

Lot 103, Canterbury Estate Stage 4 Jackass Flat

Site Classification for
Arbor Estates

Report 19C 0176 Lot 103
March 2019

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Revision

Revision	Date	Authorised
19C 0176 Lot 103	15/03/2019	SEH

Distribution (this revision only)

Recipient	Format	Date
GTSS	On file	15/03/2019
Arbor Estates	Email PDF	15/03/2019

1 INTRODUCTION

Arbor Estates commissioned Geotechnical Testing Services to conduct a geotechnical investigation for the proposed development located at Lot 103, Canterbury Estate Stage 4, Jackass Flat.

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 by a technician on the 13th of March 2019 using a trailer mounted drill-rig and drilling 2 boreholes to depths of 1.5 to 3.0 metres within the designated area. The subsequent soil profiles are presented in page 6 and the location of the boreholes are presented on page 7.

At the time of this investigation, the type of development proposed is a residential building.

3 SITE CONDITIONS

The site has been filled under controlled conditions (supervised and tested by GTS) to form the relatively flat surface and is currently vacant. At the time of the investigation the surface of the site was dry with no grass cover. There are no trees present in the immediate vicinity. There was no visual evidence of surface cracking or surface rock. No groundwater seepage was encountered over the investigated depths.

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

4 SITE CLASSIFICATION

After allowing due consideration to the site geology, soil conditions, the controlled fill (GTS report 17C 0515), drainage and known details of the proposed structure, the site has been classified as **Class M-D** (AS2870 – 2011).

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

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, some fine to medium sand and fine gravel, medium plasticity, dark brown, pale brown, brown, very stiff
At depth below 0.0 metres in the region of BH1
- Gravelly Sandy CLAY, medium plasticity, fine to medium gravel, fine to coarse sand, brown, pale brown, very stiff
At depth below 0.1 metres in the region of BH2

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 founding material.

The proposed dwelling should be located a minimum distance of 1 x the mature height of all trees. This distance can be increased by 50 % for groups or lines of trees. If this distance is impeded, then the size and distance from the dwelling 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 in contacting this office on 03 5441 4881.



Shane Hampton BE (Hons)
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Enclosed
Borehole Logs (Page 6)
Site Map (Page 7)

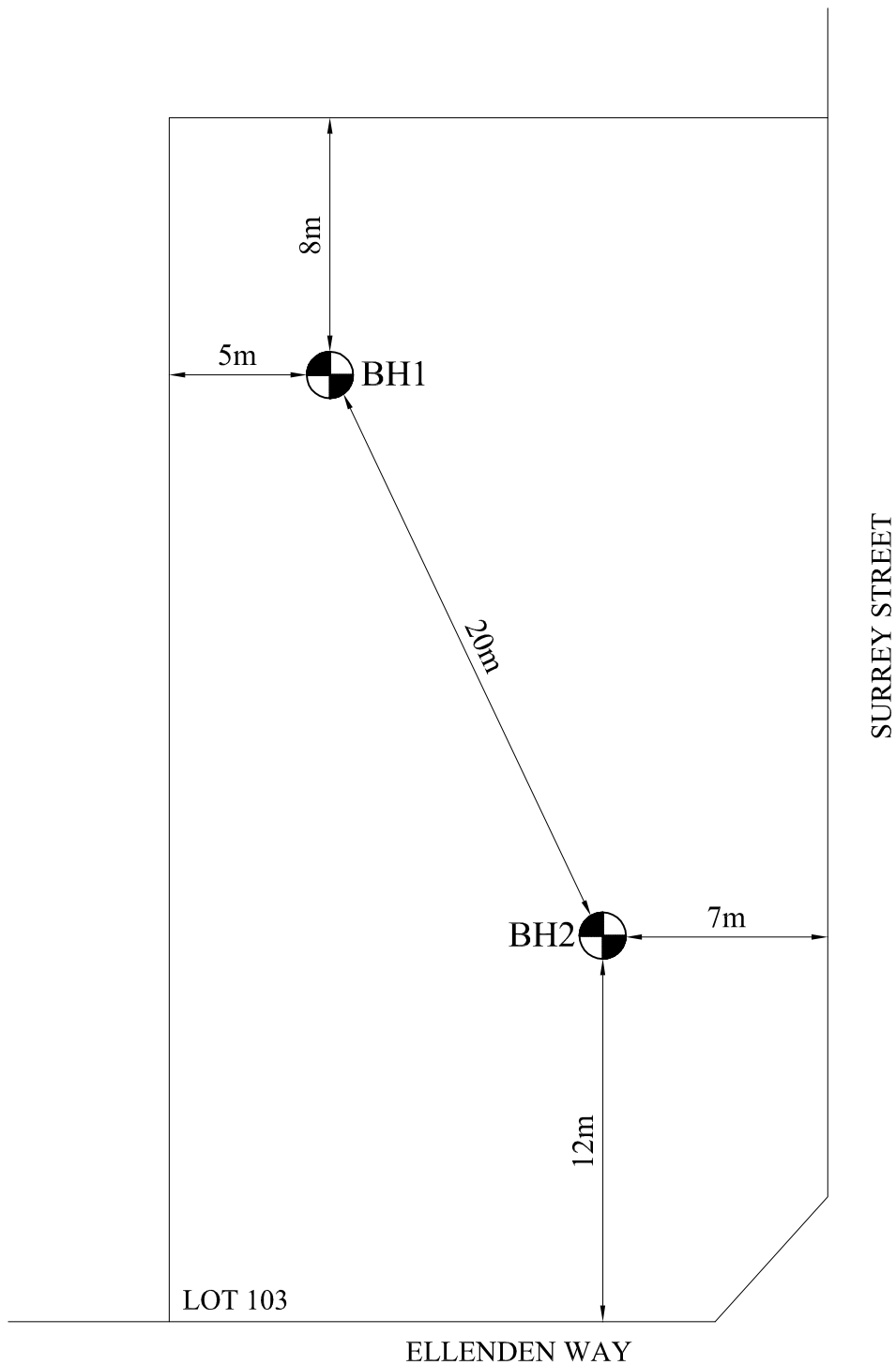
Borehole Logs

Client:	Arbor Estates	Borehole Log No.:	1-2
		Report Number:	19C 0176 Lot 103
		Date Drilled:	13/03/19
Project:	Lot 103, Canterbury Estate Stage 4, Jackass Flat	Logged By:	TP
		Drilling Method	AS

Profile (mm):	* Structure: (see key)	Material Description:	Moisture Description:	Cohesion Density:	Plasticity:	Testing / Sampling:
0 to 900 to 2400 to 3000	Controlled FILL	BH1 Silty CLAY dark brown, pale brown, some fine to medium sand and fine gravel	Moist	Very stiff	Medium	
	Soil Profile	Silty CLAY brown, pale brown	Moist	Very stiff - Stiff	Medium	
	Rock	SILTSTONE extremely weathered, pale brown	Dry	Soft Rock	-	
0 to 100 to 450 to 1200 to 1500	FILL	BH2 Gravelly Sandy SILT fine to coarse gravel and sand, dark brown	Dry	Loose	-	
	Controlled FILL	Gravelly Sandy CLAY fine to medium gravel, fine to coarse sand, brown, pale brown	Moist	Very stiff	Medium	
	Soil Profile	Silty CLAY brown, pale brown	Moist	Stiff	Medium	
	Rock	SILTSTONE extremely weathered, pale brown	Dry	Soft Rock	-	

Key:

Drilling Method:	Moisture Condition	Cohesion:	Density:	Testing/Sampling:
AS - Auger Screwing	D - Dry	VS - Very Soft	VL - Very Loose	PP – Pocket Penetrometer
HA - Hand Auger	M - Moist	S - Soft	L - Loose	V – Hand Vane Shear
	W - Wet	F - Firm	MD - Medium Dense	DCP – Dynamic Cone Penetrometer
		ST - Stiff	D - Dense	SPT – Standard Penetration Test
		VST - Very Stiff	VD - Very Dense	US – Undisturbed Sampling
		H - Hard		DS – Disturbed Sampling
		VH – Very hard		* See notes on borelog location page



GEOTECHNICAL INVESTIGATION

APPROXIMATE LOCATIONS
NOT TO SCALE

CLIENT: ARBOR ESTATES
PROJECT: LOT 103, CANTERBURY ESTATE
STAGE 4, JACKASS FLAT

GTS REF: 19C 0176 (LOT 103)

DATE: 15 MARCH 2019