BOREHOLE ENGINEERING LOG

BOREHOLE NO.

BH04A

SHEET 1 OF 6

Client:	RCP on behalf of the Department of Public Works	Date Commenced:	14/12/06
Project:	TANK STREET BRIDGE	Date Completed:	16/12/06
Borehole Location:	Brisbane River	Recorded By:	WJB
Project Number:	2132311A	Log Checked By:	QRB

Drill Model/Mounting: **Hydrapower Scout** Hole Angle: **-90°** Surface RL: **0.1 m**

Borehole Diameter: **125 mm** Bearing: **---** Co-ords: **E 992.1 N 1192.3**

Borehole Information						Field Material Description						
1	2	3	4	5	6	7	8	9	10	11	12	13
METHOD	SUPPORT	WATER	RL(m) AHD / DEPTH(m)	FIELD TEST	SAMPLE	GRAPHIC LOG	USC SYMBOL	SOIL/ROCK MATERIAL FIELD DESCRIPTION	MOISTURE	RELATIVE DENSITY / CONSISTENCY (VS S F ST VST FB VL L MD D VD H)	HAND PENETROMETER (kPa)	STRUCTURE AND ADDITIONAL OBSERVATIONS
WB	C		0.1				GM	**Silty Sandy GRAVEL :** fine grained, black and grey, coarse grained sand, low plasticity fines	W			ALLUVIAL / FILL HW casing installed to 4.2 m, casing cleaned out by WB Dredged shipping channel, storm water discharge, river bank erosion, Tidal water level, BH drilled on a barge in a river in approx 1.6 m of water
			1									
			2									
			2.70				GP	**GRAVEL :** fine grained, black and brown				
			3.00 3				GC	**Clayey GRAVEL :** fine grained, black grey, high plasticity fines				
	M		4		U50							medium sized gravel in U50, 100 mm of sample recovered
			5									
			5.20				CH	**Silty CLAY:** high plasticity, dark grey	MC>PL			ALLUVIAL
			6									
			6.40				SW	**SAND:** medium grained, with a trace of silt	W			
			7									
				SPT 4,7,9 N=16	SPT							
			8									
			9									
			9.80				SM	**Clayey Sandy SILT:** low plasticity, grey black,				

This borehole log should be read in conjunction with Parsons Brinckerhoff's accompanying standard notes.

BOREHOLE ENGINEERING LOG

BOREHOLE NO.

BH04A

SHEET 2 OF 6

Client:	RCP on behalf of the Department of Public Works	Date Commenced:	14/12/06
Project:	TANK STREET BRIDGE	Date Completed:	16/12/06
Borehole Location:	Brisbane River	Recorded By:	WJB
Project Number:	2132311A	Log Checked By:	

Drill Model/Mounting:	Hydrapower Scout	Hole Angle:	-90°	Surface RL:	0.1 m
Borehole Diameter:	125 mm	Bearing:	---	Co-ords:	E 992.1 N 1192.3

Borehole Information						Field Material Description						
1	2	3	4	5	6	7	8	9	10	11	12	13
METHOD	SUPPORT	WATER	RL(m) AHD / DEPTH(m)	FIELD TEST	SAMPLE	GRAPHIC LOG	USC SYMBOL	SOIL/ROCK MATERIAL FIELD DESCRIPTION	MOISTURE	RELATIVE DENSITY / CONSISTENCY (VS S F ST VST H / FB VL L MD D VD)	HAND PENETROMETER (kPa)	STRUCTURE AND ADDITIONAL OBSERVATIONS
WB			10.00	SPT 6,6,8 N=14	SPT		CH	fine to medium grained sand **Silty CLAY / Clayey SILT:** high plasticity, dark grey	W			
			11.00 11				SP	**SAND:** medium grained, grey, with a trace of silt, with some high plasticity dark grey silty clay bands				copper wire found in cuttings between 13.2 m and 16.2 m. (cavings?)
			12									
			13									
			14									
			15									
			16									
			17									
			18									
			19					... coarse grained sand				
								... possible gravel band				

This borehole log should be read in conjunction with Parsons Brinckerhoff's accompanying standard notes.

BOREHOLE ENGINEERING LOG

BOREHOLE NO.

BH04A

SHEET 3 OF 6

Client:	RCP on behalf of the Department of Public Works	Date Commenced:	14/12/06
Project:	TANK STREET BRIDGE	Date Completed:	16/12/06
Borehole Location:	Brisbane River	Recorded By:	WJB
Project Number:	2132311A	Log Checked By:	CRB

Drill Model/Mounting:	Hydrapower Scout	Hole Angle:	-90°	Surface RL:	0.1 m
Borehole Diameter:	125 mm	Bearing:	---	Co-ords:	E 992.1 N 1192.3

Borehole Information						Field Material Description						
1	2	3	4	5	6	7	8	9	10	11	12	13
METHOD	SUPPORT	WATER	RL(m) AHD / DEPTH(m)	FIELD TEST	SAMPLE	GRAPHIC LOG	USC SYMBOL	SOIL/ROCK MATERIAL FIELD DESCRIPTION	MOISTURE	RELATIVE DENSITY / CONSISTENCY: VS S F / L MD D / VST H VD	HAND PENETROMETER (kPa)	STRUCTURE AND ADDITIONAL OBSERVATIONS
WB			21				SP	**SAND:** medium grained, grey, with a trace of silt, with some high plasticity dark grey silty clay bands *(continued)*	W			
			22	SPT 13,14,15 N=29	SPT							
			23									
			24									
			24.40				GP	**GRAVEL:** fine grained, brown-white-red-grey, sub rounded in shape				increase in drilling resistance
			25									
			26									
			27									low drilling returns, mud tank being continually topped up, drilling mud diluted, rig shaking and jumping
			27.60				CL	**Clayey SILT:** low plasticity, pale brown, with coarse grained sand.				RESIDUAL CLAY ?
			28.00 28					**PHYLLITE:** fine grained, dark grey, extremely to highly weathered, extremely to very low strength.				WEATHERED ROCK
			29					REFER TO CORED BOREHOLE LOG				NW casing installed to 29.0m

This borehole log should be read in conjunction with Parsons Brinckerhoff's accompanying standard notes.

CORED BOREHOLE ENGINEERING LOG

BOREHOLE NO.

BH04A

SHEET 4 OF 6

Client:	RCP on behalf of the Department of Public Works	Date Commenced:	14/12/06
Project:	TANK STREET BRIDGE	Date Completed:	16/12/06
Borehole Location:	Brisbane River	Recorded By:	WJB
Project Number:	2132311A	Log Checked By:	AJRD

Drill Model/Mounting:	Hydrapower Scout	Hole Angle:	-90°	Surface RL:	0.1 m
Borehole Diameter:	125 mm	Bearing:	---	Co-ords:	E 992.1 N 1192.3

Borehole Information						Field Material Description					
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) MPa: EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH	AVERAGE DEFECT SPACING mm: 10, 30, 100, 300, 1000, 3000	STRUCTURE AND ADDITIONAL OBSERVATIONS
					21						
					22						
					23						
					24						
					25						
					26						
					27						
					28						
					29		COMMENCE CORING AT 29 m				
NMLC	M Nil		75	0	29.60		**PHYLLITE:** fine grained, dark grey with white quartz feldspathic veins and areas of crenulated cleavage.	MW			fragmented
					29.80		CORE LOSS				Core Loss
								MW			

This borehole log should be read in conjunction with Parsons Brinckerhoff's accompanying standard notes.

CORED BOREHOLE ENGINEERING LOG

BOREHOLE NO.

BH04A

SHEET 5 OF 6

Client:	RCP on behalf of the Department of Public Works	Date Commenced:	14/12/06
Project:	TANK STREET BRIDGE	Date Completed:	16/12/06
Borehole Location:	Brisbane River	Recorded By:	WJB
Project Number:	2132311A	Log Checked By:	

Drill Model/Mounting:	Hydrapower Scout	Hole Angle:	-90°	Surface RL:	0.1 m
Borehole Diameter:	125 mm	Bearing:	---	Co-ords:	E 992.1 N 1192.3

Borehole Information						Field Material Description					
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) MPa: EL 0.03, VL 0.1, L 0.3, M 1, H 3, VH 10, EH	AVERAGE DEFECT SPACING mm: 10, 30, 100, 300, 1000, 3000	STRUCTURE AND ADDITIONAL OBSERVATIONS
NMLC			50	0	30.20		**PHYLLITE:** fine grained, dark grey with white quartz feldspathic veins and areas of crenulated cleavage. *(continued)*	MW			
							CORE LOSS				Core Loss
			100	77	30.60		**PHYLLITE:** fine grained, dark grey with white quartz feldspathic veins and areas of crenulated cleavage.	SW-FR			fragmented 30.84 m: J@50°, Fr-U, R 31.2 m - 31.32 m: fractured zone 31.73 m: J@70°, Ir, R
			100	0			... slightly brecciated zone, contact zone @ 70 degrees ... 31.9 to 32.4 sub vertical joint or shear - broken zone ... quartz / feldspathic veining				Core Loss
			100	11							33.6 m - 33.8 m: J@90 33.8 m - 33.97 m: highly fractured zone
			100	36							
			100	74							34.9 m - 35 m: fractured zone 35.2 m: J@30°, P, R 35.3 m: J@30°, I, R 35.57 m: J@30°, I, R, clean 35.85 m - 36.6 m: 6xJ@70°, Ir, R 36.7 m: J@45°, Ir, R, clean 36.95 m - 37.3 m: broken zone 37.15 m: J@80°, Ir, clean 37.35 m: J@70°, P, Ir, R, clean
			100	30							38 m - 38.32 m: highly fractured zone
			100	26			... 39.3 to 40.93 - black sheared zone				39.3 m to 41.3 m - slickensided sheared zone

This borehole log should be read in conjunction with Parsons Brinckerhoff's accompanying standard notes.

CORED BOREHOLE ENGINEERING LOG

BOREHOLE NO.

BH04A

SHEET 6 OF 6

Client:	RCP on behalf of the Department of Public Works	Date Commenced:	14/12/06
Project:	TANK STREET BRIDGE	Date Completed:	16/12/06
Borehole Location:	Brisbane River	Recorded By:	WJB
Project Number:	2132311A	Log Checked By:	CJB

Drill Model/Mounting:	Hydrapower Scout	Hole Angle:	-90°	Surface RL:	0.1 m
Borehole Diameter:	125 mm	Bearing:	---	Co-ords:	E 992.1 N 1192.3

Borehole Information						Field Material Description					
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) MPa (0.03, 0.1, 0.3, 1, 3, 10; EL, VL, L, M, H, VH, EH)	AVERAGE DEFECT SPACING mm (10, 30, 100, 300, 1000, 3000)	STRUCTURE AND ADDITIONAL OBSERVATIONS
NMLC			100	59	41		**PHYLLITE:** fine grained, dark grey with white quartz feldspathic veins and areas of crenulated cleavage. *(continued)*	SW-FR			39.3 m to 41.3 m - sheared zone
					42						41.74 m: J@0°, Ir
			100	100							42.24 m: J@45°, stepped, R, clean
					43						42.8 m: J@15°, I, R, clean
											43.45 m: J@10°, U, S, clean
					44		END OF BOREHOLE AT 43.60 m				
					45						
					46						
					47						
					48						
					49						

This borehole log should be read in conjunction with Parsons Brinckerhoff's accompanying standard notes.

Tank Street Bridge **Borehole: BH 04A**
Depth: From 29 m – 33.6 m
Project No: 2132311A
Date: 15.12.06
Box – 1 of 3

Tank Street Bridge **Borehole: BH 04A**
Depth: From 33.6m – 38.6m
Project No: 2132311A
Date: 16.12.06
Box – 2 of 3

Tank Street Bridge **Borehole: BH 04A**
Depth: From 38.6m – 43.6m
Project No: 2132311A
Date: 16.12.06
Box – 3 of 3