


U120460 Well 10359

 Wellington Office PO Box 12-003 Wellington, NZ Tel: +64 4 471 7000 Fax: +64 4 471 1201 www.opus.co.nz	<b>BOREHOLE LOG</b>			HOLE NO. <b>BH105</b>
	PROJECT <b>Blenheim Urban Growth Study - Stage 2</b>	CO-ORD. <b>1676723 E 5404249 N</b>	R.L. <b>10 m</b>	SHEET <b>1 of 1</b>
	LOCATION <b>Middle Renwick Road</b>	REF. GRID <b>NZ Transverse Mercator</b>	DATUM <b>MSL</b>	HOLE LENGTH <b>15.32 m</b>

GEOLOGY/UNIT	MAIN DESCRIPTION	R.L. (m)	DEPTH (m)	GRAPHIC LOG	TESTS			ROCK STRENGTH	ROCK WEATHERING	DEFECT SPACING	DIP degrees	DETAILED DESCRIPTION	CORE			DRILLING			PIEZOMETER DETAILS	OTHER INSTRUMENTATION	
					SPT 'N' VALUE	SPT BLOW COUNTS OR SHEAR VALUE							ROD (%)	TOTAL CORE RECOVERY (%)	SAMPLE TYPE	DRILLING METHOD	DRILLING FLUID LOSS	CASING			BASE OF HOLE & WATER LEVEL
Rapaura Formation	SILT with some clay; brown, soft, dry to moist, low plasticity. Some zones of dark grey SILT.		0																		
	Sandy silty GRAVEL; brown, medium dense, wet.		2		24	7/6/6/6/6						Gravel is well rounded, well graded to 30 mm. Sand is medium to coarse.			BS	Hand Dug					
	Becomes dense, saturated.		3		40	16/11/10/10/19							DHH								
	Becomes sandy GRAVEL with some silt; brown-grey.		4		37	14/10/9/18/10									DHH	Rotary Percussive (Concentric) Drilling					
	Becomes very dense.		5		43	14/9/11/11/12									SPT						
			6		32	6/6/7/10/9							Gravel is well rounded to subangular, well graded to 40 mm.		DHH						
			7		50+	15/14/17/19 = 70mm									SPT						
			8		50+	9/7/15/14/14 = 55mm									DHH						
			9		50+	10/12/12/15/11 = 50mm									SPT						
			10		50+	22/15/16/17 = 65mm									DHH						
			11		50+	12/14/15/16/12 = 10mm									SPT						
			12		50+	16/13/20/17 = 40mm									DHH						
			13		50+	12/13/20/17 = 40mm									SPT						
			14		50+	21/17/17/14 = 55mm									DHH						
			15		50+	14/22/21/17 = 20mm									SPT						
		16																			
		17																			
		18																			
		19																			
		20																			
		21																			
		22																			
		23																			
		24																			

<b>NOTES</b> Groundwater level at end of drilling 1.3 m HD: Hand Dug BS: Bulk Sample PT: Push Tube Sample DHH: Down Hole Hammer SPT: Standard Penetration Test	STARTED <b>8/10/2012</b>	FINISHED <b>8/10/2012</b>
	DRILLER <b>Troy Norriss</b>	DRILLING CO. <b>CW Drilling &amp; Exploration Ltd</b>
	INCLINATION/ AZIMUTH <b>-90°</b>	DRILLING RIG <b>MP100</b>
	LOGGED <b>Ella Williamson</b>	CHECKED <b>Doug Mason</b>
	CLIENT <b>Marlborough District Council</b>	JOB NO. <b>5C2128.01</b>



CLIENT Opus International PROJECT NAME Blenheim Urban Growth Study

PROJECT NUMBER BH#105 PROJECT LOCATION Adjacent to Middle Renwick Road

DATE STARTED 8/10/12 COMPLETED 9/10/12 GROUND ELEVATION \_\_\_\_\_ HOLE SIZE 125

DRILLING CONTRACTOR CW Drilling GROUND WATER LEVELS:

DRILLING METHOD Concentrix AT TIME OF DRILLING --

LOGGED BY Troy Norris CHECKED BY James Chapman  AT END OF DRILLING 1.30 m

NOTES Geotech Bore AFTER DRILLING --

DEPTH (m)	SAMPLE TYPE NUMBER	REMARKS	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
		Alloy flush toby installed at surface		Light brown silts/sandy clay	
2		SPT@2m,7,6,6,6,6		1.90 Light brown/grey sandy Gravels	
		SPT@3m,16,11,10,10,10			
4		SPT@4m,14,10,9,8,10			
		SPT@5m,14,9,11,11,11			
6		SPT@6m,6,6,7,10,9			
		SPT@7m,15,14,17,19-70mm travel			
8		SPT@8m,9,7,15,14,14-55mm travel			
		SPT@9m,10,12,12,15,17-65mm travel			
10		SPT@10m,22,15,18,17-65mm travel			
		SPT@11m,12,14,15,19,2-10mm travel			
12		SPT@12m,16,17,18,15-55mm travel			
		SPT@13m,12,13,20,17-40mm travel			
14		SPT@14m,21,17,17,14-55mm travel			
		SPT@15m,14,22,21,7-20mm travel		15.00 Bottom of hole at 15.00 m.	

GENERAL BH / TP / WELL OPUS BLENHEIM UGS 105 GPJ CW DRILLING GDT 23/10/12

