



THE LAND CONSULTANCY LIMITED

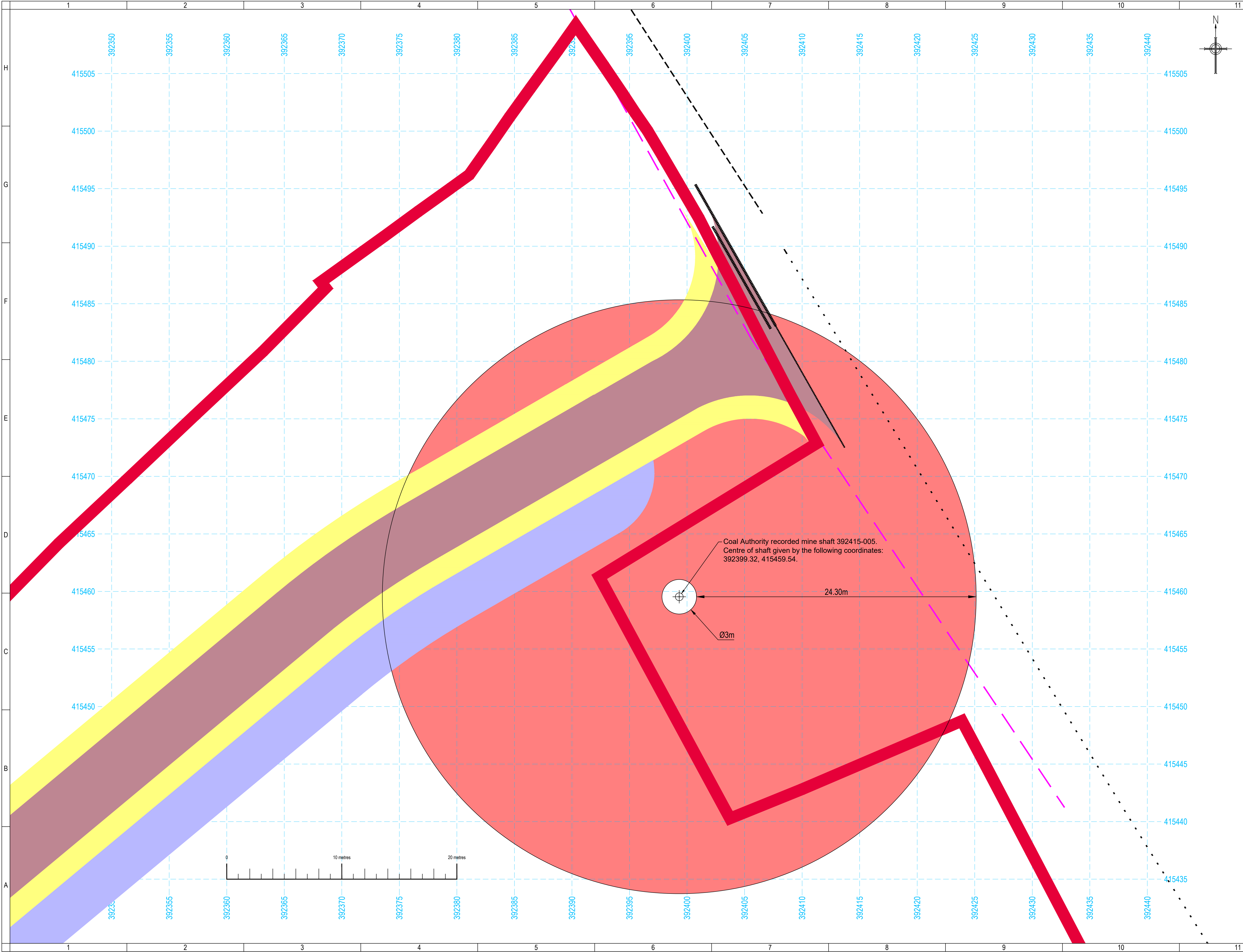
Fairweather House, 4 Parker Lane, Whitestake, Preston PR4 4JX
Tel: 01772 610609; M: 07771 800859
email: sfknot@thelandconsultancy.co.uk; www.thelandconsultancy.co.uk

Project:
Smithy Bridge Road, Littleborough OL16 2RY

Title:
Photograph displaying Exposed Mine Shaft Cap

Scale: NTS	Drawn by: SFK	Date: 26/05/2019
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Drawing No.: TLC1004/09b



Notes

The potential zone of influence of the shaft is a conservative estimate which has been calculated according to Figure 33 of CIRIA SP32 dated 1984 and entitled 'Construction over abandoned mine workings'. The potential zone of influence has been calculated using the following data:

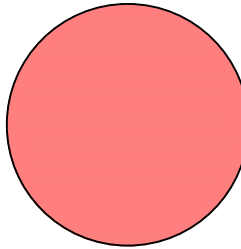
- Shaft diameter has been assumed to be 3m.
- Superficial deposit thickness has been taken as 13.70m (proven). Both granular and cohesive Glacial Deposits are expected to surround the shaft, overlain by roughly 1-1.5m of Made Ground.
- Angle of shearing resistance has been taken as 28° (conservative) - from BS8002:1994 entitled 'Code of Practice for Earth retaining structures'.

The calculated potential zone of influence has not taken into account the fact that the shaft has been backfilled and capped. However, the backfill does contain significant voids.

Key

 Centre of mine shaft

 Site boundary

 Mine shaft potential zone of influence

A	07/10/19	AP	SFK	INITIAL ISSUE
REV	DATE	DRN	CHK	DESCRIPTION

STATUS
INFORMATION

THE LAND CONSULTANCY LIMITED
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Email: sfknot@thelandconsultancy.co.uk
Web: www.thelandconsultancy.co.uk

CLIENT	LK CONSULT LTD
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PROJECT No.	TLC1004
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PROJECT	LAND OFF SMITHY BRIDGE ROAD LITTLEBOROUGH, ROCHDALE
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TITLE	POTENTIAL ZONE OF INFLUENCE OF MINE SHAFT
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DATE: 07/10/2019	SCALE @ A1: 1:150
DRAWN BY: AP	CHECKED BY: SFK
DRAWING No.: TLC1004-10	REV: A

APPENDIX B
ROTARY DRILL HOLE LOGS

THE LAND CONSULTANCY LIMITED T: 01772 610609; M: 07771 800859 sfknott@thelandconsultancy.co.uk www.thelandconsultancy.co.uk	Contract Name: Land off Smithy Bridge Road			Client: LK Consult Ltd			Borehole ID: RH1																										
	Contract Number: TLC1004	Logged By: M. Williams (TDS)	Checked By: S.F.Knott	Start Date: 14/09/2018	End Date: 15/09/2018		Sheet 1 of 2																										
	Easting:	Northing:	Ground Level (mAOD):	Hole Type: Open Hole Rotary Drilling Log			Scale: 1:100																										
Drilling Contractor / Drillers Taylor Drilling Services Ltd / Marcus Williams & Damien Rooke			Method / Plant Used Commachio M305 Rotary Rig with an air mist flush			Weather / Ground Conditions Not recorded / Not recorded																											
Samples & In Situ Testing			Strata Details						Groundwater																								
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description			Water Strike	Backfill/ Installation																							
				0.30		Grass over TOPSOIL.																											
				(0.70)		Orange/brown CLAY with sandstone cobbles. (100% flush returns)																											
				1.00		Orange brown SANDSTONE with clay bands. (100% flush returns)																											
				(4.00)		Dark grey SILTSTONE with gritstone and sandstone bands. (100% flush returns)																											
										5.00		Dark grey SILTSTONE with gritstone and sandstone bands. (100% flush returns)																					
													6.00		Dark grey SILTSTONE with gritstone and sandstone bands. (100% flush returns)																		
																7.00		Dark grey SILTSTONE with gritstone and sandstone bands. (100% flush returns)															
																			8.00		Dark grey SILTSTONE with gritstone and sandstone bands. (100% flush returns)												
																						9.00		Dark grey SILTSTONE with gritstone and sandstone bands. (100% flush returns)									
																									10.00		Dark grey SILTSTONE with gritstone and sandstone bands. (100% flush returns)						
																												11.00		Dark grey SILTSTONE with gritstone and sandstone bands. (100% flush returns)			
																															12.00		Dark grey SILTSTONE with gritstone and sandstone bands. (100% flush returns)
				14.00		Dark grey SILTSTONE with gritstone and sandstone bands. (100% flush returns)																											
										15.00		Dark grey SILTSTONE with gritstone and sandstone bands. (100% flush returns)																					
													16.00		Dark grey SILTSTONE with gritstone and sandstone bands. (100% flush returns)																		
																17.00		Dark grey SILTSTONE with gritstone and sandstone bands. (100% flush returns)															
																			18.00		Dark grey SILTSTONE with gritstone and sandstone bands. (100% flush returns)												
																						19.00		Dark grey SILTSTONE with gritstone and sandstone bands. (100% flush returns)									
																									20.00		Dark grey SILTSTONE with gritstone and sandstone bands. (100% flush returns)						
Continued next sheet																																	
Start & End of Shift Observations			Borehole Diameter				Casing Diameter		Remarks:																								
Date	Time	Depth (m)	Casing (m)				Water (m)	Depth (m)	Dia (mm)																			Depth (m)	Dia (mm)	Hand pit excavated to 1.20m depth to clear services. Log descriptions were made by the lead driller, Marcus Williams of Taylor Drilling Services Ltd (TDS). Drill hole was backfilled with a mixture of bentonite and drilled arisings on completion. CH4, CO2, H2S and CO were below detection limits (<0.1% v/v or <1ppm) and no O2 depletions were recorded (>18% v/v).			
Chiselling				Installation				Water Strikes																									
From (m)	To (m)	Duration	Remarks	Top (m)	Base (m)	Type	Dia (mm)	Depth Strike	Depth Casing	Depth Sealed	Time (mins)	Rose To (m)																Remarks					
								19.00	1.50				Heavy ingress.																				

THE LAND CONSULTANCY LIMITED T: 01772 610609; M: 07771 800859 sfknott@thelandconsultancy.co.uk www.thelandconsultancy.co.uk	Contract Name: Land off Smithy Bridge Road			Client: LK Consult Ltd			Borehole ID: RH1							
	Contract Number: TLC1004		Logged By: M. Williams (TDS)		Checked By: S.F.Knott		Start Date: 14/09/2018		End Date: 15/09/2018					
	Easting:		Northing:		Ground Level (mAOD):		Hole Type: Open Hole Rotary Drilling Log			Scale: 1:100				
Drilling Contractor / Drillers Taylor Drilling Services Ltd / Marcus Williams & Damien Rooke				Method / Plant Used Commachio M305 Rotary Rig with an air mist flush				Weather / Ground Conditions Not recorded / Not recorded						
Samples & In Situ Testing				Strata Details						Groundwater				
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description				Water Strike	Backfill/ Installation			
				(35.00)	XXXXXXXXXXXXXXXXXXXX	Dark grey SILTSTONE with gritstone and sandstone bands. (100% flush returns)				21				
					XXXXXXXXXXXXXXXXXXXX					22				
					XXXXXXXXXXXXXXXXXXXX					23				
					XXXXXXXXXXXXXXXXXXXX					24				
					XXXXXXXXXXXXXXXXXXXX					25				
					XXXXXXXXXXXXXXXXXXXX					26				
					XXXXXXXXXXXXXXXXXXXX					27				
					XXXXXXXXXXXXXXXXXXXX					28				
					XXXXXXXXXXXXXXXXXXXX					29				
					XXXXXXXXXXXXXXXXXXXX					30				
					XXXXXXXXXXXXXXXXXXXX					31				
					XXXXXXXXXXXXXXXXXXXX					32				
					XXXXXXXXXXXXXXXXXXXX					33				
					XXXXXXXXXXXXXXXXXXXX					34				
					XXXXXXXXXXXXXXXXXXXX					35				
					XXXXXXXXXXXXXXXXXXXX					36				
					XXXXXXXXXXXXXXXXXXXX					37				
					XXXXXXXXXXXXXXXXXXXX					38				
					XXXXXXXXXXXXXXXXXXXX					39				
					XXXXXXXXXXXXXXXXXXXX					40				
End of Borehole at 40.00m								40						
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Hand pit excavated to 1.20m depth to clear services. Log descriptions were made by the lead driller, Marcus Williams of Taylor Drilling Services Ltd (TDS). Drill hole was backfilled with a mixture of bentonite and drilled arisings on completion. CH4, CO2, H2S and CO were below detection limits (<0.1% v/v or <1ppm) and no O2 depletions were recorded (>18% v/v).					
					40.00	75	1.50	127						
Chiselling					Installation				Water Strikes					
From (m)	To (m)	Duration	Remarks		Top (m)	Base (m)	Type	Dia (mm)	Depth Strike	Depth Casing	Depth Sealed	Time (mins)	Rose To (m)	Remarks
									19.00	1.50				Heavy ingress.

THE LAND CONSULTANCY LIMITED T: 01772 610609; M: 07771 800859 sfknott@thelandconsultancy.co.uk www.thelandconsultancy.co.uk	Contract Name: Land off Smithy Bridge Road			Client: LK Consult Ltd			Borehole ID: RH2						
	Contract Number: TLC1004		Logged By: M.Williams (TDS)		Checked By: S.F.Knott		Start Date: 15/09/2018		End Date: 15/09/2018				
	Easting:		Northing:		Ground Level (mAOD):		Hole Type: Open Hole Rotary Drilling Log			Scale: 1:100			
Drilling Contractor / Drillers Taylor Drilling Services Ltd / Marcus Williams & Damien Rooke				Method / Plant Used Commachio M305 Rotary Rig & an air mist flush.				Weather / Ground Conditions Not recorded / Not recorded					
Samples & In Situ Testing				Strata Details						Groundwater			
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description					Water Strike	Backfill/ Installation	
				0.30		Grass onto TOPSOIL.							
				(2.70)		Orange brown sandy CLAY. (100% flush returns)					1		
				3.00		Orange brown SANDSTONE with clay bands. (100% flush returns)					2		
				(3.00)							3		
											4		
											5		
				6.00		Dark grey SILTSTONE with sandstone and gritstone bands. (100% flush returns)					6		
											7		
											8		
											9		
											10		
											11		
											12		
											13		
											14		
											15		
											16		
											17		
											18		
											19		
											20		
Start & End of Shift Observations				Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Hand pit excavated to 1.20m depth to clear services. Log descriptions were made by the lead driller, Marcus Williams of Taylor Drilling Services Ltd (TDS). Drill hole was backfilled with a mixture of bentonite and drilled arisings on completion. CH4, CO2, H2S and CO were below detection limits (<0.1% v/v or <1ppm) and no O2 depletions were recorded (>18% v/v).				
					40.00	75	1.50	127					
Chiselling				Installation				Water Strikes					
From (m)	To (m)	Duration	Remarks	Top (m)	Base (m)	Type	Dia (mm)	Depth Strike	Depth Casing	Depth Sealed	Time (mins)	Rose To (m)	Remarks
								17.00	1.50				Heavy ingress.

THE LAND CONSULTANCY LIMITED T: 01772 610609; M: 07771 800859 sfknott@thelandconsultancy.co.uk www.thelandconsultancy.co.uk	Contract Name: Land off Smithy Bridge Road			Client: LK Consult Ltd			Borehole ID: RH2							
	Contract Number: TLC1004		Logged By: M.Williams (TDS)		Checked By: S.F.Knott		Start Date: 15/09/2018		End Date: 15/09/2018					
	Easting:		Northing:		Ground Level (mAOD):		Hole Type: Open Hole Rotary Drilling Log			Scale: 1:100				
Drilling Contractor / Drillers Taylor Drilling Services Ltd / Marcus Williams & Damien Rooke				Method / Plant Used Commachio M305 Rotary Rig & an air mist flush.				Weather / Ground Conditions Not recorded / Not recorded						
Samples & In Situ Testing				Strata Details						Groundwater				
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description				Water Strike	Backfill/ Installation			
				(34.00)	XXXXXXXXXXXXXXXXXXXX	Dark grey SILTSTONE with sandstone and gritstone bands. (100% flush returns)				21				
					XXXXXXXXXXXXXXXXXXXX					22				
					XXXXXXXXXXXXXXXXXXXX					23				
					XXXXXXXXXXXXXXXXXXXX					24				
					XXXXXXXXXXXXXXXXXXXX					25				
					XXXXXXXXXXXXXXXXXXXX					26				
					XXXXXXXXXXXXXXXXXXXX					27				
					XXXXXXXXXXXXXXXXXXXX					28				
					XXXXXXXXXXXXXXXXXXXX					29				
					XXXXXXXXXXXXXXXXXXXX					30				
					XXXXXXXXXXXXXXXXXXXX					31				
					XXXXXXXXXXXXXXXXXXXX					32				
					XXXXXXXXXXXXXXXXXXXX					33				
					XXXXXXXXXXXXXXXXXXXX					34				
					XXXXXXXXXXXXXXXXXXXX					35				
					XXXXXXXXXXXXXXXXXXXX					36				
					XXXXXXXXXXXXXXXXXXXX					37				
					XXXXXXXXXXXXXXXXXXXX					38				
					XXXXXXXXXXXXXXXXXXXX					39				
					XXXXXXXXXXXXXXXXXXXX					40				
End of Borehole at 40.00m								40						
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Hand pit excavated to 1.20m depth to clear services. Log descriptions were made by the lead driller, Marcus Williams of Taylor Drilling Services Ltd (TDS). Drill hole was backfilled with a mixture of bentonite and drilled arisings on completion. CH4, CO2, H2S and CO were below detection limits (<0.1% v/v or <1ppm) and no O2 depletions were recorded (>18% v/v).					
					40.00	75	1.50	127						
Chiselling					Installation				Water Strikes					
From (m)	To (m)	Duration	Remarks		Top (m)	Base (m)	Type	Dia (mm)	Depth Strike	Depth Casing	Depth Sealed	Time (mins)	Rose To (m)	Remarks
									17.00	1.50				Heavy ingress.

THE LAND CONSULTANCY LIMITED T: 01772 610609; M: 07771 800859 sfknott@thelandconsultancy.co.uk www.thelandconsultancy.co.uk	Contract Name: Land off Smithy Bridge Road			Client: LK Consult Ltd			Borehole ID: RH3							
	Contract Number: TLC1004		Logged By: M. Williams (TDS)		Checked By: S.F.Knott		Start Date: 14/09/2018		End Date: 14/09/2018					
	Easting:		Northing:		Ground Level (mAOD):		Hole Type: Open Hole Rotary Drilling Log		Scale: 1:100					
Drilling Contractor / Drillers Taylor Drilling Services Ltd / Marcus Williams & Damien Rooke				Method / Plant Used Commachion M305 Rotary Rig with an air mist flush				Weather / Ground Conditions Not recorded / Not recorded						
Samples & In Situ Testing				Strata Details						Groundwater				
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description				Water Strike	Backfill/ Installation			
				0.30		Grass over TOPSOIL.								
				1.20		Orange brown CLAY with cobbles. (100% flush returns)				1				
				1.50		Orange brown SANDSTONE with clay bands. (100% flush returns)				2				
				2.50						3				
				4.00		Dark grey SILTSTONE with sandstone and gritstone bands. (100% flush returns)				4				
										5				
										6				
										7				
										8				
										9				
										10				
										11				
										12				
										13				
										14				
										15				
										16				
										17				
										18				
										19				
										20				
				Continued next sheet										
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Hand pit excavated to 1.20m depth to clear services. Log descriptions were made by the lead driller, Marcus Williams of Taylor Drilling Services Ltd (TDS). Drill hole was backfilled with a mixture of bentonite and drilled arisings on completion. CH4, CO2, H2S and CO were below detection limits (<0.1% v/v or <1ppm) and no O2 depletions were recorded (>18% v/v).					
					40.00	75	1.50	127						
Chiselling					Installation				Water Strikes					
From (m)	To (m)	Duration	Remarks		Top (m)	Base (m)	Type	Dia (mm)	Depth Strike	Depth Casing	Depth Sealed	Time (mins)	Rose To (m)	Remarks
									21.00	1.50				Heavy ingress.

THE LAND CONSULTANCY LIMITED T: 01772 610609; M: 07771 800859 sfknott@thelandconsultancy.co.uk www.thelandconsultancy.co.uk	Contract Name: Land off Smithy Bridge Road			Client: LK Consult Ltd			Borehole ID: RH3							
	Contract Number: TLC1004		Logged By: M. Williams (TDS)		Checked By: S.F.Knott		Start Date: 14/09/2018		End Date: 14/09/2018					
	Easting:		Northing:		Ground Level (mAOD):		Hole Type: Open Hole Rotary Drilling Log			Scale: 1:100				
Drilling Contractor / Drillers Taylor Drilling Services Ltd / Marcus Williams & Damien Rooke				Method / Plant Used Commachion M305 Rotary Rig with an air mist flush				Weather / Ground Conditions Not recorded / Not recorded						
Samples & In Situ Testing				Strata Details						Groundwater				
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description				Water Strike	Backfill/ Installation			
				(36.00)	Dark grey SILTSTONE with sandstone and gritstone bands. (100% flush returns)									
				40.00		End of Borehole at 40.00m				40				
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Hand pit excavated to 1.20m depth to clear services. Log descriptions were made by the lead driller, Marcus Williams of Taylor Drilling Services Ltd (TDS). Drill hole was backfilled with a mixture of bentonite and drilled arisings on completion. CH4, CO2, H2S and CO were below detection limits (<0.1% v/v or <1ppm) and no O2 depletions were recorded (>18% v/v).					
					40.00	75	1.50	127						
Chiselling					Installation				Water Strikes					
From (m)	To (m)	Duration	Remarks		Top (m)	Base (m)	Type	Dia (mm)	Depth Strike	Depth Casing	Depth Sealed	Time (mins)	Rose To (m)	Remarks
									21.00	1.50				Heavy ingress.

THE LAND CONSULTANCY LIMITED T: 01772 610609; M: 07771 800859 sfknot@thelandconsultancy.co.uk www.thelandconsultancy.co.uk		Contract Name: Land off Smithy Bridge Road		Client: LK Consult Ltd		Borehole ID: RH4							
		Contract Number: TLC1004	Logged By: M. Williams (TDS)	Checked By: S.F.Knott	Start Date: 13/09/2018	End Date: 13/09/2018	Sheet 1 of 2						
		Easting:	Northing:	Ground Level (mAOD):	Hole Type: Open Hole Rotary Drilling Log		Scale: 1:100						
Drilling Contractor / Drillers Taylor Drilling Services Ltd / Marcus Williams & Damien Rooke			Method / Plant Used Commachio M305 Rotary Rig with an air mist flush			Weather / Ground Conditions Not recorded / Not recorded							
Samples & In Situ Testing				Strata Details			Groundwater						
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike						
				0.30		Grass over TOPSOIL.							
				(3.70)		Orange brown SAND AND GRAVEL. (100% flush returns)	1						
				4.00		Dark grey SILTSTONE with sandstone and gritstone bands. (100% flush returns)	2						
							3						
							4						
							5						
							6						
							7						
							8						
							9						
							10						
							11						
							12						
							13						
							14						
							15						
							16						
							17						
							18						
							19						
							20						
Start & End of Shift Observations				Borehole Diameter		Casing Diameter	Remarks:						
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)					
					40.00	75	1.50	127	Hand pit excavated to 1.20m depth to clear services. Log descriptions were made by the lead driller, Marcus Williams of Taylor Drilling Services Ltd (TDS). Drill hole was backfilled with a mixture of bentonite and drilled arisings on completion. CH4, CO2, H2S and CO were below detection limits (<0.1% v/v or <1ppm) and no O2 depletions were recorded (>18% v/v).				
Chiselling				Installation				Water Strikes					
From (m)	To (m)	Duration	Remarks	Top (m)	Base (m)	Type	Dia (mm)	Depth Strike	Depth Casing	Depth Sealed	Time (mins)	Rose To (m)	Remarks
								18.00	1.50				Heavy ingress.

THE LAND CONSULTANCY LIMITED T: 01772 610609; M: 07771 800859 sfknott@thelandconsultancy.co.uk www.thelandconsultancy.co.uk	Contract Name: Land off Smithy Bridge Road			Client: LK Consult Ltd			Borehole ID: RH4							
	Contract Number: TLC1004		Logged By: M. Williams (TDS)		Checked By: S.F.Knott		Start Date: 13/09/2018		End Date: 13/09/2018					
	Easting:		Northing:		Ground Level (mAOD):		Hole Type: Open Hole Rotary Drilling Log			Scale: 1:100				
Drilling Contractor / Drillers Taylor Drilling Services Ltd / Marcus Williams & Damien Rooke				Method / Plant Used Commachio M305 Rotary Rig with an air mist flush				Weather / Ground Conditions Not recorded / Not recorded						
Samples & In Situ Testing				Strata Details						Groundwater				
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description				Water Strike	Backfill/ Installation			
				(36.00)	XXXXXXXXXXXXXXXXXXXX	Dark grey SILTSTONE with sandstone and gritstone bands. (100% flush returns)				21				
					XXXXXXXXXXXXXXXXXXXX					22				
					XXXXXXXXXXXXXXXXXXXX					23				
					XXXXXXXXXXXXXXXXXXXX					24				
					XXXXXXXXXXXXXXXXXXXX					25				
					XXXXXXXXXXXXXXXXXXXX					26				
					XXXXXXXXXXXXXXXXXXXX					27				
					XXXXXXXXXXXXXXXXXXXX					28				
					XXXXXXXXXXXXXXXXXXXX					29				
					XXXXXXXXXXXXXXXXXXXX					30				
					XXXXXXXXXXXXXXXXXXXX					31				
					XXXXXXXXXXXXXXXXXXXX					32				
					XXXXXXXXXXXXXXXXXXXX					33				
					XXXXXXXXXXXXXXXXXXXX					34				
					XXXXXXXXXXXXXXXXXXXX					35				
					XXXXXXXXXXXXXXXXXXXX					36				
					XXXXXXXXXXXXXXXXXXXX					37				
					XXXXXXXXXXXXXXXXXXXX					38				
					XXXXXXXXXXXXXXXXXXXX					39				
					40.00					XXXXXXXXXXXXXXXXXXXX		40		
End of Borehole at 40.00m														
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Hand pit excavated to 1.20m depth to clear services. Log descriptions were made by the lead driller, Marcus Williams of Taylor Drilling Services Ltd (TDS). Drill hole was backfilled with a mixture of bentonite and drilled arisings on completion. CH4, CO2, H2S and CO were below detection limits (<0.1% v/v or <1ppm) and no O2 depletions were recorded (>18% v/v).					
					40.00	75	1.50	127						
Chiselling					Installation				Water Strikes					
From (m)	To (m)	Duration	Remarks		Top (m)	Base (m)	Type	Dia (mm)	Depth Strike	Depth Casing	Depth Sealed	Time (mins)	Rose To (m)	Remarks
									18.00	1.50				Heavy ingress.

THE LAND CONSULTANCY LIMITED T: 01772 610609; M: 07771 800859 sfknott@thelandconsultancy.co.uk www.thelandconsultancy.co.uk	Contract Name: Land off Smithy Bridge Road			Client: LK Consult Ltd			Borehole ID: RH5																					
	Contract Number: TLC1004		Logged By: M. Williams (TDS)		Checked By: S.F.Knott		Start Date: 12/09/2018		End Date: 12/09/2018																			
	Easting:		Northing:		Ground Level (mAOD):		Hole Type: Open Hole Rotary Drilling Log			Scale: 1:100																		
Drilling Contractor / Drillers Taylor Drilling Services Ltd / Marcus Williams & Damien Rooke				Method / Plant Used Commachio M305 Rotary Rig with an air mist flush				Weather / Ground Conditions Not recorded / Not recorded																				
Samples & In Situ Testing				Strata Details						Groundwater																		
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description				Water Strike	Backfill/ Installation																	
				(0.40)		Grass over TOPSOIL.				1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20																		
				0.40		Sandy brown CLAY. (100% flush returns)																						
				(2.10)		Dark grey SILTSTONE with sandstone and gritstone bands. (100% flush returns)																						
												2.50																
														Continued next sheet														
															Start & End of Shift Observations				Borehole Diameter		Casing Diameter		Remarks:					
															Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Hand pit excavated to 1.20m depth to clear services. Log descriptions were made by the lead driller, Marcus Williams of Taylor Drilling Services Ltd (TDS). Drill hole was backfilled with a mixture of bentonite and drilled arisings on completion. CH4, CO2, H2S and CO were below detection limits (<0.1% v/v or <1ppm) and no O2 depletions were recorded (>18% v/v).				
																				40.00	75	1.50	127					
															Chiselling				Installation				Water Strikes					
															From (m)	To (m)	Duration	Remarks	Top (m)	Base (m)	Type	Dia (mm)	Depth Strike	Depth Casing	Depth Sealed	Time (mins)	Rose To (m)	Remarks
																							17.00	1.50				Heavy ingress.

THE LAND CONSULTANCY LIMITED T: 01772 610609; M: 07771 800859 sfknott@thelandconsultancy.co.uk www.thelandconsultancy.co.uk	Contract Name: Land off Smithy Bridge Road			Client: LK Consult Ltd			Borehole ID: RH5							
	Contract Number: TLC1004		Logged By: M. Williams (TDS)		Checked By: S.F.Knott		Start Date: 12/09/2018		End Date: 12/09/2018					
	Easting:		Northing:		Ground Level (mAOD):		Hole Type: Open Hole Rotary Drilling Log		Scale: 1:100					
Drilling Contractor / Drillers Taylor Drilling Services Ltd / Marcus Williams & Damien Rooke				Method / Plant Used Commachio M305 Rotary Rig with an air mist flush				Weather / Ground Conditions Not recorded / Not recorded						
Samples & In Situ Testing				Strata Details						Groundwater				
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description				Water Strike	Backfill/ Installation			
				(37.50)	XXXXXXXXXXXXXXXXXXXX	Dark grey SILTSTONE with sandstone and gritstone bands. (100% flush returns)				21				
					XXXXXXXXXXXXXXXXXXXX					22				
					XXXXXXXXXXXXXXXXXXXX					23				
					XXXXXXXXXXXXXXXXXXXX					24				
					XXXXXXXXXXXXXXXXXXXX					25				
					XXXXXXXXXXXXXXXXXXXX					26				
					XXXXXXXXXXXXXXXXXXXX					27				
					XXXXXXXXXXXXXXXXXXXX					28				
					XXXXXXXXXXXXXXXXXXXX					29				
					XXXXXXXXXXXXXXXXXXXX					30				
					XXXXXXXXXXXXXXXXXXXX					31				
					XXXXXXXXXXXXXXXXXXXX					32				
					XXXXXXXXXXXXXXXXXXXX					33				
					XXXXXXXXXXXXXXXXXXXX					34				
					XXXXXXXXXXXXXXXXXXXX					35				
					XXXXXXXXXXXXXXXXXXXX					36				
					XXXXXXXXXXXXXXXXXXXX					37				
					XXXXXXXXXXXXXXXXXXXX					38				
					XXXXXXXXXXXXXXXXXXXX					39				
					40.00					XXXXXXXXXXXXXXXXXXXX		40		
End of Borehole at 40.00m														
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Hand pit excavated to 1.20m depth to clear services. Log descriptions were made by the lead driller, Marcus Williams of Taylor Drilling Services Ltd (TDS). Drill hole was backfilled with a mixture of bentonite and drilled arisings on completion. CH4, CO2, H2S and CO were below detection limits (<0.1% v/v or <1ppm) and no O2 depletions were recorded (>18% v/v).					
					40.00	75	1.50	127						
Chiselling					Installation				Water Strikes					
From (m)	To (m)	Duration	Remarks		Top (m)	Base (m)	Type	Dia (mm)	Depth Strike	Depth Casing	Depth Sealed	Time (mins)	Rose To (m)	Remarks
									17.00	1.50				Heavy ingress.

[illegible]

[illegible]

THE LAND CONSULTANCY LIMITED T: 01772 610609; M: 07771 800859 sfknott@thelandconsultancy.co.uk www.thelandconsultancy.co.uk	Contract Name: Land off Smithy Bridge Road			Client: LK Consult Ltd			Borehole ID: RH7							
	Contract Number: TLC1004		Logged By: M. Williams (TDS)		Checked By: S.F.Knott		Start Date: 16/09/2018		End Date: 16/09/2018					
	Easting:		Northing:		Ground Level (mAOD):		Hole Type: Open Hole Rotary Drilling Log		Scale: 1:100					
Drilling Contractor / Drillers Taylor Drilling Services Ltd / Marcus Williams & Damien Rooke				Method / Plant Used Commachio M305 Rotary Rig with an air mist flush				Weather / Ground Conditions Not recorded / Not recorded						
Samples & In Situ Testing				Strata Details						Groundwater				
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description				Water Strike	Backfill/ Installation			
				0.30		Grass over TOPSOIL.								
				(2.60)		Orange brown CLAY. (100% flush returns)				1				
				2.90		Orange brown SANDSTONE. (100% flush returns)				2				
				(1.10)						3				
				4.00		Dark grey SILTSTONE. (100% flush returns)				4				
										5				
										6				
										7				
										8				
										9				
										10				
				(13.00)						11				
										12				
										13				
										14				
										15				
										16				
				17.00		Light grey SILTSTONE. (100% flush returns)				17				
										18				
				(5.00)						19				
										20				
Continued next sheet														
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Hand pit excavated to 1.20m depth to clear services. Log descriptions were made by the lead driller, Marcus Williams of Taylor Drilling Services Ltd (TDS). Drill hole was backfilled with a mixture of bentonite and drilled arisings on completion. CH4, CO2, H2S and CO were below detection limits (<0.1% v/v or <1ppm) and no O2 depletions were recorded (>18% v/v).					
					40.00	75	1.50	127						
Chiselling					Installation				Water Strikes					
From (m)	To (m)	Duration	Remarks		Top (m)	Base (m)	Type	Dia (mm)	Depth Strike	Depth Casing	Depth Sealed	Time (mins)	Rose To (m)	Remarks
									16.00	1.50				Heavy ingress.

THE LAND CONSULTANCY LIMITED T: 01772 610609; M: 07771 800859 sfknott@thelandconsultancy.co.uk www.thelandconsultancy.co.uk	Contract Name: Land off Smithy Bridge Road		Client: LK Consult Ltd			Borehole ID: RH7								
	Contract Number: TLC1004	Logged By: M. Williams (TDS)	Checked By: S.F.Knott	Start Date: 16/09/2018	End Date: 16/09/2018	Sheet 2 of 2								
	Easting:	Northing:	Ground Level (mAOD):	Hole Type: Open Hole Rotary Drilling Log		Scale: 1:100								
Drilling Contractor / Drillers Taylor Drilling Services Ltd / Marcus Williams & Damien Rooke		Method / Plant Used Commachio M305 Rotary Rig with an air mist flush			Weather / Ground Conditions Not recorded / Not recorded									
Samples & In Situ Testing			Strata Details				Groundwater							
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description	Water Strike	Backfill/ Installation						
				22.00	Light grey SILTSTONE. (100% flush returns)		21							
					Dark grey SILTSTONE with sandstone and gritstone bands. (100% flush returns)		22							
							23							
							24							
							25							
							26							
							27							
							28							
							29							
							30							
				(18.00)			31							
									32					
									33					
									34					
									35					
									36					
									37					
									38					
									39					
									40					
				40.00	End of Borehole at 40.00m									
Start & End of Shift Observations			Borehole Diameter		Casing Diameter		Remarks:							
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Hand pit excavated to 1.20m depth to clear services. Log descriptions were made by the lead driller, Marcus Williams of Taylor Drilling Services Ltd (TDS). Drill hole was backfilled with a mixture of bentonite and drilled arisings on completion. CH4, CO2, H2S and CO were below detection limits (<0.1% v/v or <1ppm) and no O2 depletions were recorded (>18% v/v).					
					40.00	75	1.50	127						
Chiselling				Installation				Water Strikes						
From (m)	To (m)	Duration	Remarks		Top (m)	Base (m)	Type	Dia (mm)	Depth Strike	Depth Casing	Depth Sealed	Time (mins)	Rose To (m)	Remarks
									16.00	1.50				Heavy ingress.

THE LAND CONSULTANCY LIMITED T: 01772 610609; M: 07771 800859 sfknott@thelandconsultancy.co.uk www.thelandconsultancy.co.uk	Contract Name: Land off Smithy Bridge Road			Client: LK Consult Ltd			Borehole ID: RH8							
	Contract Number: TLC1004		Logged By: M. Williams (TDS)		Checked By: S.F.Knott		Start Date: 17/09/2018		End Date: 17/09/2018					
	Easting:		Northing:		Ground Level (mAOD):		Hole Type: Open Hole Rotary Drilling Log			Scale: 1:100				
Drilling Contractor / Drillers Taylor Drilling Services Ltd / Marcus Williams & Damien Rooke				Method / Plant Used Commachio M305 Rotary Rig with an air mist flush				Weather / Ground Conditions Not recorded / Not recorded						
Samples & In Situ Testing				Strata Details						Groundwater				
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description					Water Strike	Backfill/ Installation		
				0.30		Grass over TOPSOIL.								
				(1.40)		MADE GROUND. (100% flush returns)					1			
				1.70		Orange brown CLAY. (100% flush returns)					2			
				(3.30)							3			
											4			
				5.00		Orange brown SAND and GRAVEL with cobbles. Coal fragments recovered. (100% flush returns)					5			
											6			
											7			
											8			
				(8.00)							9			
											10			
											11			
											12			
				13.00		Orange brown SANDSTONE. (100% flush returns)					13			
											14			
											15			
											16			
											17			
											18			
											19			
											20			
Start & End of Shift Observations				Borehole Diameter		Casing Diameter		Remarks:						
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Hand pit excavated to 1.20m depth to clear services. Log descriptions were made by the lead driller, Marcus Williams of Taylor Drilling Services Ltd (TDS). Drill hole was backfilled with a mixture of bentonite and drilled arisings on completion. CH4, CO2, H2S and CO were below detection limits (<0.1% v/v or <1ppm) and no O2 depletions were recorded (>18% v/v).					
Chiselling				Installation				Water Strikes						
From (m)	To (m)	Duration	Remarks		Top (m)	Base (m)	Type	Dia (mm)	Depth Strike	Depth Casing	Depth Sealed	Time (mins)	Rose To (m)	Remarks
									10.00	2.70				Heavy ingress.

THE LAND CONSULTANCY LIMITED T: 01772 610609; M: 07771 800859 sfknott@thelandconsultancy.co.uk www.thelandconsultancy.co.uk	Contract Name: Land off Smithy Bridge Road			Client: LK Consult Ltd			Borehole ID: RH8							
	Contract Number: TLC1004		Logged By: M. Williams (TDS)		Checked By: S.F.Knott		Start Date: 17/09/2018		End Date: 17/09/2018					
	Easting:		Northing:		Ground Level (mAOD):		Hole Type: Open Hole Rotary Drilling Log			Scale: 1:100				
Drilling Contractor / Drillers Taylor Drilling Services Ltd / Marcus Williams & Damien Rooke				Method / Plant Used Commachio M305 Rotary Rig with an air mist flush				Weather / Ground Conditions Not recorded / Not recorded						
Samples & In Situ Testing				Strata Details						Groundwater				
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description					Water Strike	Backfill/ Installation		
						Orange brown SANDSTONE. (100% flush returns)								
											21			
											22			
											23			
											24			
											25			
											26			
											27			
											28			
											29			
											30			
											31			
											32			
											33			
											34			
											35			
											36			
											37			
											38			
											39			
											40			
				40.00		End of Borehole at 40.00m								
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Hand pit excavated to 1.20m depth to clear services. Log descriptions were made by the lead driller, Marcus Williams of Taylor Drilling Services Ltd (TDS). Drill hole was backfilled with a mixture of bentonite and drilled arisings on completion. CH4, CO2, H2S and CO were below detection limits (<0.1% v/v or <1ppm) and no O2 depletions were recorded (>18% v/v).					
					40.00	75	2.70	127						
Chiselling					Installation				Water Strikes					
From (m)	To (m)	Duration	Remarks		Top (m)	Base (m)	Type	Dia (mm)	Depth Strike	Depth Casing	Depth Sealed	Time (mins)	Rose To (m)	Remarks
									10.00	2.70				Heavy ingress.

[illegible]

[illegible]

THE LAND CONSULTANCY LIMITED T: 01772 610609; M: 07771 800859 sfknot@thelandconsultancy.co.uk www.thelandconsultancy.co.uk	Contract Name: Land off Smithy Bridge Road			Client: LK Consult Ltd			Borehole ID: RHB								
	Contract Number: TLC1004	Logged By: D. Taylor (TDS)	Checked By: S.F.Knott	Start Date: 17/04/2019	End Date: 19/04/2019										
	Easting: 392399.3		Northing: 415459.5		Ground Level (mAOD): 135.19	Hole Type: Open Hole Rotary Drilling Log			Scale: 1:100						
Drilling Contractor / Drillers Taylor Drilling Services Ltd / Declan Taylor & Rohan Aspinall				Method / Plant Used Baretta Rotary Rig + Water Flush			Weather / Ground Conditions Not recorded / Not recorded								
Samples & In Situ Testing				Strata Details					Groundwater						
Depth	Sample ID	Test Result	Level (mAOD)	Depth (m) (Thickness)	Legend	Strata Description			Water Strike	Backfill/Installation					
			108.29	(8.40)		Hard steady drilling with broken bands. (MADE GROUND - 0% flush returns)			21						
												22			
												23			
												24			
												25			
								26							
						Steady broken drilling. (MADE GROUND - 0% flush returns)			27						
								28							
								29							
								30							
								31							
								32							
			102.19	33.00		Hard steady drilling with broken bands. (MADE GROUND - 0% flush returns to 36m then 100% flush returns)			33						
											34				
											35				
											36				
											37				
								38							
								39							
								40							
						Continued next sheet									
Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:						
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Drilled over centre of shaft cap. Safety platform was erected over the shaft prior to drilling. No groundwater encountered. Log descriptions were made by the lead driller, Declan Taylor of Taylor Drilling Services Ltd (TDS). Drill hole was backfilled with a mixture of bentonite and drilled arisings on completion. CH4, CO2, H2S and CO were below detection limits (<0.1% v/v or <1ppm) and no O2 depletions were recorded (>18% v/v).						
Chiselling					Installation				Water Strikes						
From (m)	To (m)	Duration	Remarks		Top (m)	Base (m)	Type	Dia (mm)	Depth Strike		Depth Casing	Depth Sealed	Time (mins)	Rose To (m)	Remarks

[illegible]

[illegible]

APPENDIX C
COAL AUTHORITY MINING REPORT



The Coal
Authority

Resolving the **impacts** of mining

CON29M Non-Residential Mining Report

8, SOUTH VIEW ROAD
ROCHDALE
GREATER MANCHESTER

Date of enquiry: 26 July 2017
Date enquiry received: 26 July 2017
Issue date: 27 July 2017

Our reference: 51001536748001
Your reference: 133666223_1 |



CON29M Non-Residential Mining Report

This report is based on, and limited to, the records held by the Coal Authority and the Cheshire Brine Subsidence Compensation Board's records, at the time we answer the search.

Client name

LANDMARK INFORMATION GROUP LIMITED

Enquiry address

8, SOUTH VIEW ROAD, ROCHDALE, GREATER MANCHESTER

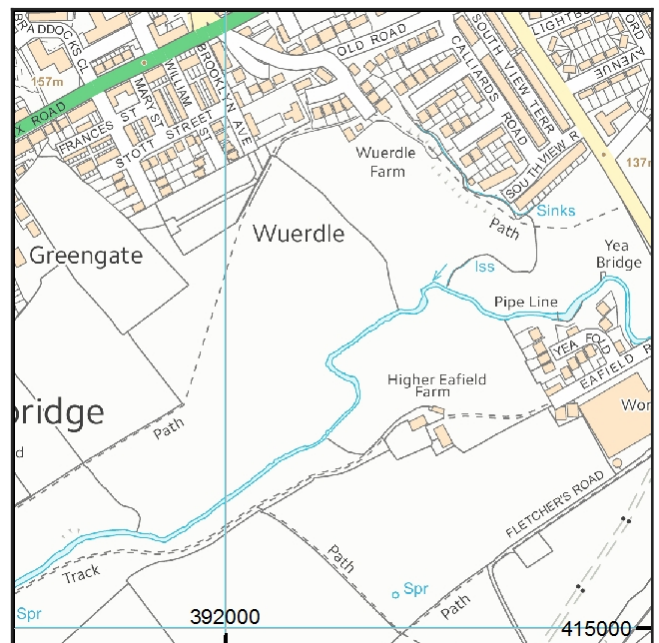
How to contact us

0345 762 6848 (UK)
+44 (0)1623 637 000 (International)

200 Lichfield Lane
Mansfield
Nottinghamshire
NG18 4RG

www.groundstability.com

 /company/the-coal-authority
 /thecoalauthority
 /coalauthority



Approximate position of property



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Summary

Has the search report highlighted evidence or potential of		
1	Past underground coal mining	Yes
2	Present underground coal mining	No
3	Future underground coal mining	Yes
4	Mine entries	Yes
5	Coal mining geology	No
6	Past opencast coal mining	No
7	Present opencast coal mining	No
8	Future opencast coal mining	No
9	Coal mining subsidence	No
10	Mine gas	No
11	Hazards related to coal mining	No
12	Withdrawal of support	No
13	Working facilities order	No
14	Payments to owners of former copyhold land	No
15	Information from the Cheshire Brine Subsidence Compensation Board	No

Further recommended reports	
Mine entry interpretive report	
Mine entry plan and data sheets	

For detailed findings, please go to page 4.

Detailed findings

1. Past underground coal mining

The property is in a surface area that could be affected by underground mining in 2 seams of coal at 30m to 190m depth, and last worked in 1891.

Any movement in the ground due to coal mining activity should have stopped.

2. Present underground coal mining

The property is not within a surface area that could be affected by present underground mining.

3. Future underground coal mining

The property is not in an area where the Coal Authority has plans to grant a licence to remove coal using underground methods.

The property is not in an area where a licence has been granted to remove or otherwise work coal using underground methods.

The property is not in an area likely to be affected from any planned future underground coal mining.

However, reserves of coal exist in the local area which could be worked at some time in the future.

No notices have been given, under section 46 of the Coal Mining Subsidence Act 1991, stating that the land is at risk of subsidence.

4. Mine entries

Within, or within 20 metres of, the boundary of the property there is 1 mine entry, the approximate position of which is shown on the enquiry boundary plot.

There is no record of what steps, if any, have been taken to treat the mine entry.

There may however be mine entries/additional mine entries in the local area which the Coal Authority has no knowledge of.

For an additional fee, the Coal Authority can provide a Mine Entry Interpretive Report. The report will provide a separate assessment for the mine entry/entries referred to in this report. It gives an opinion on the likelihood of mining subsidence damage caused from ground movement as a consequence of the mine entry/entries. It also gives details of the remedies available for subsidence damage where the mine entry was sunk in connection with coal mining.

Please note that it may not be possible to produce a report if the main building to the property cannot be identified from Coal Authority plans (ie for development sites and new build).

For further advice on how to order this additional information please visit www.groundstability.com.

5. Coal mining geology

The Coal Authority is not aware of any damage due to geological faults or other lines of weakness that have been affected by coal mining.

6. Past opencast coal mining

The property is not within the boundary of an opencast site from which coal has been removed by opencast methods.

7. Present opencast coal mining

The property does not lie within 200 metres of the boundary of an opencast site from which coal is being removed by opencast methods.

8. Future opencast coal mining

There are no licence requests outstanding to remove coal by opencast methods within 800 metres of the boundary.

The property is not within 800 metres of the boundary of an opencast site for which a licence to remove coal by opencast methods has been granted.

9. Coal mining subsidence

The Coal Authority has not received a damage notice or claim for the subject property, or any property within 50 metres, since 31 October 1994.

There is no current Stop Notice delaying the start of remedial works or repairs to the property.

The Coal Authority is not aware of any request having been made to carry out preventive works before coal is worked under section 33 of the Coal Mining Subsidence Act 1991.

10. Mine gas

The Coal Authority has no record of a mine gas emission requiring action.

11. Hazards related to coal mining

The property has not been subject to remedial works, by or on behalf of the Authority, under its Emergency Surface Hazard Call Out procedures.

12. Withdrawal of support

The property is not in an area where a notice to withdraw support has been given.

The property is not in an area where a notice has been given under section 41 of the Coal Industry Act 1994, cancelling the entitlement to withdraw support.

13. Working facilities order

The property is not in an area where an order has been made, under the provisions of the Mines (Working Facilities and Support) Acts 1923 and 1966 or any statutory modification or amendment thereof.

14. Payments to owners of former copyhold land

The property is not in an area where a relevant notice has been published under the Coal Industry Act 1975/Coal Industry Act 1994.

15. Information from the Cheshire Brine Subsidence Compensation Board

The property lies outside the Cheshire Brine Compensation District.

Comments on the Coal Authority information

The Coal Authority own the copyright in this report and the information used is protected by our database right.

The boundary plot shows the approximate location of the disused mine entry/entries referred to in this report. For reasons of clarity, mine entry symbols may not be drawn to the same scale as the plan.

Property owners have the benefit of statutory protection (under the Coal Mining Subsidence Act 1991*). This contains provision for the making good, to the reasonable satisfaction of the owner, of physical damage from disused coal mine workings including disused coal mine entries. A leaflet setting out the rights and obligations of either the Coal Authority or other responsible persons under the 1991 Act can be obtained by visiting www.groundstability.com.

If you wish to discuss the relevance of any of the information contained in this report, you should seek the advice of a qualified mining engineer or surveyor. If you or your advisor wish to examine the source plans from which the information has been taken, these are available to view, free of charge, at our Head Office in Mansfield. To book an appointment please ring 01623 637225. Should you or your advisor wish to carry out a physical investigation that may enter, disturb or interfere with any disused mine entry, prior permission of the owner must be sought. For coal mine entries, the owner will normally be the Coal Authority.

The Coal Authority, regardless of responsibility and in conjunction with other public bodies, provide an emergency call out facility in coalfield areas to assess the public safety implications of mining features (including disused mine entries). Our emergency telephone number is 01623 646333.

*Note, this Act does not apply where coal was worked or gotten by virtue of the grant of a gale in the Forest of Dean, or any other part of the Hundred of St. Briavels in the county of Gloucester.

In view of the mining circumstances a prudent developer would seek appropriate technical advice before any works are undertaken.

Therefore if development proposals are being considered, technical advice relating to both the investigation of coal and former coal mines and their treatment should be obtained before

beginning work on site. All proposals should apply good engineering practice developed for mining areas. No development should be undertaken that intersects, disturbs or interferes with any coal or mines of coal without the permission of the Coal Authority. Developers should be aware that the investigation of coal seams/former mines of coal may have the potential to generate and/or displace underground gases and these risks both under and adjacent to the development should be fully considered in developing any proposals. The need for effective measures to prevent gases entering into public properties either during investigation or after development also needs to be assessed and properly addressed. This is necessary due to the public safety implications of any development in these circumstances.

A site investigation was carried out in February 2012 by United Utilities P O Box 45, Lingley Mere Business Park, Lingley Green, Great Sankey, Warrington, WA5 3GR.

Additional remarks

Information provided by the Coal Authority in this report is compiled in response to the Law Society's Con29M Coal Mining and Brine Subsidence Claim enquiries. The said enquiries are protected by copyright owned by the Law Society of 113 Chancery Lane, London WC2A 1PL. Please note that Brine Subsidence Claim enquiries are only relevant for England and Wales. This report is prepared in accordance with the Law Society's Guidance Notes 2006, the User Guide 2006 and the Coal Authority and Cheshire Brine Board's Terms and Conditions applicable at the time the report was produced.

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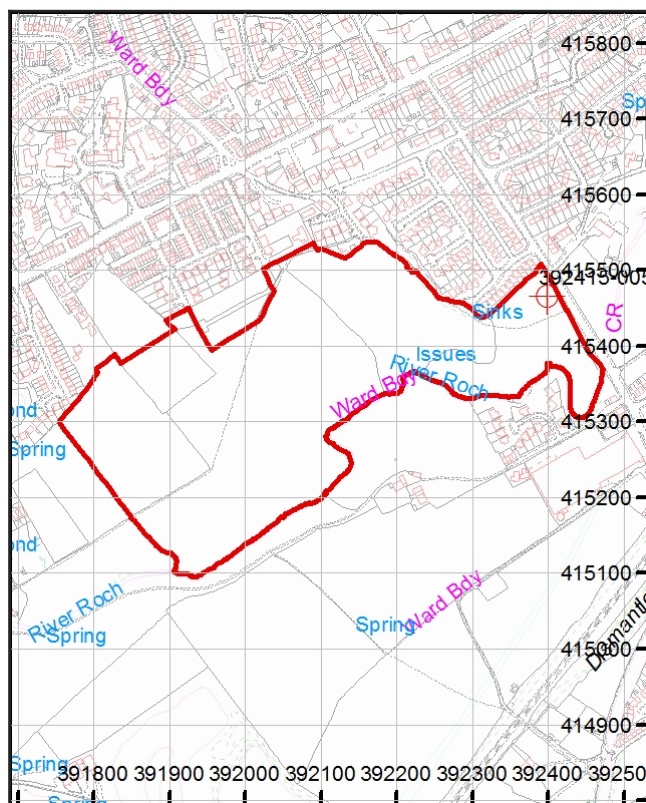
Enquiry boundary

Key

Approximate position of enquiry boundary shown



Disused mineshaft



How to contact us

0345 762 6848 (UK)
+44 (0)1623 637 000 (International)

200 Lichfield Lane
Mansfield
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 /coalauthority



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APPENDIX D

COAL AUTHORITY PERMISSIONS CERTIFICATE



The Coal
Authority

Permit to Enter or Disturb Coal Authority Mining Interests

Permit Reference Number 16478

Name and Address of Permit Holder:

*Taylor Wimpey UK Ltd
Gate house
Turnpike Road
High Wycombe
Buckinghamshire
HP12 2NR*

Site Location:

*Land at Smithy Bridge Road
Greengate
Rochdale
OL16 2SP*

This certificate hereby grants the above named Permit Holder a Permit to carry out:-

Investigation of mine workings by eight boreholes to 40m bgl

Investigation of mine entry 392415-005 by trial trenching or probe drilling

within the Authority's mining interests at the identified site location for the period of 12 months from the granted date shown below. The granting of this Permit does not constitute advice given by the Authority in relation to the proposed operations. It is the Applicant's responsibility to obtain appropriate health, safety, environmental, technical and legal advice.

Signed: *Helen Day* Granted Date: *22/08/2018*

For and on behalf of The Coal Authority

Nominated Representative: Helen Day, Permitting Manager;

The Coal Authority, Permitting Office, 200 Lichfield Lane, Mansfield, Notts, NG18 4RG

Tel: 01623 637339; E-Mail: permissions@coal.gov.uk

APPENDIX E

LABORATORY CONCRETE STRENGTH TESTING

RESULTS



TEST REPORT

Client LK Consult Ltd

Address Unit 29 Eton Business
Eton Hill Road
Radcliffe
Greater Manchester
M26 2ZS

Contract LKC 18 1005 –
Smithybridge, Littleborough

Job Number MRN 3524/53
Date of Issue 26 March 2019
Page 1 of 4

Approved Signatories

S J Hutchings, O P Davies

Notes

- 1 All remaining samples and remnants from this contract will be disposed 28 days from the date of this report unless you notify us to the contrary.
- 2 Result certificates, in this report, not bearing a UKAS mark, are not included in our UKAS accreditation schedule.
- 3 Opinions and interpretations expressed herein are outside the scope of our UKAS accreditation
- 4 Certified that the samples have been examined and tested in accordance with the terms of the contract/order and unless otherwise stated conform to the standards/specifications quoted. This does not, however, guarantee the balance of the materials from which the tested samples have been taken to be of equal quality.





TEST CERTIFICATE
DETERMINATION OF THE COMPRESSIVE STRENGTH AND DENSITY OF CONCRETE
CORES

BS EN 12504-1: 2009 & 12390-7: 2009

Client LK Consult Ltd
Address Unit 29 Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester
M26 2ZS

Site **LKC 18 1005 -**
Smithybridge, Littleborough

Job No. MRN 3524/53

Laboratory Sample Number 82147

Site Reference Number Concrete Core 1

Date of Receipt 13 March 2019 **Date Cast** Not Advised **Date of Test** 18 – 22 March 2019

Dimensions

Length received	Max = 271 mm Min = 240 mm	Diameter	117 mm
Length after preparation	122 mm	Length/diameter ratio	1.04

Method of End Preparation Saw/HAC Mortar Capping **Time in Water prior to test** N/A

Reinforcement in test specimen	No	Number of bars	0
Reinforcement diameter	N/A	Distance to top of prepared specimen	N/A

Aggregate	Limestone Aggregate	Estimated maximum size 20mm	Distribution Even
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Date of Drilling Not Advised

Drilled by Others

Density , as received by water displacement	2360 kg/m ³
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Compressive Strength

Load at Failure kN	438.4	Measured Compressive Strength N/mm ²	40.8
Mode of Failure	Normal	Surface Condition at Time of Test	SSD

Compressive Strength 40.8 N/mm²

Insitu Cube Strength 41.5 N/mm²

Comments/Deviations from standard method/Abnormalities noted during visual inspection
None, Compaction Good, Excess Voidage = 0.5%

Name O.P. Davies BA (Hons)
Laboratory Manager

Signature

Date 26 March 2019



TEST CERTIFICATE
DETERMINATION OF THE COMPRESSIVE STRENGTH AND DENSITY OF CONCRETE
CORES

BS EN 12504-1: 2009 & 12390-7: 2009

Client LK Consult Ltd
Address Unit 29 Eton Business Park
Eton Hill Road
Radcliffe
Greater Manchester
M26 2ZS

Site LKC 18 1005 -
Smithybridge, Littleborough

Job No. MRN 3524/53

Laboratory Sample Number 82148

Site Reference Number Concrete Core 2

Date of Receipt 13 March 2019 **Date Cast** Not Advised **Date of Test** 18 – 22 March 2019

Dimensions

Length received	Max = 216 mm Min = 169 mm	Diameter	117 mm
Length after preparation	120 mm	Length/diameter ratio	1.03

Method of End Preparation Saw/HAC Mortar Capping **Time in Water prior to test** N/A

Reinforcement in test specimen	No	Number of bars	0
Reinforcement diameter	N/A	Distance to top of prepared specimen	N/A

Aggregate	Limestone Aggregate	Estimated maximum size 20mm	Distribution Even
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Date of Drilling Not Advised

Drilled by Others

Density , as received by water displacement	2400 kg/m ³
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Compressive Strength

Load at Failure kN	584.5	Measured Compressive Strength N/mm ²	54.4
Mode of Failure	Normal	Surface Condition at Time of Test	SSD

Compressive Strength 54.4 N/mm²

Insitu Cube Strength 55.0 N/mm²

Comments/Deviations from standard method/Abnormalities noted during visual inspection
None, Compaction Good, Excess Voidage = 0.5%

Name O.P. Davies BA (Hons)
Laboratory Manager

Signature

Date 26 March 2019



TEST CERTIFICATE
DETERMINATION OF THE COMPRESSIVE STRENGTH AND DENSITY OF CONCRETE
CORES

BS EN 12504-1: 2009 & 12390-7: 2009

Client LK Consult Ltd
Address Unit 29 Eton Business Park
 Eton Hill Road
 Radcliffe
 Greater Manchester
 M26 2ZS

Site LKC 18 1005 -
 Smithybridge, Littleborough

Job No. MRN 3524/53

Laboratory Sample Number 82149

Site Reference Number Concrete Core 3

Date of Receipt 13 March 2019 **Date Cast** Not Advised **Date of Test** 18 – 22 March 2019

Dimensions

Length received	Max = 210 mm Min = 172 mm	Diameter	117 mm
Length after preparation	122 mm	Length/diameter ratio	1.04

Method of End Preparation Saw/HAC Mortar Capping Time in Water prior to test N/A

Reinforcement in test specimen	No	Number of bars	0
Reinforcement diameter	N/A	Distance to top of prepared specimen	N/A

Aggregate	Limestone Aggregate	Estimated maximum size 20mm	Distribution Even
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Date of Drilling Not Advised

Drilled by Others

Density , as received by water displacement	2400 kg/m ³
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Compressive Strength

Load at Failure kN	545.5	Measured Compressive Strength N/mm ²	50.7
Mode of Failure	Normal	Surface Condition at Time of Test	SSD

Compressive Strength 50.7 N/mm²

Insitu Cube Strength 51.6 N/mm²

Comments/Deviations from standard method/Abnormalities noted during visual inspection
 None, Compaction Good, Excess Voidage = 0.5%

Name O.P. Davies BA (Hons)
 Laboratory Manager

Signature

Date 26 March 2019