



# Geotechnical Survey Report

FSI Ref: 29914  
Issue Date: October 2025

Risk Address: 4 Teal Drive  
Northwood  
Middlesex  
HA6 2PT

Company: Crawford  
Claim Ref: 1875934

Managing Director: Martin Rush MSc FGS  
Finance Director: Louise Banks BSc (Hons)

Laboratory Manager: Jade McLellan

Senior Geologist: Thomas Lee BSc (Hons)  
Assistant Geologist: Bradley Webb BSc (Hons)  
Geotechnical Assistant: Sarah Brand

It is possible that other conditions exist elsewhere on this site, not revealed by the Boreholes or Trial Pits and thus will not have been taken into account.  
Any reference to ground water relates specifically to the time of the investigation and does not account for any variations due to seasonal or other effects.

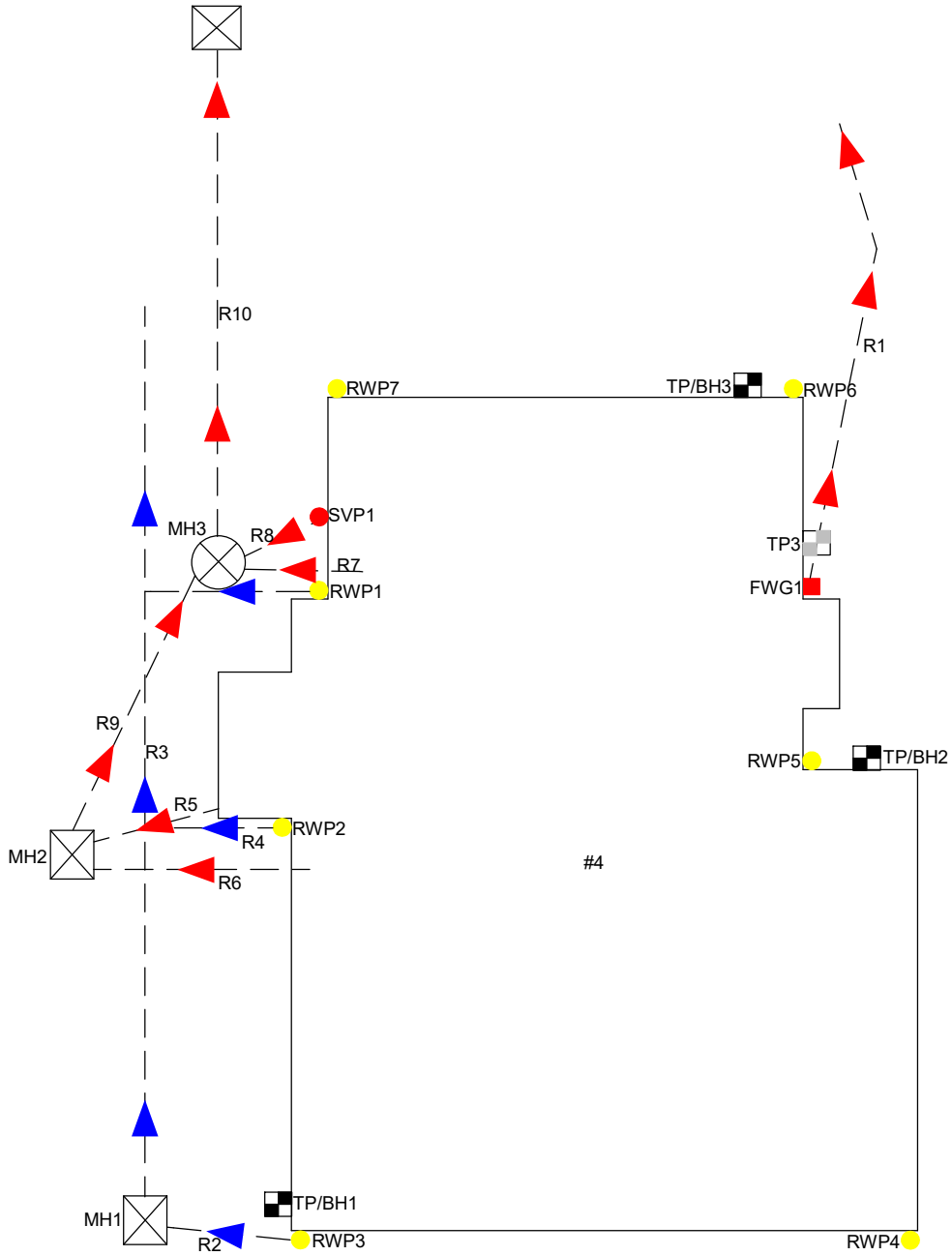
## SITE PLAN

**Property Address:** 4 Teal Drive, Northwood, Middlesex, HA6 2PT

**Client Claim Ref:** 1875934

**Survey date:** 04/10/2025

**Operative:** SE2



TP3 moved due to FWG1 running through it, there are no leaks detected in Run1 but standing water is noted in the first attempt of TP3.

<b>Scale:</b> NTS	<b>Drawn by:</b> BW	<b>Key:</b>	Trial Pit	Manholes	Rain Water Pipe	Surface Water Gully	Shrub	Tree (Conifer)	Tree (Deciduous)
		Borehole	Soil & Vent Pipe	Foul Water Gully					

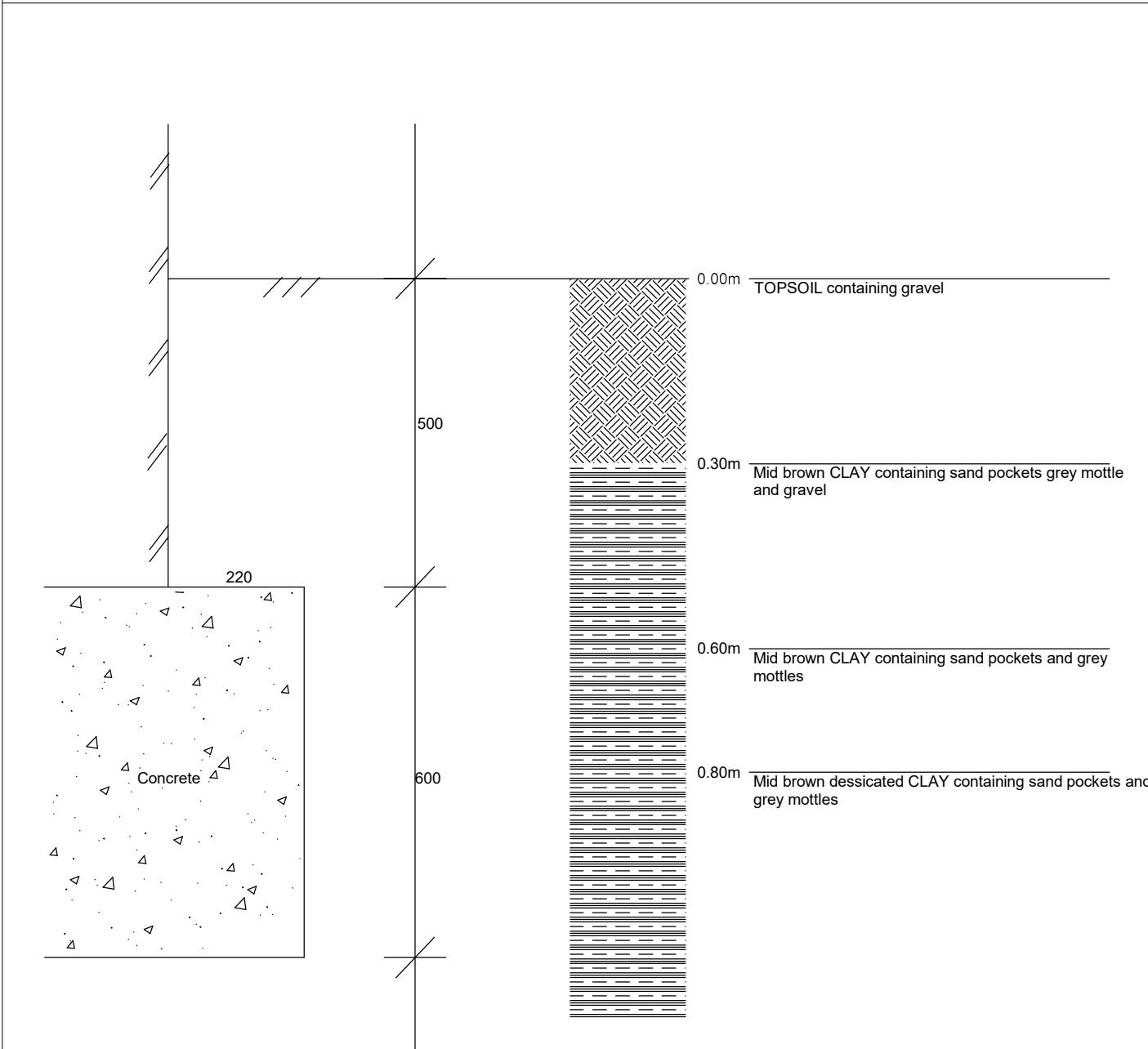
## TRIAL PIT 1

**Property Address:** 4 Teal Drive, Northwood, Middlesex, HA6 2PT

**Client Claim Ref:** 1875934

**Survey date:** 04/10/2025

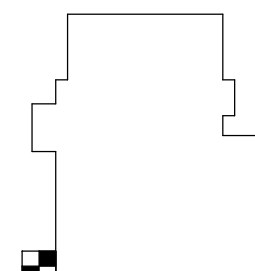
**Operative:** SE2



D1 @ F.L. (1.10m)

V = 140+kPa

Founding strata: Mid brown dessicated CLAY containing sand pockets and grey mottles

<p><b>Trial Pit Location:</b></p> 	<p><b>Drawn by:</b></p> <p style="text-align: center;">BW</p>
<p><b>Scale:</b></p> <p style="text-align: center;">1:10</p>	

D= small disturbed sample, B= large bulk sample, U= undisturbed sample, MP= mackintosh probe blow counts, V= shear vane reading (kPa)



Fastrack Site Investigations Ltd  
Unit 9, Tyndales Farm  
Southend Road  
Maldon CM9 6TQ

# Borehole Log

Borehole No.

**BH1**

Sheet 1 of 1

Project Name: 1875934

Project No.  
29914

Site Date: 04/10/2025

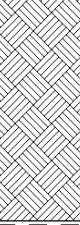

Hole Type  
BH

Location: 4 Teal Drive, Northwood, Middlesex, HA6 2PT

Scale  
1:10

Client: Crawford

Logged By  
SE2

Water Strikes	Sample and In Situ Testing			Depth (m)	Legend	Stratum Description
	Depth (m)	Type	Results			
				0.30		TOPSOIL containing gravel
						Mld brown CLAY containing sand pockets grey mottle and gravels
						<u>Foundation top-0.50m ( concrete construct projecting 220mm with a thickness of 600mm)</u>
						<u>CLAY noted to no longer contain gravels by 0.60m</u>
						<u>CLAY noted to be desiccated by 0.80m</u>
	1.10	D	V (kPa) = 140			<u>Foundation level-1.10m</u> <u>1-6mm roots noted at F/L</u>
				1.30		End of Borehole at 1.300m

Key: D - Disturbed Sample V - Insitu Vane Test MP - Mackintosh Probe Test

Remarks: Borehole closed at 1.30m due to poor recovery.  
Borehole noted to be dry on completion.



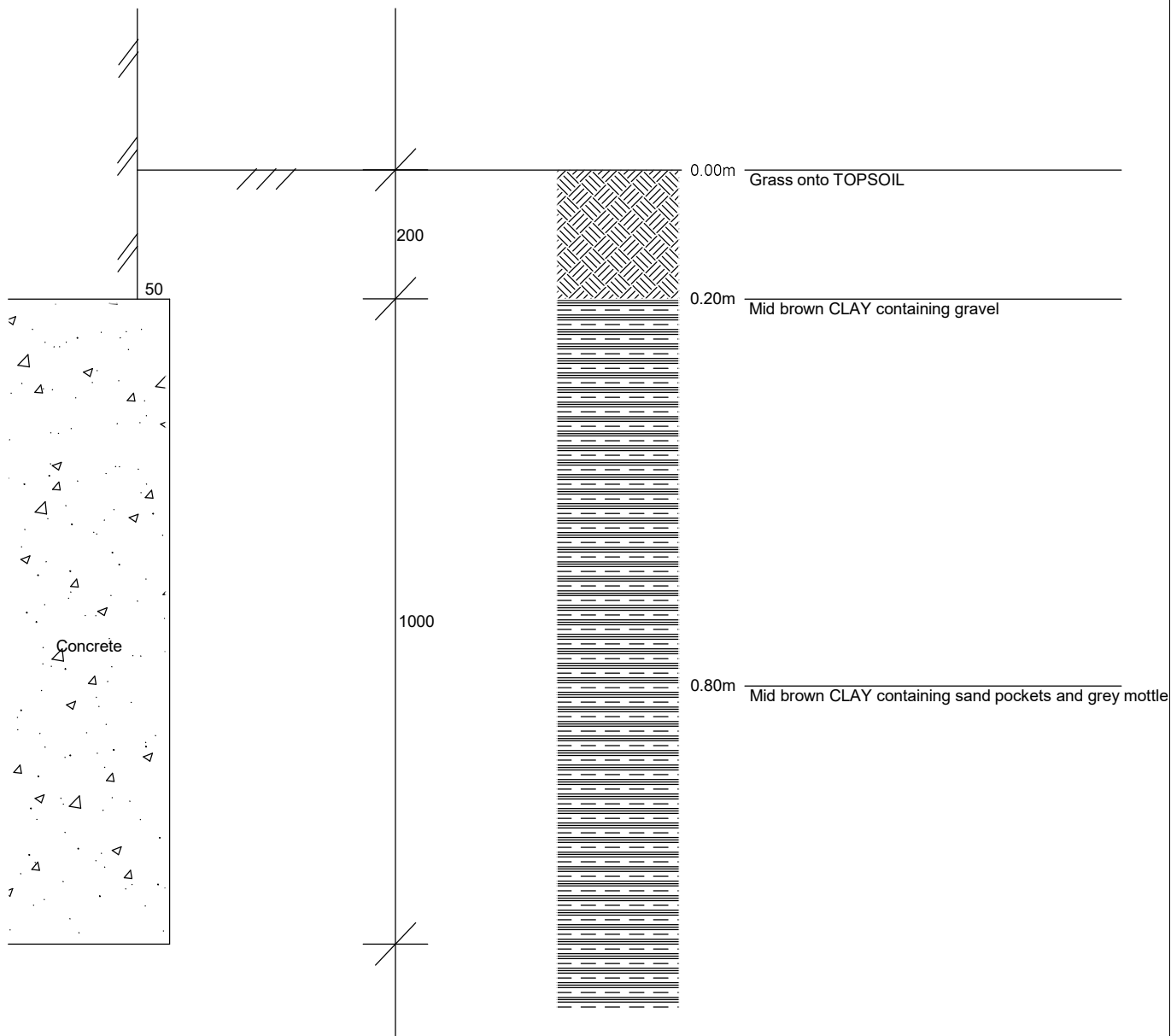
## TRIAL PIT 2

**Property Address:** 4 Teal Drive, Northwood, Middlesex, HA6 2PT

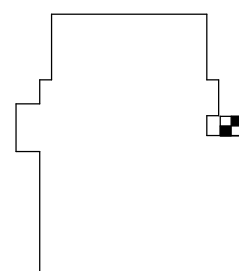
**Client Claim Ref:** 1875934

**Survey date:** 04/10/2025

**Operative:** SE2



D1 @ F.L. (1.20m)  
 V = 98-100kPa  
 Founding strata: Mid brown CLAY containing sand pockets and grey mottle

<b>Trial Pit Location:</b>	<b>Drawn by:</b>
	BW
<b>Scale:</b>	
1:10	

D= small disturbed sample, B= large bulk sample, U= undisturbed sample,  
 MP= mackintosh probe blow counts, V= shear vane reading (kPa)



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# Borehole Log

Borehole No.

**BH2**

Sheet 1 of 1

Project Name: 1875934

Project No.  
29914

Site Date: 04/10/2025


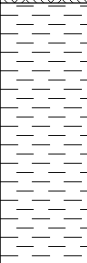
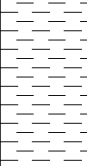
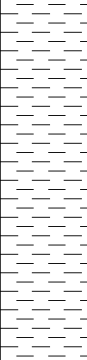
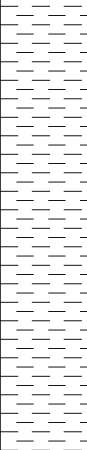

Hole Type  
BH

Location: 4 Teal Drive, Northwood, Middlesex, HA6 2PT

Scale  
1:17

Client: Crawford

Logged By  
SE2

Water Strikes	Sample and In Situ Testing			Depth (m)	Legend	Stratum Description
	Depth (m)	Type	Results			
				0.20		Grass onto TOPSOIL
						Mid brown CLAY containing gravel <i>Foundation top-0.20m (concrete construct projecting 50mm with a thickness of 100mm)</i>
						CLAY noted to contain sand pockets and grey mottles from 0.80m
▼	1.20	D	V (kPa) = 100 V (kPa) = 98			<i>Foundation level-1.20m</i> <i>Water strike-1.20m</i>
	2.00	D	V (kPa) = 92 V (kPa) = 96			
	2.50	D	V (kPa) = 140			
	3.00	D	V (kPa) = 140	3.00		End of Borehole at 3.000m

Key: D - Disturbed Sample V - Insitu Vane Test MP - Mackintosh Probe Test

Remarks: Borehole closed at 3.00m on completion.  
Borehole noted to contain standing water at 1.20m on completion.  
No roots found.



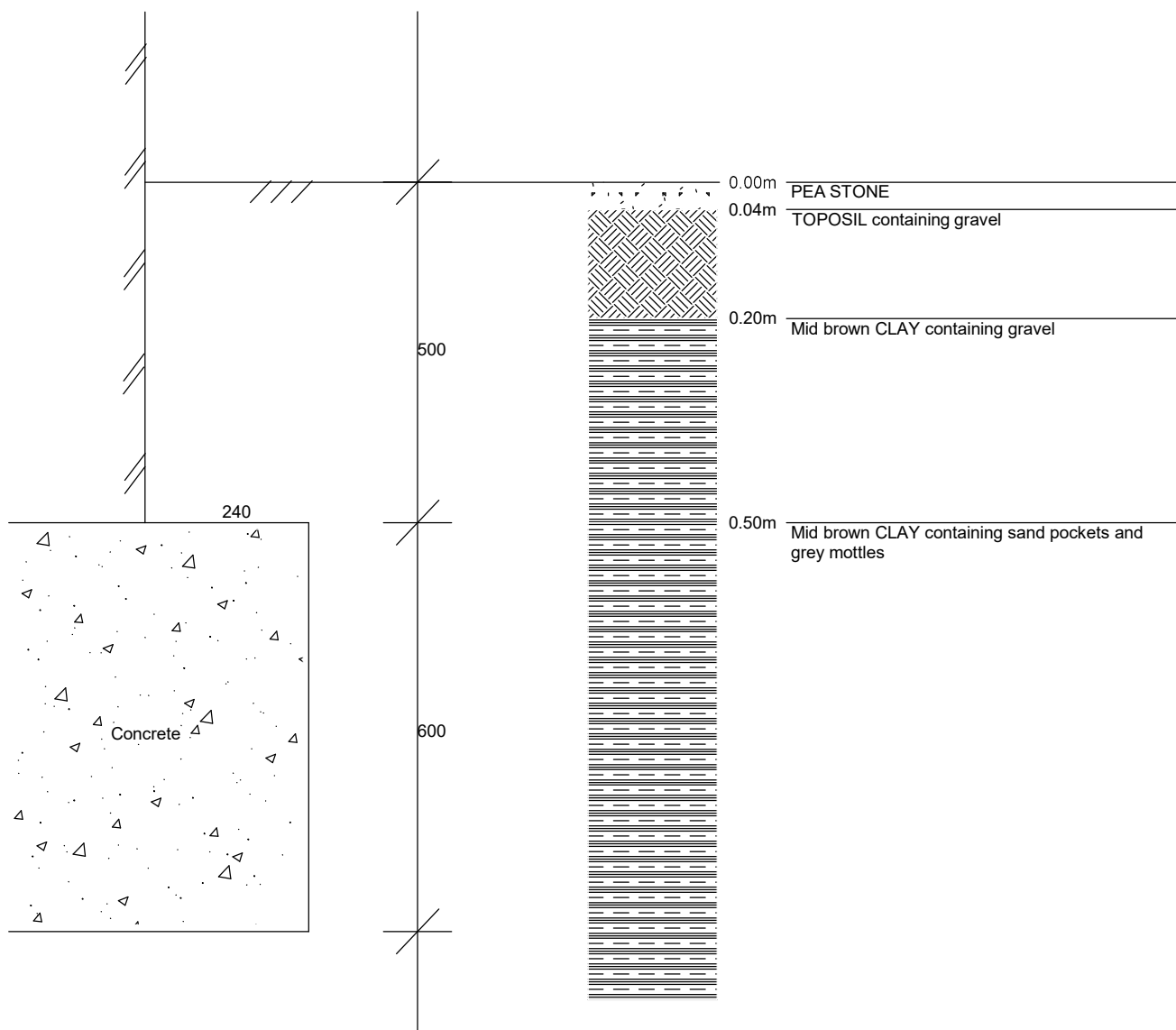
## TRIAL PIT 3

**Property Address:** 4 Teal Drive, Northwood, Middlesex, HA6 2PT

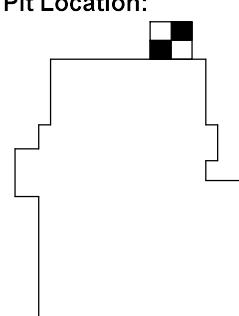
**Client Claim Ref:** 1875934

**Survey date:** 04/10/2025

**Operative:** SE2



D1 @ F.L. (1.10m)  
 V = 100-104kPa  
 Founding strata: Mid brown CLAY containing sand pockets and grey mottles

<p><b>Trial Pit Location:</b></p> 	<p><b>Drawn by:</b></p> <p style="text-align: center;">BW</p>
<p><b>Scale:</b></p> <p style="text-align: center;">1:10</p>	

D= small disturbed sample, B= large bulk sample, U= undisturbed sample,  
 MP= mackintosh probe blow counts, V= shear vane reading (kPa)



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# Borehole Log

Borehole No.

**BH3**

Sheet 1 of 1

Project Name: 1875934

Project No.  
29914

Site Date: 04/10/2025

Hole Type  
BH

Location: 4 Teal Drive, Northwood, Middlesex, HA6 2PT

Scale  
1:17

Client: Crawford

Logged By  
SE2

Water Strikes	Sample and In Situ Testing			Depth (m)	Legend	Stratum Description
	Depth (m)	Type	Results			
				0.04	PEA STONE	
					TOPSOIL containing gravel	
				0.20	Mid brown CLAY containing gravel	
					CLAY noted to contain sand pockets and grey mottles from 0.50m Foundation top-0.50m (concrete construct projecting 240mm with a thickness of 600mm)	
	1.10	D	V (kPa) = 100 V (kPa) = 104		Foundation level-1.10m	1
	1.50	D	V (kPa) = 140			
	2.00	D	V (kPa) = 140			2
	2.50	D	V (kPa) = 140			
	3.00	D	V (kPa) = 140	3.00		3
					End of Borehole at 3.000m	

Key: D - Disturbed Sample    V - Insitu Vane Test    MP - Mackintosh Probe Test

Remarks: Borehole closed at 3.00m on completion.  
Borehole noted to be dry on completion.  
No roots found.



## LABORATORY RESULTS

<b>Property Address:</b>	4 teal Drive, Northwood, Middlesex, HA6 2PT		
<b>Client Claim Ref:</b>	1875934	<b>Client:</b>	Crawford & Company

SAMPLE DETAILS	ANALYSIS REQUESTED
Investigation date: <b>04/10/2025</b>	Water Content <input checked="" type="checkbox"/> PSD <input type="checkbox"/>
Sample details: <b>Bags as received</b>	Liquid Limit <input checked="" type="checkbox"/> Soil Suction <input type="checkbox"/>
Samples received: <b>09/10/2025</b>	Plastic Limit <input checked="" type="checkbox"/> Shear Strength <input type="checkbox"/>
Schedule recieved: <b>09/10/2025</b>	Plasticity Index <input checked="" type="checkbox"/> Contamination <input type="checkbox"/>
Samples tested: <b>09/10/2025-14/10/2025</b>	Root ID <input checked="" type="checkbox"/> Root/Tree DNA <input type="checkbox"/>
Results reported: <b>14/10/2025</b>	Roots obtained <input type="checkbox"/>

## TEST DETAILS

### General

Sample descriptions were written in accordance with BS EN ISO 14688-1:2018.

Samples were prepared in accordance with BS 1377: Part 1: 2016, section 8

Samples from this contract will be retained for 1 calendar month following the issue of this report unless otherwise notified

Written approval is required from Fastrack Site Investigations Limited to reproduce report in full. The results shown within this report only relate to the samples tested. Results will only be released to instructing party or with expressed written permission of the instructing party.

Fastrack Site Investigations Limited take steps to ensure that all staff are aware of the need to act impartially; ensuring that there shall be no conflicts of interest to influence the activities of the Laboratories process or outcomes

### Water Content

Samples were tested in accordance with BS EN ISO 17892 - 1: 2014 (Oven drying method)

In accordance with Note 1 to paragraph 3.2.4 of BS 1377 Part 2 1990; these water contents have been corrected to give the equivalent water content of the fraction passing the 425µm sieve, to enable comparison with the liquid & plastic limits. (If condition of test is 'natural' the retained percentage is an estimated value, if condition is 'washed' the percentage is a measured value).

Samples are dried at 105-110°C unless otherwise stated.

### Atterberg Limits

Samples were tested in accordance with BS EN ISO 17892 - 12:2018, section 5.2 (4 drop LL), 5.2 (1 drop LL), 5.5 (PL) and 6.5 (PI)

Test results on samples with a sand content, may show less accurate results. If condition of test is 'washed' results relate to the fraction passing the 425µm sieve only.

*\* Driscoll's rules deem the soil to be desiccated where the moisture content is less than the value calculated using driscoll's rule 1 and/or 2*

### Particle Size Distribution

Samples were tested in accordance with BS EN ISO 17892-:2016 section 9.2 (Wet sieving method)

### Soil Suction

Samples were prepared and tested based on the BRE digest No:IP4/93 (Corrected). 'A method of determining the state of desiccation in clay soils.' (Filter paper method).

Test results on samples with a sand or silt content, may show less accurate results. Deviation to standard procedure - Polythene bags are not used from weighing filter papers.





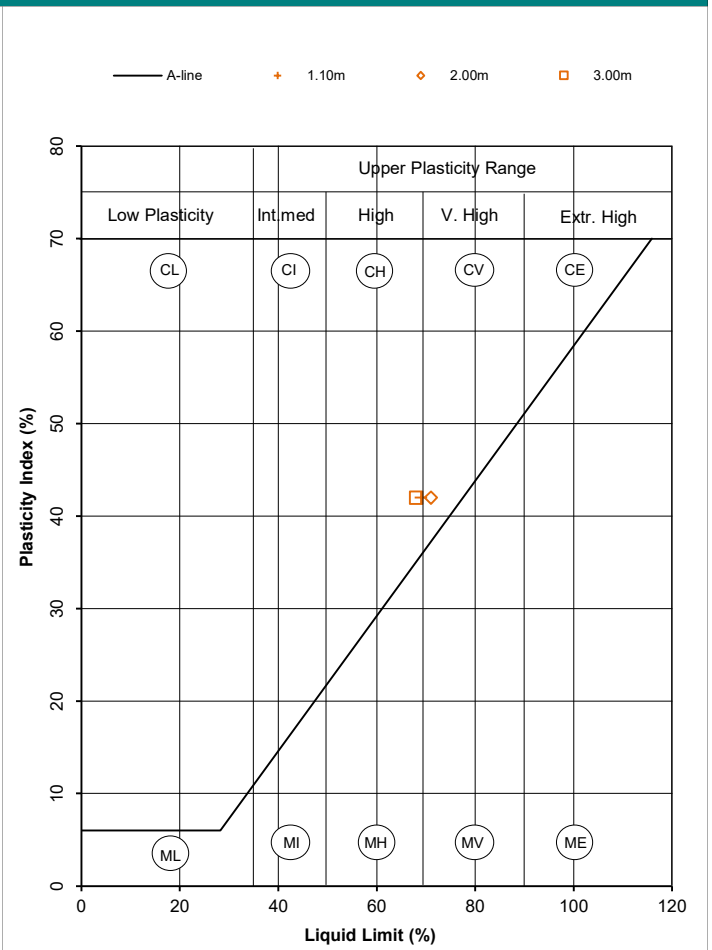
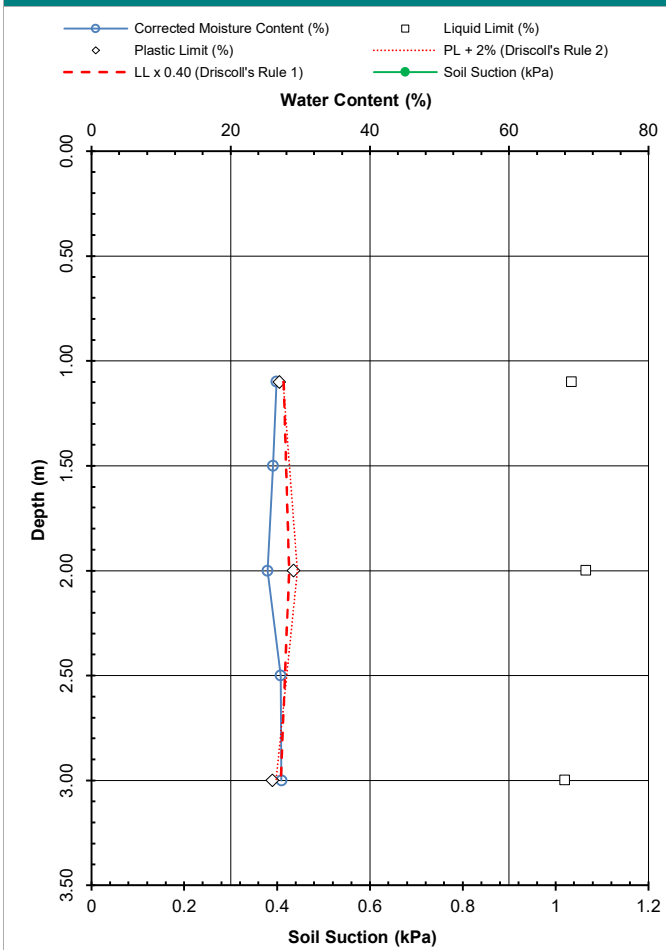
**LABORATORY RESULTS**

**Property Address:** 4 teal Drive, Northwood, Middlesex, HA6 2PT  
**Client:**

1875934

**BOREHOLE 3**

Depth (m)	WC (%)	Corr. WC (%)	LL (%)	PL (%)	PI (%)	Class	% Retained (425µm)	Soil Suction (kPa)	Condition of test	Soil Description
1.10	26.6	26.6	69	27	42	CI	0		Natural	Firm grey / brown silty CLAY containing orange mottle and sand pockets
1.50	26.1	26.1					0		Natural	Firm grey / brown silty CLAY containing orange mottle and sand pockets
2.00	25.3	25.3	71	29	42	CV	0		Natural	Firm grey / brown silty CLAY containing orange mottle and gypsum
2.50	27.2	27.2					0		Natural	Firm grey / brown silty CLAY containing orange mottle and gypsum
3.00	27.3	27.3	68	26	42	CH	0		Natural	Firm grey / brown silty CLAY containing orange mottle and gypsum



Comments: Samples dried in oven not exceeding 50°C due to the presence of gypsum

Reported by: Issy Acerbis

Checked by: Jade McLellan

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Woodham Mortimer  
Essex  
CM9 6TQ

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LL57 4FG  
Tel: 01248 672652  
Fax: 01248 672601

# ROOT IDENTIFICATION

## 4 Teal Drive

Client Reference: 29914  
Report Date: 15 October 2025  
Our Ref: R62573

Sub Sample	Species Identified	Root Diameter	Starch
<b>TP1:</b>			
1.1m	<i>Quercus</i> spp.	8 mm	Abundant

### Comments:

*Quercus* spp. are oaks (both deciduous and evergreen).

**Signed:** R. Shaw

Unless we are otherwise instructed in writing, the above sample material will normally be disposed of 6 years after the date of this report.





197-199 High Street, Maldon, Essex CM9 5BU

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Appendix No: 4  
 FSI Ref: 29914

### DRAINAGE SURVEY

**Property Address:** 4 Teal Drive, Northwood, Middlesex, HA6 2PT  
**Client Claim Ref:** 1875934 **Survey date:** 04/10/2025 **Operative:** SE2

Following your recent instruction we attended the above property and carried out a CCTV camera survey and hydraulic testing of the drainage, in accordance with procedures detailed in the WRc Drain Repair Book.

#### Manhole / Inspection chamber Summary:

Node	Invert Level (m)	Manhole Construction	Pipe Size	Pipe Material	Manhole Condition	Type of Cover	Size of Cover
MH1	2.00	Concrete	100mm	Clay	FAIR	Concrete	690x540mm
MH2	2.90	Concrete	100/110mm	Clay/UPVC	FAIR	Concrete	690x540mm
MH3	0.30	UPVC	110mm	UPVC	GOOD	Iron	500x500mm

#### Hydraulic Testing Summary:

Run	From	To	Result	Remarks
1				
2				
3				
4				
5				
6				

#### Serviceability:

1	Is the system failing to discharge normal household flows to the sewer system? (i.e. recurrence of blockage)	Yes
2	Is there evidence of leakage occurring (infiltration or exfiltration)?	Yes
3	Is there intermittent storm-water flooding?	Undetermined
4	Has a hydraulic leakage test failed?	N/A
5	Do observed defects make the drain unserviceable?	Yes

#### Comments:

MH2 noted to contain roots. RWP4, RWP5, RWP6 & RWP7 require break-ins to survey. The operative performed the mains test on the water outlet at the rear of the property, they were unable to locate the policy holders water meter this resulted in a pass.

#### Recommendations for Repair:

Run	Grade	Recommended action
1-6	A	None required
7	B	Excavate & replace
8-10	A	None required



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## DRAINAGE SURVEY

**Property Address:** 4 Teal Drive, Northwood, Middlesex, HA6 2PT  
**Client Claim Ref:** 1875934

### Run Details: (Please refer to appendix 1 for site plan and run layout)

Run	From	To	Pipe Diameter	Pipe Materials	Duty	Direction	Ownership
1	FWG1	Downstream	110mm	UPVC	Foul	Downstream	Private
2	MH1	Upstream	100mm	Clay	Storm	Upstream	Private
3	MH1	Downstream	100mm	Clay	Storm	Downstream	Private
4	RWP2	Downstream	110mm	UPVC	Storm	Downstream	Private
5	MH2	Upstream	110mm	UPVC	Foul	Downstream	Private
6	MH2	Upstream	110mm	UPVC	Foul	Upstream	Private
7	MH3	Upstream	110mm	UPVC	Foul	Upstream	Private
8	MH3	SVP1	110mm	UPVC	Foul	Upstream	Private
9	MH3	MH2	110mm	UPVC	Foul	Upstream	Private
10	MH3	Downstream	110mm	UPVC	Foul	Downstream	Shared

### Grade Guidelines:

<b>Grade A</b>	Condition grade A: <i>Structurally sound with no leakage evident. Slight crack/defects permitted.</i>
<b>Grade B</b>	Condition grade B: <i>Cracks and/or fractures observed but pipe provides sufficient arching support. Some leakage may be evident.</i>
<b>Grade C</b>	Condition grade C: <i>Structurally unsound with insufficient arching support. Total collapse/blockage likely in the future.</i>

### Inspection Report:

Run	m	Code	Grade	Observations	Water (%)	Clock	Remarks
1	0.00	SS		Start Survey			
	6.70	SF	A	Finish Survey			Bends left into a chamber not visible from the property
2	0.00	SS		Start Survey			
	0.20	SF	A	Finish Survey			Steep incline unable to push the camera up
3	0.00	SS		Start Survey			
	2.50	CN		Connection			Lateral on right
	9.70	CN		Connection			Lateral on right
	14.50	SF	A	Finish Survey			Potential soakaway
4	0.00	SS		Start Survey			
	3.40	SF	A	Finish Survey			Enters Run2
5	0.00	SS		Start Survey			
	2.40	SF	A	Finish Survey			Bends up
6	0.00	SS		Start Survey			
	2.00	SF	A	Finish Survey			Bends up
7	0.00	SS		Start Survey			
	3.60	SF	B	Finish Survey			Concrete obstruction
8	0.00	SS		Start Survey			
	4.00	SF	A	Finish Survey			Bends up



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## DRAINAGE SURVEY

**Property Address:** 4 Teal Drive, Northwood, Middlesex, HA6 2PT

**Client Claim Ref:** 1875934

<b>9</b>	0.00	SS		Start Survey			
	5.20	SF	A	Finish Survey			Enters MH2
<b>10</b>	0.00	SS		Start Survey			
	11.20	CN		Connection			Steady stream of water from right lateral
	16.90	SF	A	Finish Survey			Enters neighbouring MH



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**Section:** 1  
**FSI Ref:** 29914

## PHOTOS

**Property Address:** 4 Teal Drive, Northwood, Middlesex, HA6 2PT

**Client Claim Ref:** 1875934

**Survey date:** 04/10/2025

**Operative:** SE2



Photo 1 (Showing front of property)

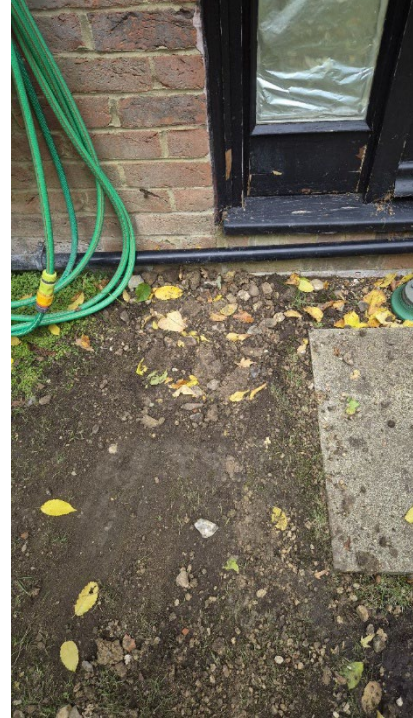


Photo 2 (Showing TP3 attempt closed)



Photo 3 (Showing TP3 moved)



Photo 4 (Showing MH1)



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**Section:** 1  
**FSI Ref:** 29914

## PHOTOS

**Property Address:** 4 Teal Drive, Northwood, Middlesex, HA6 2PT

**Client Claim Ref:** 1875934

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**Operative:** SE2



Photo 5 (Showing MH2)



Photo 6 (Showing MH3)



Photo 7 (Showing RWP1)



Photo 8 (Showing RWP2)



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## PHOTOS

**Property Address:** 4 Teal Drive, Northwood, Middlesex, HA6 2PT

**Client Claim Ref:** 1875934

**Survey date:** 04/10/2025

**Operative:** SE2



Photo 9 (Showing RWP3 & RWP4)



Photo 10 (Showing RWP5 & FWG1)



Photo 11 (Showing RWP 6 & RWP7)



Photo 12 (Showing obstruction in Run7 at 3.6m)



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## DRAINAGE REPAIR ESTIMATE

**Property Address:** 4 Teal Drive, Northwood, Middlesex, HA6 2PT  
**Client Claim Ref:** 1875934      **Survey date:** 04/10/2025      **Operative:** SE2

13<sup>th</sup> October 2025

Our Ref: 29914d  
Your Ref: 1875934

**Re:** Estimate for drainage repairs

### Works:

1. Run 7 Re-survey to confirm if the run is dis-used – Run taps/ flush WC/s
2. RWP1 Break-in & survey
3. RWP4 Break-in & survey
4. RWP5 Break-in & survey
5. RWP6 Break-in & survey
6. RWP7 Break-in & survey

<b>TOTAL</b>	<b>£743.75</b>	<b>exc vat</b>
	<b>£892.50</b>	<b>inc vat</b>

### Work expected to take 1 day to complete

This estimate is exclusive of vat, is based on our interpretation of the required repairs and limited to the items listed above; should any further works be deemed necessary they will be charged in accordance with the schedule of rates. Should you require alternative repairs to be carried out, please provide details and we will issue a revised quotation as soon as possible. An assumption has been made that a building notice is not required for the completion of these works; in the event that a building notice is required, we can obtain it on your behalf; this will be charged at cost plus 10%. This estimate should be read in conjunction with our standard schedule of assumptions and conditions of contract; a copy of which can be obtained from the office.

This estimate is valid for 2 calendar months from the date of issue.

Should you have any queries please do not hesitate to contact the office on 08443358908.

Yours sincerely

Fastrack™ Site Investigations Ltd