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CLIENT PROJECT	DMR	H MOTORWAY UPGRADE - WACOL TO DARRA					LOGGED BY ACS CHECKED BY GWE DRILLED DATE 09-0				3
CONTRACTOR DRILL MODEL DRILLER	Ter Eds	rratest son 3000 ent Ormsb			ANGLE Vertical BEARING - HOLE DIAMETER 100mm ()		GROUND LEVEL RL 2 LOCATION 3265				22.97m 54 E 150708 ralian Height Da
DRILLING	STRATA				MATERIAL DESCRIPTION	CONDITION				OBSER)	
SAMPLE, TEST, BIT, SUPPORT, ETC.	R.L.	DEPTH	GROUP SYMBOL	LEGEND	SOIL TYPE Plasticity / Grain Size, Colour, Minor Components	WATER / MOISTURE	S S L G	SIVE	СОН	ON ESIVE	SOIL ( STRU
	m	m	SM	× · . · . · ×	Silty SAND (SM) fine to coarse grained, brown, with gravel fine grained sub-angular, with grass rootlets and silt.		≫ ω π. g	N % I			NON
SPT at 0.8m N 4;5,7	22.47	0.50 - - - <b>1</b>	CL CI		0.40 gravel, light brown medium grained sub-rounded CLAY (CL-Cl) stiff, grey mottled red-brown, brown, with ironstone gravel fine to medium grained sub-angular to sub-rounded, silt, trace sand fine grained and rootlets.  Clayey SAND (SC) very dense, fine to coarse grained, grey mottled red-brown, brown, clay low plasticity, (well cemented sands as difficulty with augering, v-bit refusal).	-				сон	
	21.67	1.30						<b>J</b>			NON
	-	-2			Borehole continued as a Cored Drillhole						
	-	- -									
	-	3			-						
	-	<b>-</b>				-					
	-	5									
		<u></u>									
	-	-6 -			<u> </u>						
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	-	-9 9			- - -						

SHEET 2 **CORED BOREHOLE RECORD BH220** OF 4 LOGGED BY ACS CLIENT CHECKED BY **GWB** IPSWICH MOTORWAY UPGRADE - WACOL TO DARRA **PROJECT** DRILLED DATE 09-Oct-07 RL 22.97m CONTRACTOR Vertical **GROUND LEVEL** Terratest **DRILL MODEL BEARING** LOCATION 32654 E 150708 N Edson 3000 Brent Ormsby HOLE DIAMETER **DRILLER** 100mm () **ELEVATION DATUM** Australian Height Datum COORDINATE SYSTEM Local Grid **DRILLING STRATA** MATERIAL DESCRIPTION DISCONTINUITIES GENERAL DESCRIPTION **SPECIFIC** FREQUENCY TCR % (Drill rate HETURN TYPE) SCR / (RQD Is 50 (MPa) SAMPLES CaCO<sub>3</sub>, SPT, UCS, Ê **ESTIMATED** THICKNESS R.L. DEPTH GRAPHIC **ROCK TYPE** ANGLE (per ROCK Planarity, Roughness, Grain Size, Texture/Fabric, Colour, Minor Components STRENGTH FLUSH Coating, Infill m 21.52 Continued from Borehole 1.45 CORE LOSS: 0.25m (sand, fine grained in drilling 21.27 70/(70) SANDSTONE fine to coarse grained, massive, mottled grey brown with properties of a very dense 700 SPTLS 30/120 .... 2.30 red brown mottled light grey (Tuff polymer + water) 100 % 18 47 Sandy GRAVEL (GP) very dense, fine to medium (Tuff polymer + water) 100 % → (Tuff polymer + water) 100 grained sub-angular to sub-rounded, sand fine to coarse grained (poorly cemented sands and gravels). Clayey Gravelly SAND (SC) very dense, fine to coarse grained, light brown, gravel fine to medium grained, with trace of silt. 17.17 SILTSTONE very fine grained massive, grey, with properties of a hard silty clay with sand very fine grained. SPTLS \* .... 7.39 grey-brown mottled light brown N 11:15.29 15.02 7.95 CORE LOSS: 0.44m (sand, very fine grained in drilling mud return). 14.58 SILTSTONE massive, grey-brown mottled light 82/(82) 820 JOB **NOTES** Hole Diameter 100mm to 24.59m depth. (SFA to 1.45m NMLC Coring from 1.45m to 2.3m, Washbore with 100mm diatri-blade bit from 2.3m to 5.8m, 100mm tri-cone roller from 5.8m to 7.5m. NMLC Coring from 7.95m to 16.6m. 86015 Washboring with 75mm dia. tri-blade bit from 16.6m to 24.5m. No free groundwate)

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SHEET 3 **CORED BOREHOLE RECORD BH220** OF 4 LOGGED BY ACS CLIENT CHECKED BY **GWB** IPSWICH MOTORWAY UPGRADE - WACOL TO DARRA **PROJECT** DRILLED DATE 09-Oct-07 RL 22.97m CONTRACTOR Vertical **GROUND LEVEL** Terratest **DRILL MODEL BEARING** LOCATION 32654 E 150708 N Edson 3000 Brent Ormsby HOLE DIAMETER **DRILLER** 100mm () **ELEVATION DATUM** Australian Height Datum COORDINATE SYSTEM Local Grid **DRILLING STRATA** MATERIAL DESCRIPTION DISCONTINUITIES GENERAL DESCRIPTION **SPECIFIC** FREQUENCY TCR % (Drill rate) HETURN TYPE) 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 FLUSH Coating, Infill SILTSTONE massive, grey-brown mottled light 82/(82) brown. (continued) 82() 10.00m - 10.40m silty clay with sand fine grained SPTLS .... 10.50m - 10.61m grey, sand coarse grained and gravel fine grained sub-angular, multicoloured 12.02 CORE LOSS: 1.43m (sand, very fine grained in drilling mud return). 12 46/(46) 46() 10.59 SILTSTONE massive, grey-brown mottled light brown.
.... 12.54 light brown in places, grey mottled light 13 SPTLS 30/100 9.27 13.70 13.60 with a trace of gravel medium grained CORE LOSS: 2.9m (sand, fine to coarse grained in drilling mud return) 15 0)/0 0 SPTLS 6.37 16.60 MUDSTONE massive, grey-black, with properties of odechnicskjinkmaster w2d(14.12.07) gpj codechnicskjinkgint libraryaus\_library\_12 (04.10.07) glb CORE LOG (rev 22Jan08 checked AB/ACP Feb 2006) Jan08 10.47 (Tuff polymer + water) 100 % uff polymer + water 100 % 30/90s SPTLS 19.00 attempted U50 sample; unable to drive U50 tube JOB **NOTES** Hole Diameter 100mm to 24.59m depth. (SFA to 1.45m NMLC Coring from 1.45m to 2.3m, Washbore with 100mm diatri-blade bit from 2.3m to 5.8m, 100mm tri-cone roller from 5.8m to 7.5m. NMLC Coring from 7.95m to 16.6m. 86015 Washboring with 75mm dia. tri-blade bit from 16.6m to 24.5m. No free groundwate)

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**BH220** SHEET 4 **CORED BOREHOLE RECORD** OF 4 LOGGED BY ACS CLIENT CHECKED BY **GWB** PROJECT IPSWICH MOTORWAY UPGRADE - WACOL TO DARRA DRILLED DATE 09-Oct-07 CONTRACTOR **GROUND LEVEL** RL 22.97m Terratest Vertical **DRILL MODEL** Edson 3000 **BEARING** LOCATION 32654 E 150708 N DRILLER Brent Ormsby HOLE DIAMETER 100mm () **ELEVATION DATUM** Australian Height Datum COORDINATE SYSTEM Local Grid **DRILLING STRATA** MATERIAL DESCRIPTION DISCONTINUITIES SPECIFIC GENERAL DESCRIPTION FREQUENCY WEATHERING 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 MUDSTONE massive, grey-black, with properties of clay (CH) with silt. (continued) 30/75s .... 21.00 no sample recovered in SPT (Tuff polymer + water) 100 % - 23 -0.53 23.50 SILTSTONE massive, grey mottled light brown. 30/90s -1.53 24.50 no sample recovered in SPT End of Borehole at 24.59m eotechnics\gint\master w2d(14.12.07).gpj odechnics\gint\gint\library\aus\_library\_12 (04.10.007).glb CORE LOG (rev 22.Jan08 checked AB/ACP Feb 2006) -Jan08 10.47 JOB **NOTES** Hole Diameter 100mm to 24.59m depth. (SFA to 1.45m NMLC Coring from 1.45m to 2.3m, Washbore with 100mm diatri-blade bit from 2.3m to 5.8m, 100mm tri-cone roller from 5.8m to 7.5m. NMLC Coring from 7.95m to 16.6m. 86015 Washboring with 75mm dia. tri-blade bit from 16.6m to 24.5m. No free groundwate)

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