Appendix E Stantec Logs and Location Plan



			<u> </u>	. • .	Lab Na 200	540544		
(Stantec				Job No: 80			
'	Justantec	TEST PIT L	OG		Hole No: The Sheet: 1 of			
		Client: Tasman District Council						
	TEC NEW ZEALAND				Started: 13/			
	xford street	Project: Richmond South Reservoirs Location: 520 Hill Street	Finished: 13/12/18					
Richn Nelso		Description: 10m downslope offset from top of	f driveway.		Logged: KC			
	03 546 8728 03 548 2016				Checked: J			
		Easting: 389351m Northing: 790356			RL Surface			
	1	Equipment Type: 5 Tonne Excavator	Pit dimension: 2n		Datum: NZ			
		Material Description			Sca (B)	ala Penetration lows/100mm)		
_			B	s	SCALA PENETRO			
m)		(Logging carried out in accordance with Guidelines for t Classification of Soil and Rock for Engineering Purpose	ne Field 9	age	ACCORDANCE V +DETERMINATIO	WITH NZS 3604: 1999 ON OF PENETRATION RESISTANCE CORDANCE WITH NZS 4402: 1988		
depth (m)		Zealand Geotechnical Society, 2005)	draphic log	Seepages	0 2 4 6	8 10 12 14 16 18 20		
	Sandy SILT, brown, soft,	dry, non-plastic, organics present.	X X	0) [
	[TOPSOIL]	-	×××	2	$\frac{1}{2}$			
0.2	Silty CLAV arange veller	w orango brown firm day low pleatiaity. Co-th	(0.2) ×		- 			
	pebbles with sand (weath	w, orange brown, firm, dry, low plasticity. Scattere ered fragments).	u angulal	-				
0.4			<u>x_x</u>	1				
			X					
			<u> </u>					
0.6			× ×	2 2	<u>^</u>			
			X X		}	$\downarrow \mid \mid \mid \mid \mid \mid \mid$		
0.8			- X X- X- X-	1				
			× × ×					
1.0			(1) × ×	-				
1.0	Clayey GRAVEL and cob	bles with some silt, yellow brown, dry, low plastici h some boulders (<300mm).	ty. Rounded	2				
	[MOUTERE GRAVELS]	n some boulders (<300mm).	0-4-0					
1.2			000					
			0-00					
1.4			°O-O°C					
			0.20	al I	>			
4.6			0 7 0 0 0 0	│	5			
1.6			0/0	1 1				
			0000]				
1.8			~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	2				
			0.00	d				
2.0		.	(2)					
	Test pit terminated at 2m	gue to Target Depth						
2.2								
2.4								
2.6								
0.0								
2.8								

				STC	_TF	2 02			
		1					Job No: 80	510514	
	(Stantec	TEST PIT LO)G			Hole No: T	P2	
							Sheet: 1 of	1	
	STAN	ITEC NEW ZEALAND	Client: Tasman District Council				Started: 13	/12/18	
	level		Project: Richmond South Reservoirs				Finished: 1	3/12/18	
	Richn Nelso	nond	Location: 520 Hill Street Description: 10m downslope offset from top of	driveway			Logged: K	2	
	Tel: 0	3 546 8728	Description. Tom downslope onset from top of	unveway.			Checked: J	IG	
	Fax: (03 548 2016	Easting: 389393m Northing: 790371m	ı	Pit orienta	ation:	RL Surface	e: 59m	
			Equipment Type: 5 Tonne Excavator	Pit dim	nension: 2m	1 X 0.7m	Datum: NZ	VD2016	
			Material Description			2	Sca	ala Penetration	
						8	5 SCALA PENETR	Slows/100mm)	
	Œ		(Logging carried out in accordance with Guidelines for the Classification of Soil and Rock for Engineering Purposes.	Field	000	ges	+DETERMINATI ACCORDANCE	ON OF "GOOD GROUND" IN WITH NZS 3604: 1999 ON OF PENETRATION RESIST	ANCE
	depth (m)		Zealand Geotechnical Society, 2005)	11011	graphic log	Seepages	OF A SOIL IN A	CCORDANCE WITH NZS 4402:	1988
	ŏ	Sandy SILT soft dry non	-plastic, organics present.		× ·×	ο B	0 2 4 6	8 10 12 14 16	18 20 교
	_	[TOPSOIL]	-plastic, organics present.		× ×		5		_
	0.2			<u> </u>	0.2) × ×	7			58.8
		Silty CLAY, orange, yellow pebbles with sand (weather	v, orange brown, firm, dry, low plasticity. Scattered	angular	× ×				
		possios mar cana (weath	orod magmonto).		xx			7	_
	0.4				××				58.6.
	_				× × ×				
	0.6				×_×_	1	<u>~</u>	>	58 <u>.4</u>
					× ×	"	⁵ ,	/	_
	0.8				<u>×</u> ×				58.2
					× × =				
	_				(1) ×				_
	1.0	Clayey GRAVEL and cobb	oles with some silt, yellow brown, dry, low plasticity	. Rounded	0 0 0		\		58.0
	_	fine to coarse gravels (<19 [MOUTERE GRAVELS]	50mm).		0-0		;	$\mathbf{k} \parallel \mathbf{k} \parallel \mathbf{k}$	_
	1.2				000			\	57.8
					0-00				_
	1.4				0-00				57 <u>.6</u>
c.con					0 0 0				
stante	_				0 7 0	1 7	5		• ₂₅ —
www.	1.6				000				57 <u>.4</u>
street	_				°0 0 0 0				_
Hill	1.8				000				57.2
rs, 52(_				000				_
servoi	2.0				(2)				57.0
STANTEC NEW ZEALAND Project: 80510514, Richmond South Reservoirs, 520 Hill Street www.stantec.com		Test pit terminated at 2m	due to Target Depth						
d Sou									
hmon	2.2								56 <u>.8</u>
4, Ric	_								_
51051	2.4								56 <u>.6</u>
3ct: 80	_								_
Proje	2.6								56 <u>.4</u>
_AND									
'ZEAI	_								_
NEW	2.8								56.2
NTEC									_
STA	3.0 Remar	ks: No groundwater meas	ured in test nit				Contractor: No	elmec	56.0
20/12/18	Coordi	nates and RL's are approx	timate. Coordinates (Nelson GD2000) derived via i	measureme	ent from sit	е	John actor. No		
20	reature	es. Reduced Levels derive	d from 0.5m LiDar information.						

ſ			S	TC_TI	P03	T	
		1				Job No: 80510514	
		Stantec	TEST PIT LOG			Hole No: TP3	
						Sheet: 1 of 1	
	CTAN	ITEC NEW ZEALAND	Client: Tasman District Council			Started: 13/12/18	
	level	1	Project: Richmond South Reservoirs			Finished: 13/12/18	
	Richn	ford street nond	Location: 520 Hill Street			Logged: KC	
	Nelso	n 3 546 8728	Description: 30m downslope offset from top of drivewa	ıy.		Checked: JG	
		03 548 2016	Easting: 389410m Northing: 790372m	Pit orienta	ation:	RL Surface: 54m	
				dimension: 2m		Datum: NZVD2016	
			Material Description		5	Scala Penetration	
			Material Becompton		s	(Blows/100mm)	
	(u		(Logging carried out in accordance with Guidelines for the Field	<u>log</u>	es es	SCALA PENETROMETER TEST: +DETERMINATION OF "GOOD GROUND" IN ACCORDANCE WITH NZS 3604: 1999	
	depth (m)		Classification of Soil and Rock for Engineering Purposes. New Zealand Geotechnical Society, 2005)	graphic log	Seepages Moisture o	+DETERMINATION OF PENETRATION RESISTANCE OF A SOIL IN ACCORDANCE WITH NZS 4402: 1988	(E)
	deb			gra	See	0 2 4 6 8 10 12 14 16 18 20	1
		Sandy SILT, brown, soft, o	dry, non-plastic, organics present.	× × × ×			
	_	[TOI SOIL]		·× ·	\ <u>2</u> p		_
	0.2	Silty CLAY, orange, yellow	v, orange brown, firm, dry, low plasticity. Scattered angular	(0.2) × × × × × × × × × × × × × × × × × × ×			53.8
	_	pebbles with sand (weathe	ered fragments).	<u> </u>			_
	0.4			<u>× ×_</u> × ×_			53.6
				× ×			
				x_x-			50.4
	0.6			× ×	<u> </u>		53.4
	_			<u> </u>	0	5 • •	_
	0.8			× ×			53.2
	_			× -× -			_
	1.0			× ×			53 <u>.0</u>
				(1.1) × × ×			25
	_	Clayey GRAVEL and cobb	oles with some silt, yellow brown, dry, low plasticity. Round	led ooo			-
	1.2	fine to coarse gravels, son [MOUTERE GRAVELS]	ne boulders (<300mm).	0-0			52.8
	_			000			_
Ε	1.4			0-00			52 <u>.6</u>
ec.co	_			0-0			
stant.	1.6			000	2		52,4
WW	1.0			0 7 0	"		32.4
Street	_						_
Ĭ E	1.8			P0 000			52.2
s, 52(_			0 0 0	1		_
servoi	2.0			$(2) \stackrel{\circ}{\rightarrow} \stackrel{\circ}{\rightarrow} \stackrel{\circ}{\circ}$			52.0
th Re		Test pit terminated at 2m o	due to Target Depth				
d Sou							
hmon	2.2						51 <u>.8</u>
4, Ric	_						_
51051	2.4						51 <u>.6</u>
ct: 80	_						
Proje	2.6						51 <u>.4</u>
AND	2.0						01.3
ZEAL	_						_
NEW,	2.8						51.2
TEC	_						_
STANTEC NEW ZEALAND Project. 805/105/14, Richmond South Reservoirs, 520 Hill Street www.stantec.com	3.0						51.0
20/12/18	Remar Coordi	ks: No groundwater meas	sured in test pit. kimate. Coordinates (Nelson GD2000) derived via measure	ement from site		Contractor: Nelmec	
20/1;			d from 0.5m LiDar information.		-		

Г				STC	TF	204	.				
	1	O CLARA	l					Job No: 80	510514		
	(Stantec	TEST PIT LO	G				Hole No: Th			
								Sheet: 1 of	1		
	STAN	ITEC NEW ZEALAND	Client: Tasman District Council					Started: 13	/12/18		
	level	1 ford street	Project: Richmond South Reservoirs					Finished: 1	3/12/18		
	Richn Nelso	nond	Location: 520 Hill Street Description: Corner of property.					Logged: KC			
	Tel: 0	3 546 8728	Description. Comer of property.					Checked: J	G		
	Fax: (03 548 2016	Easting: 389398m Northing: 790344m	F	Pit orienta	ation:		RL Surface	: 56.5m		
			Equipment Type: 5 Tonne Excavator	Pit dimer	nsion: 2n	n X 0.4n	n	Datum: NZ	VD2016		
			Material Description				condition	(B	ala Penetra lows/100n		
	depth (m)		(Logging carried out in accordance with Guidelines for the F Classification of Soil and Rock for Engineering Purposes. N Zealand Geotechnical Society, 2005)	ïeld lew	graphic log	Seepages	moisture co	ACCORDANCE V +DETERMINATION OF A SOIL IN AC	ON OF "GOOD GRO WITH NZS 3604: 19! ON OF PENETRATIO CORDANCE WITH	99 ON RESISTANCE	RL (m)
		Sandy SILT, brown, soft, o	dry, non-plastic, organics present.		× × × ×						50.4
•	_	[TOFSOIL]			× . ×		dry	. 🕇			56.4
	0.2				×××		₽				_
	_	Silty SAND with clay grey	brown, dry to moist, non-plastic, organics present.	(0.3	3)× × ×			}			56.2
	0.4	only of and man day, groy	stemi, ary to motor, non-placine, organico proceni.		×						_
	_				× .		ф	.			56 <u>.0</u>
	0.6			(0.6	5) ^ · · × ·						
		Silty CLAY, orange, yellow pebbles with sand (weath	v, orange brown, firm, dry, low plasticity. Scattered a	ngular	X X						-
	_	pennies with saild (weath	ered magnierits).		<u>x</u> x						55 <u>.8</u>
	0.8				× ×						_
	_				× × ×						55.6
	1.0				× ×		dry	.			_
	_				× ×		Ф				55.4
	1.2				× ×						
					× × -						25
	_			(1.4	X X						55.2
com	1.4	Clayey GRAVEL and cobl	oles with some silt, yellow brown, dry, non-plastic. Ro	,	0000						_
antec.	_	to coarse gravels (<80mm [MOUTERE GRAVELS]	n).		0-0						55.0
ww.st	1.6				000						_
eet w	_				0-00		dry	.			54.8
ill Str	1.8				000		₽				
520 F					0000						E4.6
rvoirs,	_			r:							54.6
Rese	2.0	Test pit terminated at 2m	due to Target Depth		7 A S (1)					
South	_										54.4
mond	2.2										_
, Rich	_										54.2
10514	2.4										
t: 805											54 <u>.0</u>
Projec	_										0.12
ND I	2.6										_
ZEAL/	_										53.8
VEW 2	2.8										_
TEC !	_										53.6
STANTEC NEW ZEALAND Project: 80510514, Richmond South Reservoirs, 520 Hill Street www.stantec.com	3.0										
20/12/18		ks: No groundwater meas	sured in test pit. kimate. Coordinates (Nelson GD2000) derived via m	easuremen	t from sit	e		Contractor: Ne	elmec		
20/1	feature	es. Reduced Levels derive	d from 0.5m LiDar information.		510						



Stantec

STANTEC NEW ZEALAND level 1 66 Oxford street Richmond Nelson

Tel: 03 546 8728 Fax: 03 548 2016

BOREHOLE LOG

Client: Tasman District Council Project: South Richmond Reservoirs

Location: Richmond

Description: Hanna Reservoir SI

Easting: 389541.98m Northing: 793871.98m Inclination: Vertical

RL Surface: 76.2m

Job No: 80507007

Hole No: STC17-01

Started: 25/10/17

Finished: 25/10/17

Logged: KWC

Checked: JKW

Sheet: 1 of 4

					Dia	ameter	(Int/Ext): 85mm/123mm		Datur	n: NZ	ZVD2016	
		(i	Samples	Shear Vane (kPa)	Standa Penetrat Tests	tion	Material Description	Б		e.	vations	
:	Depth (m)	Elevation (m)	Туре	Peak Strength/ Residual Strength	Blows (Seating // 75mm/150mm, 225mm/300mm)	N Value/ Refusal Data	(Logging carried out in accordance with Guidelines for the Field Classification of Soil and Rock for Engineering Purposes. New Zealand Geotechnical Society, 2005)	Graphic Log	Moisture Condition	Groundwater	Other Observations	Installation
	-	76.0					Sandy SILT, brown, soft, dry, non-plastic, organics present. [TOPSOIL] (0.3)	× × × × × × × × × × × × × × ×	dry		-	
		-					Silty SAND with clay, grey brown, moist, non-plastic, organics present. (0.6)	× · · · · · · · · · · · · · · · · · · ·	dry		:	
	1.0-	75.0					Silty CLAY, orange, yellow, orange brown, firm, moist, non-plastic, scattered angular pebbles with sand (weathered fragments).	*	moist			
	-	-	ODT		5/7//9/10/12/14	N = 45	Pebbles becoming less weathered. (1.5)	× × 0 0 0 0			,	
2	2.0-	74.0	SPT sample				Clayey GRAVEL with silt, yellow brown, moist, very dense, non-plastic, rounded fine to coarse gravels. [MOUTERE GRAVELS]		moist			
	-	-					(2.8) 200mm layer of medium, rounded gravels.	0000			:	
;	3.0-	73.0	SPT sample		6/13// 10/11/10/16	N = 47	(3.5)		moist			
	-	-					Orange brown oxidation prominent layer.	0-0-0	moist		-	
2	4.0-	72.0	SPT sample		5/11// 18/16/16	for 225 mm 50 Blows	Trace cobbles encounted with estimated 200 mm diameter.		moist			

Drilling Method:
Rotary drilling with flush Casing: None.

Contractor: CW Drilling Equipment Type: Hanjin D8D Rig

Flush: **Mud**



Tel: 03 546 8728 Fax: 03 548 2016 **BOREHOLE LOG**

Client: Tasman District Council

Sheet: 2 of 4

Checked: JKW

Started: 25/10/17

Job No: 80507007

Hole No: STC17-01

Project: South Richmond Reservoirs Finished: 25/10/17

STC_BH01

Location: Richmond Logged: KWC Description: Hanna Reservoir SI

RL Surface: 76.2m Easting: 389541.98m Northing: 793871.98m Inclination: Vertical

				Di	amete		Datur	n: NZ	ZVD2016		
	E G	Samples	(kPa)	Standa Penetra Tests	tion	Material Description	g		er	rvations	
Depth (m)	Elevation (m)	Type	Peak Strength/ Residual Strength	Blows (Seating // 75mm/150mm, 225mm/300mm)	N Value/ Refusal Data	(Logging carried out in accordance with Guidelines for the Field Classification of Soil and Rock for Engineering Purposes. New Zealand Geotechnical Society, 2005)	Graphic Log	Moisture Condition	Groundwater	Other Observations	Installation
	71.0	-				Clayey GRAVEL with silt, yellow brown, moist, very dense, non-plastic, rounded fine to coarse gravels. [MOUTERE GRAVELS] (5.3)		moist			
-						Layer of higher concentration of fine to medium rounded gravels, orange brown.					
6.0-	70.07	SPT sample		4/15//29/21	for 35 mm 50 Blows						
7.0-									9/4 AD2 i		
-	0.69	- SPT sample		9/27//28/22	for 120 mm 50			moist			
8.0-	68.0				Blows						
-											
9.0-	0.79	SPT sample		9/21//29/21	for 120 mm 50 Blows						
-						(10)					

Drilling Method: Rotary drilling with flush Casing: None.

Contractor: CW Drilling Flush: **Mud** Equipment Type: Hanjin D8D Rig



Tel: 03 546 8728 Fax: 03 548 2016

Northing: 793871.98m

BOREHOLE LOG

Client: Tasman District Council Project: South Richmond Reservoirs

Location: Richmond

Easting: 389541.98m

Description: Hanna Reservoir SI

Inclination: Vertical

STC BH01

RL Surface: 76.2m

Job No: 80507007

Hole No: STC17-01

Started: 25/10/17

Finished: 25/10/17

Logged: KWC

Checked: JKW

Sheet: 3 of 4

						. 30904 1.90m Moruning. 79307 1.90m monitation. Ve		- .		T) (D0040	
				Di	iametei	(Int/Ext): 85mm/123mm		Datur	n: Nz	ZVD2016	
	(F	Samples	(kPa)	Standa Penetra Testa	ition s	Material Description	g		e	rvations	
Depth (m)	Elevation (m)	Туре	Peak Strength/ Residual Strength	Blows (Seating // 75mm/150mm, 225mm/300mm)	N Value/ Refusal Data	(Logging carried out in accordance with Guidelines for the Field Classification of Soil and Rock for Engineering Purposes. New Zealand Geotechnical Society, 2005)	Graphic Log	Moisture Condition	Groundwater	Other Observations	Installation
	. 66.0					Clayey GRAVEL with silt, yellow brown, moist, very dense, non-plastic, rounded fine to coarse gravels.					
		SPT sample		13/18//27/23	for 120 mm 50 Blows						
11.0	65.0	-									
12.0	┧.	- SPT sample		11/18//29/21	for 120 mm			moist			
		Sample			50 Blows						
13.0	63.0	-									
	-	- SPT sample		9/19//31/19	for 105 mm 50 Blows	(13.8) Becoming wet.	ô- ô				
14.0	62.0							wet			
Drillin	g Meth	od:	Cor	sing:		(15) Remarks: See key sheets for abbreviations and symbols	000				

Drilling Method: Rotary drilling with flush Casing: None.

Contractor: CW Drilling Flush: **Mud** Equipment Type: Hanjin D8D Rig



Fax: 03 548 2016

BOREHOLE LOG

Job No: 80507007 Hole No: STC17-01

Sheet: 4 of 4

Started: 25/10/17

Finished: 25/10/17

Logged: KWC

Checked: JKW

Description: Hanna Reservoir SI

Northing: 793871.98m

Inclination: Vertical

STC_BH01

RL Surface: 76.2m

Client: Tasman District Council

Location: Richmond

Easting: 389541.98m

Project: South Richmond Reservoirs

				Di	ametei	(Int/Ext): 85mm/123mm		Datur	n: NZ	ZVD2016	
	(F	Samples	(kPa)	Standa Penetra Tests	tion s	Material Description	ס		e	rvations	
Depth (m)	Elevation (m)	Туре	Peak Strength/ Residual Strength	Blows (Seating // 75mm/150mm, 225mm/300mm)	N Value/ Refusal Data	(Logging carried out in accordance with Guidelines for the Field Classification of Soil and Rock for Engineering Purposes. New Zealand Geotechnical Society, 2005)	Graphic Log	Moisture Condition	Groundwater	Other Observations	Installation
16 17 18	0.09 0.65 0.85	SPT sample		9/28//50 9/28//50 7/22//26/24	for 75 mm 50 Blows for 120 mm 50 Blows Blows for 100 mm 50 Blows			wet			
	-	-									

Drilling Method:
Rotary drilling with flush Casing: None.

Contractor: CW Drilling Flush: **Mud** Equipment Type: Hanjin D8D Rig



Tel: 03 546 8728 Fax: 03 548 2016

BOREHOLE LOG

Client: Tasman District Council

Description: Hanna Reservoir SI

Location: Richmond

Easting: 389349.73m

Project: South Richmond Reservoirs

STC BH02

Job No: 80507007 Hole No: STC17-02

Sheet: 1 of 2

Started: 19/03/18

Finished: 20/03/18

Logged: KWC

Checked: JKW

Northing: 790499.36m Inclination: Vertical

RL Surface: 66.9m

				Di	ameter	(Int/Ext): 85mm/123mm			Datur	n: NZ	ZVD2016	
	n)	Samples	Shear Vane (kPa)	Standa Penetra Tests	tion	Material Description		g		ər	vations	
Depth (m)	Elevation (m)	Туре	Peak Strength/ Residual Strength	Blows (Seating // 75mm/150mm, 225mm/300mm)	N Value/ Refusal Data	(Logging carried out in accordance with Guidelines for the Field Classification of Soil and Rock for Engineering Purposes. New Zealand Geotechnical Society, 2005)		Graphic Log	Moisture Condition	Groundwater	Other Observations	Installation
-	-					SILT, brown, soft, moist, non-plastic. Organics present.	(0.4)	× × × × × ×	moist			- -
-	0.99					Silty CLAY, yellow brown, firm, moist, low plasticity. Occasional pockets of mottled orange material.	(1)	× × × × × × × × × × × × × × × × × × ×	moist			\\ -\\\ -\\\\ -\\\\\\\\\\\\\\\\\\\\\\\
1.0- - - -				4/3//4/5/5/5	N = 19	Clayey, fine to coarse GRAVEL, some silt, yellow brown, medium dense, moist, non-plastic; Rounded. [MOUTERE GRAVELS]						
2.0-	65.0	SPT sample								<u></u>		
-	0.					2.80m - Prominent orange oxidation layer.	(2.8)			9/4 AD2		
3.0-	64.0	SPT sample		13/15//22	for 75 mm 22 Blows	3.00m - Becomes very dense.	(3.5)		moist mois			
4.0-	63.0					3.50m - Large gravel clast encountered.						
-		SPT		17/15//35	for 55 mm				moist			
5.0-	62.0	sample			35 Blows	4.90m - Becomes wet. Clayey, fine to coarse GRAVEL, some silt, yellow brown, medium	(4.9) (5)		wet			
- Drilling	Moth		Con	sing:		Clayey, fine to coarse GRAVEL, some silt, yellow brown, medium dense, moist, non-plastic; Rounded. [MOUTERE GRAVELS] Remarks: See key sheets for abbreviations and symbols			wet			

Drilling Method: Rotary drilling with flush Casing: None.

Contractor: CW Drilling Flush: **Mud** Equipment Type: Hanjin D8D Rig

Remarks: See key sheets for abbreviations and symbols

- Material descriptions conform to FIELD DESCRIPTION OF SOIL AND ROCK, 2005, NZGS

- Solid nose cone used for SPT Testing at 6 m bgl and for all tests below this depth.

Coordinate System - Nelson Circuit 2000.



Tel: 03 546 8728 Fax: 03 548 2016

STC_BH02

BOREHOLE LOG

Northing: 790499.36m

Client: Tasman District Council Project: South Richmond Reservoirs

Location: Richmond

Easting: 389349.73m

Description: Hanna Reservoir SI

Logged: KWC Checked: JKW

Inclination: Vertical

RL Surface: 66.9m

Job No: 80507007

Hole No: STC17-02

Started: 19/03/18

Finished: 20/03/18

Sheet: 2 of 2

				<u> </u>		1009049.70111 Northing. 790499.30111 Inclination. V	Ortioui	- .		T (D 00 / 0	
				D	iamete	(Int/Ext): 85mm/123mm		Datur	n: Nz	ZVD2016	
	(m	Samples	(kPa)	Standa Penetra Test	ation	Material Description) Bo		ter	ervations	l _
Depth (m)	Elevation (m)	Туре	Peak Strength/ Residual Strength	Blows (Seating // 75mm/150mm, 225mm/300mm)	N Value/ Refusal Data	(Logging carried out in accordance with Guidelines for the Field Classification of Soil and Rock for Engineering Purposes. New Zealand Geotechnical Society, 2005)	Graphic Log	Moisture Condition	Groundwater	Other Observations	Installation
6.0-	61.0	SPT		8/16//22/12	for 105	Clayey, fine to coarse GRAVEL, some silt, yellow brown, medium dense, moist, non-plastic; Rounded. [MOUTERE GRAVELS][continued]				:	
-	- - - -	sample			mm 34 Blows						
7.0-	60.0							wet			
8.0-	59.0	SPT sample		14/17//33	for 75 mm 33 Blows						
- - - - -	- - - - -					(8.5) 8.50m - Some rounded cobbles.					
9.0-	58.0	SPT sample		14/21//15	for 75 mm 15 Blows			≥			
10.0	57.0	SPT sample		14/36	for 150	(10) Borehole terminated at 10m due to Target Depth				:	
-	- - - - -				(seating)						
Drilling N	0.95 Metho	od:	Cas	sing:		Remarks: See key sheets for abbreviations and symbols					

Drilling Method: Rotary drilling with flush Casing: None.

Contractor: CW Drilling Flush: **Mud** Equipment Type: Hanjin D8D Rig