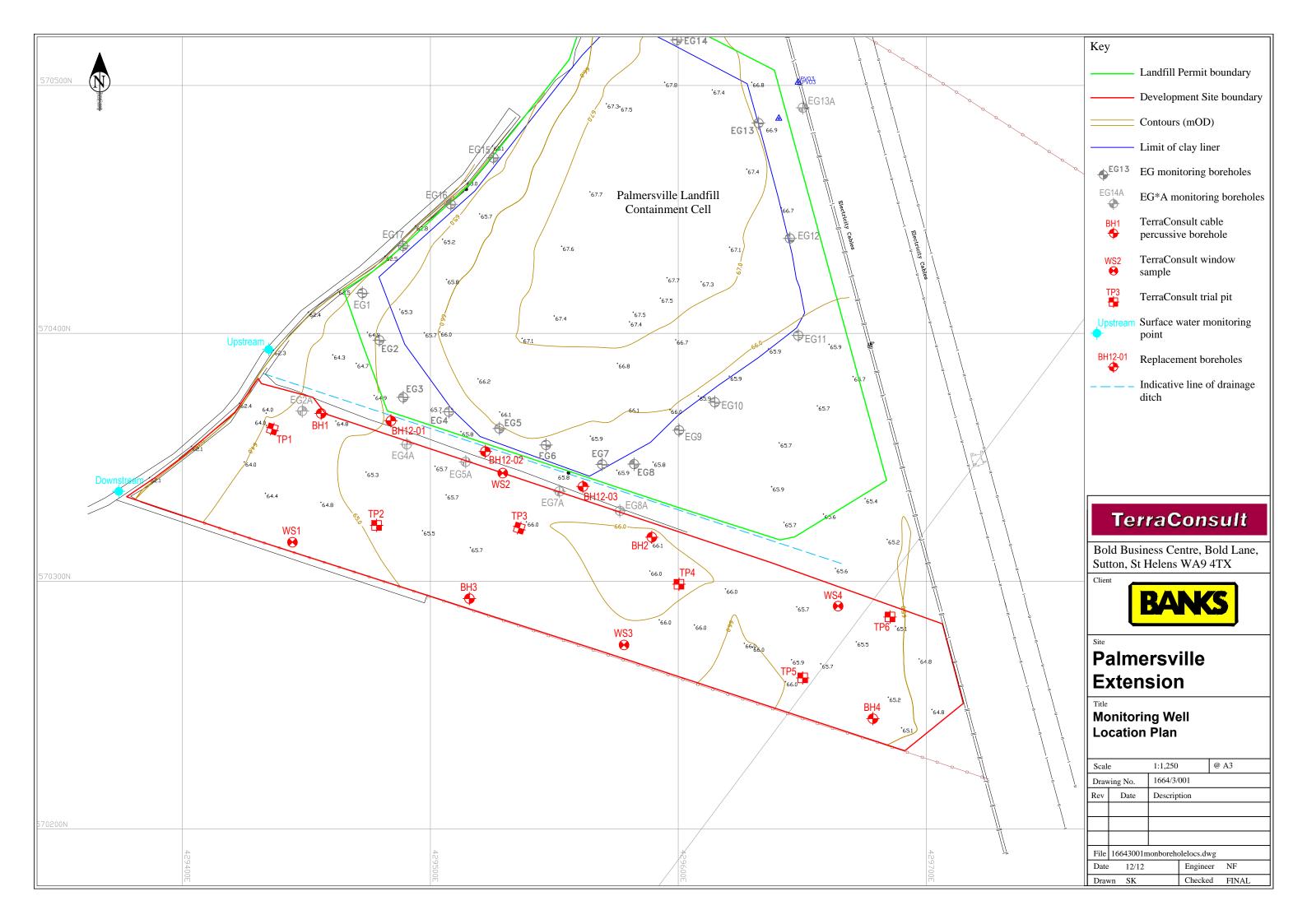


Appendix E

Appendix E Terraconsult Borehole Logs



Ter	rra	Consu	It	TerraCons Tel: 01925 29 Fax: 01925 29 www.terracon	ult Ltd 91111 91191		Client: Banks	Group		Borehole BH	
				www.terracon mailbox@terra	aconsult.co.			12 End: 18/09/201	12	Sheet 1	
Project N Palmer	lame: 'svill e	e Extension			Proje	ct No. 664	Co-ords: - Ground Level: 6	4.60 m OD			е Туре СР
ocatio					Final de	onth (m)	Logged: EM	Checked: NHF	Drilled: JB	Sc	ale 40
Sample		n Situ Testing Results	Depth (m)	Level (m AOD) <thickness></thickness>	Legend		1	Stratum Descript	ion	Water Strikes	
0.10	D1			<0.25>	****	MADE	GROUND: Grasse	d dark brown slightly gunded, fine to coarse	gravelly sandy clay.		
0.35	D2		0.25	64.35 <0.35>		MADE angula	GROUND: Dark gr r to rounded, fine to	ey sandy slightly grav coarse of bricks and d, fine to coarse grave	elly clay. Gravel is sandstone.		
0.60 0.70	D3 B4		0.60	- 64.00 - 1		Stiff bro	ownish grey slightly	a, fine to coarse grave sandy slightly gravel ed, fine to coarse of n	y CLAY. Gravel		1-
1.40 1.20-1.62	D6 U5	100 blows		<1.60>							
2.20	D7		2.20	-2 62.40		Stiff gre	ey slightly sandy sli	ghtly gravelly CLAY w ndstone. Gravel is ar	vith occasional		2-
2.50-2.95	SPT	N=23 (3,4/6,5,6,6)					coarse of mudston		igular to subrounded,		
2.50-2.95	D8 B9										3-
4.00 4.00-4.30	D11 U10	100 blows		4 4 <4.20>							4-
5.50-5.92 5.50-5.90	SPT D12	50 (7,10/11,13,13,13 for 40mm	1	6							6
6.40-6.50 6.40 6.40-6.50 6.20-6.82 6.70-6.84	SPT D13 D14 D15 SPT	50 (25 for 45mm/50 for 50mm) 50 (21,4 for 5mm/50 for 60mm)	6.40	58.20 <0.42>		Grey S coarse		ered as subangular to	subrounded, fine to	6.65	
			6.82	57.78 7				End of Borehole at 6.82 m			- - 7-
Rema Hand		Results	20m.	Ground	lwater	enco	untered at 6	.65m bgl.			

Tor		Consu	1+	TerraCons	sult Ltd		Client: Banks Group	Borehole N BH2	0.
Ier	10	CUIISU		Fax: 01925 29 www.terracon mailbox@terr	91191 Isult.co.uk aconsult.co.	.uk	Start: 18/09/2012 End: 18/09/2012	Sheet 1 of	1
Project N	lame:				Proje	ct No.	Co-ords: -	Hole T	уре
		Extension			16 Final de	onth (m)	Ground Level: 66.00 m OD	CP Scale	<u> </u>
Locatio					7.	.20	Logged: EM Checked: NHF Drilled: JB	1:40	
Sample Depth (m)		n Situ Testing Results	Depth (m)	Level (m AOD) <thickness></thickness>	Legend		Stratum Description	Water Strikes	Well
0.10	D1			<0.40>		MADE (Gravel i	GROUND: Grassed dark brown slightly gravelly sandy clay. is angular to subrounded, fine to coarse of sandstone		1.1.1
0.50	D2		0.40	65.60 <0.50>		coal and	GROUND: Dark grey slightly sandy slightly gravelly clay. s angular to rounded, fine to coarse of bricks, occasional d sandstone. Gravel is subangular to subrounded and fine to		
			0.90	65.10 1		coarse Stiff bro is subar mudsto	wnish grey slightly sandy slightly gravelly CLAY. Gravel ngular to subrounded, fine to coarse of sandstone and ne	1- 1- 	
1.50-1.95	U3	68 blows	-	<1.60> - 2				2-	
			2.50	63.50		cobbles	y slightly sandy gravelly CLAY with occasional subrounded of sandstone. Gravel is angular to subrounded, fine to of mudstone and sandstone		
3.00-3.45	SPT	N=16 (3,3/3,4,4,5)	-	- 3				3-	
3.00-3.50 4.00	D4			- 4				4-	
4.50-4.95	SPT D6	N=20 (3,3/4,5,5,6)		- <3.90>					
			-	- 5				5	
6.00-6.45	SPT	N=46 (2,4/8,8,10,20)		- 6				6-	
6.00-6.50	D7		6.40	59.60					
6.50-6.62	SPT	50 (25/50 for 40mm)	0.40			Grey SA	ANDSTONE recovered as subangular to subrounded, fine to gravel		
6.70-6.81 6.50-7.00	SPT D8	50 (25/50 for 35mm)		<0.80>			-		
6.70-7.20	D9			- 7				7-	E
			7.20	58.80			End of Borehole at 7.20 m		
				- - - -					
	Туре	Results		-					
	arks:	1.000010	1	ı					

Remarks: Hand pit excavated to 1.20m. No groundwater encountered. Chiselling for 30 minutes between 7.00 and 7.20m bgl

Ta		Consu	14	TerraCons Tel: 01925 29	ult Ltd		Client: Banks Group	Borehole N BH3	lo.
IEI	n a	Consu		Fax: 01925 29 www.terracon mailbox@terra	91191 sult.co.uk aconsult.co	.uk	Start: 18/09/2012 End: 18/09/2012	Sheet 1 of	1
roject N	lame:	Futencien		2	Proje	ct No. 664	Co-ords: -	Hole T	
ocatio		Extension				onth (m)	Ground Level: 65.60 m OD Logged: EM Checked: NHF Drilled: JB	CP Scale	
		n Situ Testing	Depth	Level		.50		1:40 Water	
Depth (m)	Type,No		(m)	(m AOD) <thickness></thickness>	Legend	MADE	Stratum Description	Strikes	Well
0.10 0.20	D1 D2		0.15	<0.15> 65.45		Gravel	GROUND: Grassed dark brown slightly gravelly sandy clay. is angular to subrounded, fine to coarse of sandstone		
0.20-0.75	B3			<0.60>		MADE to coar	GROUND: Dark grey clayey slightly sandy gravel. Sand is fine se of ash, gravel is angular to subrounded fine to coarse of		
0.50 0.75	D4 D5		0.75	64.85		mixed I mudsto	lithologies consisting of limestone, sandstone, clinker and		
0.75	B6		0.75	- 1 <0.45>		Stiff bro	ownish grey slightly sandy slightly gravelly CLAY. Gravel angular to subrounded, fine to coarse of sandstone and		
1.20	D7		1.20	64.40		mudsto	one	1-	
	5.		1.20			subrou	ey slightly sandy slightly gravelly CLAY with occasional nded cobbles of sandstone. Gravel is angular to subrounded,		
1.30-1.75	U8	49 blows				fine to	coarse of mudstone and sandstone		
1.80	D9								
1.80-2.10 2.10	B10 D11			2				2-	
2.20-2.65	SPT	N=30 (4,5/7,7,8,8)							
2.20-2.65 2.20-2.70	D12 B13								
					고고				
				- 3				3-	
0 00 0 05	D14					2			
3.20-3.65 3.55	D14 D15			<4.60>					
				4				4 -	
4.20-4.63	SPT	50 (5,8/9,14,16,11 for 50mm)							
4.20-4.60	D16								
					127				
				-5				5 -	
5.20-5.42 5.20-5.42	SPT D17	50 (10,13/50 for 70mm)							
5.42-5.60	B18								
5.80-6.07	SPT	50 (7,14/20,30 for 40mm)	5.80	59.80		2			
5.80 5.80 5.80-6.15	D19 D20	50 (7,14/20,50 101 401111)	5.60	- 6		Grey S coarse	ANDSTONE recovered as subangular to subrounded, fine to gravel	6-	
				<0.70>					-
6.40-6.50	SPT	50 (25 for 60mm/50 for 40mm)							-
			6.50	59.10			End of Borehole at 6.50 m		
									-
				7				7-	
									-
									-
									1
	Туре	Results							
Rema Hand		cavated to 1.2	20m.	No gro	undwa	ater en	ncountered		

Ter		Consu	11	TerraCons	91111	Client: Banks Group	BH	ole No.
Iel	la	Consu	115	Fax: 01925 2 www.terracor mailbox@terr	91191 sult.co.uk aconsult.co.	Start: 17/09/2012 End: 17/09/2012	Sheet	
Project N	lame:	Extension			Proje		Hc	ole Type CP
ocatio		LAGHSION			Final de	pth (m)		Scale
		n Situ Testing	Depth	Level (m AOD)		70 Checked: NHF Drilled: JB Stratum Description	Wat	1:40 ter We
Depth (m) 0.10			(m)	<thickness></thickness>	Legend	MADE GROUND: Grassed dark brown slightly gravelly sandy cla	Strik	ies vve
			0.30	<0.30> 65.55 <0.30> 65.25		Gravel is angular to subrounded, fine to coarse of sandstone MADE GROUND: Dark grey slightly sandy slightly gravelly clay. Gravel is angular to rounded, fine to coarse of bricks and sandstone. Gravel is subangular to subrounded, fine to coarse Stiff brownish grey slightly sandy slighty gravelly CLAY. Gravel is subangular to subrounded, fine to coarse of sandstone and muds	tone	
1.00 2.00	D2 D3			- 2				2-
3.00-3.20 3.00-3.50 3.50-3.60	SPT D4 SPT	50 (3,8/50 for 45mm) 50 (25/50 for 25mm)	2.90	62.95 3 < <0.80>		Grey SANDSTONE recovered as subangular to subrounded, fine coarse gravel	to	3-
3.50-3.70	D5		3.70	62.15		End of Borehole at 3.70 m		
				- 4 				4 - - - - - - - - - - - - - - - - - - -
			1	ł				-

Remarks: Hand pit excavated to 1.20m. No groundwater encountered. Chiselling for 30 minutes between 3.50 and 3.70m bgl.

ler	ra	Consu		Tel: 01925 29 Fax: 01925 29 www.terracon	91111 91191 sult.co.uk	Client: Banks Group Start: 18/09/2012 End: 18/09/2012	Borehole No. WS1 Sheet 1 of 1	
Project Na	ame:			mailbox@terra	Proje		Hole Typ	
		Extension			10	Ground Level: 64.90 m OD	WS	
ocation			1	Level	Final de	0 Logged: EM Checked: NHF Drilled: JB	Scale 1:40	
Sample Depth (m)		n Situ Testing Results	Depth (m)	(m AOD) <thickness></thickness>	Legend	Stratum Description	Water Strikes	Well
			0.20	<0.20> 64.70		MADE GROUND: Topsoil over dark brown slightly gravelly sandy of Gravel is angular to subrounded, fine to coarse of sandstone.	xlay	
			0.50	<0.30>		MADE GROUND: Dark grey slightly sandy slightly gravelly clay. Gravel is angular to rounded, fine to coarse of bricks and		
			0.50	64.40		sandstone	1	
						Firm brown mottled grey slightly sandy slightly gravelly CLAY. Gravel is subangular to subrounded, fine to coarse of sandstone a	nd	
1.00 1.20-1.65	ES1 SPT	N=10 (1,2/2,3,3,2)		-1 <1.00>			1-	
1.20 1.00	011	N=10 (1,2/2,0,0,2)						
1.20-2.00	B2		1.50	63.40		Stiff brownish grey slightly sandy gravelly CLAY. Gravel is angular to subrounded, fine to coarse of sandstone and occasional coal		
								E
2.00-2.45	SPT	N=12 (2,2/2,3,3,4)		-2			2-	
								E
3.00-3.45	SPT	N=13 (2,2/3,3,4,3)		-3			3-	
				<3.40>				
							- 10	
				-				
4.00-4.45	SPT	N=17 (2,3/4,4,4,5)		4			4 -	
4.00	D3				120			
			4.90	60.00				
5.00-5.24	SPT	50 (4,3/25,25 for 15mm)		- 5 <0.00>		Grey SANDSTONE recovered as subangular to subrounded, fine t coarse gravel	o 5-1	* 1
						End of Borehole at 5.00 m		
				6			6 -	
				-7			- 7-	
				[
				-				
							I	

Те	rra	iConsu	17	Tel: 01925 29 Fax: 01925 29 www.terracon	91111		Client: Banks Group	Borehole	
	12			www.terracon mailbox@terr	sult.co.uk aconsult.co	.uk	Start: 17/09/2012 End: 17/09/2012	Sheet 1 c	
Project N	lame:				Proje		Co-ords: -	Hole	
		e Extension				664 epth (m)	Ground Level: 65.70 m OD	W Sca	
ocatio				Level	3	.45	Logged: EM Checked: NHF Drilled: JB	1:4	
Sample Depth (m)		n Situ Testing Results	Depth (m)	(m AOD) <thickness></thickness>	Legend		Stratum Description	Water Strikes	Well
				<0.30>		MADE	GROUND: Topsoil over dark brown slightly gravelly sandy clay. is angular to subrounded, fine to coarse of sandstone.		-
			0.30	65.40			GRUND: Dark grey slightly sandy gravelly clay. Gravel is		
				<0.40>		angula	r to rounded, fine to coarse of bricks and sandstone.		-
			0.70	65.00			rownish grey slightly sandy slightly gravelly CLAY. Gravel is		-
1.00	ES1			- - 1		subang	gular to subrounded, fine to coarse of sandstone	1	
1.20-1.65	SPT	N=12 (2,2/2,3,3,4)				ŝ			
				<1.30>					
1.20-2.00	B2								
						1			
2.00-2.45	SPT	N=16 (3,4/3,3,5,5)	2.00	2 63.70		Stiff gr	ey slightly sandy gravelly CLAY with occasional subrounded	2	2-
						cobble coarse	of sandstone. Gravel is angular to subrounded, fine to of mudstone and sandstone		. =
				-		ŝ			
				<1.45>					
3.00-3.42	SPT	50 (6,9/12,14,14,10 for 40mm)		3					
5.00-5.42	Gri	50 (0,5/12,14,14,10 101 401111)		3					\mathbf{X}
			0.45	00.05					\times
			3.45	62.25	i dakuki B		End of Borehole at 3.45 m		
									-
				4				4	- -
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									-
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				-5				5	-
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				-6				6	- 6 -
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]
	Туре			<u> </u>					
Rema			20m	No are	undwo	tor or	acountered		
anu	pit e)	xcavated to 1.2	2011I.	ino gio	unuwa				

Te	rra	Consı	II.	TerraCons Tel: 01925 29	011 LIO		Client: Banks Group	Borehole	
		Const		mailbox@terra	sult.co.uk aconsult.co	.uk	Start: 18/09/2012 End: 18/09/2012	Sheet 1 c	
Project N					Proje	ct No.	Co-ords: -	Hole	
Palmer	rsville	Extension				664 epth (m)	Ground Level: 65.80 m OD	W	
ocatio	n:				5	.45	Logged: EM Checked: NHF Drilled: JB	Sca 1:4	
Sampl Depth (m)		Situ Testing Results	Depth (m)	Level (m AOD) <thickness></thickness>	Legend		Stratum Description	Water Strikes	Well
Dopur (iii)	1,900,110	Results		<0.30>	****	MADE	GROUND: Topsoil over dark brown slightly gravelly sandy clay. is angular to subrounded, fine to coarse of sandstone		
			0.30	65.50 <0.30>		MADE	GROUND: Dark grey slightly sandy slightly gravelly clay.		-
0.50	ES1		0.60	65.20		sandst	is angular to rounded, fine to coarse of bricks and one		-
					120	Gravel	rown mottled grey slightly sandy slightly gravelly CLAY. is subangular to subrounded, fine to coarse of sandstone and		-
				- 1 <1.10>		mudsto	one.	1	
1.20-1.65	SPT	N=11 (1,2/2,3,3,3)		\$1.102					
1.20-2.00	B2								
			1.70	64.10		Stiff br	ownish grey slightly sandy gravelly CLAY. Gravel is angular		
2.00-2.45	SPT	N=10 (2,2/3,2,3,2)		2 <0.50>			rounded, fine to coarse of sandstone, mudstoen and onal coal	2	
			2.20	63.60		Stiff gr	ey slightly sandy slightly gravelly CLAY with occasional		
2.00-3.00	B3					subrou	coarse of mudstone and sandstone.		
3.00-3.45	SPT	N=14 (2,2/3,3,4,4)		-3				3	
3.00-3.43	Gri	N=14 (2,2/3,3,4,4)							
				- -					
				<3.25>					
4.00-4.45 4.00	SPT ES4	N=20 (4,4/4,5,5,6)		- 4				4	
5.00-5.45	SPT	N=36 (4,6/7,9,9,11)		-5				5	xx
									\otimes
			5.45	60.35	222		End of Borehole at 5.45 m		∞
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				-6				6	-
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									-
				- -					-
				- 7				7	'
				•					1
				-]
				-					-
	Туре	Results							-
Rema		RESUIIS		I	1	1			
		cavated to 1.	20m.	No gro	undwa	ter er	ncountered.		

Jer		Consu	<u>115</u>	Fax: 01925 29 www.terracon	91191 sult.co.uk		Start: 18/09/2012 End: 18/09/2012	s	WS4 heet 1 of 1	1
Project N				mailbox@terra	aconsuit.co		Co-ords: -		Hole Ty	
Palmer	sville	Extension			1	664	Ground Level: 65.60 m OD		WS	
ocatio	n:				Final de	epth (m) .45	Logged: EM Checked: NHF Drilled: JB		Scale 1:40	
Sample Depth (m)		n Situ Testing Results	Depth (m)	Level (m AOD) <thickness></thickness>	Legend		Stratum Description		Water Strikes	Well
0.10	ES1		0.10	<0.10> 65.50		MADE	GROUND: Topsoil over dark brown slightly gravelly sandy clay. is angular to subrounded, fine to coarse of sandstone.		-	
				<0.50>		MADE	GROUND: Dark grey slightly sandy slightly gravelly clay.		-	
			0.60	65.00	the state of the	sandst	is angular to rounded, fine to coarse of bricks and one.		-	
				<0.60>		Firm br subang	rownish grey slightly sandy slightly gravelly CLAY. Gravel is gular to subrounded, fine to coarse of sandstone		-	
				-1					1-	
1.20-1.65	SPT	N=11 (1,2/3,2,3,3)	1.20	64.40		Stiff gre	ey slightly sandy gravelly CLAY with occasional subrounded of sandstone. Gravel is angular to subrounded, fine to		-	
1.20-2.00	B2						of mudstone and sandstone		-	
									-	
2.00-2.45	SPT	N=21 (5,6/7,5,5,4)		-2					2-	
									-	
									-	
									-	
3.00-3.45	SPT	N=31 (2,3/4,6,9,12)		3 <3.60>					3-	
						5			-	
									-	
									-	
4.00-4.45 4.00	SPT ES3	N=20 (3,3/4,4,5,7)		4					4 -	
	200								-	
					空気の				-	
			4.80	60.80					-	
5.00-5.45	SPT	N=38 (10,11/9,10,9,10)		- 5		Grey S coarse	ANDSTONE recovered as subangular to subrounded, fine to gravel.		5-	××
				<0.65>]	\otimes
			5.45	60.15			End of Borehole at 5.45 m		-	30
									-	
				+6					6-	
									-	
									-	
									-	
				-7					- - 7-	
									-	
				ŀ					-	
				}					-	
	!	Results	1	1						

rsonnel:		Equipment &	methods:	Dimensions & orientation:		nates & level		Pit Lo
gged by: ite: 20 iecked by:	EM //09/2012 NHF	Method: Plant: JCB Shoring: None		Width: 0.70m Length: 2.80m $c \square A \boxtimes 0$ deg	UK Nati 0.00mE 63.600n		00mN	Start: 20/09/2012 End: 20/09/2012 Backfilled: 20/09/2012
ckfill/ ភូន	Legend	Level Depth	Strat	tum Description	•		Samples & I	n Situ Testing
ckfill/ Mater-	~~~~~	(Thickness)		-		Depth (m)	Type & No.	Results
		(0.30) 63. <i>30</i> 0.30 (0.70)	MADE GROUND: Topsoil over dark f Gravel is angular to subrounded, fine MADE GROUND: Firm brown mottled Gravel is subangular to subrounded, gravel sized fragment of coal and gra	e to coarse of sandstone. d grey slightly sandy gravelly clay. fine to coarse of sandstone. Few	- - - - -	- - 0.30 - -	ES 001	
	번째 번째 번 번 번째 번 번 번 번 번	(0.70) 62.60 1.00 (0.50)	 Stiff brownish grey slightly sandy gra cobbles of sandstone. Gravel is angu sandstoneand mudstone 	welly CLAY with few subrounded alar to subrounded, fine to coarse of	- - - - -	- - 1.00 	D 002	
		<i>62.10</i> 1.50	 Stiff dark brown and grey slightly sar occasional subrounded cobbles and subangular to subrounded, fine to co 	boulders of sandstone. Gravel is		- - 1.50 -	ES 003	
		(1.30) <i>60.80</i> (0.00)2.80		ally CLAY with occasional cobbles o subrounded, fine to coarse of 	- - - - - - - - - - - - - - - - - - -	- 3.00	ES 004	
			-		-	_ _ Depth (m)	Type & No.	Results
undwater en ruck: Rose t No Groundw	o: Rate		Depth related remarks: From: To:				General remai Weather: Stability: Sta Remarks:	able
abbreviations	planation of syn see key sheet. reduced levels		Project: Palmersville Extension Project No: 1664 Client: Banks Group	1			Trial pit no: TP1	

n nel: d by:	EM	Equipment & Method:	methods:	Dimensions & orientation: Width: 0.50m Length: 3.30m		nates & level ional Grid		Dates: Start: 20/09/
ed by:	20/09/201 NHF	2 Plant: JCB Shoring: None		cA 🗱 -	- 64.800r	- n		End: 20/09/ Backfilled: 20/09/
			0	B	I		Samples & II	n Situ Testing
Mater-	Legend	<i>Level</i> Depth (Thickness)	Strat	um Description		Depth (m)	Type & No.	Results
		(0.20)	MADE GROUND: Topsoil over dark b Gravel is angular to subrounded, fine			-		
		64.60 0.20	MADE GROUND: Firm brown mottled clay. Gravel is subangular to subround and mudstone. Few gravel sized fragr	ded, fine to coarse of sandstone		0.20	ES 001	
		(0.60)	-					
		64.00 0.80	Stiff brown mottled grey slightly sandy subrounded cobbles of sandstone. Gr to coarse of sandstone and mudstone	ravel is angular to subrounded, fine		+		
		(0.90)	-		 - -	- 1.00 -	D 002	
			- -			- -		
		63.10 1.70	Stiff dark brown and grey slightly sand occasional subrounded cobbles and b subangular to subrounded, fine to coa	ooulders of sandstone. Gravel is		+ + -		
			-			- - 2.00	ES 003	
		(1.00)	- - -			+		
		62.10 2.70	Stiff grey slightly sandy slightly gravel of sandstone. Gravel is subangular to	lly CLAY with occasional cobbles subrounded, fine to coarse of	· · · ·	-		
			sandstone		· 	3.00	ES 004	
			-		•	+		
		(1.80)	- 		· ·			
			-			+ + +		
			-			+ + +		
2		60.30 4.50	Explora	tory hole ends at 4.50 m		4.50	D 005	
water	r entries:		Depth related remarks:			Depth (m)	Type & No. General remai	Results
Ros	se to: Rat		From: To:				Weather: Stability: Sta	ble
							Remarks:	
	or explanation of tions see key she		Project: Palmersville Extension				Trial pit no:	

nnel: d by:		EM	Equipment & I Method:	methods:	Dimensions & orientation: Width: 0.50m Length: 3.30m		nates & level ional Grid		Dates: Start: 20/09/
ed by:		/09/2012 NHF	Plant: JCB 3 Shoring: None			- 65.700r	-		End: 20/09/ Backfilled: 20/09/
			Chining. Hone		B B	00.700		Samples & Ir	Situ Testing
Vater-	strikes	Legend	Level Depth (Thickness)	Stratum De	escription		Depth (m)	Type & No.	Results
	,	****	(THICKHESS)	MADE GROUND: Topsoil over dark brown slig Gravel is angular to subrounded, fine to coars					
			(0.30)	-		-	+		
		*****	<i>65.40</i> 0.30 -	MADE GROUND: Firm brownish grey slightly Gravel is angular to rounded, fine to coarse of	sandy slightly gravelly clay.	· · ·	- 0.30	ES 001	
			(0.50)	Few gravel sized fragment of coal encountere	d	-	F		
			(0.50)	-		-	ł		
			64.90 0.80				Ť.		
	-			Stiff dark brown and grey slightly sandy sightly occasional subrounded cobbles and boulders subangular to rounded, fine to coarse of sand	s of sandstone. Gravel is	-	$\frac{1}{1}$		
				- · ·		-	- 1.00	ES 002	
			-	-		-	F		
			(1.10)	-		-			
			-	-		-	ł		
8			-	-		-			
			-	-		-	‡		
8			63.80 1.90	Stiff grey slightly sandy slightly gravelly CLAY	with occasional cobbles		F		
8				 of sandstone. Gravel is subangular to subrour sandstone and mudstone 	nded, fine to coarse of	-	<u>+</u> -		
			-	- -			-		
			-				$\frac{1}{2}$		
	1		-	-		-	-		
	2		-				$\frac{1}{2}$		
	1			•		-			
			(2.10)				+		
			(2.10)	-		-	- 3.00	D 003	
	1			-			-		
			-	-			+		
8	-			-		-	Ī.		
				-			F		
				-		-	t L		
			F	-		-	+		
R	Ī	<u> 1997 (1998) (1999)</u>	61.70 4.00	Exploratory hole	e ends at 4.00 m		‡		
			ŀ	-		-	+		
			-	-		-	<u>+</u>		
			F	-		-	ł		
+							Depth (m)	Type & No.	Results
		o: Rate	of inflow:	Depth related remarks: From: To:				General reman Weather:	ks:
		ater Enco							ble
								Remarks:	
Notes:	For ex	planation of syn see key sheet.	nbols and	Project: Palmersville Extension				Trial pit no: TP3	

onnel ad by		EM	Equipment & Method:		nensions & orientation: oth: 0.50m Length: 3.20m		nates & level: onal Grid		Pit Lo
ed by	20	/09/2012 NHF	Plant: JCB Shoring: None	3CX		- 65.800n	-		End: 20/09/2012 Backfilled: 20/09/2012
ked b	у.		Shoring. None		B_	65.8001		Samples & Ir	n Situ Testing
ill/	Water- strikes	Legend	Level Depth	Stratum Descri	ption		Depth (m)	Type & No.	Results
	<u> </u>	****	(Thickness)	MADE GROUND: Topsoil over dark brown slightly g				51	
			(0.30)	 Gravel is angular to subrounded, fine to coarse of s 	andstone.	-	-		
			65.50 0.30	MADE GROUND: Firm brown mottled grey slightly s	andy slightly gravelly		- 0.30	ES 001	
				 clay. Gravel is subangular to subrounded, fine to co and mudstone. Few gravel sized fragment of coal er 	arse of sandstone ncountered.	-	_		
				_		-	-		
			(0.90)	-		-	_		
				-		-	_		
				_		-			
			C1 C0 1 00	-		-	_		
			64.60 1.20	Stiff grey mottled brown slightly sandy gravelly CLA subrounded cobbles of sandstone. Gravel is angula		-			
				to coarse of sandstone.		-	_		
				-		-	- 1.50	ES 002	
				-		-	_		
			(1.20)	-		-	-		
				-		-	-		
				-		-	_		
				-		-	-		
			63.40 2.40	-		-	_		
			2.10	Stiff grey slightly sandy slightly gravelly CLAY with of sandstone. Gravel is subangular to subrounded, sandstone	occasional cobbles fine to coarse of	-	_		
						-	-		
				-		-	- 2.70 -	ES 003	
				-		-	-		
				-			_		
				-		-	-		
				-		-	_		
			(2.10)	-		-	_		
				-		_			
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			6 2 8	-		-	-		
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2992		<u>28262</u>)	61.30 4.50	Exploratory hole ends	s at 4.50 m		_		
				Douth which down a			Depth (m)	Type & No.	Results
		n tries: o: Rate	of inflow:	Depth related remarks: From: To:				General remar Weather:	KS:
o Gro	oundw	ater Enco	untered	1.601.60Becoming clayey SAND3.404.00Occasional subrounded cobbles	and boulders of sandstone			Stability: Sta	able
								Remarks:	
abbre	eviations	planation of syr see key sheet. reduced levels		Project: Palmersville Extension Project No: 1664				Trial pit no:	
issue:				Client: Banks Group				TP4	

onnel led by:		EM	Equipment & Method:		ensions & orientation: h: 0.50m Length: 3.30m		ates & level	:	Dates: Start: 20/09/20 ⁷
:	20	/09/2012	Plant: JCB	3CX		- 66.000m	-		End: 20/09/20 Backfilled: 20/09/20
ked b	y:	NHF	Shoring: None		B	00.000	1	Samples & In	
fill/	Water- strikes	Legend	Level Depth	Stratum Descrip	otion		5 4 ()		-
t. :	Wa str	*****	(Thickness)	MADE GROUND: Topsoil over dark brown slightly gra	avelly sandy clay.		Depth (m)	Type & No.	Results
	100		(0.20)	- Gravel is angular to subrounded, fine to coarse of sar	ndstone.	_	-		
	2.02230		65.80 0.20	MADE GROUND: Firm yellowish brown slightly sandy - clay. Gravel is angular to subrounded, fine to coarse of	/ slightly gravelly of sandstone. Few		-		
	100000			gravel sized fragment of coal encountered.		-	_		
	5 600 12			-		-	- 0.50	ES 001	
	10000		(1.00)	-		-	-		
	1.0000			-		-	-		
	101010			-		_	-		
	and the second			-		-	-		
	1000		64.80 1.20	Stiff greyish brown slightly sandy slightly gravelly CLA	AY with few		-		
	1000			 subrounded cobbles of sandstone. Gravel is angular t coarse of sandstone and mudstone 	to rounded, fine to	-	-		
	1000			-		-	-		
	10000			-		-	-		
	10100			-		-	-		
	a di Ganza			-		-	-		
	1000			_		_			
	50 - 50			-		-	-		
	50 SG		(2.10)	-		-	-		
	- 00 - 00			-		_	-		
	141 - 252			-		-	- 2.50	ES 002	
	14 - 26			-		-	-		
	10 SO			-		=	-		
	10 N			-		_			
	100 B			-		-	-		
	100		00.70 0.00	-		-	-		
			62.70 3.30	Stiff grey slightly sandy slightly gravelly CLAY with oc of sandstone. Gravel is subangular to subrounded, fin	casional cobbles ne to coarse of		-		
				sandstone		-	- 3.50	ES 003	
	0.000		(0.70)	-		-	-		
	1.0000			-		-	-		
				-		-	-		
2009		<u>((1997)</u>	62.00 4.00	Exploratory hole ends a	at 4.00 m		_		
				-		_	-		
				-		-	-		
				-		-	_		
_							Dopth (m)	Type & No.	
ndwa	iter e	ntries:		Depth related remarks:			Depth (m)	General remar	Results ks:
		to: Rate	of inflow:	From: To:				Weather: Stability: Sta	ble
.00	-			3.10 - Occasional subrounded cobbles ar	nu boulders of sandstone			Remarks: Gro	
								enc as a hyd	ountered at 4.00m a slight seepage. A rocarbon odour and en was noted on
N	o. E	valanation of	mkolo ond					the	water.
abbre	eviations	explanation of s ssee key sheet e reduced level		Project: Palmersville Extension Project No: 1664				Trial pit no: TP5	

nne d by			Equipment & Method:	methods:	Dimensions & orientation: Width: 0.50m Length: 3.50m		nates & level		Pit Lo
		-	Plant: JCB			UK National Grid 			End: 20/09/201
ed b	by:		Shoring: None		B	65.600r	n İ	0	Backfilled: 20/09/201
11/	Water- strikes	Legend	Level Depth	Stratum Des	scription		Depth (m)	Type & No.	n Situ Testing Results
	st≥	****	(Thickness)	MADE GROUND: Topsoil over dark brown sligh	tly gravelly sandy clay.		Deptil (III)	Type a rio.	Results
			(0.30)	- Gravel is angular to subrounded, fine to coarse	of sandstone.	-			
			65.30 0.30				-		
				 MADE GROUND: Firm brownish grey slightly sa Gravel is subangular to subrounded, fine to coa quartz. 	andy slightly gravelly clay. arse of sandstone and	-	-		
				-		-	- 0.50	D 001	
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				-		-	-		
			(1.40)	-		-			
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			63.90 1.70 ·	Stiff greyish brown slightly sandy slightly gravel	Ily CLAY with few		+		
				 subrounded cobbles of sandstone. Gravel is an to coarse of sandstone 	gular to subrounded, fine	-	-		
				-			2.00	D 002	
			(0.00)	-		-	-		
		2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	(0.90)	-		-	-		
				-		-	t		
			-	Ξ.		-	-		
			63.00 2.60	Stiff grey slightly sandy slightly gravelly CLAY v	with occasional cobbles		-		
			0 8 8 9	 of sandstone. Gravel is angular to subrounded, sandstone and mudstone 	fine to coarse of	-	t		
			8 	- -		-	Ļ		
			а Е. К	-			-		
				-		-	-		
			(1.40)	-		-	Í.		
			(,	-		-	-		
				-		-	- 3.50	D 003	
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2112			61.60 4.00	Exploratory hole	ends at 4.00 m		ţ		
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				-		-	t l		
							Donth ()	Ture 0 M	
ndwa	ater ei	ntries:		Depth related remarks:			Depth (m)	Type & No. General rema	Results
ck:				From: To:				Weather:	
Gro	oundw	ater Enco	untered					Stability: Sta	IL IC
								Remarks:	
abb	reviations	planation of syr see key sheet. reduced levels		Project: Palmersville Extension Project No: 1664				Trial pit no:	
ssue				Client: Banks Group				TP6	

			onsu						<u>ole Lo</u>
onnel d by:	:	JB	Plant:	t & methods:	Hole diameter & ca Dia (mm): to:	asing depths: Casing depth:	Coordinates & UK National Grid		Dates: Start: 13/12/2012
ed by: ked b		NHF CSE	Method: D	ando 2000 SPT Hammer details:			- 64.120m	-	End: 13/12/2012 Backfilled: -
-		Legend	Level De	pth	I	Progress, Casir & Water Data		Samples & In	
st.	Water- strikes	Logona	(Thicknes	Stratum Description		Date T	ime Depth ater	Type & No.	Results
				 MADE GROUND: Stiff brownish grey slightly sandy gravelly clay. Gravel is subangular to subrounded, f 	slightly ne to	+			
				 coarse of sandstone and mudstone 		+			
			(1.50)			Ţ			
			(1.50)	-		1			
				-		+			
			62.62 1	50		1			
			02.02	 Stiff grey slightly sandy gravelly CLAY with occasion subrounded cobbles of sandstone. Gravel is angula 	ir to	+			
				 subrounded, fine to coarse of mudstone and sandst 	one	Ŧ			
				-		+			
				-					
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1			57.12 7	00 Grey fine to coarse subangular SAND and firn to coarse subangular stand firn to coarse subangular stand firn to coarse subangular stand firm to coarse stand firm to	arse	-			
			(0.80)	- subangular GRAVEL		‡			
		6 . 9	(0.00)	-		‡			
			(0.20)	80 Stiff grey slightly sandy gravelly CLAY with occasior	al				
		<u>. 1977 - 19</u> 9	56.12 8	00 subrounded cobbles of sandstone. Gravel is angula subrounded, fine to coarse of mudstone and sandst	ir to				
				Exploratory hole ends at 8.00	m	-			
						1 1			
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						<u>+</u>			
						*	ater ime Depth	Type & No.	Results
rume i Typ		n details: Diam: Re		Depth related remarks: From: to:		Groundwater en		Chiselling: From: to:	Duration (hhmm): Too
SP		0				(20 mins 5.50 -) inflow: sealed: -	6.10 - 6.30	30 m
abbre	eviations	planation of syr see key sheet. reduced levels		Project: Palmersville Extension Project No: 1664				Borehole no:	
issue:				Client: Banks Group				BH12	-1 Sheet 1

onnel:		DNSUI		Hole diameter & casing d	lepths:	Coordinates & I		Dates:
ed by: jed by:	JB NHF	Plant: Method: Dand	lo 2000	Dia (mm): to: Ca	asing depth:	UK National Gric -	-	Start: 13/12/2012 End: 14/12/2012
cked by:	CSE	Flush:	SPT Hammer details:	Pro	gress, Casin	64.940m	• • • •	Backfilled: -
strikes	Legend	Level Depth	Stratum Description	B Date	Water Data	ne Depth	Samples & In Type & No.	Results
> o	*****	(Thickness)	 MADE GROUND: Stiff brownish grey slightly sandy slightly 	Casi	ing Wa	ter	Type & No.	Results
		-	 gravelly clay. Gravel is subangular to subrounded, fine to coarse of sandstone and mudstone) <u>†</u>				
		(1.30)	-					
* * *		(1100)	-					
			-					
		63.64 1.30	 Stiff grey slightly sandy gravelly CLAY with occasional subrounded cobbles of sandstone. Gravel is angular to 					
		-	- subrounded, fine to coarse of mudstone and sandstone					
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			-	1				
		-	- 	4				
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		-	-	<u>+</u>				
		-	-	+				
		58.94 6.00	-					
		(0.40)	 Grey fine to coarse subangular SAND and firn to coarse subangular GRAVEL 	1				
		58.54 6.40	 Stiff grey slightly sandy gravelly CLAY with occasional subrounded cobbles of sandstone. Gravel is angular to 					
		(0.60)	subrounded, fine to coarse of mudstone and sandstone					
		57.94 7.00	Exploratory hole ends at 7.00 m					
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				Casi	ing Wa	ter		
rumentatio	on details:		Depth related remarks:	Date	-	me Depth	Type & No. Chiselling:	Results
	Diam: Re		From: to:	Strue		Rate of Depth inflow: sealed:		Duration (hhmm): Too 30 m 30 m 45m
	xplanation of sys	nbols and	Project: Palmersville Extension				Borehole no:	

			onsult		<u></u>				ole Lo
sonnel ed by:		JB	Equipment & Plant:		Hole diameter & cas Dia (mm): to:	ing depths: Casing depth:	Coordinates & I UK National Grid		Dates: Start: 14/12/2012
ged by: cked b		NHF CSE	Method: Dano Flush:	to 2000 SPT Hammer details:			- 65.140m	-	End: 14/12/2012 Backfilled: -
	- 1	Legend	Level Depth	of Fridminer details.		Progress, Casir & Water Data		Samples & In	
nst.	Water- strikes		(Thickness)	Stratum Description		Date T	ime Depth ater	Type & No.	Results
				 MADE GROUND: Stiff brownish grey slightly sandy sligh gravelly clay. Gravel is subangular to subrounded, fine to 	tly -				
				- coarse of sandstone and mudstone	-	+			
			(1.40)		-				
			(1.40)	-	-	+			
			63.74 1.40		.	+			
	-			 Stiff grey slightly sandy gravelly CLAY with occasional subrounded cobbles of sandstone. Gravel is angular to subrounded, fine to coarse of mudstone and sandstone 	-				
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			57.34 7.80						
			0.1.01	Exploratory hole ends at 7.80 m	-	+			
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							ater ïme Depth	Type & No.	Results
		n details: Diam: Re		Depth related remarks: From: to:		Groundwater en	tries:	Chiselling:	Duration (bbmm): Too
: Typ SP			and NS.	From: to:		Struck: Rose to: (20 mins) No Groundwat	s) inflow: sealed: er Encountered	From: to: 5.50 - 5.80 6.00 - 6.20 7.50 - 7.80	Duration (hhmm): Too 25 m 30 m 45 m
								7.50 - 7.80	45 m
		planation of syr see key sheet.	nbols and	Project: Palmersville Extension		ļ		Borehole no:	
		reduced levels	in metres.	Project No: 1664				BH12	2