

# Lot 164 – Canterbury Estate Stage 6 Jackass Flat

Site Classification  
for  
Arbor Estates

Report 17C 0645  
September, 2017

# Lot 164 – Canterbury Estate Stage 6, Jackass Flat

## Site Classification for Arbor Estates

### Revision

Revision	Date	Authorised
17C 0645	2/10/17	SEH

### Distribution (this revision only)

Recipient	Format	Date
GTSS	On file	2/10/17
Arbor Estates Attn: Darren Pitson	Email PDF <a href="mailto:darren@kpdgroup.com.au">darren@kpdgroup.com.au</a>	2/10/17

## 1 INTRODUCTION

Arbor Estates commissioned Geotechnical Testing Services to conduct a geotechnical investigation for the proposed residential development located at Lot 164 – Canterbury Estate Stage 6, 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 20<sup>th</sup> day of September, 2017 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 unknown to GTS.

## 3 SITE CONDITIONS

The site has been filled under controlled conditions (supervised and tested by GTS) to form the relatively flat area and is currently vacant. At the time of the investigation the surface of the site was moist with no grass cover. There are no trees present in the near vicinity. There was visual evidence of surface cracking. No visual evidence of 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 0517), 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: Gravelly sandy/silty CLAY, low to medium plasticity, pale brown, off white, stiff to very stiff  
At depths below 0.0 metres

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 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 5441 4881



Shane Hampton BE (Hons)  
Senior Geotechnical Engineer

Enclosed

Borehole Logs (Page 6)

Site Map (Page 7)

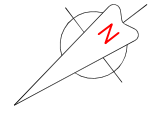
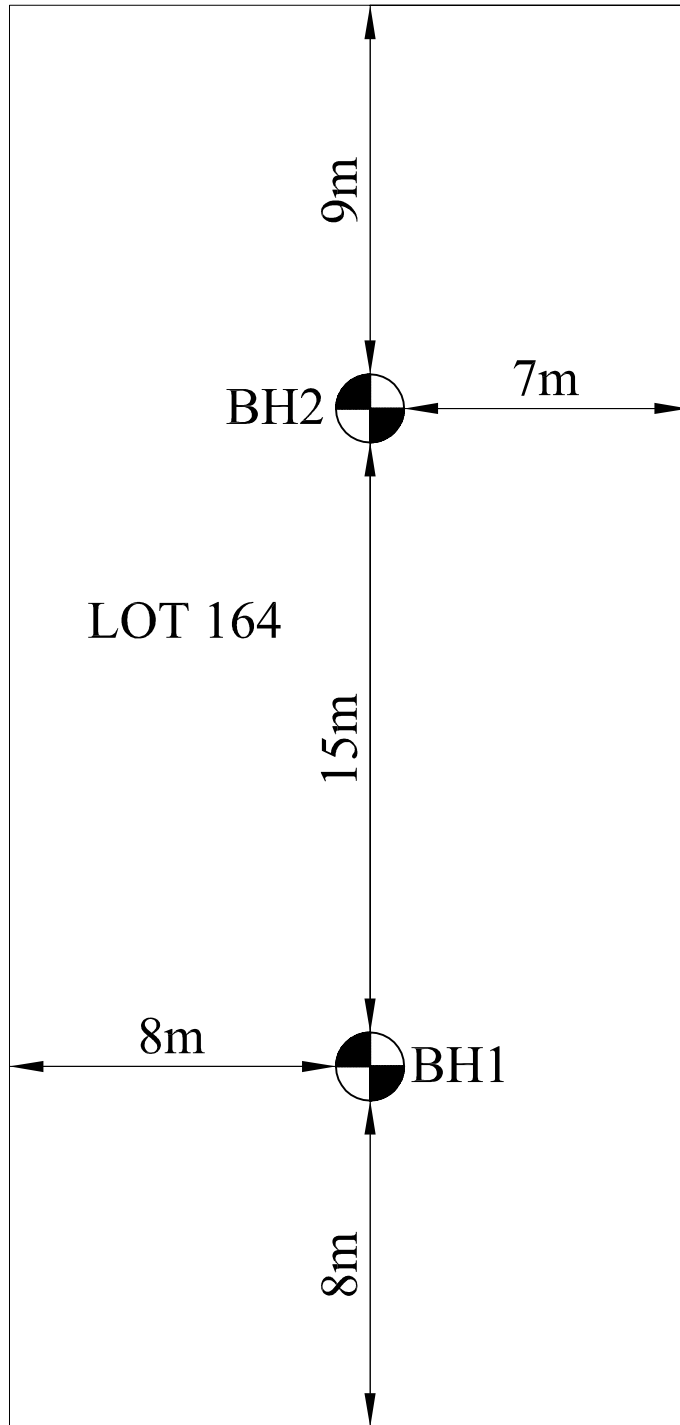
# Borehole Logs

Client:	Arbor Estates	Borehole Log No.:	1-2
		Report Number:	17C 0645
		Date Drilled:	20/9/17
Project:	Lot 164 – Canterbury Estate Stage 6, Jackass Flat	Logged By:	TP
		Drilling Method	AS

Profile (mm):	* Structure: (see key)	Material Description:	Moisture Description:	Cohesion Density:	Plasticity:	Testing / Sampling:
0 To 1100	Controlled Fill	BH1  Gravelly, sandy CLAY Pale brown, off white	D-M	VSt	Low-Medium	
1100 To 1700		Soil Profile	Silty CLAY Brown, some fine sand	M	VSt	Medium
1700 To 2400	Silty CLAY Brown, trace sand		M	F	Medium	
2400 To 3000	Silty CLAY Brown		VM	S	Medium	
0 To 700	Controlled Fill	BH2  Gravelly silty CLAY Off white, pale brown	M	St	Low-Medium	
700 To 1500		Soil Profile	Silty CLAY Brown, black	M	VSt	Medium

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**

**CLIENT:** ARBOR ESTATES  
**PROJECT:** LOT 164, CANTERBURY ESTATE  
 STAGE 6, JACKASS FLAT

APPROXIMATE LOCATIONS  
 NOT TO SCALE

GTS REF: 17C 0645 LOT 164

DATE: 25 SEPTEMBER 2017