CONDITION

The site is currently vacant and has been filled under controlled conditions (supervised and tested by GTS) to form a relatively flat surface. At the time of the investigation, the surface of the site was moist with no grass cover. There were no trees near the investigation site, though a review of aerial photography indicates several small to medium trees were removed from at or near the site sometime during 2018. There was no visual evidence of surface cracking or surface rock. No groundwater seepage was encountered over the investigated depths.

Full details of the soil conditions are presented in the borehole logs.

4 SITE CLASSIFICATION

After allowing due consideration to the site geology, soil conditions, drainage, vegetation, siteworks, GTS Level 1 Report 22C 0348 and known details of the proposed development, the site has been classified as **Class H1-D** (*AS2870 – 2011 Table D1; >1.5 metres of Group (2) soils over Group (4) soils*).

Foundations designed in accordance with this classification are to be subject to the overriding conditions of Section 5.

5 DISCUSSION

Particular attention should be paid to the design of footings as required by *AS2870 – 2011*.

In addition to the normal founding requirements arising from the above classification, particular conditions at the site dictate that the founding medium and minimum depth below existing surface levels for all footings should be as follows:

- Silty CLAY, high plasticity, brown, very stiff to hard, trace fine sand in places
At depth below 0.15 to 0.3 metres in the region of BH1 & BH2

and

- Controlled FILL: Silty CLAY, high plasticity, dark brown, brown, very stiff, some fine to coarse gravel
At depth below 0.1 metres (*not intercepted during this investigation*)

An allowable bearing pressure of 100kPa is available for edge beams, strips and stump footings founded as above. All foundations should extend a minimum of 100mm into the above foundation material. The base of all footing excavations must be free of tree roots.

It is noted that, as per GTS Level 1 Report *22C 0348*, controlled fill has been placed at the rear of Lot 35. While not intersected during this investigation, the controlled fill as described above (if located under the footprint of the residential development) is an acceptable founding medium.

The proposed development should be located a minimum distance of 1 x the mature height of all trees. This distance should be increased by 50% for groups or lines of trees. If this distance is impeded, then the size and distance from the development of the tree(s) needs to be taken into account when designing the foundation.

6 IMPORTANT NOTES ABOUT THIS REPORT

- The site classification presented in Section 4 assumes that the current natural drainage and infiltration conditions at the site will not be markedly affected by the proposed site development work. Care should therefore be taken to ensure that surface water is not permitted to collect adjacent to the structure and that significant changes to seasonal soil moisture equilibria do not develop as a result of service trench construction or tree root action.
- Attention is drawn to Appendix B of AS2870 and CSIRO document *BTF 18 – Foundation Maintenance and Footing Performance: A Homeowner’s Guide* as a guide to maintenance requirement for the proposed structure.
- This is not a comprehensive investigation nor is it economic or practical to determine every subsurface feature on the site. Although this investigation indicates that soil conditions are relatively uniform across the site, it is recommended that the base of all footing excavations be inspected to ensure that the founding medium meets that requirements referenced

herein with respect to type and strength of founding materials. If further variations in descriptions in soil types, colour or depths are discovered during construction, this office should be notified immediately so that potential influence on the footings may be assessed.

- The soil colours provided in the borehole logs attached may vary with soil moisture content and individual interpretation, therefore colour alone should not be used to identify these soils.
- Strength characteristics of soils often exhibit a large variation between wet and dry conditions. Soil characteristics of a soil profile are given on the soil conditions at the time of the investigation.
- In the event of significant earthworks being undertaken on the site after this investigation, this report may require an amendment if appropriate.

Should you have any further queries concerning these results, please do not hesitate to contact GTS on 03 5441 4881.



Benj Beatty BA/BSc (Hons), MPA, MAusIMM
Senior Engineering Geologist



GTS - Bendigo

13 Alstonvale Court East Bendigo VIC 3550
Phone: 03 5441 4881

Engineering Log - Borehole

Borehole No: 1

UTM : 55H Driller Rig : Gemco HS7 - Landcruiser Mount Job Number : 22C0512 Lot 35
 Easting : Driller Supplier : Geotechnical Testing Services Client : DPJ Civil Pty Ltd
 Northing : Logged By : Ben Tippett Project : Stage 8 Marong Run
 RL : N/A Reviewed By : Location : Marong
 Total Depth : 3m Date : 13/07/2022

Drilling Method	Water	Depth (m)	Soil Origin	Graphic Log	Classification Code	Material Description	Weathering	Moisture	Consistency	DCP	Testing
100mm SFA		0.3	Fill		SC	Clayey SAND (SC) : Medium dense, fine grained, brown, low plasticity clay, Moist.		M	MD		
		0.5	Natural		CH	Silty CLAY (CH) : Very stiff, high plasticity, brown, w=PL.		w ≈ PL	Vst		
		1.2	Natural		SW	SAND (SW) : Medium dense, fine to medium grained, brown, Dry.		D	MD		
		2.2	Natural		SC	Clayey SAND (SC) : Medium dense, fine grained, pale brown, low plasticity clay, Moist.		M	MD		
		3				1 Terminated at 3m					
		3.5									
		4									



GTS - Bendigo

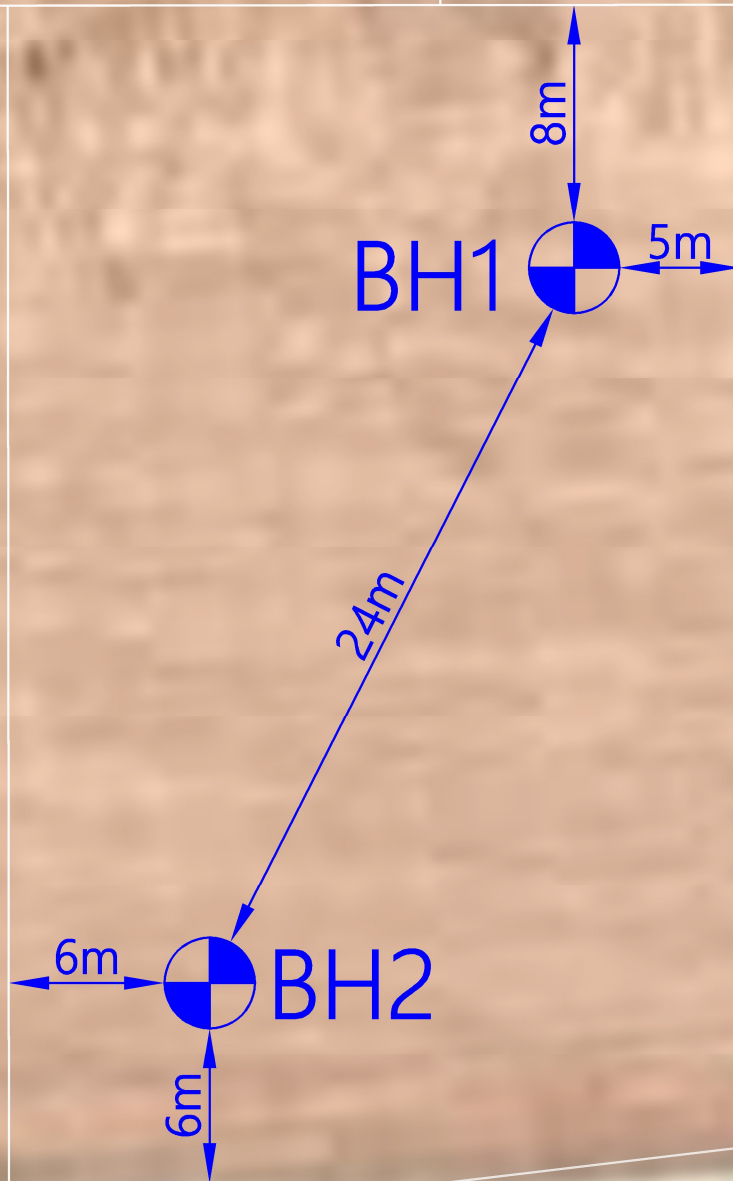
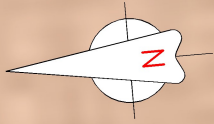
13 Alstonvale Court East Bendigo VIC 3550
Phone: 03 5441 4881

Engineering Log - Borehole

Borehole No: 2

UTM : 55H Driller Rig : Gemco HS7 - Landcruiser Mount Job Number : 22C0512 Lot 35
 Easting : Driller Supplier : Geotechnical Testing Services Client : DPJ Civil Pty Ltd
 Northing : Logged By : Ben Tippett Project : Stage 8 Marong Run
 RL : N/A Reviewed By : Location : Marong
 Total Depth : 1.5m Date : 13/07/2022

Drilling Method	Water	Depth (m)	Soil Origin	Graphic Log	Classification Code	Material Description	Weathering	Moisture	Consistency	DCP	Testing	
100mm SFA		0.15	Fill		SC	Clayey SAND (SC) : Medium dense, fine grained, brown, low plasticity clay, Moist to Dry.		M-D	MD			
			Natural		CH	Silty CLAY (CH) : Hard, high plasticity, brown, trace fine grained sand, w<PL.		w < PL	H			
		0.8	Natural		SP	SAND (SP) : Dense, fine grained, brown, trace low plasticity clay, Dry.		D	D			
		1.5	2 Terminated at 1.5m									
		2										
		2.5										
		3										
		3.5										
		4										



GARINGAL STREET



GEOTECHNICAL INVESTIGATION

APPROXIMATE LOCATIONS
NOT TO SCALE

CLIENT: DPJ CIVIL PTY LTD
PROJECT: LOT 35, MARONG RUN STAGE 8
MARONG

GTS REF: 22C 0512 (LOT 35)
CLIENT REF:

DRAWN BY: BAB
DATE: 18 JULY 2022