Lot 116, Canterbury Estate Stage 4
Jackass Flat

Site Classification for
Arbor Estates

Report 19C 0176 Lot 116
March 2019

GTS
GEOTECHNICAL TESTING SERVICES

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Jackass Flat

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for
Arbor Estates

Revision

Revision	Date	Authorised
19C 0176 Lot 116	15/03/2019	SEH

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1 INTRODUCTION

Arbor Estates commissioned Geotechnical Testing Services to conduct a geotechnical investigation for the proposed development located at Lot 116, 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 is relatively flat 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, 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, medium plasticity, some fine gravel, dark brown, pale brown, very stiff
  At depth below 0.1 metres in the region of BH1 and 0.32 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.

- If FILL is found during this investigation, it is an indication of what was found during the investigation and it may vary over the site. It may be in the best interest of the buyer / seller to undertake a more detailed investigation, in this instance.

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)
Senior Geotechnical Engineer

Enclosed
Borehole Logs (Page 6)
Site Map (Page 7*)*

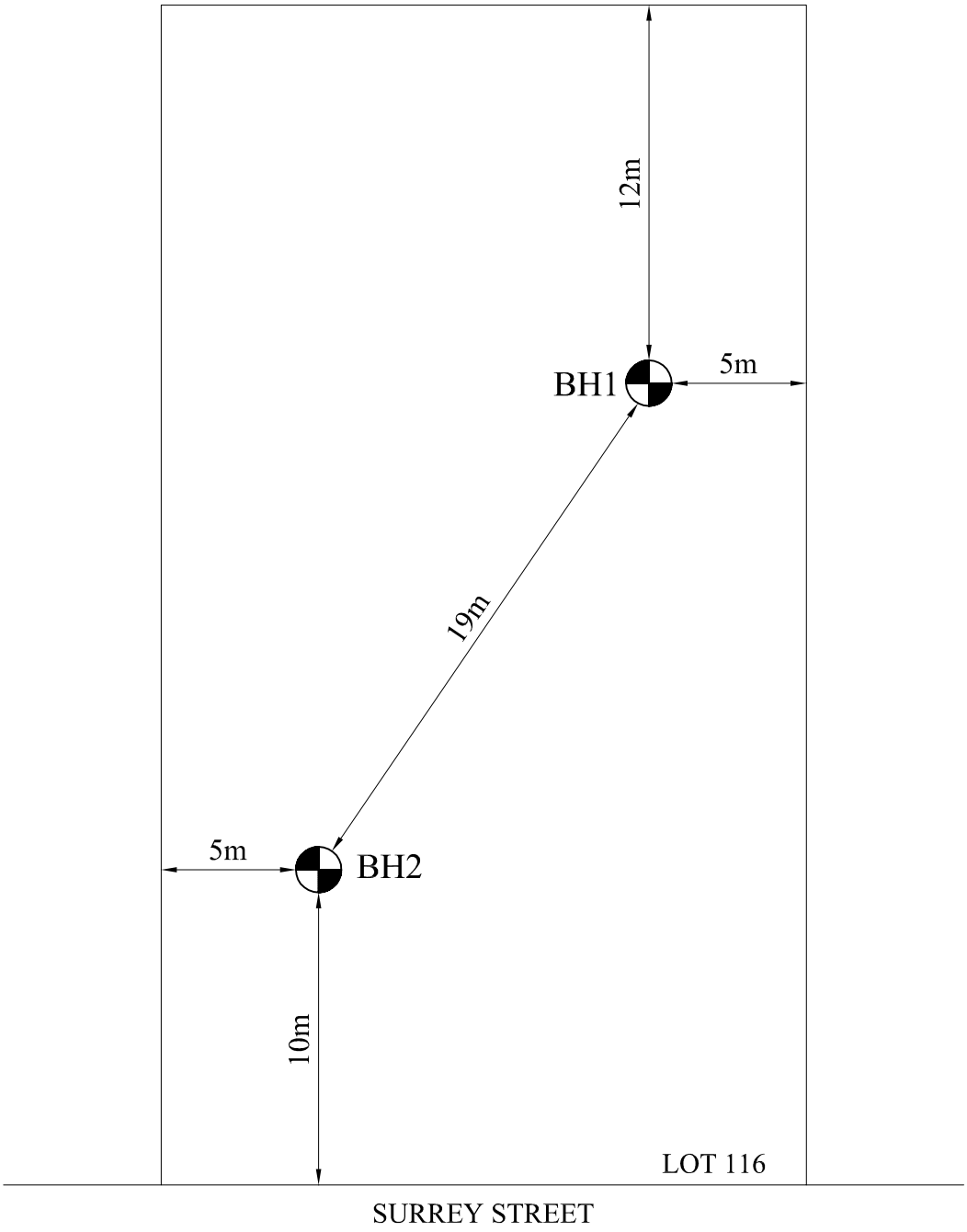
Borehole Logs

Client:	Arbor Estates	Borehole Log No.:	1-2
		Report Number:	19C 0176 Lot 116
		Date Drilled:	13/03/19
Project:	Lot 116, 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 100	FILL	**BH1** Gravelly Sandy SILT fine to medium gravel, dark brown	Dry	Moderately Dense	-	
to 800	Soil Profile	Silty CLAY dark brown, some fine gravel	Moist	Very stiff	Medium	
to 1200	Soil Profile	Silty CLAY reddish brown	Moist	Very stiff	Medium	
to 2500	Soil Profile	Silty CLAY off white, pale brown	Moist	Stiff	Medium - Low	
to 3000	Rock	SILTSTONE extremely weathered, pale brown	Dry	Soft Rock	-	
0 to 200	FILL	**BH2** Gravelly Sandy SILT fine to medium gravel, dark brown	Dry	Moderately Dense	-	
to 900	Soil Profile	Silty CLAY pale brown	Moist	Very stiff	Medium	
to 1500	Soil Profile	Silty CLAY off white, pale brown	Moist	Stiff	Medium - Low	

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 Sheer
	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



GTS GEOTECHNICAL TESTING SERVICES

GEOTECHNICAL INVESTIGATION	**CLIENT:** ARBOR ESTATES **PROJECT:** LOT 116 CANTERBURY ESTATE STAGE 4, JACKASS FLAT	
APPROXIMATE LOCATIONS NOT TO SCALE	GTS REF: 19C 0176 (LOT 116)	DATE: 15 MARCH 2019