



Geotechnical Survey Report

FSI Ref: 26463
Issue Date: May 2023

Risk Address: 18 Delaunays Road
Manchester
Lancashire
M8 4QS

Engineer: Andrew Wyse

Company: Crawford
Claim Ref: SU2300734

Managing Director:
Finance Director:

Martin Rush MSc FGS
Louise Banks BSc (Hons)

Geotechnical Compliance &
Logistics Supervisor:

Perry Martin MCIHT

Laboratory Manager:

Jade McLellan

Senior Geologist:
Assistant Geologist:
Geotechnical Assistant:

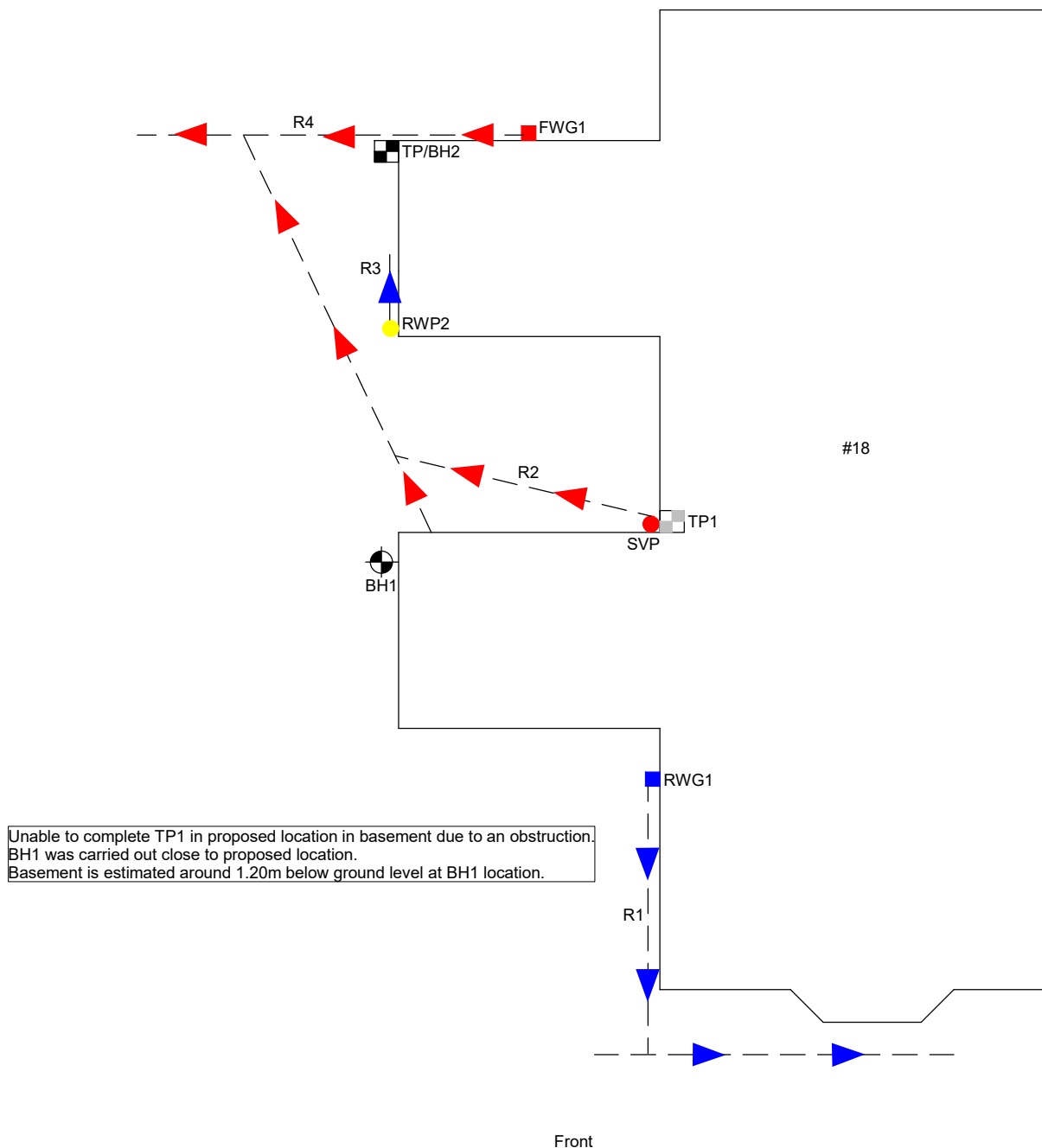
Scott Parker BSc (Hons) FGS
Sarah Brand
Bradley Webb

SITE PLAN

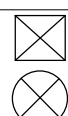
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Client Claim Ref: SU2300734

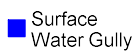
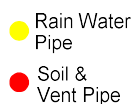
Survey date: 02/05/2023

Operative: CE2

Scale:
NTS

Drawn by:
SB

Key:


Manholes



Shrub


Tree
(Conifer)

Tree
(Deciduous)



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

Borehole Log

Borehole No.

BH1

Sheet 1 of 1

Project Name: SU2300734

Project No.
26463

Site Date: 02/05/2023

Hole Type
BH

Location: 18 Delaunays Road, Manchester, Lancashire, M8 4QS

Scale
1:15

Client: Crawford

Logged By
SE2

Water Strikes	Sample and In Situ Testing			Depth (m)	Legend	Stratum Description	
	Depth (m)	Type	Results				
				0.05		Brown TOPSOIL	
						Mid brown silty sandy CLAY	
	0.50	D	V (kPa) = 70 V (kPa) = 75				
	1.00	D	V (kPa) = 70 V (kPa) = 75			<u>Noted to contain hairlike roots at 1.00m</u>	1
	1.50	D	V (kPa) = 75 V (kPa) = 80			<u>Noted to contain hairlike-1mm at 1.50m</u>	
	2.00	D	V (kPa) = 80 V (kPa) = 86			<u>Noted to contain hairlike-2mm roots at 2.00m</u>	2
	2.50	D	V (kPa) = 85 V (kPa) = 90	2.50		End of Borehole at 2.500m	3

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

Remarks: Borehole closed at 2.50m as sample continued to fall from auger.
Borehole noted to be dry on completion.

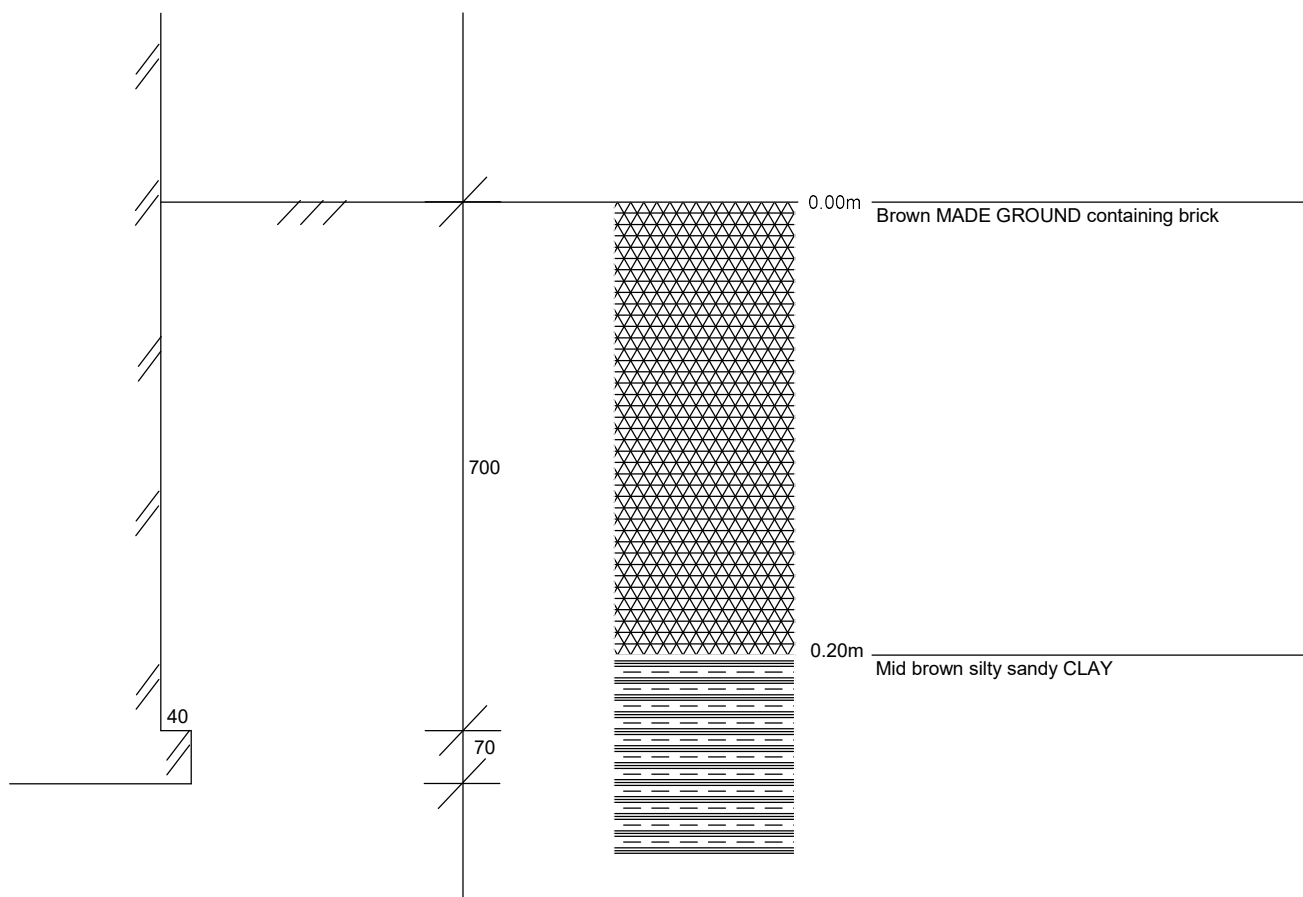


TRIAL PIT 2

Property Address: 18 Delaunays Road, Manchester, Lancashire, M8 4QS

Client Claim Ref: SU2300734

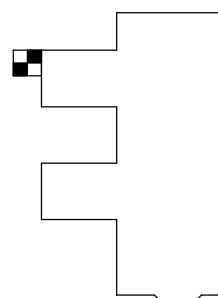
Survey date: 02/05/2023

Operative: CE2


D1 @ F.L. (0.77m)

V = 70-80kPa

Founding strata: Mid brown silty sandy CLAY

Trial Pit Location:

Drawn by:

SB

Scale:

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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Southend Road
Maldon CM9 6TQ

Borehole Log

Borehole No.

BH2

Sheet 1 of 1

Project Name: SU2300734

Project No.
26463

Site Date: 02/05/2023

Hole Type
BH

Location: 18 Delaunays Road, Manchester, Lancashire, M8 4QS

Scale
1:15

Client: Crawford

Logged By
SE2

Water Strikes	Sample and In Situ Testing			Depth (m)	Legend	Stratum Description	
	Depth (m)	Type	Results				
				0.60		Brown MADE GROUND containing brick	
	0.77	D	V (kPa) = 70 V (kPa) = 80			Mid brown silty sandy CLAY <u>Foundation top-0.70m (Brick construct projects 40mm with a thickness of 70mm)</u> <u>Foundation level-0.77m</u>	1
	1.20			1.20		Light brown/orange clayey SAND	
	1.50	D	V (kPa) = 60 V (kPa) = 70			<u>Noted to contain hairlike roots at 1.50m</u>	
	1.80			1.80		Light brown/orange SAND	
	2.00	D	MP = 8/75mm MP = 10/75mm MP = 10/75mm MP = 15/75mm			<u>Noted to contain hairlike roots at 2.00m</u>	2
	2.50	D	MP = 14/75mm MP = 17/75mm MP = 23/75mm MP = 24/75mm				
	2.70	D	MP = 100/20mm	2.70		End of Borehole at 2.700m	3

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

Remarks: Borehole closed at 2.70m due to an obstruction.
Borehole noted to be dry on completion.





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Appendix No: 3
FSI Ref: 26463

LABORATORY RESULTS

Property Address: 18 Delaunays Road, Manchester, Lancashire, M8 4QS
Client Claim Ref: SU2300734 **Client:** Crawford & Company

SAMPLE DETAILS		ANALYSIS REQUESTED	
Investigation date:	02/05/2023	Moisture Content	☒ PSD ☐
Sample details:	Bags as received	Liquid Limit	☒ Soil Suction ☐
Samples received:	09/05/2023	Plastic Limit	☒ Shear Strength ☐
Schedule recieved:	09/05/2023	Plasticity Index	☒ Contamination ☐
Samples tested:	10/05/2023-15/05/2023	Root ID	☒ Root/Tree DNA ☐
Results reported:	15/05/2023		Roots obtained _____

TEST DETAILS

General

Sample descriptions were written in accordance with BS 5930:1999.

Samples were prepared in accordance with BS 1377: Part 1: 1990, section 7

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

Moisture Content

Samples were tested in accordance with BS 1377: Part 2: 1990, section 3.2 (Oven drying method)

In accordance with Note 1 to paragraph 3.2.4 of BS 1377 Part 2 1990; these moisture contents have been corrected to give the equivalent moisture 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 1377: Part 2: 1990, section 4.3 (4 drop LL), 4.4 (1 drop LL), 5.3 (PL) and 5.4 (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 1377: Part 2: 1990 section 9.2 (Wet sieving method)

Undrained Shear Strength

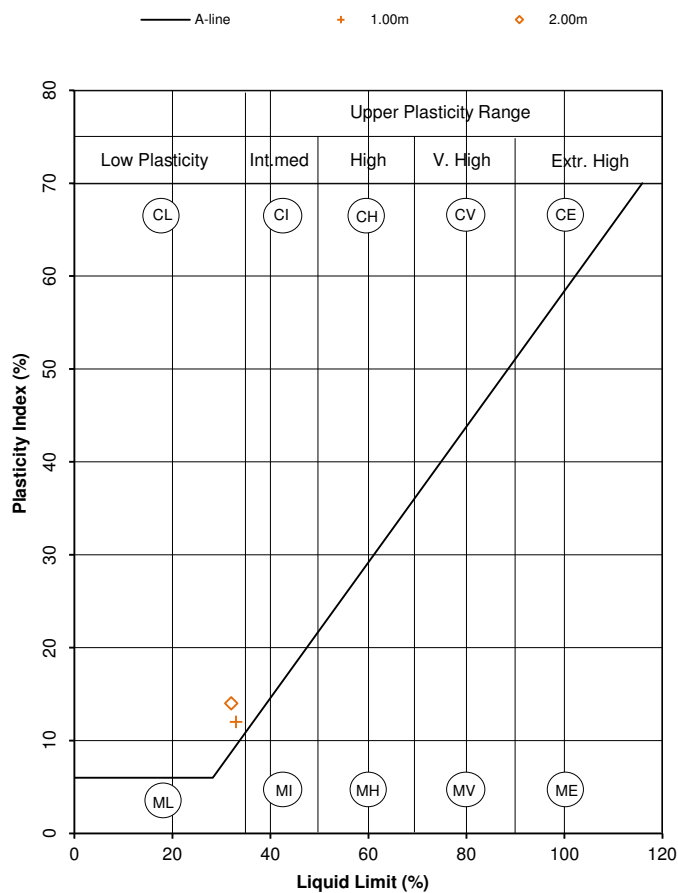
Samples were prepared in accordance with BS 1377: Part 7: 1990 section 8.3 and testing in accordance with BS 1377: Part 7: 1990: section 8.4 (undrained shear strength in triaxial compression without measurement of pore pressure (UU))

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).

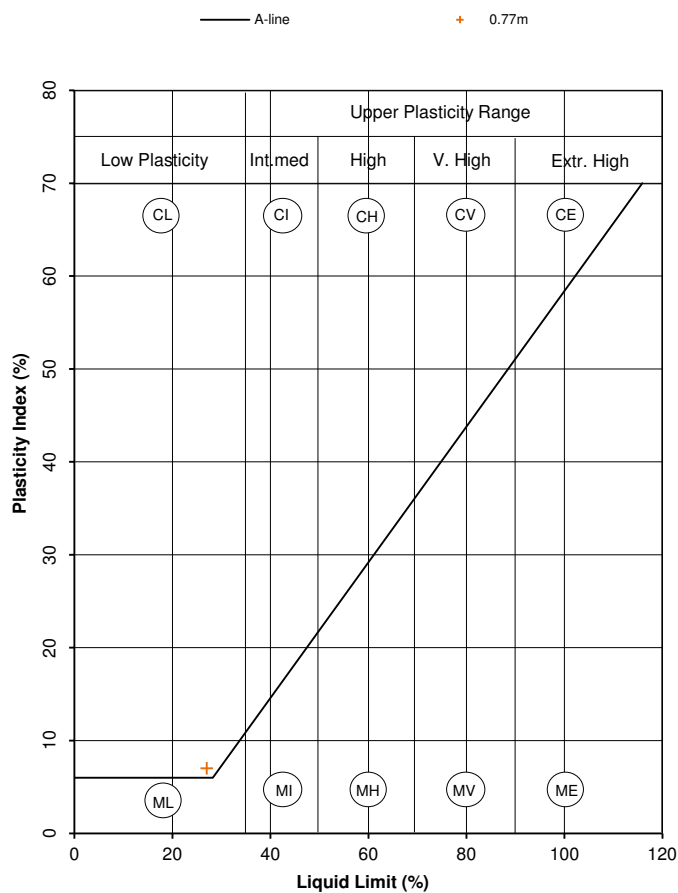
Test results on samples with a sand or silt content, may show less accurate results. Deviation to standard procedure - Polythene bags are not used from weighing filter papers.

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[illegible]

Jade McLellan

Property Address:	18 Delaunays Road, Manchester, Lancashire, M8 4QS
Client Claim Ref:	SU2300734

[illegible]

Comments:	BH2 @ 2.00m - Unable to perform atterberg limits due to incohesive soil
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Checked by: Jade McLellan

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ROOT IDENTIFICATION

18 Delaunays

Client Reference: 26463
Report Date: 15 May 2023
Our Ref: R52785

Sub Sample	Species Identified		Root Diameter	Starch
BH1:				
1m	<i>Tilia</i> spp.	1	<1 mm	Low
1.5m	<i>Tilia</i> spp.	2	1 mm	Low
1.5m	Pomoideae gp.		<1 mm	Moderate
2m	<i>Tilia</i> spp.	3	2 mm	Moderate
BH2:				
1.5m	too juvenile for identification	4	1 mm	Low
2m	broadleaved species, too decayed for positive identification		<1 mm	Absent

Comments:

- 1 - Plus 1 other also identified as *Tilia* spp. Both in poor condition.
- 2 - In poor condition.
- 3 - Plus 1 other also identified as *Tilia* spp.
- 4 - Plus 1 other the same.

Tilia spp. are limes.

Pomoideae gp include apple, cotoneaster, hawthorn, pear, pyracantha, quince, rowan, snowy mespil and whitebeam.

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.





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Appendix No:

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FSI Ref:

26463

DRAINAGE SURVEY

Property Address: 18 Delaunays Road, Manchester, Lancashire, M8 4QS

Client Claim Ref: SU2300734

Survey date: 02/05/2023

Operative: CE2

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

Hydraulic Testing Summary:

Run	From	To	Result	Remarks
1				
2				
3				
4				
5				
6				

Serviceability:

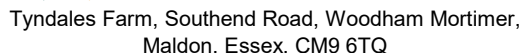
1	Is the system failing to discharge normal household flows to the sewer system? (i.e. recurrence of blockage)	Yes
2	Is there evidence of leakage occurring (infiltration or exfiltration)?	Yes
3	Is there intermittent storm-water flooding?	Undetermined
4	Has a hydraulic leakage test failed?	N/A
5	Do observed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

Comments:

Water mains test passed. Unable to remove trap to survey FWG1.

Recommendations for Repair:

Run	Grade	Recommended action
1	A	None required
2	C	Excavate & replace damaged section
3	B	Jet to clear & re-survey
4		
5		
6		



Fax: 0844 3358907

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4

26463

Property Address:	18 Delaunays Road, Manchester, Lancashire, M8 4QS
Client Claim Ref:	SU2300734

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

Run	From	To	Pipe Diameter	Pipe Materials	Duty	Direction	Ownership
1	RWG1	Downstream	110mm	UPVC	Storm	Downstream	Private
2	SVP1	Downstream	110mm	UPVC	Foul	Downstream	Private
3	RWP2	Downstream	75mm	UPVC	Storm	Downstream	Private
4							
5							
6							

Grade Guidelines:

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

Inspection Report:

[illegible]



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DRAINAGE REPAIR ESTIMATE

Property Address: 18 Delaunays Road, Manchester, Lancashire, M8 4QS

Client Claim Ref: SU2300734

Survey date: 02/05/2023

Operative: CE2

26th May 2023

Our Ref: 26463d
Your Ref: SU2300734

Re: Estimate for drainage repairs

Works:

1. Run 2 Excavate & replace damaged section
2. Run 3 Jet to clear & re-survey

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



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Southend Road
Woodham Mortimer
Maldon,

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Section: 1
FSI Ref: 26463

PHOTOS

Property Address: 18 Delaunays Road, Manchester, Lancashire, M8 4QS

Client Claim Ref: SU2300734

Survey date: 02/05/2023

Operative: CE2



Photo 1 (Unable to remove FWG1 trap without breaking it to survey)



Photo 2 (SVP downstream large break in pipe at 2.90m)



Photo 3 (Unable to complete TP1 due to obstruction-
BH1 carried out close to proposed location)



Photo 4 (Unable to complete TP1 due to obstruction-
BH1 carried out close to proposed location)