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SHEET 3 **CORED BOREHOLE RECORD BH224** OF 3 LOGGED BY ACS CLIENT CHECKED BY **GWB** IPSWICH MOTORWAY UPGRADE - WACOL TO DARRA **PROJECT** DRILLED DATE 24-Jul-07 CONTRACTOR RL 25.77m Terratest Vertical **GROUND LEVEL DRILL MODEL** Edson 3000 **BEARING** LOCATION 32815 E 150717 N Brent Ormsby HOLE DIAMETER 100mm () **DRILLER ELEVATION DATUM** Australian Height Datum COORDINATE SYSTEM Local Grid **DRILLING STRATA** MATERIAL DESCRIPTION DISCONTINUITIES SPECIFIC GENERAL DESCRIPTION FREQUENCY FLUSH RETURN 9 (TYPE) TCR % (Drill rate) SCR / (RQD Is 50 (MPa) (ber m) SAMPLES CaCO<sub>3</sub>, SPT, UCS, **ESTIMATED** THICKNESS R.L. DEPTH GRAPHIC **ROCK TYPE** ANGLE ROCK Planarity, Roughness, Grain Size, Texture/Fabric, Colour, Minor Components STRENGTH Coating, Infill m 13.32 Continued from Borehole 12.45 CORE LOSS: 0.2m (sand, fine grained in drilling 13.12 12.65 SILTSTONE, massive, grey-brown, with properties of O A0.09 a hard silty clay (CH). -PL Ro2 Sand O A0.09 92/(89) 920 11.99 13.78 MUDSTONE, massive, grey-black with properties of a hard clay (CH). O .... 14.40 with bands of very fine to fine grained sandstone, up to 120mm thick -PL Ro3 Sandy - 15 . 16.14 ironstone lens 9.41 16.36 -15 -10 —PL Ro2 Sandy —CU Ro3 Sandy CORE LOSS: 1.64m (sand, fine to medium grained in drilling mud return). 35/(32) 35() eotechnics\gin\text{funaster} vZd(14.12.07).gpj sotechnics\gin\text{gint}\gint\text{library\_lz} [2 (04.10.07).glb CORE LOG (rev Z2Jan08 checked AB/ACP Feb 2006) Jan08 10.48 ·18 <sup>18.00</sup> 7.77 End of Borehole at 18.00m JOB NOTES Hole Diameter 100mm to 18.00m depth. (Solid Flight Augering to 7.5m. HW casing to 7.7m. Washboring with 100mm diameter tri-blade bit from 7.5m to 12m. NMLC Coring from 12.45m to 18m. Groundwater below 7m.) 86015

ARU	DMR					HOLE  LOGGED BY ACS			OF 2	
PROJECT	IPSWICH MOTORWAY UPGRADE - WACOL TO DARRA						CHECKED BY GWB DRILLED DATE 10-Au			
CONTRACTOR DRILL MODEL DRILLER	Terratest Edson 3000 Brent Ormsby				ANGLE Vertical BEARING - HOLE DIAMETER 100mm ()	GROUND LEVEL RL 17 LOCATION 32010			7.07m 0 E 150158 N Ilian Height Datu	
DRILLING		STRA	TA	MATERIAL DESCRIPTION			CONDIT	OBSERVA		
SAMPLE, TEST, BIT, SUPPORT, ETC.	R.L.	DEPTH	GROUP SYMBOL	LEGEND	SOIL TYPE Plasticity / Grain Size, Colour, Minor Components	WATER/	COHESIVE	NON COHESIVE	SOIL C STRUC ET	
	m	m	GR	.74 5× .74	Silty SAND fine to medium grained, brown, with grass rootlets.	D	S & T R S	20 BC KI	то	
-	16.87	0.20	CL		Sandy CLAY (CL) light brown, sand fine to coarse grained, with gravel fine grained angular.				СОН	
-	16.37	0.70	sw	· · · · a	Clayey Gravelly SAND (SW) dense, sand fine to coarse grained, white-grey, gravels fine grained sub-angular to sub-rounded.	-			NON	
-	15.67	1 40		0	_	1				
SPT at 1.71m	15.45	1.40	CL SW		Sandy CLAY (CL) very stiff, brown, sand fine to coarse grained 1.56 increase in quartz gravel fine grained angular				СОН	
SPT at 1.71m N 24;30/120	15.12	1.95	CL		Clayey Gravelly SAND (SW) very dense, sand fine to coarse grained, white-grey.  Sandy CLAY (CL) stiff, brown, sand fine to coarse grained, with gravel				NON	
-	14.77	2.30			fine grained sub-angular to sub-rounded.			<u> </u>	СОН	
-		†	CH	==	CLAY (CH) hard, grey light brown, with sand medium grained.				СОН	
<u>-</u>	14.27	2.80	СН		CLAY (CH) very stiff then hard, grey mottled brown, with silt and ironstone sand nodules, fine grained (ironstained clay).	_ b		J		
SPT at 3.3m N 4;11,18		+								
-	-	- -4				-				
SPT at 4.7m		† -				]     D			СОН	
N 8;30/100	-	- 5				-				
-		+								
-		Ī								
SPT at 6.2m N 15;30/100	11.07 -	<b>-6</b> 6.00 - 6.18	CH CL	<del>× ,</del>	Sandy Silty CLAY (CH) hard, red brown, sand fine to medium grained angular 6.13 ironstone gravel, fine to medium grained, red	w		<b> </b>	СОН	
- - -		<u> </u>  -		E	Sandy CLAY (CL) hard, grey, sand fine to coarse grained.				СОН	
	-	7			<u>.</u> -	_			JOH	
_	9.57	7.50	CI		CLAY (CI-CH) hard, grey-brown, with silt.			-		
SPT at 7.8m N 11;22,32		- 8	CH		7.80m - 7.95m with sand, fine grained					
-									СОН	
-										
- ODT -400	8.07 -	<b>9</b> 9.00	СН		Sandy CLAY (CH) very stiff, grey-brown, sand fine grained.	d w		<b>J</b>		
SPT at 9.3m N 8;15,22									СОН	
-		1			-	]				

CLIENT	DMR					LC	HOLE LOGGED BY		ACS	OF 2	
PROJECT IPSWICH MOTORWAY UPGRADE - WACOL TO DARRA						CHECKED BY GWB DRILLED DATE 10-Aug-07					
CONTRACTOR DRILL MODEL DRILLER	Eds	ratest son 3000 nt Ormsb	у		ANGLE Vertical BEARING - HOLE DIAMETER 100mm ()	LOCATION 3201				7.07m 0 E 150158 N alian Height Datum Grid	
DRILLING	STRA	TA		MATERIAL DESCRIPTION	CONDITION			ON	OBSERVATION		
SAMPLE, TEST, BIT, SUPPORT, ETC.	R.L.	DEPTH m	GROUP SYMBOL	LEGEND	SOIL TYPE Plasticity / Grain Size, Colour, Minor Components	WATER/ MOISTURE	СОН	ESIVE	NON COHESIVE	I ETC	
<b>.</b>	-	-	CH		Sandy CLAY (CH) very stiff, grey-brown, sand fine grained. (continued)		> W L	0 > 1		COHES	
SPT at 10.8m N 8;15,24	6.44	10.63 <b>11</b>	SP		SAND (SP) dense, fine to coarse grained sub-angular, light brown, grey-brown 10.90 with clay	w w					
	- - -	-			-	-				NONCO	
SPT at 12.2m N 22;30/90	4.98	- <b>12</b> 12.09 - -	CL		Sandy CLAY (CL) hard, grey, sand medium to coarse grained sub-angular with traces of gravel fine grained.					COHES	
-	- - 3.57	- <b>13</b> - - 13.50								COLLO	
SPT at 13.68m N 25;30/50	- - -	- 14	SP		SAND (SP) very dense, medium to coarse grained, dark grey, sub-angular with clay					Nove	
	- -	-			-	-				NONCO	
SPT at 15.07m N 30/140s	2.07 - 1.93 <sub>-</sub>	- <b>15</b> 15.00 15.14	GP	0,00	Quartz GRAVEL (GP) very dense, fine to medium grained, sub-angular to sub-rounded, (poorly cemented sands and gravels).  Borehole completed at 15.14m depth					SNDGRV	
-	- - -	- - 16 -			- - -	_					
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- - -	- - -	- - - - 18			- - -	- - - -					
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