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### BOREHOLE ENGINEERING LOG

BOREHOLE NO.



100 YEARS

Borehole Location:

Project Number:

SHEET 1 OF 4

16/2/10

16/2/10

DS

Client: Project: Department of Transport and Main Roads

**Gold Coast Rapid Transit** 

Proposed Parklands Drive cutting, Ch: 19457.6

2161016A

Hole Angle:

90°

Surface RL:

Log Checked By: 23.96 m AHD\*

Date Commenced:

Date Completed:

Recorded By:

Drill Model/Mounting: **Drillpower Jackro 350** Borehole Diameter: 75 mm Bearing: Co-ords:

E 81472.3 N 62147.11 GCCC Grid\* **Borehole Information Field Material Description** HAND PENETROMETER (KPa) GRAPHIC LOG JSC SYMBOL STRUCTURE AND ADDITIONAL OBSERVATIONS RL(m) AHD' FIELD TEST MOISTURE SOIL/ROCK MATERIAL FIELD DESCRIPTION SUPPORT METHOD ST ST VST FILL (Sandy GRAVEL): fine to coarse grained, FILL dark grey, roadbase 0.40 META-SILTSTONE: pale grey mottled orange WEATHERED ROCK and grey, extremely weathered, has consistency of hard silty clay -23 WB Nil SPT 6,12,21 N=33 -22 ... extremely low strength 30 /130mm -21 Parsons Brinckerhoff Australia Pty Ltd. Version 5.1 ENGINEERING BOREHOLE LOG GCRT\_BOREHOLES.GP.J. GEOTECH\_24-2-2006.GDT 25/5/10 -20 SPT /130mm 5.00 5 **META-SILTSTONE:** pale grey mottled orange and grey, extremely weathered. SPT 30 /115mm SPT 30 /90mm 8 SPT SP 30 /90mm REFER TO CORED BOREHOLE LOG This borehole log should be read in conjunction with Parsons Brinckerhoff's accompanying standard notes.



## CORED BOREHOLE ENGINEERING LOG

BOREHOLE NO.

**UBH10** 

SHEET 2 OF 4

16/2/10

16/2/10

DS

Client: Department of Transport and Main Roads

Project: **Gold Coast Rapid Transit** 

Proposed Parklands Drive cutting, Ch: 19457.6 Borehole Location:

2161016A Project Number:

Drill Model/Mounting:

**Drillpower Jackro 350** Hole Angle:

90°

Surface RL:

Log Checked By: 23.96 m AHD\*

Date Commenced:

Date Completed:

Recorded By:

or	200000		iam	200	r: rmat	75 mm	ր 	Bearing:		Co-ord	ords:	E 81472.3 N 62147.11 GCCC G	
1	2	3	4	5		6	7	8	9	10	11	12	
METHOD	SUPPORT	WATER	CORE RECOVERY	RQD	RL(m) AHD*	DEPTH(m)	GRAPHIC LOG	SOIL/ROCK MATERIAL FIELD DESCRIPTION	WEATHERING	INFERRED STRENGTH IS(50) WPa	/ERAGE IEFECT PACING mm 0000 0000	STRUCTURE AND ADDITIONAL OBSERVATIONS	
Σ	Ø	S	02	2	-23 23 22 22		0		8	# 2	8 - 8		
		8		10	- - -20 - - - - -19	- - 4 — - - 5 — -							
		8			-18 - - - -17 - -	6- - - - 7- - -							
NMLC	Nil		100	70	-16 - - - -15 - -	8-		COMMENCE CORING AT 9 m  META-SANDSTONE: fine grained, grey-brown mottled orange and purple-red	HW			9.0 m - 10.0 m: 5 x DB 9.32 m - 9.39 m: CZ 9.45 m: DS 9.52 m: DS	



## CORED BOREHOLE ENGINEERING LOG

BOREHOLE NO.

**UBH10** 

SHEET 3 OF 4

16/2/10

16/2/10

DS

MCK

Client: Department of Transport and Main Roads

Project: Gold Coast Rapid Transit

Borehole Location: Proposed Parklands Drive cutting, Ch: 19457.6

Project Number: 2161016A

2161016A

Drill Model/Mounting: Drillpower Jackro 350 Hole An

Hole Angle: 90°

90° Surface RL:

Log Checked By:

Date Commenced:

Date Completed:

Recorded By:

Borehole Information   Field Material Description   1 2 3 4 5 6 7 8 9 10 11 12   INFERRED STRENGTH STRENGTH STRENGTH STRENGTH SPACING MPa mm STRUCTURE AND ADDITIONAL		I Model/Mounting: rehole Diameter:					Drillpo 75 mm		Jackro 350 Hole Angle: Bearing:		Surface RL: Co-ords:		23.96 m AHD* E 81472.3 N 62147.11 GCCC Grid*	
1	БОІ		The second secon				DESCRIPTION OF THE PARTY OF THE			ald N			L 01412.3 N 02141.11 GCCC GFIG	
SITERCITIES AND ADDITIONAL GISERVATIONS  SITERCITIES AND ADDITIONAL GISERVATIONS  STRUCTURE AND ADDITIONAL GISERVATIONS  STRUCTURE AND ADDITIONAL GISERVATIONS  15.5 m = 5.6 m o = 10.5 m = 10.6 m = 10.6 m m or	1	_				IIIai		7					12	
No.   No.	МЕТНОВ	SUPPORT	WATER	CORE	RQD	RL(m) AHD*	DEPTH(m)	GRAPHIC LOG	SOIL/ROCK MATERIAL FIELD DESCRIPTION	WEATHERING	STRENGTH Is(50) MPa 0.000 - 80	DEFECT SPACING mm	STRUCTURE AND ADDITIONAL OBSERVATIONS	
10   10   10   10   10   10   10   10			Ť							-			10.0 m - 11.0 m: 5 x DB	
### ### ##############################	NN			100	80	-	10.50		red-brown and orange 10.5 m - 10.6 m: meta-sandstone, fine	XW- HW			10.6 m: CZ	
12   12   12   12   12   12   12   12						-13 - -	E	===	fine grained, grey-brown					
11   12   12   13   13   14   15   15   15   15   16   16   16   16				100	85	- - -12 -	-		grey-brown mottled orange brown and	HW				
13.84 m: DB 14.0 m - 14.75 m: Non Intact Core 15.0 m - 14.5 m - 14.6 m: meta-siltstone, pale 15.0 m - 14.5 m - 14.6 m: meta-siltstone, pale 15.0 m - 15.0 m - 16.42 m: Non Intact Core 16.0 m - 16.42 m: Non Intact Core 16.0 m - 16.42 m: Non Intact Core 16.0 m - 17.0 m: Non Intact Core 17.28 m: PP 480 18.4 m: PP 300 18.78 m: PP 480 18.6 m: B, 60°, P 18.46 m: B, 60°, P 18.54 m: PP 300 18.78 m: PP 280 19.86 m: discing				100	06	- - 11 -			12.95 m - 13.19 m: meta-siltstone, grey				12.93 m: PP 470 13.0 m - 13.2 m: Non Intact Core	
grey CORE LOSS  META-SILTSTONE: grey XW  META-SANDSTONE: fine grained, grey with orange and purple staining along healed defects  META-SANDSTONE: fine grained, grey with orange and purple staining on healed defects  META-SANDSTONE: fine grained, grey with orange and purple staining on healed defects  META-SANDSTONE: fine grained, grey with orange and purple staining on healed defects  META-SANDSTONE: fine grained, grey with orange and purple staining on healed defects  META-SANDSTONE: fine grained, grey with orange and purple staining on healed defects at 60°  META-SANDSTONE: fine grained, pale grey  META-SANDSTONE: fine grained, pale grey  18.46 m: B, 60°, P 18.54 m: PP 300 18.78 m: PP 280  19.86 m: discing						- - -10 -							13.84 m: DB	
META-SANDSTONE: grey META-SANDSTONE: fine grained, grey-brown with orange and purple staining along healed defects  7 17.04 7 CORE LOSS META-SANDSTONE: fine grained, grey with orange and purple staining on healed defects  8 0 0 18 0 18 0 18 0 18 0 18 0 18 0 18				38	0	- - - - 9	14.50		grey 14.5 m - 14.6 m: meta-siltstone, pale grey					
META-SANDSTONE: grey META-SANDSTONE: fine grained, grey-brown with orange and purple staining along healed defects  7 17.04 7 CORE LOSS META-SANDSTONE: fine grained, grey with orange and purple staining on healed defects  8 0 0 18 0 18 0 18 0 18 0 18 0 18 0 18						- - - 8	-							
CORE LOSS META-SANDSTONE: fine grained, grey with orange and purple staining on healed defects  17.28 m: PP 460 stained healed defects at 60°  18.46  META-SILTSTONE: pale grey  18.46 m: B, 60°, P 18.54 m: PP 300 18.78 m: PP 280  META-SANDSTONE: fine grained, pale grey  19.86 m: discing				06	0	-	16.10		META-SANDSTONE: fine grained, grey-brown with orange and purple				16.08 m: PP 370 16.61 m: PP 400	
8 8 - 18.46 m: B, 60°, P 18.54 m: PP 300 18.78 m: PP 280    META-SANDSTONE: fine grained, pale grey				80	50	-			META-SANDSTONE: fine grained, grey with orange and purple staining on healed	xw			- 17.28 m: PP 460	
META-SANDSTONE: fine grained, pale grey  88 8				100	09		18.46		META-SILTSTONE: pale grey				18.54 m: PP 300	
				82	09	- 5 - - -	- -	. — .						
					9		80.70030	orebol	log should be read in conjunction with Pare	one P	rinckerhoffs	accompanyir	and the state of t	



## CORED BOREHOLE ENGINEERING LOG

BOREHOLE NO.

**UBH10** 

SHEET 4 OF 4

16/2/10

16/2/10

2 MGL

DS

Client: Project: Department of Transport and Main Roads

**Gold Coast Rapid Transit** 

Borehole Location: Project Number:

Proposed Parklands Drive cutting, Ch: 19457.6

2161016A

Drill Model/Mounting: Drillpower Jackro 350

Hole Angle: 90°

Surface RL:

Log Checked By: 23.96 m AHD\*

Date Commenced:

Date Completed:

Recorded By:

	יטווכ	le D	iam	eter	;	75 mm	1	Bearing:		Co-	ords:	E 81472.3 N 62147.11 GCCC Gri	
	_		_		mat	ion		Fie		laterial De	scription		
	SUPPORT	ω WATER	CORE RECOVERY P	RQD 5	RL(m) AHD*	DEPTH(m)	GRAPHIC LOG	8 SOIL/ROCK MATERIAL FIELD DESCRIPTION	WEATHERING ©	10 INFERRED STRENGTH IS(50) MPa  WPa  H	AVERAGE DEFECT SPACING mm	STRUCTURE AND ADDITIONAL OBSERVATIONS	
ININIFC	8	5 3	75 CC	70 R		20.00	9	CORE LOSS  META-SANDSTONE: fine grained, pale grey with red-brown bands  CORE LOSS	/HW			20.05 m: DB 20.14 m: DB	
			100	95	- 3 - - - - 2	21.0 <b>2</b> 1 —	21.60	META-SANDSTONE: fine grained, dark grey with orange purple and red-brown staining along healed defects.  21.6 m - 21.8 m: dark grey carbonaceous matter 21.7 m - 21.8 m: Fe cemented with fine gravel size quartz fragments	HW- MW			21.0 m - 23.0 m; multiple healed defects	
		8	100	80	- - - - 1	22.80 - 22.85 - 23 -		22.8 m: carbonaceous bands 22.85 m: quartz vein, 5 mm					
			100	70	- - - - - 0	23.60 -		23.6 m - 23.8 m: dark grey, soft waxy					
			85	75	75	24.0 <b>24</b> — — — — — — — — — — — — — — — — — — —		24.0 m - 24.28 m: dark grey bands, 1 - 10 mm  24.61 m - 24.66 m: dark grey bands  CORE LOSS				24.0 m: DB along bedding, 60°, P, S  PP = Hand Penetrometer (kPa) 24.75 m - 24.85 m: Non Intact Core * Horizontal and vertical data determined	
					=-1 - - - 2 - - - - - - - - - - - - - -	25 - 26 - 27 - 28 - 29		END OF BOREHOLE AT 25.00 m				by ground survey	

# REPORT OF PHOTOGRAPHS



Borehole number:

**UBH10** 

Client:

Department of Transport and Main Roads

E 81472.3 N 62147.11 Coordinates:

Depth range:

9.0 m - 25.0 m

Project:

**Gold Coast** Rapid Transit

Surface RL:

23.96 m AHD

Inclined length:

Sheet

Borehole location:

Ch: 19510 2161016A Hole angle: Bearing:

90°

Drill model/mounting:

**Hydrapower Scout** 

75 mm Borehole diameter:

