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SHEET 1 **BOREHOLE RECORD BH215** OF 4 LOGGED BY ACS CLIENT DMR **CHECKED BY** PROJECT IPSWICH MOTORWAY UPGRADE - WACOL TO DARRA DRILLED DATE 06-Jul-07 to 07-Jul-07 CONTRACTOR ANGLE GROUND LEVEL Terratest Vertical RL 15.07m 32591 E 151254 N **DRILL MODEL** Edson 3000 BEARING LOCATION **DRILLER Brent Ormsby** HOLE DIAMETER 100mm () **ELEVATION DATUM** Australian Height Datum COORDINATE SYSTEM Local Grid DRILLING **STRATA** MATERIAL DESCRIPTION **OBSERVATION** CONDITION SYMBOL CONSISTENCY WATER/ MOISTURE SAMPLE, TEST. EGEND R.L DEPTH SOIL ORIGIN, SOIL TYPE NON BIT. SUPPORT. STRUCTURE, Plasticity / Grain Size, Colour, Minor Components COHESIVE GROUP COHESIVE ETC. ETC. S S T S VS m m Silty CLAY (CL) firm, mottled red-brown brown, with fine to medium grained ironstone gravel, with grass rootlets. CL D-M **FILL** 14.82 0.25 СН Silty CLAY (CH) firm, mottled red-brown brown, with fine to medium D grained ironstone gravel **FILL** 0.80 14.27 Silty SAND (SP) fine to medium grained, light brown, with a trace of clay (cl) and some ironstone gravel, fine to medium grained. SP **FILL** 13.97 1.10 Silty CLAY (CL) firm to stiff, red-brown, with sand medium to coarse CI grained subrounded. **COHES** 13.52 1.55 CL Silty CLAY (CL) stiff to very stiff, red and grey, with traces of ironstone SPT at 1.8m gravel fine grained. N 3;6,7 2.10 banded grey and light brown, with ironstone gravel fine to medium grained, subrounded **COHES** 11.97 3.10 SW Silty Clayey SAND (SW) medium dense, fine to medium grained, NONCO SPT at 3.3m N 4;10,10 11 79 3 28 mottled red-brown, grey light brown, with ironstone gravel fine to CI medium grained Sandy CLAY (CI) firm to stiff, fine grained, mottled red-brown, grey light **COHES** 10.57 4.50 CL Silty CLAY (CL) stiff, grey SPT at 4.8m 4.72 mottled light brown red-brown, grey with ironstone gravel N 6:11.12 medium to coarse grained, sub-angular **COHES** 5.80 becomiong grey red-brown 9.07 -**6** 6.00 СН Silty CLAY (CH) stiff, light brown, grey with a trace of tree rootlets SPT at 6.3m N 4:5.10 **COHES** ed to ARUP Schespingeotechnics/ginthmaster w2d(14.12.07).gpj Schespingeotechnics/ginthgint librarylaus, library_2 (04.10.007).gbb GoENERAL DORFHOLE LOG (rev 12Dec07 checked ABACP Feb 2006) 1. Made 22Jan08 (10.49) 7.34 7.27 7.12 Clayey Silty SAND (SW) dense, fine grained, red-brown, light NONCO 7.80 7.95 brown-grey COHES CLAY (CH) stiff to very stiff, purple, grey. Silty CLAY (CH) stiff to very stiff, red-brown, light brown-grey purple **COHES** N 8;12,23 Borehole continued as a Cored Drillhole **NOTES** JOB Hole Diameter 100mm to 23.73m depth. (Solid Flight Augering to 4.5m. HW casing to 4.5m. Washboring with 100mm diameter tri-blade bit from 4.5m to 9.45m. NMLC coring from 9.45m to 23.3m. Groundwater below 4.3m.) 86015

BH215 SHEET 2 **CORED BOREHOLE RECORD** OF 4 LOGGED BY ACS CLIENT CHECKED BY PROJECT IPSWICH MOTORWAY UPGRADE - WACOL TO DARRA DRILLED DATE 06-Jul-07 to 07-Jul-07 CONTRACTOR **GROUND LEVEL** RL 15.07m Terratest Vertical **DRILL MODEL** Edson 3000 **BEARING** LOCATION 32591 E 151254 N DRILLER Brent Ormsby HOLE DIAMETER 100mm () **ELEVATION DATUM** Australian Height Datum COORDINATE SYSTEM Local Grid **DRILLING** STRATA MATERIAL DESCRIPTION DISCONTINUITIES **SPECIFIC** GENERAL DESCRIPTION **GRAPHIC LOG** FREQUENCY FLUSH RETURN 9 (TYPE) TCR % (Drill rate) SCR / (RQD) Is 50 (MPa) (ber m) SAMPLES CaCO₃, SPT, UCS, ESTIMATED ROCK LHICKNESS R.L. DEPTH **ROCK TYPE** ANGLE TYPE Planarity, Roughness, Grain Size, Texture/Fabric, Colour, Minor Components STRENGTH Coating, Infill m 086015/design/geotechnics/gint/master wZd(14.12.07).gjg 086015/design/geotechnics/gint/girtt libranyalus. librany. IZ (04.10.007).glb TRALIA ROTARY CORE LOG (rev Z2Jan08 checked ABIACP Feb 2006). e1 of 3. Made Z2Jan08 (0.47. Continued from Borehole 5.62 9.45 A CLAY (CH) stiff, red-brown, grey, with silt. 100/(100) 100() 5.29 9.78 Description starts on next page JOB **NOTES** Hole Diameter 100mm to 23.73m depth. (Solid Flight Augering to 4.5m. HW casing to 4.5m. Washboring with 100mm diameter tri-blade bit from 4.5m to 9.45m. NMLC coring from 9.45m to 23.3m. Groundwater below 4.3m.) 86015

BH215 SHEET 3 **CORED BOREHOLE RECORD** OF 4 LOGGED BY ACS CLIENT CHECKED BY IPSWICH MOTORWAY UPGRADE - WACOL TO DARRA **PROJECT** DRILLED DATE 06-Jul-07 to 07-Jul-07 CONTRACTOR Vertical **GROUND LEVEL** RL 15.07m Terratest **DRILL MODEL BEARING** LOCATION 32591 E 151254 N Edson 3000 Brent Ormsby HOLE DIAMETER **DRILLER** 100mm () **ELEVATION DATUM** Australian Height Datum COORDINATE SYSTEM Local Grid **DRILLING STRATA** MATERIAL DESCRIPTION DISCONTINUITIES **SPECIFIC** GENERAL DESCRIPTION FREQUENCY WEATHERING TCR % (Drill rate) HETURN TYPE) SCR / (RQD SAMPLES , SPT, UCS, Is 50 (MPa) 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 MUDSTONE, massive, dark grey-black, properties of a very stiff to hard clay (CI) with silt. (continued)
.... 10.00 becoming dark grey-black 100 % 100/(100) 100() Ö + water) (Tuff polymer SPTLS $\dot{\circ}$ * 13 SPTLS Å 13.45m - 14.50m - washboring techniques SPTLS 0.12 À 15 CORE LOSS: 0.54m, (mud return is black with a sand, very fine grained). -0.4215.49 MUDSTONE, massive, dark grey-black, properties of a very stiff to hard silty clay (CI) with silt. polymer + water) 100 % -1.36 82/(82) 82() SILTSTONE, massive, grey, properties of a dense to very dense clayey sand fine grained, with silt. O XW (Tuff nigeotechnicsigintimaster w2d(14.12.07).gpj Ygeotechmicsigintigint library eus_ library, I2 (04.10.007).gbb Y CORE LOG (rev 22Jan08 checked ABIACP Feb 2006) 22Jan08 1047 -3.23 18.30 CORE LOSS: 1.21m, (mud return is black-grey with sand fine grained) 55/(55) 55() O SILTSTONE, massive, grey, properties of a dense to very dense clayey sand fine grained, with silt. JOB **NOTES** Hole Diameter 100mm to 23.73m depth. (Solid Flight Augering to 4.5m. HW casing to 4.5m. Washboring with 100mm diameter tri-blade bit from 4.5m to 9.45m. NMLC coring from 9.45m to 23.3m. Groundwater below 4.3m.) 86015

7.8

	PROJECT IPSWICH MOTORWAY UPGRADE - WACOL TO DARRA CONTRACTOR Terratest ANGLE Vertical DRILL MODEL Edson 3000 BEARING - DRILLER Brent Ormsby HOLE DIAMETER 100mm ()										GROUND I LOCATION				EL	RL 15. 32591	E 151254
					ent Ormst	, y	HOLE DIAMETER 100mm ()				ELEVATION DATUM Australian Height Da COORDINATE SYSTEM Local Grid						
	DR	ILLIN			STRATA		MATERIAL DESCRIPTION						SPEC			ONTINUITIES GENERAL DESCR	
TCR % (Drill rate)	SCR / (RQD)	FLUSH RETURN % (TYPE)	SAMPLES CaCO ₃ , SPT, UCS, etc)	R.L.	DEPTH m	GRAPHIC LOG	ROCK TYPE Grain Size, Texture/Fabric, Colour, Minor Components	WEATHERING	ESTIMATED ROCK STRENGTH	ls 50 (N	30 FREQUENCY	(per m)	TYPE		THICKNESS (mm)		narity, Roug Coating, In
	→ 55/(55) —	water) 100 % ——) O SO	-6.03	-21 _{21.10}		SILTSTONE, massive, grey, properties of a dense to very dense clayey sand fine grained, with silt. (continued)	- -									
. ()6 —	(6)/6		C	-7.21			CORE LOSS: 0.18m, (mud return is black-grey with sand fine to medium grained).										
- 100() +	. 100/(100) -	T)	▲ € C → ♦ PTL ∮ ▲ → N 11:33/120	7.96	22.28 - - - - - 23 23.03	× × × × × × × × × × × × × × × × × × ×	SILTSTONE, massive, grey, properties of a dense to very dense clayey sand fine grained, with silt. MUDSTONE, massive, dark grey-black, properties of a very stiff to hard clay (CI) with silt.	XW/R		A0.12							
			SPTLS		23.73		End of Borehole at 23.30m End of Borehole at 23										

BOREHOLE PHOTOGRAPHS



PROJECT: Upgrade Centenary Highway CLIENT: Department of Main Roads PROJECT NUMBER: 86015

Hole: BH 215



Depth: 9.45m - 13m



Depth: 14.95m - 21m



Depth: 21m - 23.3m