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SOIL LOG

HOLE NO: **BH BV 5**

PROJECT : Brisbane Valley Grade Separation	JOB NO : QB10200.4	PAGE : 1 OF 4
POSITION : E: 470395, N: 6949811 (56 MGA94)	SURFACE ELEVATION : 59.9 (AHD)	LOCATION : Brisbane Valley Hwy
RIG TYPE : Hydrapower Scout	CONTRACTOR : GeoDrill - T Partleton	DIP / AZIMUTH : 90°
DATE DRILLED : 10/5/11 to 10/5/11	LOGGED BY : LN	CHECKED BY : VP
		STANDARD : AS1736

DRILLING & WATER DETAIL	LAB DATA				SAMPLES & SPT DATA	RL (m)	DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE	CONSISTENCY / RELATIVE DENSITY				COMMENTS Field Test Data & Other Observations
	Moisture Content	Dry Density	% Fines	Atterberg Limits							S / L	F / MD	SI / D	VS / VD	
Groundwater						59.4	0.5	[Cross-hatched pattern]	BITUMEN GRAVEL FILL - fine to coarse sand and gravel, grey to black, lumpy.					0.00: Bitumen Loose Fill	
						58.9	1.0								
					1.60m D	58.4	1.5	[Diagonal lines pattern]	SAND - silty gravelly SAND, fine to coarse sand, fine to medium gravel, brown, moist, loose.					1.60: Fill	
						57.9	2.0								
				2.50m SPT {2, 3, 4 N=7}	57.4	2.5	[Vertical lines pattern]	CLAY - sandy CLAY, high plasticity, light brown streaked red, fine to coarse sand, moist, hard.						2.50: Natural	
				2.95m	56.9	3.0									
				3.10m D		3.10		[Vertical lines pattern]	CLAY - silty sandy CLAY, high plasticity, light orange grey, fine to coarse sand, moist, very stiff.						
						3.50									

DRILLING HA Hand Auger HQ HQ Coring AS Auger NQ NQ Coring WB Washbore PQ PQ Coring RR Rock Rolling NMLC NMLC Coring GROUNDWATER SYMBOLS = Water level (static) = Water level (during drilling)	SAMPLES & FIELD TESTS D Disturbed Sample SPT SPT Sample ES Env Soil Sample U Undisturbed Tube Sample EW Env Water Sample W Water Sample HP Hand Penetrometer HV Hand Vane Shear (P: Peak Su R: Residual Su) N SPT blows per 300mm HW SPT penetration by hammer weight RW SPT penetration by rod weight MOISTURE CONDITION D = Dry M = Moist W = Wet	DENSITY (N-value) VL Very Loose 0 - 4 L Loose 4 - 10 MD Medium Dense 10 - 30 D Dense 30 - 50 VD Very Dense 50 - 100 CO Compact >50/150mm	CONSISTENCY (Su) (N-value) VS Very Soft < 12 kPa {0-2} S Soft 12 - 25 {2-4} F Firm 25 - 50 {4-8} St Stiff 50 - 100 {8-15} VSt Very Stiff 100 - 200 {15-30} H Hard > 200 kPa {>30}
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HOLE NO: **BH BV 5**

PROJECT : Brisbane Valley Grade Separation	JOB NO : QB10200.4	PAGE : 2 OF 4
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	Moisture Content	Dry Density	% Fines	Atterberg Limits							S / L	F / MD	SI / D	VS / VD	
Groundwater						55.9	4.0		CLAY - sandy CLAY, high plasticity, light orange grey mottled red, fine to coarse sand, moist, very stiff to hard.	M					
					4.50m SPP 8, 19, 20 N=39	55.4	4.5	4.50m	CLAY - sandy silty CLAY, high plasticity, grey with orange/red layering (extremely weathered ironstone), fine to coarse sand in layers, moist, hard.	M					
						4.95m	54.9	5.0	5.00m	CLAY - sandy CLAY, high plasticity, orange mottled grey, fine to coarse sand, moist, very stiff.	M				
					5.50m SPP 11, 15, 26 N=41	54.4	5.5	5.50m	CLAY - sandy CLAY, high plasticity, grey with orange streaks and layering, some orange/red extremely low strength and extremely weathered ironstone layering, fine to coarse sand, moist, hard.	M					
					5.95m 6.00m D	53.9	6.0	6.00m	CLAY - sandy CLAY, high plasticity, grey mottled orange, fine to coarse sand moist, very stiff to hard.	M					
					6.50m SPP 30, 110mm N=9 (6.61m)	53.4	6.5	6.50m	IRONSTONE - extremely weathered, very low strength, orange red brown, some fine sand. CLAY - sandy CLAY, high plasticity, grey mottled orange, fine sand, moist, very stiff to hard.	M					

DRILLING				SAMPLES & FIELD TESTS				DENSITY (N-value)				CONSISTENCY (Su) (N-value)			
HA	Hand Auger	HQ	HQ Coring	D	Disturbed Sample	SPT	SPT Sample	VL	Very Loose	0 - 4	VS	Very Soft	< 12 kPa {0-2}		
AS	Auger	NQ	NQ Coring	ES	Env Soil Sample	U	Undisturbed Tube Sample	L	Loose	4 - 10	S	Soft	12 - 25 {2-4}		
WB	Washbore	PQ	PQ Coring	EW	Env Water Sample	W	Water Sample	MD	Medium Dense	10 - 30	F	Firm	25 - 50 {4-8}		
RR	Rock Rolling	NMLC	NMLC Coring	HP	Hand Penetrometer	MOISTURE CONDITION		D	Dense	30 - 50	St	Stiff	50 - 100 {8-15}		
GROUNDWATER SYMBOLS				HV	Hand Vane Shear	D = Dry	M = Moist	W = Wet	VD	Very Dense	50 - 100	VSt	Very Stiff	100 - 200 {15-30}	
▼ = Water level (static)				P: Peak Su R: Residual Su				CO	Compact	>50/150mm	H	Hard	> 200 kPa {>30}		
▽ = Water level (during drilling)				N SPT blows per 300mm											
				HW SPT penetration by hammer weight											
				RW SPT penetration by rod weight											



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DRILLING & WATER DETAIL	LAB DATA				SAMPLES & SPT DATA	RL (m)	DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE	CONSISTENCY / RELATIVE DENSITY				COMMENTS Field Test Data & Other Observations
	Moisture Content	Dry Density	% Fines	Atterberg Limits							S/L	F/MD	SI/D	VS/VD	
Groundwater					7.50m SPT 16, 21, 27 N=48	52.4-7.5	7.50m	CLAY - sandy CLAY, high plasticity, grey mottled orange, fine sand, moist, very stiff to hard. (continued)	M						
					7.95m	51.0-8.0		CLAY - high plasticity, grey with orange brown streaking and layering, moist, hard. Some extremely weathered and very low strength ironstone layering.	M						
					8.50m SPT 30/140mm N=R 8.64m	51.4-8.5	8.50m	SILT - sandy SILT high plasticity finest, grey with some orange streaking, some fine sand, moist, hard.	M						
					9.50m SPT 13, 30/100mm N=R	50.4-9.5	9.50m	SILT - high plasticity, light orange grey, moist, hard.	M						
					9.75m	49.9-10.0			M						

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DRILLING & WATER DETAIL	LAB DATA				SAMPLES & SPT DATA	RL (m)	DEPTH (m)	GRAPHIC LOG	MATERIAL DESCRIPTION Soil Type, Colour, Plasticity or Particle Characteristic Secondary and Minor Components	MOISTURE	CONSISTENCY / RELATIVE DENSITY			COMMENTS Field Test Data & Other Observations
	Moisture Content	Dry Density	% Fines	Aterberg Limits							S / L	F / MD	St / D	
Groundwater					SPT 17, 23, 30/100mm N=R	10.91m	48.9-11.0	[Hatched pattern]	SILT - high plasticity, grey with orange brown mottling, moist, hard. Note organic layer at 10.5 to 10.6, black, organic odour, some fine black sand.	M				
					SPT 18, 30/100mm N=R	11.50m	48.4-11.5		11.50m	SILT - high plasticity, orange grey, moist, hard.	M			
						11.75m	47.9-12.0							
							47.4-12.5		Terminated @ 12.5m. No water encountered.					
							46.9-13.0							
							46.4-13.5							

DRILLING HA Hand Auger HQ HQ Coring AS Auger NQ NQ Coring WB Washbore PQ PQ Coring RR Rock Rolling NMLC NMLC Coring GROUNDWATER SYMBOLS = Water level (static) = Water level (during drilling)	SAMPLES & FIELD TESTS D Disturbed Sample SPT SPT Sample ES Env Soil Sample U Undisturbed Tube Sample EW Env Water Sample W Water Sample HP Hand Penetrometer MOISTURE CONDITION HV Hand Vane Shear D = Dry M = Moist W = Wet (P: Peak Su R: Residual Su) N SPT blows per 300mm HW SPT penetration by hammer weight RW SPT penetration by rod weight	DENSITY (N-value) VL Very Loose 0 - 4 L Loose 4 - 10 MD Medium Dense 10 - 30 D Dense 30 - 50 VD Very Dense 50 - 100 CO Compact >50/150mm	CONSISTENCY (Su) (N-value) VS Very Soft < 12 kPa {0-2} S Soft 12 - 25 {2-4} F Firm 25 - 50 {4-8} St Stiff 50 - 100 {8-15} VSt Very Stiff 100 - 200 {15-30} H Hard > 200 kPa {>30}
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