



Permit Ref.	<b>14005</b>	Project / Site Location	Oakenholt, Flint,
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Please complete and return this e-form within **3 months** of the permitted works being completed. It is supplementary to, and should form part of, the full completion/validation reporting.

Where relevant the report should include; borehole logs and details of mine or mine entry treatment works carried out (incl. engineering drawings, grout takes etc.) and a scaled site layout plan (correlated to O.S N' Grid) showing all relevant mine entry positions, coal seams, voids and broken ground proved by the works.

### Summary of works

Start date

06/06/2017

Finish date

23/06/2017

Have variations occurred to the scope / design of the works since the Permit was granted? ☒ No, ☐ Yes.

If yes, please describe;

### Did if any of the following incidents occur?

- ☐ Spontaneous combustion, ☐ Water emission, ☐ Gas emission (elevated or above action levels)  
☐ Geotechnical instability, ☐ Legal issues incl. damage or potential claims, ☒ None

If yes, please detail each item;

### If shallow coal or coal workings were encountered please describe the conditions.

- ☐ Intact coal only, ☐ Broken ground, ☐ Backfilled ground, ☐ Voids

Please provide a general description;

Will further works be necessary that require a Permit? ☒ No ☐ Yes

If yes, please describe, including any recommendations;

Will the closure information be submitted to the LPA for discharge of a Planning Condition? ☐ No ☒ Yes

Relevant Planning Application Reference No.

Please provide the details;

LPA - Client

Name: M. SCOTT

Email: m.kescott@groundsolve.com

Company: Groundsolve LTD

Tel: 01244 661 361

REF: 1944/ORC/CAclosure/sdi

Permitting Office  
Coal Authority  
200 Lichfield Lane  
Berry Hill  
Mansfield  
Nottinghamshire  
NG18 4RG

26<sup>th</sup> July 2017

Dear Sirs,

**RE: CA Reference 14005: Mine Shaft Location & Treatment, Oakenholt, Flintshire.**

We have now completed our investigation works for Mine shaft reference 326371-002.

This letter report provides full details of the works undertaken, as required by the original permit terms and conditions. The Permit Closure Summary Form is also enclosed.

***Background***

A Coal Authority report identified the presence of a mine shaft on a site in Oakenholt in Flintshire, reference 326371-002.

A shaft data sheet identified the source of the information to be as follows:

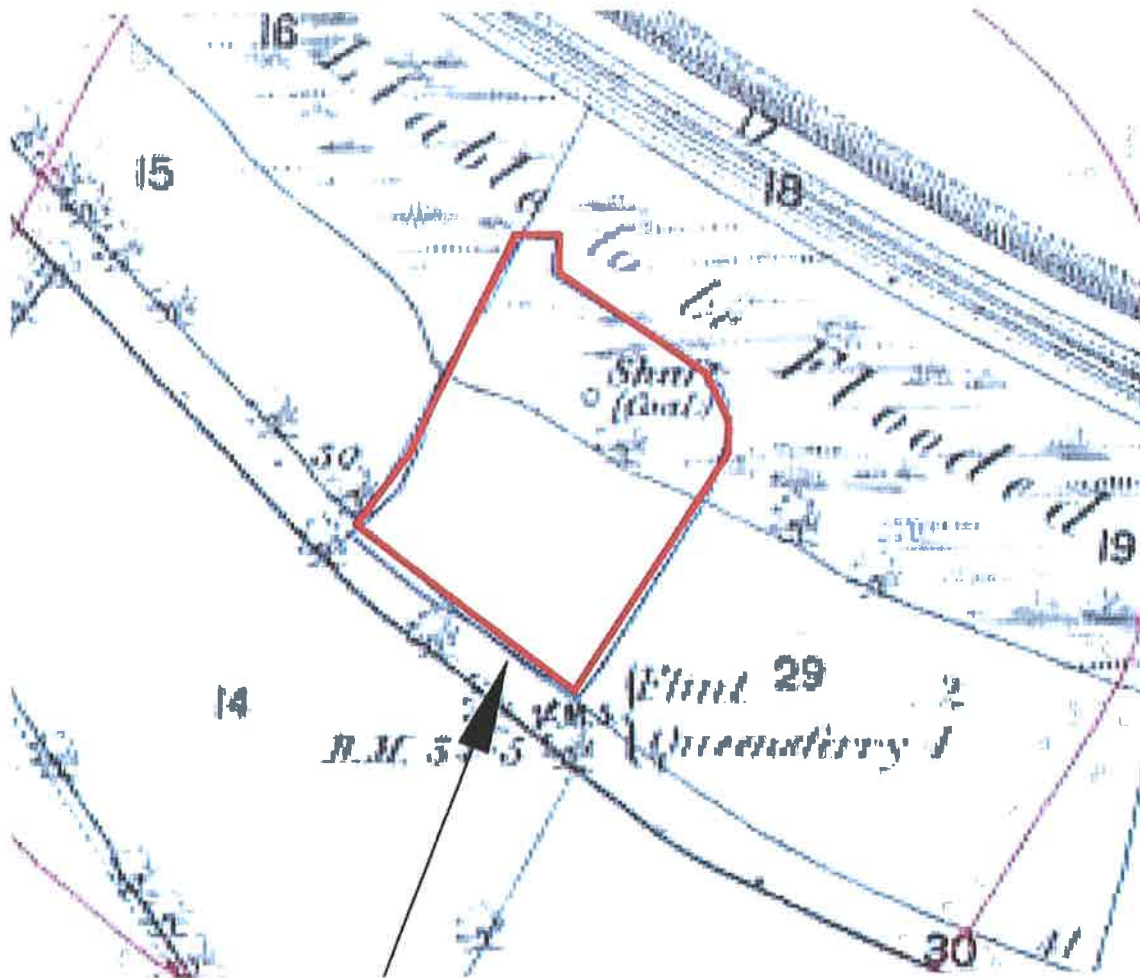
- 1870 OS plan,
- Geology plan dated 1923 at a scale of 1:10,560.

The depth of the shaft was given as 54.90m. The data sheet is presented in Appendix A.

In addition, a shaft, reference 326371-015 was shown immediately east of the site, with the source being the 1870 OS plan, no depth information was submitted.

The desk study information, in particular the 1870 OS plan, shows shaft 002 was in an area liable to flooding. In addition, shaft 015 is not shown on the 1870 plan, not appearing until the 1899 plan, see below.

The desk study and site investigation proved that the area occupied by shaft 002 was backfilled in the 1940's. Subsequent investigation proved several metres of ash and clinker fill, with a high ground water table.



1870 OS plan

### ***Description of Works Undertaken***

The scope of works covered by the permit comprised “investigation to locate and treat by grouting one mine entry (326371-002)”, see Appendix B.

It should be noted that the fact that a good OS source was available for the shaft, meant that an accurate grid reference could be obtained and set out on site using a GPS system.

In the first instance, a tracked excavator was used to excavate at the location of the shaft. However, the loose nature of the fill and the high groundwater table meant that the excavation quickly became unstable and had to be abandoned.

Therefore, and in accordance with the permit conditions, a rotary drilling rig was mobilised to site to locate the shaft prior to treatment, via probe drilling.

The probe drilling was carried out on a 1m by 1m grid, in an anticlockwise spiralling-outwards pattern starting at the recorded position of the shaft. Once rockhead was proven (to a minimum

thickness of 1.5m), the borehole was terminated and the probing pattern continued out to a 10m radius from the anticipated shaft location.

A plan showing the locations of the individual probe holes is presented on Figure 1.

The ground conditions comprised approximately 4-5m of loose ash fill, overlying soft tidal flat deposits, predominantly clays and silts. The presence of the loose ash fill caused a loss of flush while drilling through the deposit, and rockhead could therefore only be determined by the onset of “firm drilling” conditions, rather than by identification of rock in the drill flush returns. The driller’s logs are presented in Appendix C, along with the contractor’s records of borehole locations.

The depth to rockhead recorded within the probe holes was very consistent, with rockhead typically encountered at a depth of 10.5m below existing ground level. A small cluster of five boreholes, at the northwesternmost perimeter of the probing grid, encountered rockhead from a greater depth of between 13.0-14.0m below existing ground level. Rockhead was subsequently proven for another 1-2m (to 15.0m depth) before these probe holes were terminated.

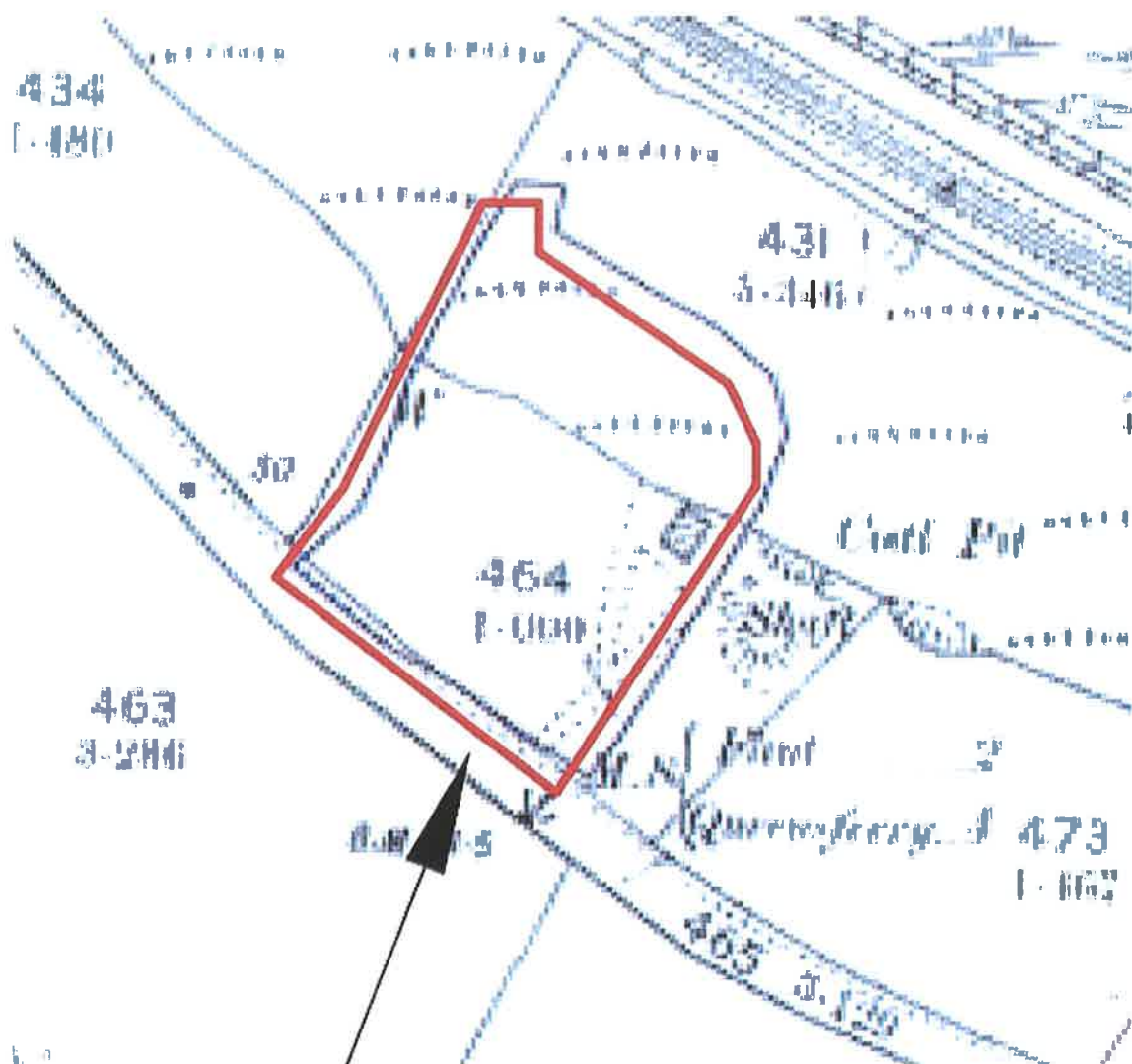
### ***Discussion of Investigation Findings***

Out of 347 locations drilled around the recorded location of the shaft, rockhead was encountered at 10.5m depth in 342 of the probe holes. A cluster of five probe holes, at the north-western limit of the drilling grid, encountered rockhead at slightly greater depths of between 13.0 and 14.0m depth, proved to a depth of 15.0m.

No evidence of a shaft, shaft liner, or any backfill material (other than the made ground known to be present on site) was encountered, and subsequently no shaft treatment has been carried out.

The recorded position of the shaft 002 is based on the 1870, 1: 2,500 scale Ordnance Survey (OS) plan, which showed the shaft as a well-defined feature, although no evidence of any spoil heaps is shown surrounding the shaft. The area where the shaft is located is recorded as “liable to be flooded”, with higher ground evident immediately to the south of the shaft location.

The subsequent 1889 OS plan no longer shows shaft 002, but a new shaft 015 is recorded 30m to the southeast of the site boundary, with spoil surrounding its location, see below.



1899 OS plan

It is therefore considered likely that the shaft 002 was a trial, which was quickly abandoned due to flooding issues, and shaft 015 was subsequently sunk on the higher ground to the southeast, which means that the records held by the Coal Authority will need to be amended.

### ***Conclusion***

Based on the lack of spoil surrounding shaft 002 location, and no evidence of a shaft encountered during the probe drilling, despite there being an accurate record of its location. It is therefore considered unlikely that a shaft was ever excavated to significant depth at this location, or that workings were pursued from the shaft.

The recorded depth for shaft 002 of 54.9m is more likely to be attributed to the nearby shaft 015, for which no depth is recorded.



Based on the above findings, no further investigation or shaft treatment works are considered necessary, and no special precautions will be required for any proposed development at the recorded location of the shaft.

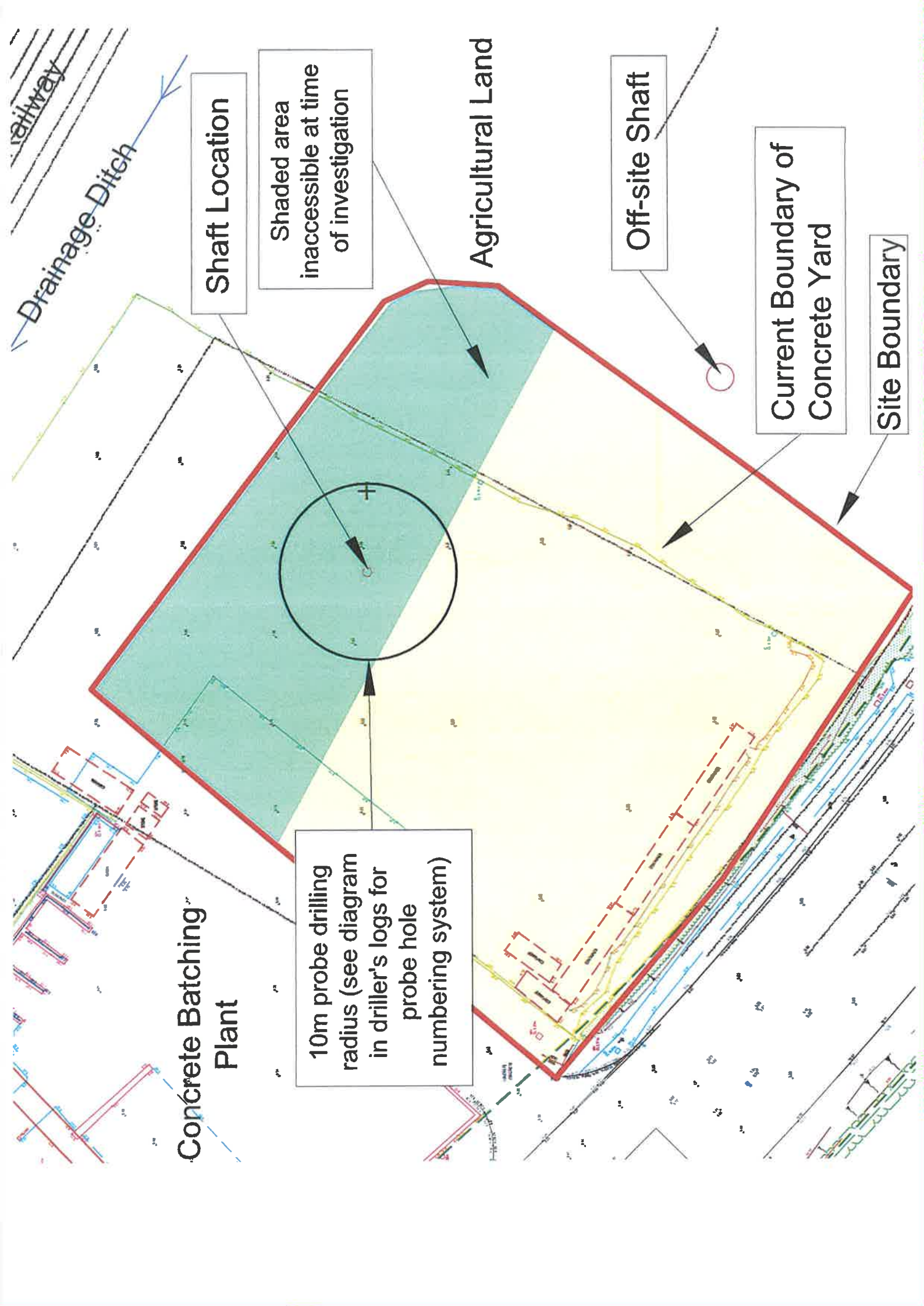
We trust this is satisfactory, should you have any queries please call Stefan Imiolczyk on 01244 661361.

Yours faithfully,



Stefan D Imiolczyk  
Enc.

## FIGURES



railway

Drainage Ditch

Shaft Location

Shaded area  
inaccessible at time  
of investigation

Agricultural Land

Off-site Shaft

Current Boundary of  
Concrete Yard

Site Boundary

Concrete Batching  
Plant

10m probe drilling  
radius (see diagram  
in driller's logs for  
probe hole  
numbering system)



## **APPENDIX A**

### **Shaft data sheet**



**The Coal  
Authority**

Issued by:

The Coal Authority, Property Search Services, 200 Lichfield Lane, Berry Hill, Mansfield, Nottinghamshire, NG18 4RG

Website: [www.groundstability.com](http://www.groundstability.com) Phone: 0345 762 6848

**TERRACONSULT  
BOLD BUSINESS CENTRE  
BOLD LANE  
BOLD  
ST HELENS COUNCIL  
WA9 4TX**

Our reference:	<b>51001306125001</b>
Your reference:	<b>3124-Oakenholt HWRC</b>
Date of your enquiry:	<b>07 December 2016</b>
Date we received your enquiry:	<b>07 December 2016</b>
Date of issue:	<b>07 December 2016</b>

This report is for the property described in the address below and the attached plan.

### **Shaft Plan and Data Sheets**

### **OAKENHOLT, FLINTSHIRE, CH6 5SF**

I refer to the enquiry dated 07 December 2016, received 07 December 2016, in connection with the above.

As requested I enclose the mine entry data sheet(s) held for the mine entry/entries referred to.

### ***Mine Entry Data***

Shaft/adit:	Shaft
Reference:	326371-015
Source:	OS: 1/2500 plan FL 10/5 - 1870 edition.
Colliery name:	Unknown
Entry name:	Unknown
Date abandoned:	Unknown
Depth of superficial deposits (m):	Unknown
Depth of shaft (m):	Unknown
Diameter of shaft (m):	Unknown
Probable adit azimuth:	Not Applicable
Treatment details:	Unknown
Conveyance:	Not Applicable
Easting:	326676
Northing:	371406
Other information:	Yes

**Mine Entry Data (continued)**

Shaft/adit:	Shaft
Reference:	326371-002
Source:	OS: 1/2500 plan FL 10/5 - 1870 edition. Geol: 1/10560 geological plan FL 10 NW - 1923 edition.
Colliery name:	Unknown
Entry name:	Unknown
Date abandoned:	Unknown
Depth of superficial deposits (m):	Unknown
Depth of shaft (m):	54.9
Diameter of shaft (m):	Unknown
Probable adit azimuth:	Not Applicable
Treatment details:	Unknown
Conveyance:	Not Applicable
Easting:	326654
Northing:	371446
Other information:	Yes

## **APPENDIX B**

Coal Authority Permit





The Coal  
Authority

# Permit to Enter or Disturb Coal Authority Mining Interests

**Permit Reference Number 14005**

**Name and Address of Permit Holder:**

*Flintshire County Council  
County Hall  
Mold  
CH7 6NA*

**Site Location:**

*Oakenholt  
Flint*

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

***Investigation to locate and treat by grouting one mine entry (326371-002)***

**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: *27<sup>th</sup> April 2017*

For and on behalf of The Coal Authority

*Nominated Representative: Helen Day, Permitting Technical Officer;  
The Coal Authority, Permitting Office, 200 Lichfield Lane, Mansfield, Notts, NG18 4RG  
Tel: 01623 637339; E-Mail: [permissions@coal.gov.uk](mailto:permissions@coal.gov.uk)*

## **APPENDIX C**

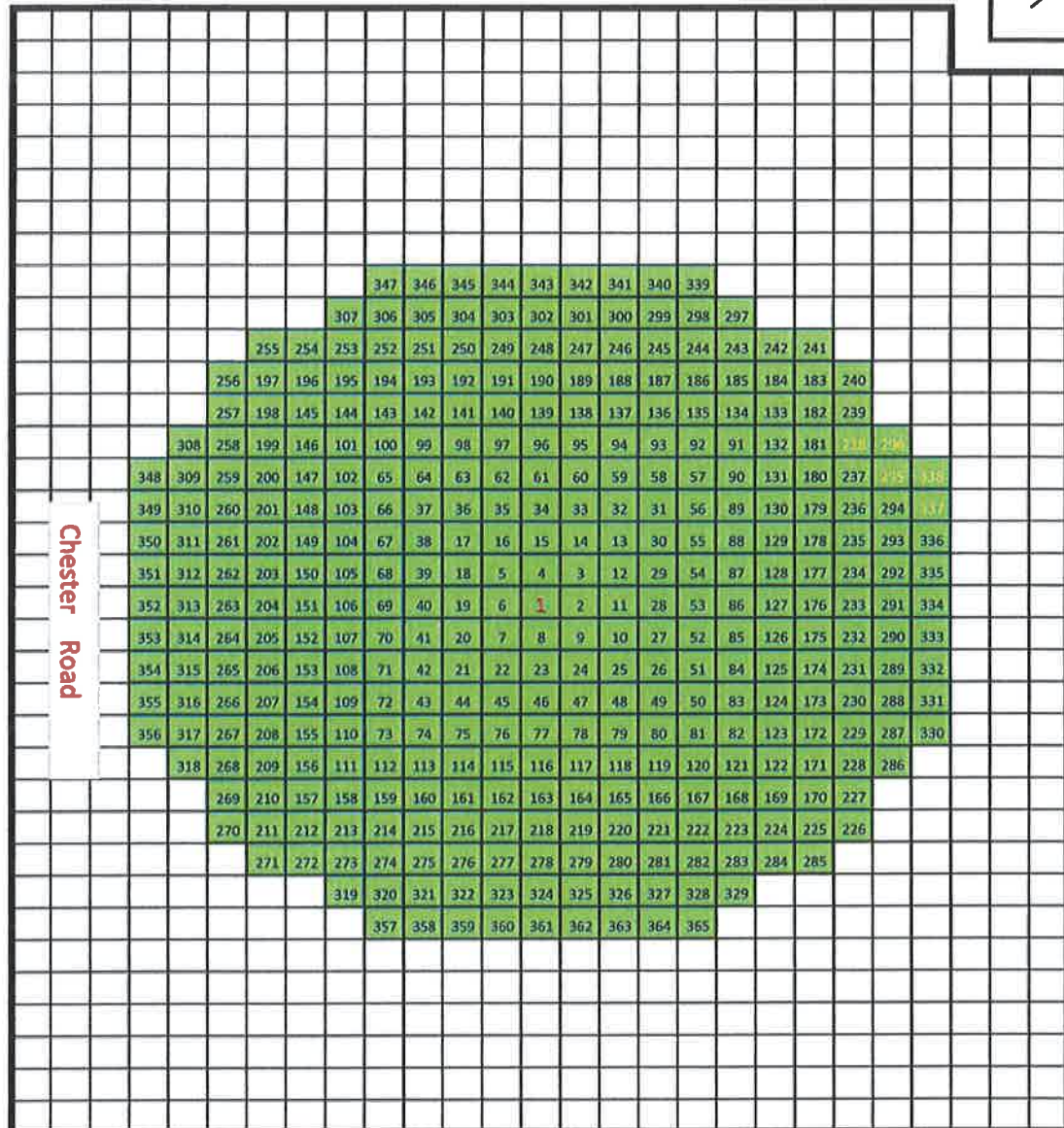
### **Contractors Records**

**FOREMAN'S DAILY JOURNAL – PLAN OF PROBE DRILLING GRID**

**CONTRACT: Oakenholt, Flintshire**  
**CONTRACT NO.: F766**

DATE: 23/06/2017	DATE HOLE COMMENCED: 06/06/2017	SHAFT NUMBER: 326371-002	GRID SPACING: 1.0m	SHEET NUMBER: 1
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**Holes Drilled Up To Week Ending 25/06/2017**



**Notes**



Set Out Position of Shaft



Firm Drilling Encountered at 10.5m BGL



Firm Drilling Encountered at 13.0m to 14.0m BGL

DRAWING BY: Iain Harron

Contract: <b>FLINT (OAKENHOLT)</b>			Contract No: <b>F766</b>		Date: <b>6-6-17</b> Date Commenced:	Sheet No: <b>(DI)</b>	Ground Level (m): <b>TBC</b>			
Drilling Method: <b>RP</b>			Drilling Equipment / Rig No: <b>KLEMM B60604</b>			Drilling / Casing Diam (mm): <b>75mm</b>			Bit Type: <b>BB</b>	Flush Type: <b>WATER</b>
Borehole No	Angle of Hole	Strata Thickness (m) From      To		Description of Strain	Depth of Casing (m)			Flush Return (%)	Final Depth Borehole (m)	
<b>1</b>	<b>V</b>	<b>CL</b>	<b>10.50</b>	<b>SOFT</b>						
	<b>1</b>	<b>10.50</b>	<b>12.00</b>	<b>HARD</b>						
	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>						
	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>						
	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>						
<b>8</b>	<b>1</b>	<b>CL</b>	<b>10.50</b>	<b>SOFT</b>						
	<b>1</b>	<b>10.50</b>	<b>12.00</b>	<b>HARD</b>						
Hours Worked on Site				Remarks: Standing Time / Weather Conditions / Groundwater etc:			Signed for Forkers Ltd:			
From	To	Total		<b>WAIT FOR TANK TO FILL SET UP SITE + FENCE OFF</b>			<b>L. Cosgrove</b> Signed for Client			

Contract:		Contract No:		Date:	Sheet No:	Ground Level (m):		
FLINT (OAKENHOLT)		F766		7-6-17	D2	TRC		
Date Commenced:		Drilling Method:		Drilling Equipment / Rig No:		Drilling / Casing Diam (mm):		
		RP		KLEMM B60604		75mm		
Bit Type:		Flush Type:						
BB		WATER						
Borehole No	Angle of Hole	Strata Thickness (m)		Description of Strata		Depth of Casing (m)	Flush Return (%)	Final Depth Borehole (m)
		From	To					
9	✓	0	10.50	SOFT				
'	'	10.50	12.00	HARD				
'	'	'	'	'				
'	'	'	'	'				
'	'	'	'	'				
'	'	'	'	'				
49	'	0	10.50	SOFT				
	'	10.50	12.00	HARD.				
Hours Worked on Site		Remarks: Standing Time / Weather Conditions / Groundwater etc:		Signed for Forkers Ltd:				
From	To	Total		L. Cosgrove				
				Signed for Client				



Contract:			Contract No:		Date:	Sheet No:	Ground Level (m):	
FLINT (OAKENHOLT)			F766		8.8-17	D3	TBC	
Drilling Method:			Drilling Equipment / Rig No:		Drilling / Casing Diam (mm):		Bit Type:	Flush Type:
RP			KLEMM B6060F		75mm		BB	WATER
Borehole No	Angle of Hole	Strata Thickness (m)		Description of Strata	Depth of Casing (m)	Flush Return (%)	Final Depth Borehole (m)	
		From	To					
P50	V	CL	10.50	SOFT				
'	'	10.50	12.00	HARD				
'	'	'	'	'				
'	'	'	'	'				
'	'	'	'	'				
'	'	'	'	'				
P91	I	CL	10.50	SOFT				
	I	10.50	12.00	HARD				
Hours Worked on Site					Remarks: Standing Time / Weather Conditions / Groundwater etc:		Signed for Forkers Ltd:	
From	To	Total	L. Cosgrove					
					Signed for Client			

Contract:			Contract No:		Date:	Sheet No:	Ground Level (m):	
FLINT (OAKENHOLT)			F766		9-6-17	D4	TBC	
Drilling Method:			Drilling Equipment / Rig No:		Drilling / Casing Diam (mm):		Bit Type:	Flush Type:
RP			KLEMM B60604		75mm		BR	WATER
Borehole No	Angle of Hole	Strata Thickness (m)		Description of Strata	Depth of Casing (m)	Flush Return (%)	Final Depth Borehole (m)	
		From	To					
P 92	V	CL	10.50	SOFT				
	1	10.50	12.00	HARD				
	1	1	1	1				
	1	1	1	1				
	1	1	1	1				
P 132	1	1	1	1				
	1	CL	10.50	SOFT				
	1	10.50	12.00	HARD				
Hours Worked on Site				Remarks: Standing Time / Weather Conditions / Groundwater etc:		Signed for Forkers Ltd:		
From	To	Total						
					L. COSGROVE			
					Signed for Client			

## X/C/000/AP19

Costs of a Group Insurance Estimate

**Golds Green House, Shaw Street, West Bromwich, West Midlands B70 0TX**  
Tel: 0121 505 1010 • Email: [admin@forkers.com](mailto:admin@forkers.com)

[illegible]

## X/C/000/AP19

**FORN & SONS LTD**  
 1001 & 9000 Island Avenue, Seattle, WA 98148

**Gold's Green House, Shaw Street, West Bromwich, West Midlands B70 0TX**  
Tel: 0121 505 1010 • Email: [admin@forkers.com](mailto:admin@forkers.com)

[illegible]



## X/C/000/AP19

Cost &amp; Groundhog Spring Estimates

**Golds Green House, Shaw Street, West Bromwich, West Midlands B70 0TX**  
**Tel: 0121 505 1010 • Email: [admin@forkers.com](mailto:admin@forkers.com)**

Contract: FLINT				Contract No: FT66		Date: 14-6-17 Date Commenced:		Sheet No: (D7)		Ground Level (m): TBC			
Drilling Method: RA				Drilling Equipment / Rig No: KLEMM BLOWOFF		Drilling / Casing Diam (mm): 75mm		Bit Type: BB		Flush Type: WATER			
Borehole No		Angle of Hole		Strata Thickness (m)		Description of Strata		Depth of Casing (m)		Flush Return (%)		Final Depth Borehole (m)	
				From To									
P218		V		CL 10.50		SOFT							
1		1		10.50 12.00		HARD							
1		1		1		1							
1		1		1		1							
1		1		1		1							
P237		1		CL 10.50		SOFT							
1		1		10.50 12.00		HARD							
P238		V		CL 13.00		SOFT							
1		1		13.00 15.00		HARD							
P239		V		CL 10.50		SOFT							
1		1		10.50 12.00		HARD							
1		1		1		1							
1		1		1		1							
1		1		1		1							
P258		1		CL 10.50		SOFT							
1		1		10.50 12.00		HARD							
Hours Worked on Site				Remarks: Standing Time / Weather Conditions / Groundwater etc:						Signed for Forkers Ltd:			
From		To		Total		Signed for Client							



