Lot 147 Canterbury Estate Stage 5
Jackass Flat

Site Classification
for
Arbor Estates

Report 17C 0733
November, 2017

GTS
GEOTECHNICAL TESTING SERVICES

Lot 147 Canterbury Estate Stage 5, Jackass Flat

Site Classification
for
Arbor Estate

Revision

Revision	Date	Authorised
17C 0733 (Lot 147)	10/11/17	SEH

Distribution (this revision only)

Recipient	Format	Date
GTSS	On file	10/11/17
Arbor Estates Attn: Darren Pitson	Email PDF darren@kpdgroup.com.au	10/11/17

1 INTRODUCTION

Arbor Estates commissioned Geotechnical Testing Services to conduct a geotechnical investigation for the proposed residential development located at Lot 147 Canterbury Estate Stage 5, 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 30th of October, 2017 using a vehicle 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 unknown to GTS.

3 SITE CONDITIONS

It is noted that the site has been filled under controlled conditions (supervised and tested by GTSS). At the time of the investigation the surface of the site was moist with no grass cover. There are no trees 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 (GTSS Report 17C 0516), 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:

- CONTROLLED FILL: Silty CLAY, some sand, some gravel, low plasticity, brown, stiff
  At depths below 0.0 metres in the region of BH1
- CONTROLLED FILL: Gravelly Sandy CLAY, low plasticity, brown, stiff
  At depths below 0.0 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 AS 2870 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 borelogs 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 5441 4881

Shane Hampton BE (Hons)
Senior Geotechnical Engineer

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

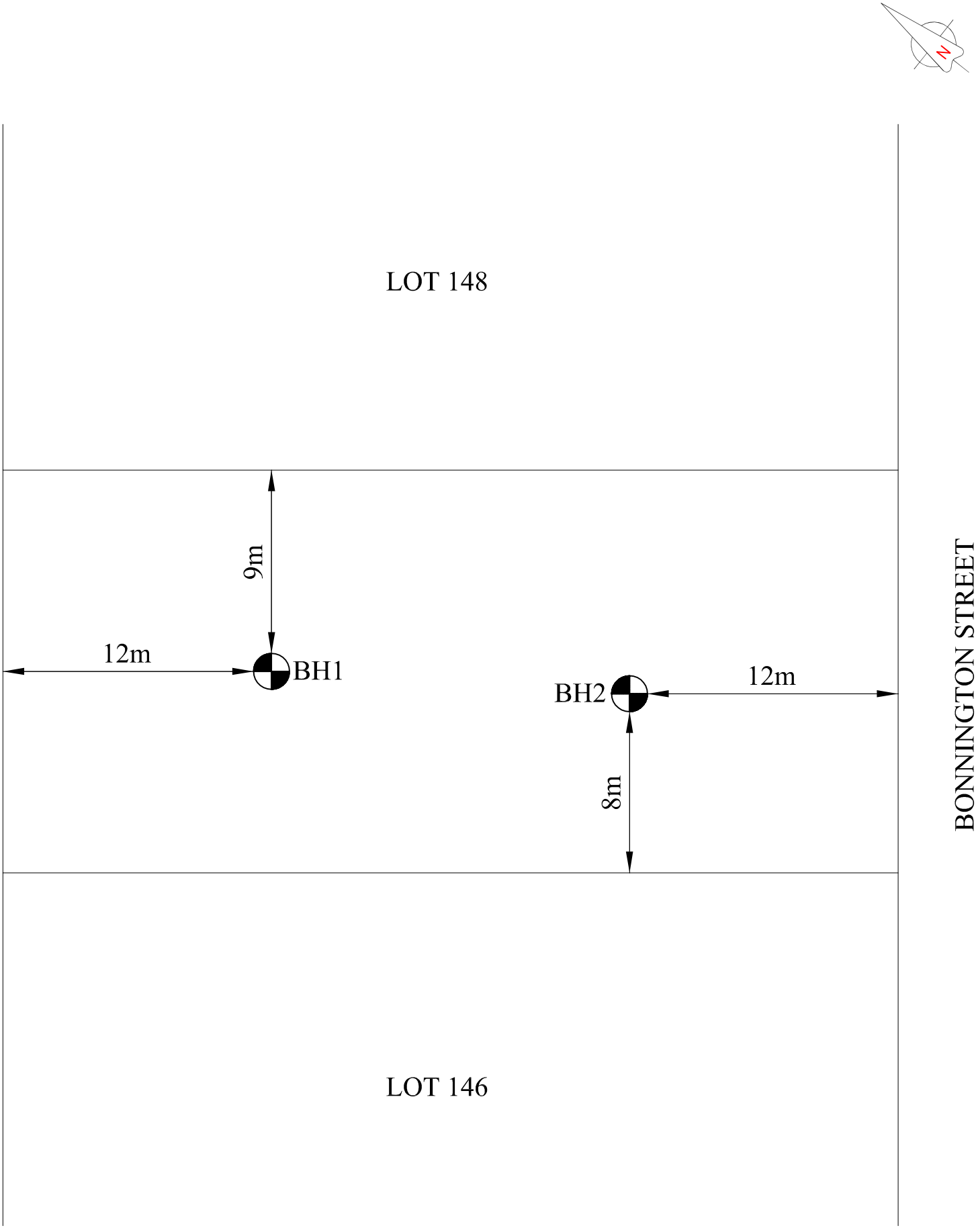
Borehole Logs

Client:	Arbor Estates	Borehole Log No.:	1-2
		Report Number:	17C 0733
		Date Drilled:	30/10/17
Project:	Lot 147 Canterbury Estate Stage 5, Jackass Flat	Logged By:	TP
		Drilling Method	AS

Profile (mm):	* Structure: (see key)	Material Description:	Moisture Description:	Cohesion Density:	Plasticity:	Testing / Sampling:
0 To 200	Controlled Fill	BH1 Silty CLAY Brown, some sand and gravel	D	St	Low	
To 800	Soil Profile	Silty CLAY Brown, pale brown, some sand	D-M	VSt	Medium	
To 1300		Sandy CLAY Brown, trace of gravel	D	VSt	Low	
To 1800		Silty CLAY Brown	M	St	Medium	
To 3000		Gravelly Sandy CLAY Red/brown	M	St	Low	
0 To 100	Controlled Fill	BH2 Gravelly Sandy CLAY Brown	D	St	Low	
To 800	Soil Profile	Silty CLAY Brown, pale brown, some sand	M	St	Medium	
To 1500		Gravelly Sandy CLAY Red/brown	M	VSt	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



	GEOTECHNICAL INVESTIGATION	**CLIENT:** ARBOR ESTATES **PROJECT:** LOT 147 CANTERBURY ESTATE STAGE 5, JACKASS FLAT	
	APPROXIMATE LOCATIONS NOT TO SCALE	GTS REF: 17C 0733	DATE: 6 NOVEMBER 2017