

**SITE INVESTIGATION REPORT**

**PROJECT REFERENCE**

**S20074**

164 HAMPSTEAD WAY, LONDON, NW11 7XD



**Claims Consortium Group  
Blackdown House  
Culmhead Business Centre  
Culmhead, Taunton  
Somerset  
TA3 7DY**

**S20074 Report 1**

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## 1.0 INTRODUCTION

This report has been prepared following an instruction by **Claims Consortium Group**, to carry out a site investigation at **164 Hampstead Way, London, NW11 7XD**.

Works were undertaken by Nicholls Colton Group Limited, Southern Region, Airport House, Purley Way, Croydon, CR0 0XZ (Head office: 7-11 Harding Street, Leicester, LE1 4DH). Nicholls Colton Group Limited is a UKAS accredited testing laboratory, number 0320, accredited tests are identified by (U). Site work was carried out as detailed below:

Date	Weather conditions	Temperature (°C)	Day/Night
3/10-09-2020	Dry	20	Day

Laboratory work was carried out from the 4th to 18th September 2020.

## 2.0 SUMMARY

### 2.1 Scope of works

A total of 2No. trial pits, extended by hand auger were carried out; TPBH1 to the right-hand corner of the front elevation and TPBH2 to the rear left-hand corner of the property. A control borehole at the front was also completed Please see Site Plan for locations.

A CCTV of the drainage was also carried out.

Crack and level monitoring installations were also completed.

### 2.2 Health and Safety

- Risk Assessment and Method Statement (RAMS) issued to site crew (copy available on request). Site Supervisor reviewed RAMS and all crew signed off before starting works.
- Site crew issued with appropriate PPE; Site Supervisor responsible for ensuring PPE worn.
- All trial pit locations CAT scanned prior to excavation.
- Manhole covers put back down and checked before leaving site.

### 2.3 Geological Background

British Geological Survey records indicate a bedrock geology of LONDON CLAY FORMATION - CLAY, SILT AND SAND.



.....  
T Sharif  
Southern Business Manager  
Nicholls Colton Group

**Report issue date: 28th October 2020**

**Report revision no:**

**Reason for revision:**

**SECTION 3.0**

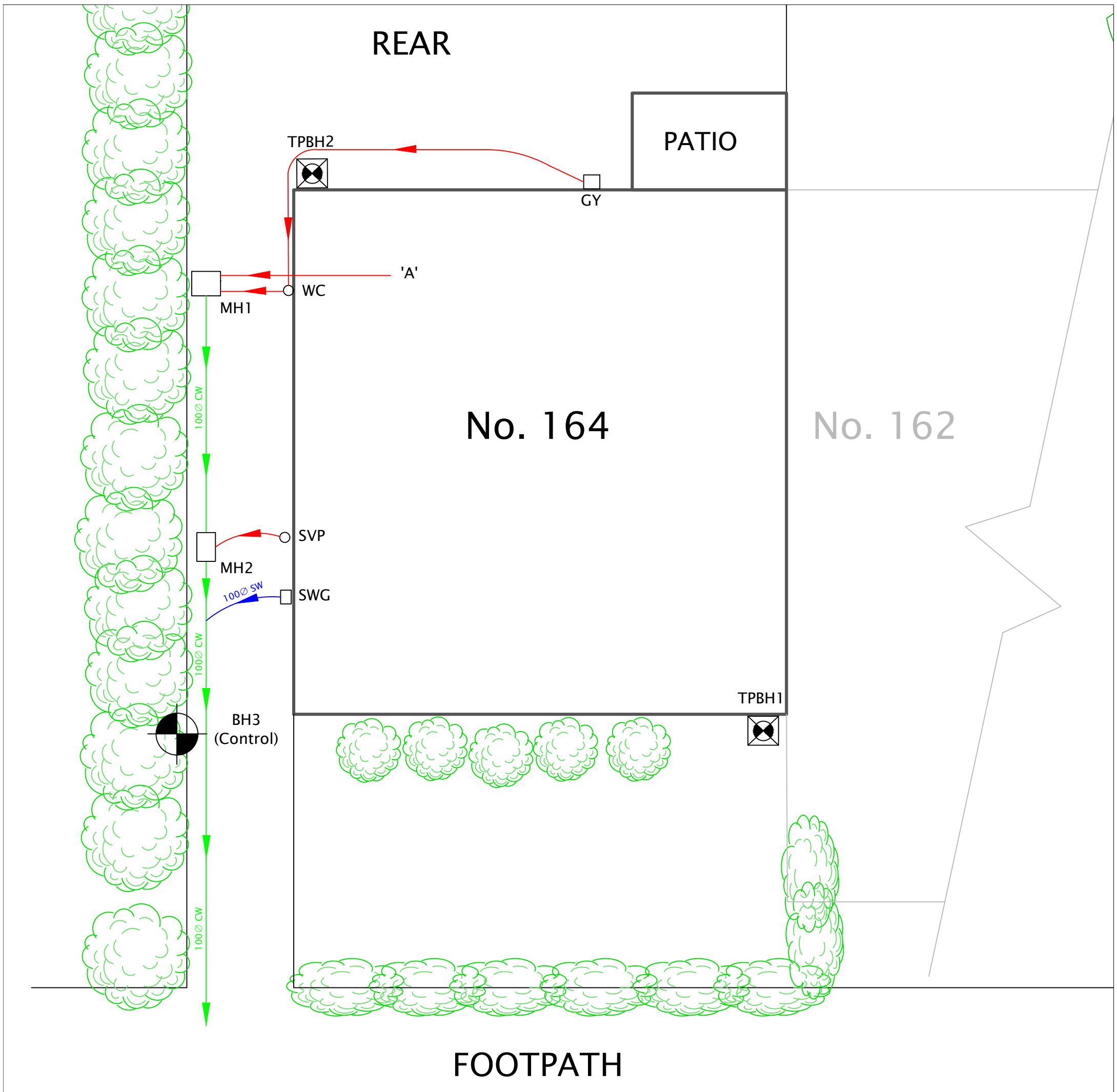
**SITE PLAN**

# S20074 Site Plan

Client:  
**Claims Consortium Group**  
 Project Title:  
 164 Hampstead Way, London,  
 NW11 7XD  
 Date of site works:  
**03/09/20**  
 Weather:  
**Dry**



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 Web site: www.nicholls-colton.co.uk



**KEY:**

- |                         |                              |                         |   |
|-------------------------|------------------------------|-------------------------|---|
| Surface water drainage  | TPBH Trial pit with borehole | IC Inspection chamber   | RWS Rainwater pipe (discharges onto ground) |
| Foul water drainage     | TP Trial pit                 | GY Gully (grey waste)   | SWG Yard gully                              |
| Combined water drainage | BH Borehole                  | CG Combined gully       | SVP Soil vent pipe                          |
| Assumed drainage        | RWG Rainwater gully          | VP Vent pipe            | Tree (approx. height in m)                  |
| MH Manhole              | RWP Rainwater pipe           | SS Soil stack (no vent) | All dimensions are given in mm.             |

**SECTION 4.0**  
**PHOTOGRAPHS**





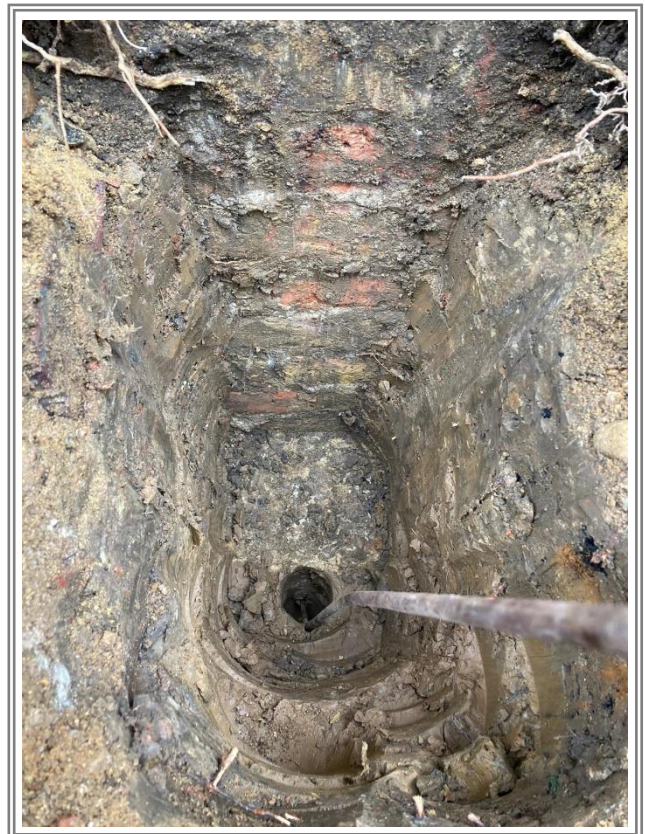
1. TPBH1 overview



2. TPBH1 detail



3. TPBH2 overview



4. TPBH2 detail



**SECTION 5.0**  
**TRIAL PIT SECTIONS**



# Trial pit 1

Client:  
**Claims Consortium Group**

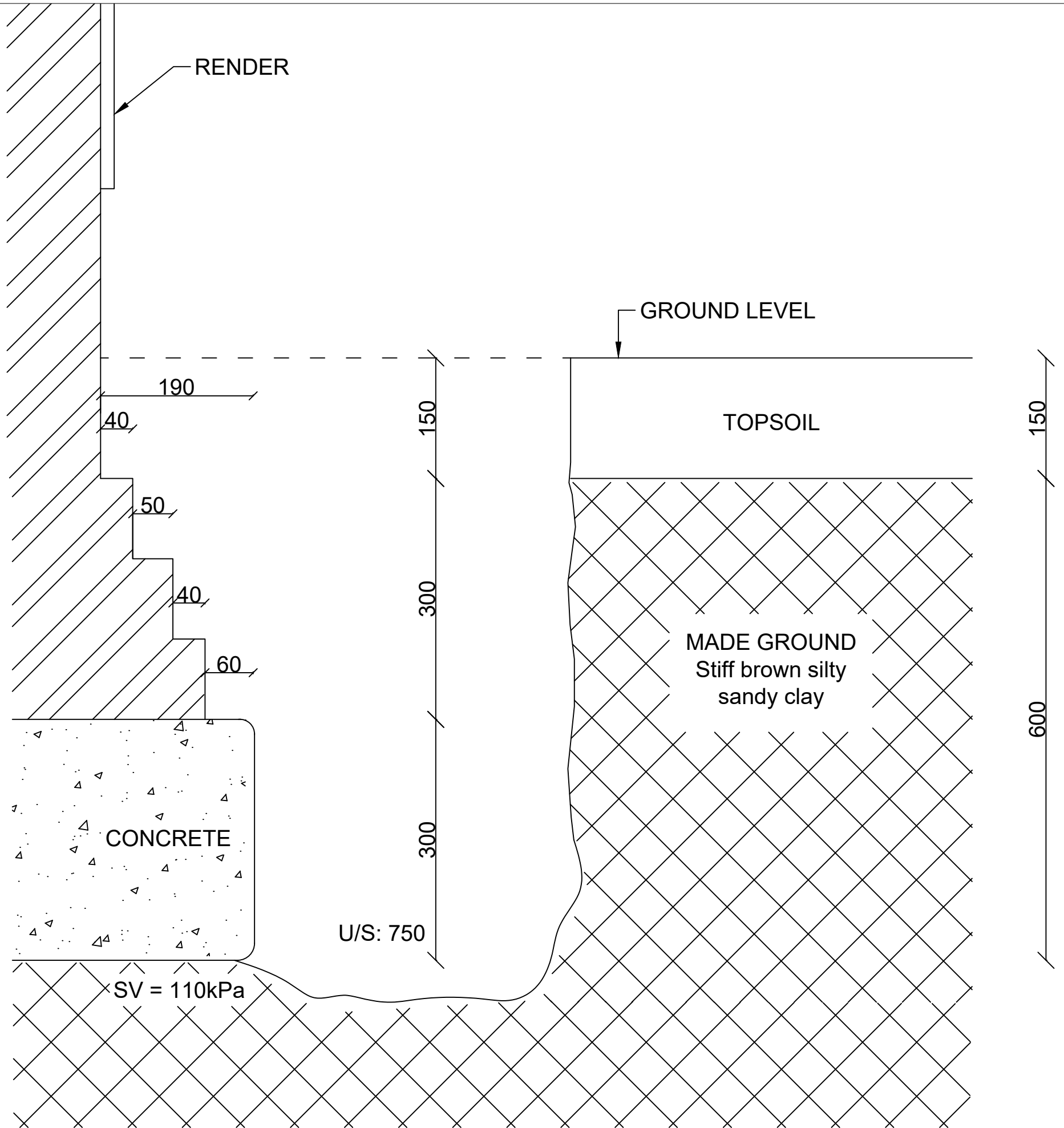
Project Title:  
164 Hampstead Way, London,  
NW11 7XD

Date of site works:  
**03/09/20**

Weather:  
**Dry**



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All dimensions are given in mm.

# Trial pit 2

Client:  
**Claims Consortium Group**

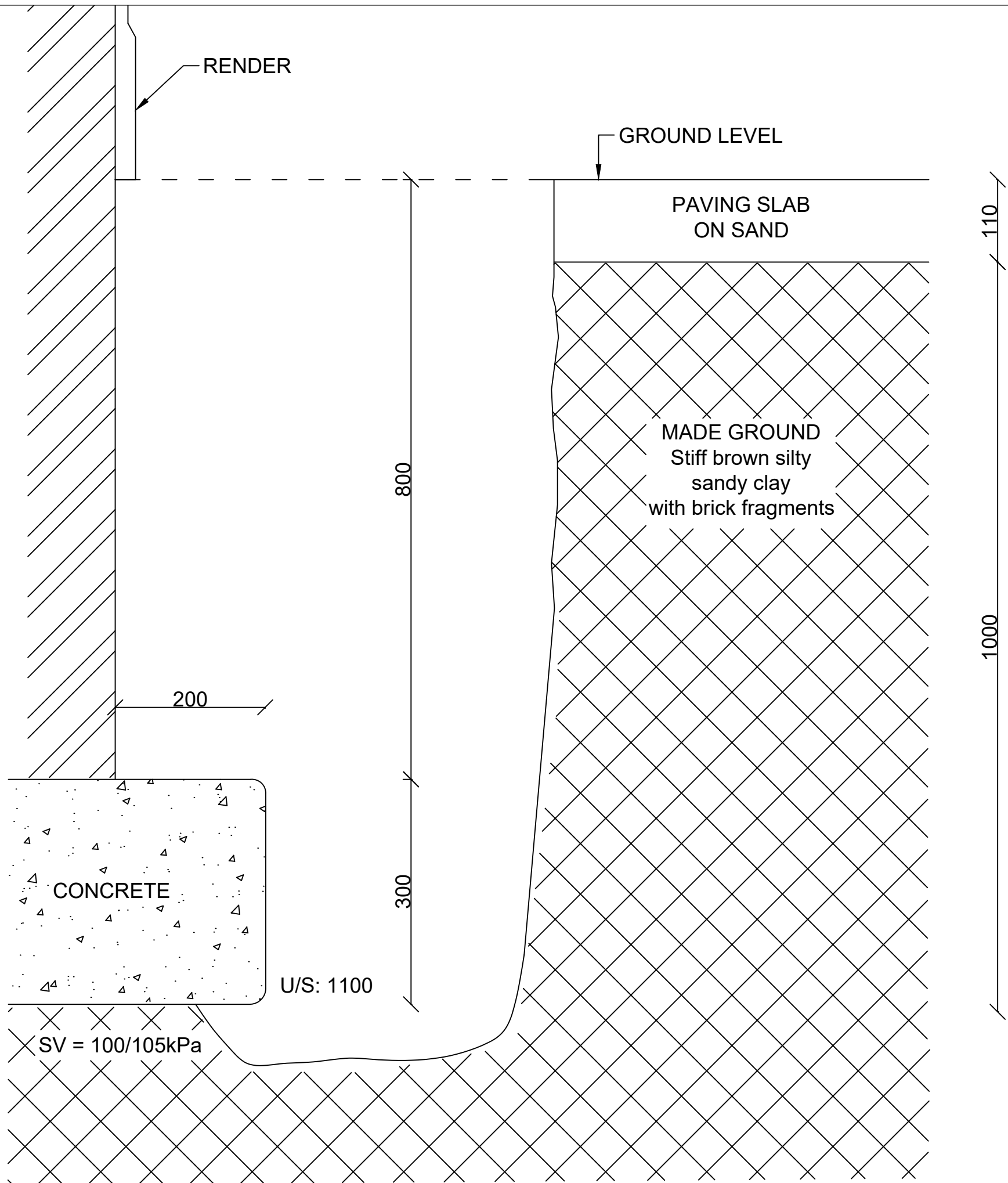
Project Title:  
164 Hampstead Way, London,  
NW11 7XD

Date of site works:  
**03/09/20**

Weather:  
**Dry**

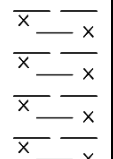
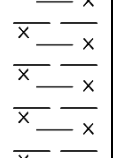
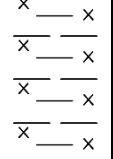
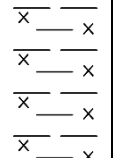
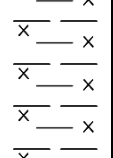
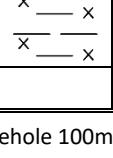
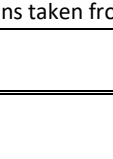




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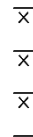

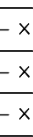









All dimensions are given in mm.

**SECTION 6.0**  
**BOREHOLE LOGS**

BOREHOLE LOG – BH1						
Water/ Roots	Insitu Test		Samples	Strata		N.B. All depths in millimetres from local ground level
	Type	Result		Legend	Depth	
Roots in TPBH1	SV	110	—	TOPSOIL	150	TOPSOIL
			—			MADE GROUND Stiff brown silty sandy clay
Root sample at 1200 (test)	SV	90/100	1A (D)		750	Stiff brown silty CLAY
			—			
Root sample at 1600	SV	85/90	1B (D)		1000	Stiff brown silty CLAY
			—			
Root sample at 1900 (test)	SV	90/100	1C (D)		1500	Firm/stiff brown silty CLAY with orange pockets from 1500
			—			
Last visible fine roots at 2500	SV	95/100	1D (D)		2000	Stiff brown silty CLAY with fine/coarse gravel from 2000
			—			
BH DRY	SV	100/110	1E (D)		2500	Stiff brown silty CLAY with fine/coarse gravel from 2000
			—			
BH DRY	SV	100/110	1F (D)		3000	Stiff brown silty CLAY with fine/coarse gravel from 2000
			—			
Borehole completed at 3000						
<b>Remarks</b>	Boring method: Hand auger. Borehole 100mm diameter. Ground level = Datum. Descriptions taken from drillers logs.					
<b>Key</b>	D (Disturbed Sample)		SV	Shear Vane	MP	Mackintosh Probe (R = Refusal)



BOREHOLE LOG – BH2						
Water/ Roots	Insitu Test		Samples	Strata		N.B. All depths in millimetres from local ground level
	Type	Result		Legend	Depth	
Roots in TPBH2	SV	100/105	—	PAVING	110	PAVING SLABS
			—			MADE GROUND Stiff brown silty sandy clay with brick fragments
Fibrous roots	SV	90/95	2A (D)		1100	Stiff brown silty CLAY  with gravel pockets at 1500
			—			
Last visible fine roots at 2000	SV	140+	2B (D)		1500	Stiff/hard brown silty CLAY  from 2000
			—			
BH DRY	SV	140+	2C (D)		2000	Stiff/hard brown silty CLAY  from 2000
			—			
BH DRY	SV	140+	2D (D)		2500	Stiff/hard brown silty CLAY  from 2000
			—			
BH DRY	SV	140+	2E (D)		3000	Stiff/hard brown silty CLAY  from 2000
			—			
Borehole completed at 3000						
<b>Remarks</b>	Boring method: Hand auger. Borehole 100mm diameter. Ground level = Datum. Descriptions taken from drillers logs.					
<b>Key</b>	D (Disturbed Sample)		SV	Shear Vane	MP	Mackintosh Probe (R = Refusal)

BOREHOLE LOG – BH3 (Control)						
Water/ Roots	Insitu Test		Samples	Strata		N.B. All depths in millimetres from local ground level
	Type	Result		Legend	Depth	
Roots in BH3	SV	140+	—		500	MADE GROUND Stiff/hard brown silty sandy clay with brick fragments
			3A (D)			
Last visible fine roots at 2000	SV	100/105	—		1000	Stiff orange brown silty CLAY
			3B (D)			
			—			
			3C (D)			
BH DRY	SV	100/110	—		2000	Stiff orange brown silty CLAY with grey sandy pockets from 1500
			3D (D)			
			—			
			3E (D)			
BH DRY	SV	100/110	—		2500	
			3F (D)			
			—			
			—			
BH DRY	SV	100/110	—		3000	
			3F (D)			
Borehole completed at 3000						
<b>Remarks</b> Boring method: Hand auger. Borehole 100mm diameter. Ground level = Datum. Descriptions taken from drillers logs.						
<b>Key</b> D (Disturbed Sample) SV Shear Vane MP Mackintosh Probe (R = Refusal)						

**SECTION 7.0**  
**ROOT IDENTIFICATION RESULTS**



# Richardson's Botanical Identifications

Root identification  
Vegetation surveys  
Tree/Building investigations  
Plant taxonomy

**Nicholls Colton Group**  
**7-11 Harding Street**  
**LEICESTER**  
**LE1 4DH**

**Dr Ian B K Richardson**  
*BSc, MSc, PhD, MRSB, FLS*

**James Richardson**  
*BSc (Hons. Biology)*

**Enterprise House**  
**49-51 Whiteknights Road**  
**Reading**  
**RG6 7BB**

**Tel: (0118) 986 9552** (*Direct line*)

**E-mail:** [richardsons@botanical.net](mailto:richardsons@botanical.net)

**Web:** [www.botanical.net](http://www.botanical.net)

*Your ref:* **S20074**

*Our ref:* **80/5814**

25/09/2020

Dear Sirs

**164 Hamstead Way NW11 7XD**

The samples you sent in relation to the above have been examined. Their structures were referable as follows:

TP/BH, 1.2m		
1 no.	Examined root: a SHRUB, similar in some ways to the family OLEACEAE (Syringa (Lilac), Ligustrum (Privet), Forsythia, Olea (includes Olive), Jasminum (Jasmine), Osmanthus, Phillyrea, Forestiera). This was a very IMMATURE sample (under 0.15mm in diameter).	Dead* (note this 'dead' result can be unreliable with such thin samples).
1 no.	Examined root: also a SHRUB - probably a different type from above (if critical, you could send us twigs from nearby bushes: we may be able to give you a match).	Dead*.
1 no.	Although examined microscopically, this was found to be only a section of either twig, stem or sucker - NOT a root. Not identified.	
2 no.	Both pieces of BARK only - insufficient material for recognition.	
TP/BH, 1.9m		
2 no.	Examined root: PLATANUS (Plane).	Alive, recently*.

Click here for more information: [PLATANUS](#)

I trust this is of help. Please call us if you have any queries; our Invoice is enclosed.

Yours faithfully

Dr Ian B K Richardson

\* Based mainly on the Iodine test for starch. Starch is present in some cells of a living woody root, but is more or less rapidly broken down by soil micro-organisms on death of the root, sometimes before decay is evident. This result need not reflect the state of the parent tree.

\*\* Try out our web site on [www.botanical.net](http://www.botanical.net) \*\*



**SECTION 8.0**  
**LABORATORY TEST RESULTS**



Nicholls Colton Group  
7 - 11 Harding Street  
Leicester  
LE1 4DH

Nicholls Colton Group  
7-11 Harding Street  
Leicester  
LE1 4DH

Analytical Test Report: S20074/001 - Amendment A

Your Project Reference:	164 Hamstead Way NW11 7XD	Samples Received on:	07/09/2020
Your Order Number:	S20074	Testing Instruction Received:	04/09/2020
Report Issue Number:	2	Sample Tested:	04/09 to 18/09/2020
Samples Analysed:	11 soil samples	Report issued:	07/10/2020

Signed

**Lee Harbottle**  
GCM Operations Manager  
Nicholls Colton Group

Notes:

Samples will be retained for 14 days after issue of this report unless otherwise requested.

The results included within the report are representative of the samples submitted for analysis.

A certificate of sampling as not supplied.

Samples were taken by NC.

**1377 Plasticity Index**

Sample preparation was in accordance with BS1377:Part 1:2016.

Testing was in accordance with BS1377:Part 2:1990

**1377 Moisture Content**

Sample preparation was in accordance with BS1377:Part 1:2016.

Moisture content testing was in accordance with BS1377 : Part 2 :1990

This report has been amended to add on BH3.

**Accreditation Key**

UKAS = UKAS Accreditation, u = Unaccredited

Date of Issue 27/11/2019

Owned by Emily Blissett - Commercial Reporting Supervisor

Authorised by Lee Harbottle - GCM Operations Manager

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**S20074/001 - Amendment A**

**Project Reference - 164 Hamstead Way NW11 7XD**

**Analytical Test Results - Soil**

NC Reference		109051	109052	109053	109054	109055	109056
Client Sample ID		1A	1B	1C	1D	1E	1F
Depth (m)		0.75	1.00	1.50	2.00	2.50	3.00
Date of Sampling		03/09/2020	03/09/2020	03/09/2020	03/09/2020	03/09/2020	03/09/2020
Sample type		Disturbed	Disturbed	Disturbed	Disturbed	Disturbed	Disturbed
Sample Description		Brown slightly silty clay	Brown slightly silty clay	Brown slightly silty clay	Brown slightly silty clay	Brown slightly silty clay	Brown slightly silty clay
<b>Determinant</b>	<b>Units</b>						
Moisture Content	(%)	29	27	29	29	30	30
Moisture Content Prep	-	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)
Fines passing 425µm test sieve	(%)	100	-	100	-	100	-
Liquid Limit	(%)	89	-	74	-	75	-
Plastic Limit	(%)	27	-	25	-	26	-
Plasticity Index	(%)	62	-	49	-	49	-
PI preparation	-	from its natural state	-	from its natural state	-	from its natural state	-
PI Test Method		clause 4.4 (one point)	-	clause 4.4 (one point)	-	clause 4.4 (one point)	-



**S20074/001 - Amendment A**

**Project Reference - 164 Hamstead W**

**Analytical Test Results - Soil**

NC Reference		109057	109058	109059	109060	109061
Client Sample ID		2A	2B	2C	2D	2E
Depth (m)		1.10	1.50	2.00	2.50	3.00
Date of Sampling		03/09/2020	03/09/2020	03/09/2020	03/09/2020	03/09/2020
Sample type		Disturbed	Disturbed	Disturbed	Disturbed	Disturbed
Sample Description		Brown slightly silty clay	Brown slightly silty clay	Brown slightly silty clay	Brown slightly silty clay	Brown slightly silty clay
<b>Determinant</b>	<b>Units</b>					
Moisture Content	(%)	33	26	24	28	31
Moisture Content Prep	-	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)
Fines passing 425µm test sieve	(%)	100	-	100	-	100
Liquid Limit	(%)	84	-	79	-	81
Plastic Limit	(%)	29	-	24	-	27
Plasticity Index	(%)	55	-	55	-	54
PI preparation	-	from its natural state	-	from its natural state	-	from its natural state
PI Test Method		clause 4.4 (one point)	-	clause 4.4 (one point)	-	clause 4.4 (one point)





**S20074/001 - Amendment A**

**Project Reference - 164 Hamstead W**

**Analytical Test Results - Soil**

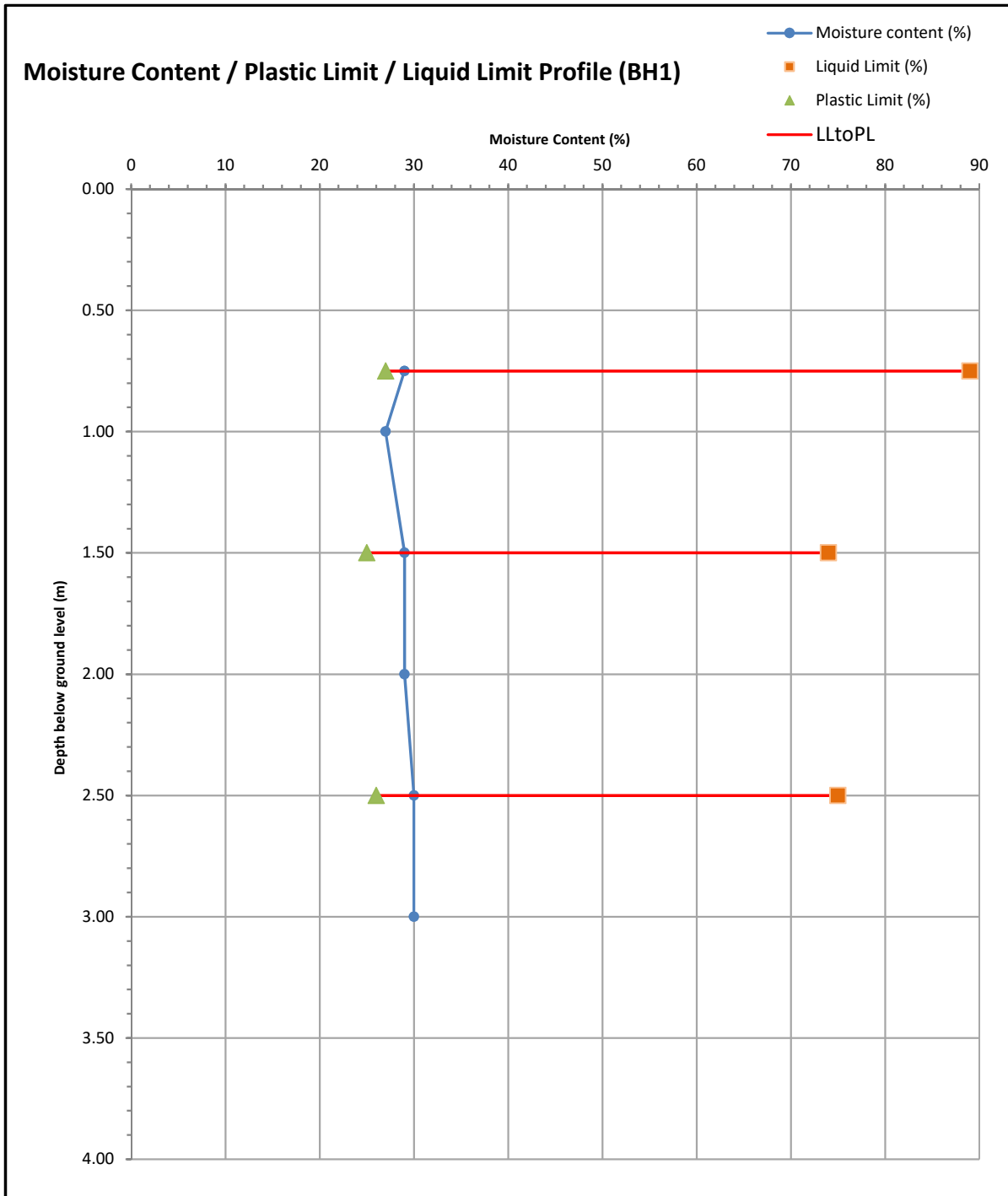
NC Reference		110953	110954	110955	110956	110957	110958
Client Sample ID		3A	3B	3C	3D	3E	3F
Depth (m)		0.50	1.00	1.50	2.00	2.50	3.00
Date of Sampling		10/09/2020	10/09/2020	10/09/2020	10/09/2020	10/09/2020	10/09/2020
Sample type		Disturbed	Disturbed	Disturbed	Disturbed	Disturbed	Disturbed
Sample Description		Brown slightly silty clay	Brown clay	Brown clay	Brown clay	Brown clay	Brown clay
<b>Determinant</b>	<b>Units</b>						
Moisture Content	(%)	25	26	28	32	32	32
Moisture Content Prep	-	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)	3.2.3.1 (fine)
Fines passing 425µm test sieve	(%)	100	-	100	-	100	-
Liquid Limit	(%)	83	-	75	-	73	-
Plastic Limit	(%)	28	-	26	-	29	-
Plasticity Index	(%)	55	-	49	-	44	-
PI preparation	-	from its natural state	-	from its natural state	-	from its natural state	-
PI Test Method		clause 4.4 (one point)	-	clause 4.4 (one point)	-	clause 4.4 (one point)	-

S20074/001 - Amendment A

Project Reference - 164 Hamstead Way NW11 7XD

Moisture Content Plot

Borehole / Trial Pit Reference **BH1**

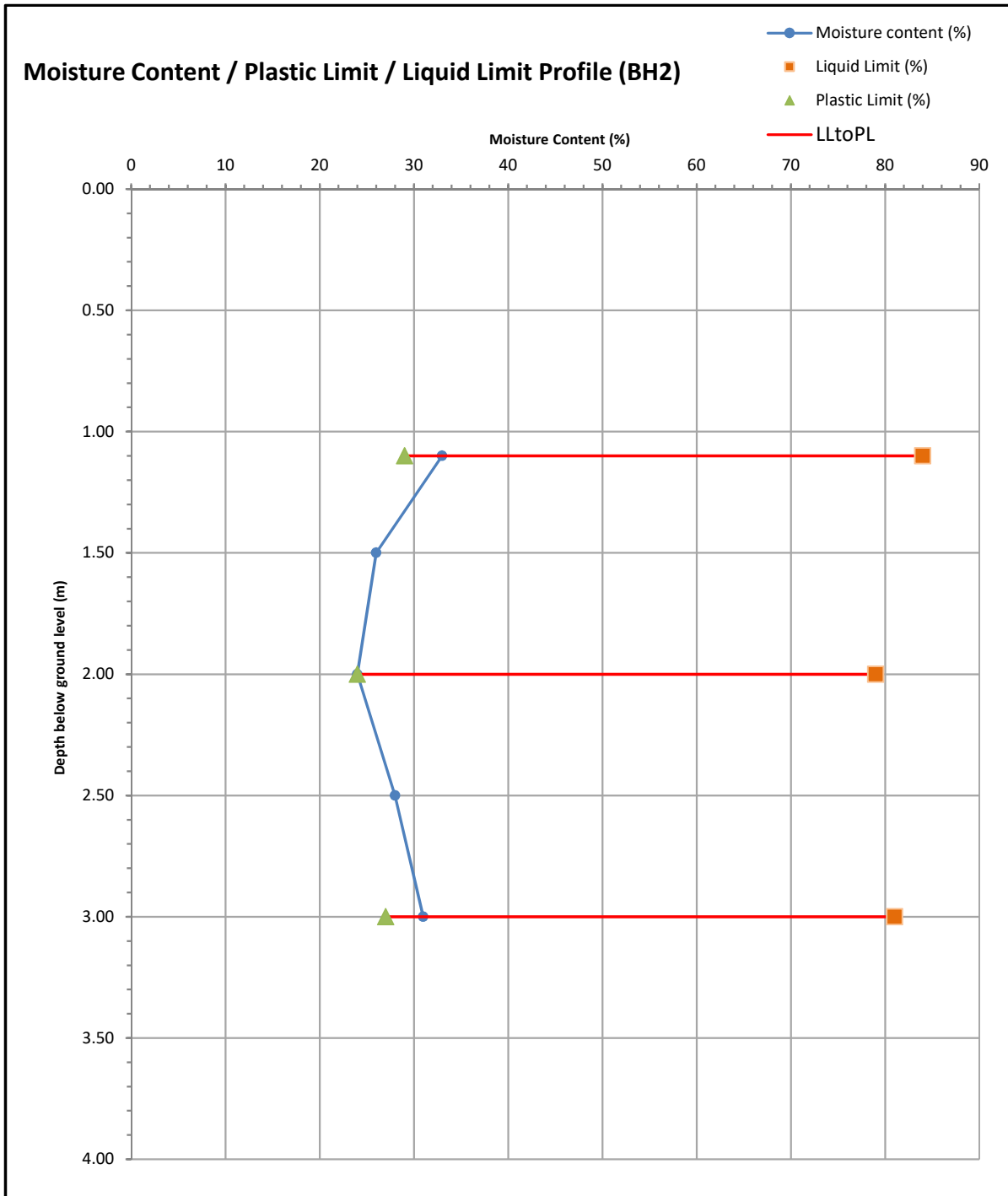


S20074/001 - Amendment A

Project Reference - 164 Hamstead Way NW11 7XD

Moisture Content Plot

Borehole / Trial Pit Reference **BH2**

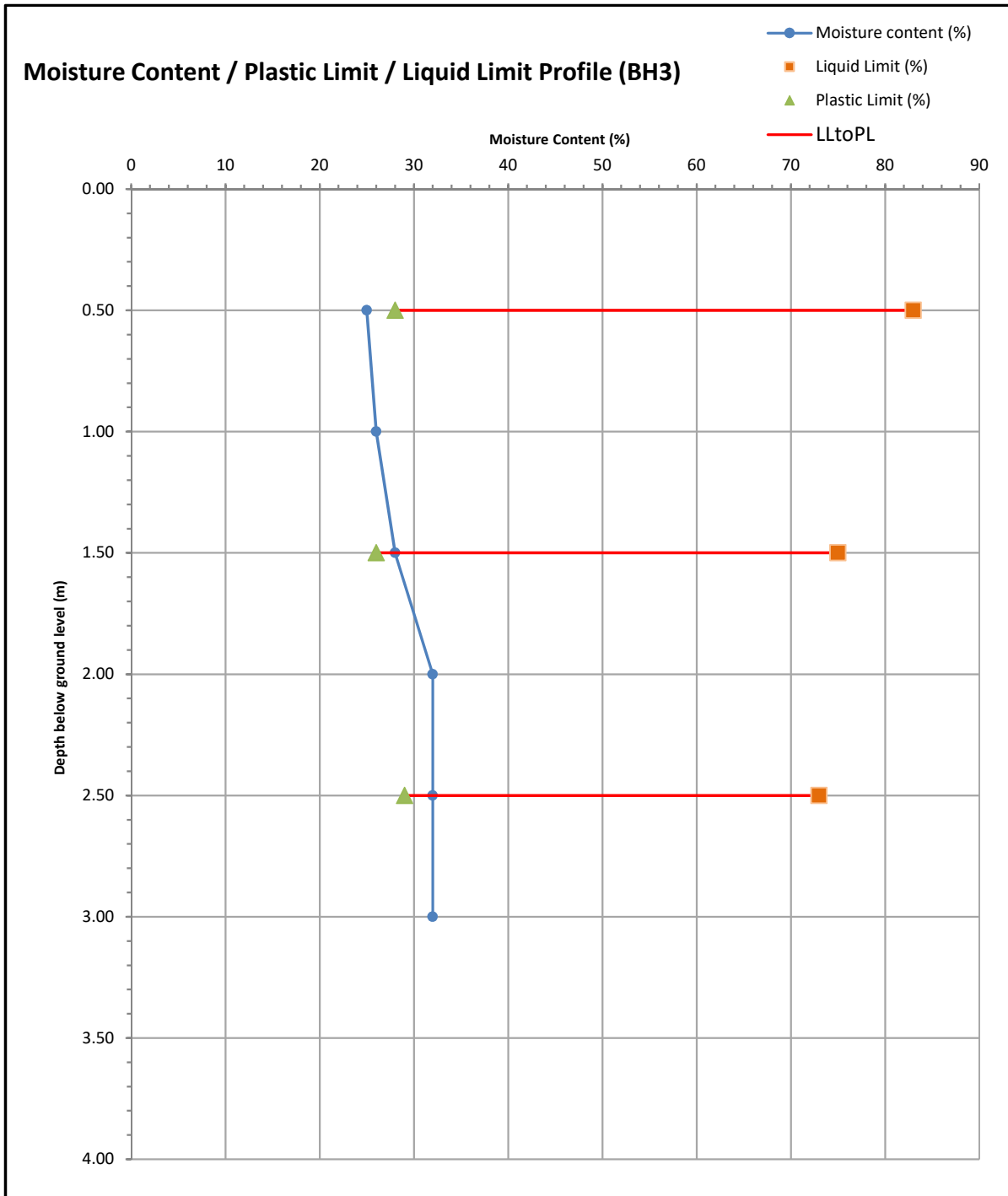


S20074/001 - Amendment A

Project Reference - 164 Hamstead Way NW11 7XD

Moisture Content Plot

Borehole / Trial Pit Reference **BH3**



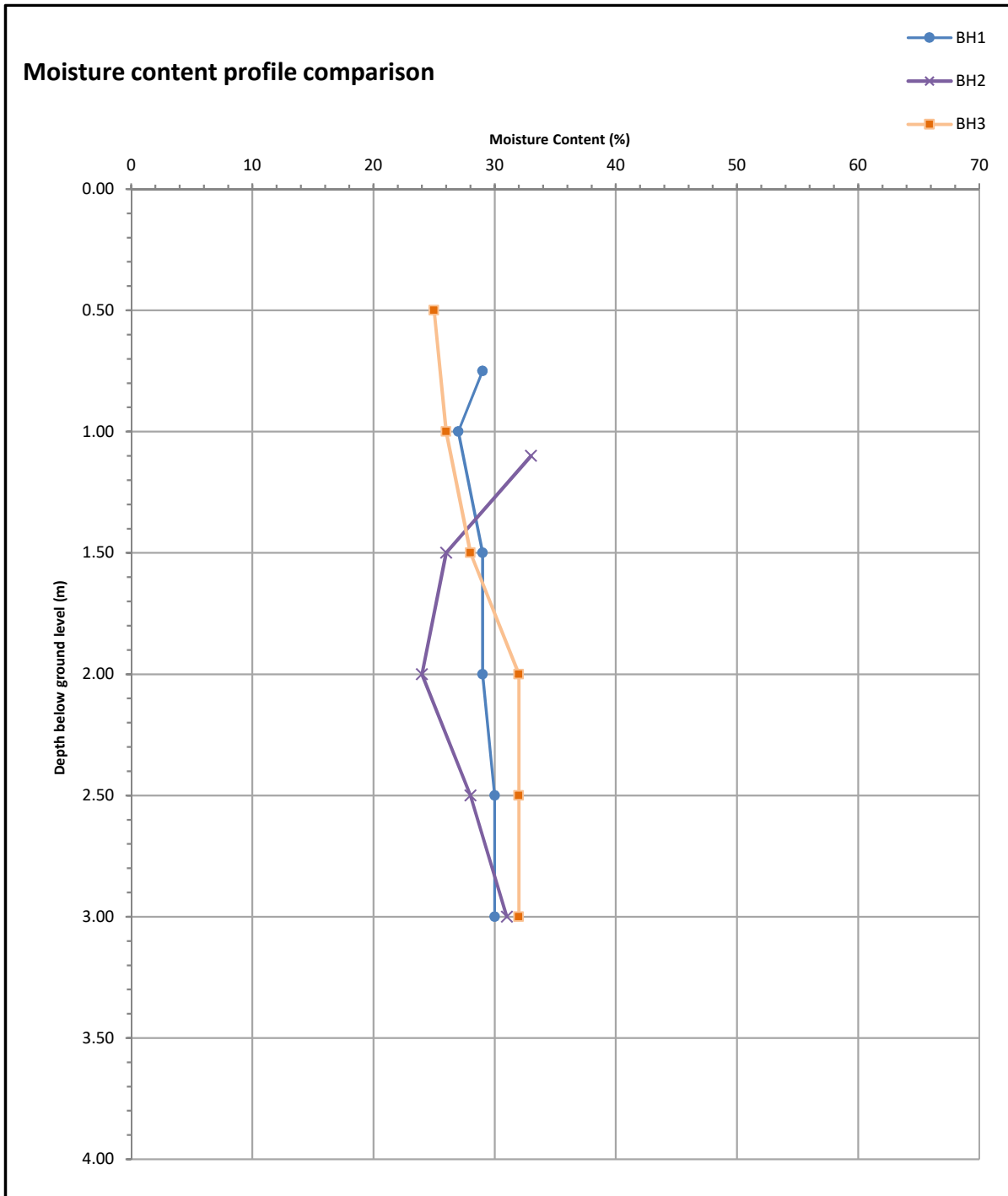


S20074/002

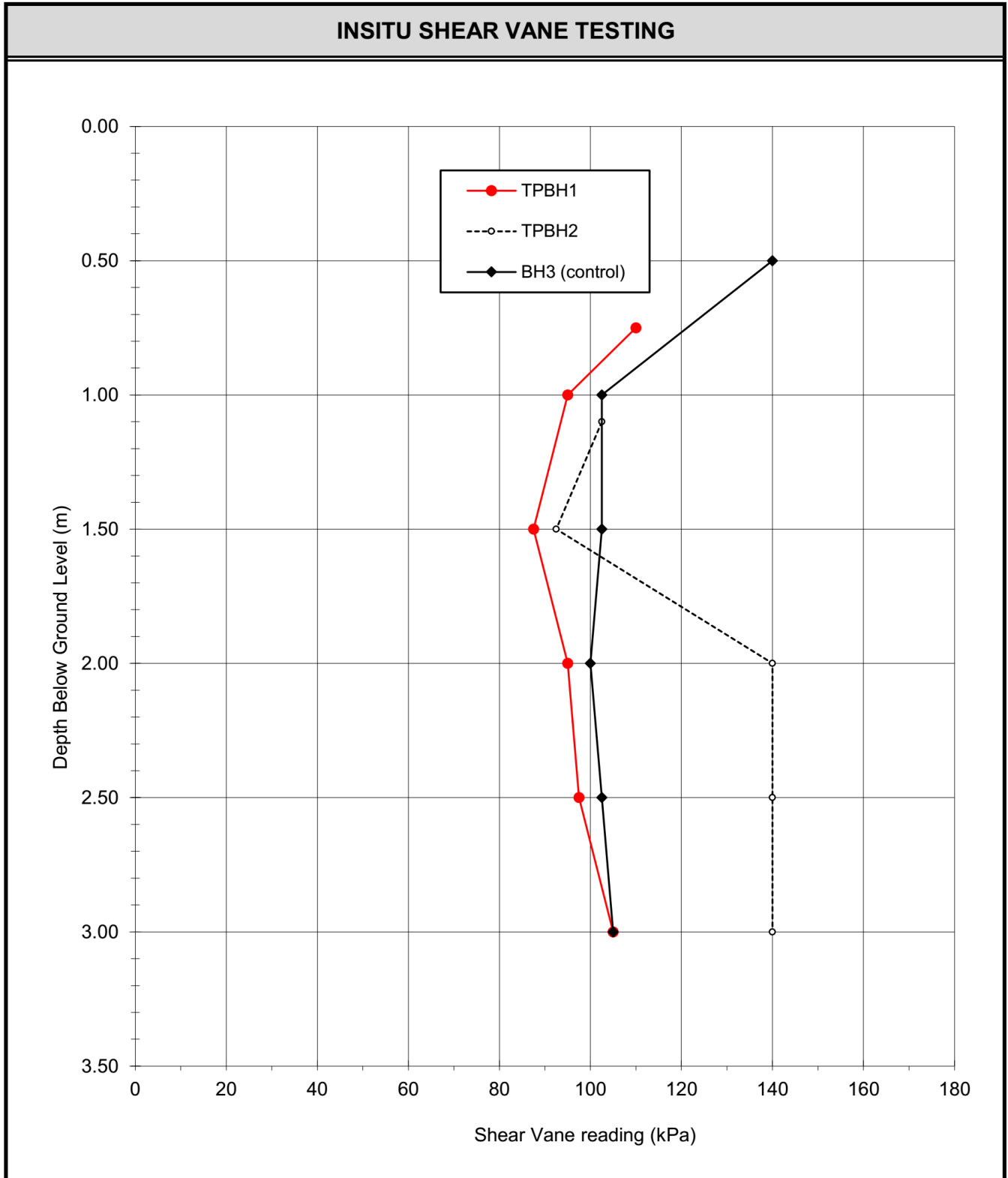
Project Reference - 164 Hampstead Way London NW11 7XD

Moisture Profile Comparison

Borehole / Trial Pit Reference All



**SECTION 9.0**  
**SHEAR VANE GRAPH**



**SECTION 10.0**  
**DRAINAGE REPORT**



**Project**

**Project Name:** S20074 - CCG, 164 Hampstead Way, NW11 7XD

**Project Description:** CCTV survey of all accesible drainage

**Project Number:** S20074

**Project Status:** Complete

**Project Date:** 10/09/2020

**Inspection Standard:** MSCC4 Sewers & Drainage GB (SRM4 Scoring)



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S20074 - CCG, 164 Hampstead Way, NW11 7XD	S20074	10/09/2020

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Section: 4; SVP > MH2 (SVPX) .....	8
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## Project Information

Project Name	Project Number	Project Date
S20074 - CCG, 164 Hampstead Way, NW11 7XD	S20074	10/09/2020

### Client

**Company:** Claims Consortium  
**Department:** Subsidence claims  
**Street:** 10 Thames View, Cliffe Woods  
**Town or City:** Rochester  
**Post Code:** ME3 8LT  
**Phone:** 0330 124 1395  
**Email:** subsidence@claimsconsortiumgroup.co.uk



### Contractor

**Company:** Nicholls Colton  
**Contact:** T Sharif  
**Department:** Southern Region Office  
**Street:** Airport House, Purley Way  
**Town or City:** Croydon  
**Post Code:** CR0 0 XZ  
**Phone:** 020 8288 3513  
**Email:** tanweer.sharif@nicholls-colton.co.uk

# S20074 Site Plan

Client:  
**Claims Consortium Group**

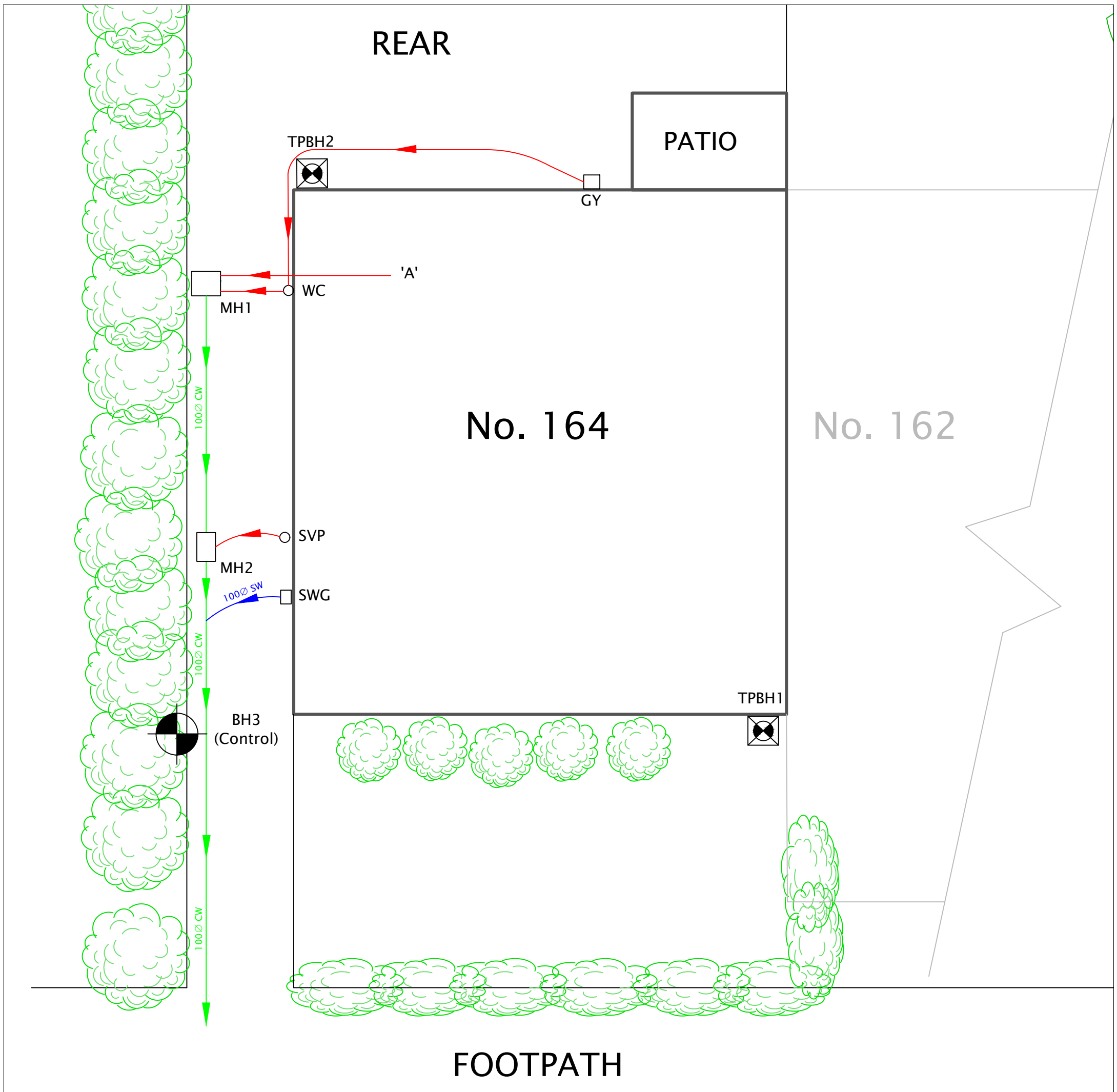
Project Title:  
 164 Hampstead Way, London,  
 NW11 7XD

Date of site works:  
 03/09/20

Weather:  
 Dry



Airport House, Purley Way, Croydon  
 CR0 0XZ  
 Tel: 020 8288 3513  
 E-mail: info@nicholls-colton.co.uk  
 Web site: www.nicholls-colton.co.uk



**KEY:**

- |                         |                              |                         |   |
|-------------------------|------------------------------|-------------------------|---|
| Surface water drainage  | TPBH Trial pit with borehole | IC Inspection chamber   | RWS Rainwater pipe (discharges onto ground) |
| Foul water drainage     | TP Trial pit                 | GY Gully (grey waste)   | SWG Yard gully                              |
| Combined water drainage | BH Borehole                  | CG Combined gully       | SVP Soil vent pipe                          |
| Assumed drainage        | RWG Rainwater gully          | VP Vent pipe            | Tree (approx. height in m)                  |
| MH Manhole              | RWP Rainwater pipe           | SS Soil stack (no vent) | All dimensions are given in mm.             |

## Project Information

Project Name	Project Number	Project Date
S20074 - CCG, 164 Hampstead Way, NW11 7XD	S20074	10/09/2020

## Project Notes

As per instruction received, a CCTV survey of all accessible drainage serving this property was carried out. The survey identified a combined drainage system located to the left-hand side of the property.

Access was available through manholes (MH1 and MH2) where multiple defects were observed in the pipework, primarily root ingress and structural cracking.

The rear manhole (MH1) downstream to MH2, was found to be suffering from heavy root ingress and a partially collapsed pipe adjacent to its entry into MH2.

It should be noted that the rear gully has a waste pipe outlet that is laid shallow under the slabs and flows into the line from the WC.

In light of the findings the following works are recommended:

- 1. MH1 to A** - Establish status of section - if it is 'live', HPWJ and CIPP patch line defects.
- 2. MH1 to WC** - Excavate and renew.
- 3. MH1 to MH2** - Excavate and renew.
- 4. MH2 to SVP** - CIPP patch line.
- 5. MH2 to Main Sewer** - HPWJ and CIPP line to 5m / Excavate and renew SWG.
- 6. Rear Gully** - Consider installing new line to connect directly into MH1.

## Section Profile

<b>Project Name</b> S20074 - CCG, 164 Hampstead Way, NW11 7XD	<b>Project Number</b> S20074	<b>Project Date</b> 10/09/2020
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### Circular, 100 mm

Section	Upstream Node	Downstream Node	Date	Road	Pipe Material	Total Length	Inspected Length
1	A	MH1	10/09/2020	164 Hamsteead way	Vitrified clay pipe (i.e. all clayware)	5.70 m	5.70 m
2	WC	MH1	10/09/2020	164 Hamsteead way	Vitrified clay pipe (i.e. all clayware)	1.60 m	<b>1.37 m</b>
3	MH1	MH2	10/09/2020	164 Hamsteead way	Vitrified clay pipe (i.e. all clayware)	4.94 m	<b>4.75 m</b>
4	SVP	MH2	10/09/2020	164 Hamsteead way	Vitrified clay pipe (i.e. all clayware)	1.90 m	<b>1.79 m</b>
5	MH2	Main Sewer	10/09/2020	164 Hamsteead way	Vitrified clay pipe (i.e. all clayware)	7.90 m	<b>7.90 m</b>

**Total: 5 Inspections x Circular 100 mm = 22.04 m Total Length and 21.51 m Inspected Length**

**Total: 5 Inspections = 22.04 m Total Length and 21.51 m Inspected Length**

## Section Inspection - 10/09/2020 - AX

Section 1	Inspection 1	Date 10/09/20	Time 12:18	Client's Job Ref 0652906207	Weather No Rain Or Snow	Pre Cleaned No	PLR AX
Operator Not Specified		Vehicle Not Specified		Camera Not Specified	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Town or Village:	London	Inspection Direction:	Upstream	Upstream Node:	A
Road:	164 Hamsteead Way	Inspected Length:	5.70 m	Upstream Pipe Depth:	0.000 m
Location:	Other (state in comments)	Total Length:	5.70 m	Downstream Node:	MH1
Surface Type:		Joint Length:	0.00 m	Downstream Pipe Depth:	0.900 m
Use:	Other	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Year Constructed:		Pipe Material:	Vitrified clay pipe (i.e. all clayware)		
Flow Control:	No flow control	Lining Type:	No Lining		
Inspection Purpose:	Sample survey to determine asset condition	Lining Material:	No Lining		
Comments:	Large section of debris and silt / Cracks in line				
Recommendations:	Establish if 'live' / High pressure water jet and CIPP patch line defects if 'live'				

Scale:	1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
		Depth: 0.90 m MH1					
		0.00	MH	Start node type, manhole, reference number: MH1	00:00:01		
		0.00	WL	Water level, 0% of the vertical dimension	00:00:04	1	
		0.99	FL	Fracture, longitudinal at 10 o'clock	00:00:24	2	3
		1.18	S01 DEC	Settled deposits, hard or compacted, 40% cross-sectional area loss, start	00:00:26	3	
		2.05	CC	Crack, circumferential from 7 o'clock to 11 o'clock	00:00:41	4	2
		4.29	F01 DEC	Settled deposits, hard or compacted, 40% cross-sectional area loss, finish	00:01:16		4
		5.17	JN	Junction at 9 o'clock, diameter: 100mm	00:01:35	5	
		5.70	LU	Line deviates up	00:01:48		
		5.70	OCF	Finish node type, other special chamber, reference number: A: Unsourced	00:03:12		
		Depth: 0.00 m					

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
2	40.0	8.8	50.0	3.0	1	5.0	3.5	20.0	4.0

**Section Pictures - 10/09/2020 - AX**

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
1	Upstream	AX	0652906207	S20074



1, 00:00:04, 0.00 m  
Water level, 0% of the vertical dimension



2, 00:00:24, 0.99 m  
Fracture, longitudinal at 10 o'clock



3, 00:00:26, 1.18 m  
Settled deposits, hard or compacted, 40% cross-sectional area loss, start



4, 00:00:41, 2.05 m  
Crack, circumferential from 7 o'clock to 11 o'clock



5, 00:01:35, 5.17 m  
Junction at 9 o'clock, diameter: 100mm

**Section Inspection - 10/09/2020 - WCX**

Section 2	Inspection 2	Date 10/09/20	Time 12:26	Client's Job Ref 0652906207	Weather No Rain Or Snow	Pre Cleaned No	PLR WCX
Operator 8020/B10703/C1092		Vehicle Not Specified		Camera Not Specified	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

<b>Town or Village:</b>	London	<b>Inspection Direction:</b>	Upstream	<b>Upstream Node:</b>	WC
<b>Road:</b>	164 Hamsteead Way	<b>Inspected Length:</b>	1.37 m	<b>Upstream Pipe Depth:</b>	0.000 m
<b>Location:</b>	Other (state in comments)	<b>Total Length:</b>	1.60 m	<b>Downstream Node:</b>	MH1
<b>Surface Type:</b>		<b>Joint Length:</b>	0.00 m	<b>Downstream Pipe Depth:</b>	0.900 m
<b>Use:</b>	Combined	<b>Pipe Shape:</b>	Circular	<b>Di/Height:</b>	100 mm
<b>Type of Pipe:</b>	Gravity drain/sewer	<b>Pipe Material:</b>	Vitrified clay pipe (i.e. all clayware)	<b>Lining Type:</b>	No Lining
<b>Year Constructed:</b>		<b>Lining Material:</b>	No Lining		
<b>Flow Control:</b>	No flow control				
<b>Inspection Purpose:</b>	Sample survey to determine asset condition				
<b>Comments:</b>	Root ingress and displaced joints				
<b>Recommendations:</b>	Excavate and renew				

Scale:	1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
		0.00	MH	Start node type, manhole, reference number: MH1	00:00:01		
		0.00	WL	Water level, 0% of the vertical dimension	00:00:06	1	
		0.30	RFJ	Roots, fine at joint	00:00:15	2	2
		0.49	JDM	Joint displaced, medium	00:00:21		1
		0.49	RFJ	Roots, fine at joint	00:00:21	3	2
		0.80	LU	Line deviates up	00:00:27		
		1.29	REM	General remark: Bossed connection from gully in vertical section	00:00:40		
		1.37	BRF	Finish node type, major connection without manhole, reference number: WC	00:00:45	4	

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
1	1.0	0.6	1.0	1.0	2	1.0	1.3	2.0	3.0



**Section Pictures - 10/09/2020 - WCX**

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
2	Upstream	WCX	0652906207	S20074



1, 00:00:06, 0.00 m  
Water level, 0% of the vertical dimension



2, 00:00:15, 0.30 m  
Roots, fine at joint



3, 00:00:21, 0.49 m  
Roots, fine at joint



4, 00:00:45, 1.37 m  
Finish node type, major connection without manhole, reference number: WC



## Section Inspection - 10/09/2020 - MH1X

Section 3	Inspection 3	Date 10/09/20	Time 12:31	Client's Job Ref 0652906207	Weather No Rain Or Snow	Pre Cleaned No	PLR MH1X
Operator 8020/B10703/C1092		Vehicle Not Specified		Camera Not Specified	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Town or Village:	London	Inspection Direction:	Downstream	Upstream Node:	MH1
Road:	164 Hamsteead Way	Inspected Length:	4.75 m	Upstream Pipe Depth:	
Location:	Under a permanent building	Total Length:	4.94 m	Downstream Node:	MH2
Surface Type:		Joint Length:	0.00 m	Downstream Pipe Depth:	
Use:	Combined	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Year Constructed:		Pipe Material:	Vitrified clay pipe (i.e. all clayware)		
Flow Control:	No flow control	Lining Type:	No Lining		
Inspection Purpose:	Sample survey to determine asset condition	Lining Material:	No Lining		
Comments:	Mass roots and partially collapsed line				
Recommendations:	Excavate and renew				

Scale:	1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
		Depth: m MH1					
		0.00	MH	Start node type, manhole, reference number: MH1	00:00:01		
		0.00	WL	Water level, 0% of the vertical dimension	00:00:05	1	
		0.53	S01 RT	Roots, tap, start	00:00:18	2	
		0.72	RMJ	Roots, mass at joint, 10% cross-sectional area loss	00:00:20	3	3
		1.03	F01 RT	Roots, tap, finish	00:00:24		4
		1.82	RFJ	Roots, fine at joint	00:00:34	4	2
		3.12	RFJ	Roots, fine at joint	00:00:47		2
		3.72	CCJ	Crack, circumferential at joint from 8 o'clock to 4 o'clock	00:00:52	5	2
		3.76	RF	Roots, fine	00:00:52		2
		4.18	XP	Collapsed drain or sewer	00:00:59	6	5
		4.75	MHF	Finish node type, manhole, reference number: MH2	00:01:13	7	
		Depth: m MH2					

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
2	165.0	35.4	175.0	5.0	5	9.0	2.4	12.0	4.0

**Section Pictures - 10/09/2020 - MH1X**

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
3	Downstream	MH1X	0652906207	S20074



1, 00:00:05, 0.00 m  
Water level, 0% of the vertical dimension



2, 00:00:18, 0.53 m  
Roots, tap, start



3, 00:00:20, 0.72 m  
Roots, mass at joint, 10% cross-sectional area loss



4, 00:00:34, 1.82 m  
Roots, fine at joint



5, 00:00:52, 3.72 m  
Crack, circumferential at joint from 8 o'clock to 4 o'clock



6, 00:00:59, 4.18 m  
Collapsed drain or sewer

**Section Pictures - 10/09/2020 - MH1X**

<b>Section</b> 3	<b>Inspection Direction</b> Downstream	<b>PLR</b> MH1X	<b>Client's Job Ref</b> 0652906207	<b>Contractor's Job Ref</b> S20074
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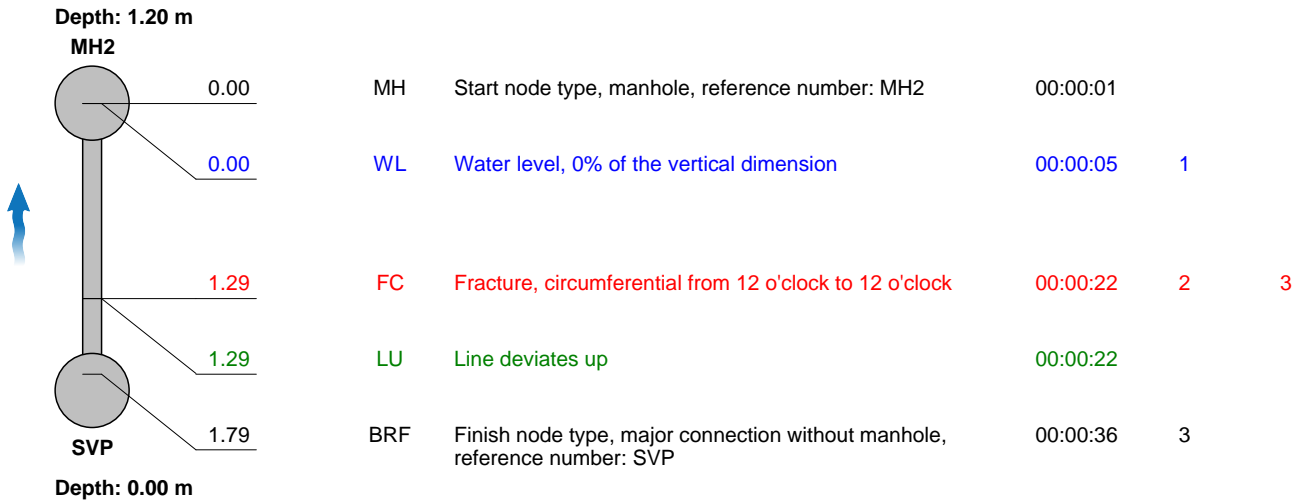
7, 00:01:13, 4.75 m  
Finish node type, manhole, reference number: MH2

**Section Inspection - 10/09/2020 - SVPX**

Section 4	Inspection 4	Date 10/09/20	Time 12:49	Client's Job Ref 0652906207	Weather No Rain Or Snow	Pre Cleaned No	PLR SVPX
Operator 8020/B10703/C1092		Vehicle Not Specified		Camera Not Specified	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

<b>Town or Village:</b>	London	<b>Inspection Direction:</b>	Upstream	<b>Upstream Node:</b>	SVP
<b>Road:</b>	164 Hamsteead Way	<b>Inspected Length:</b>	1.79 m	<b>Upstream Pipe Depth:</b>	0.000 m
<b>Location:</b>	Under a permanent building	<b>Total Length:</b>	1.90 m	<b>Downstream Node:</b>	MH2
<b>Surface Type:</b>		<b>Joint Length:</b>	0.00 m	<b>Downstream Pipe Depth:</b>	1.200 m
<b>Use:</b>	Combined	<b>Pipe Shape:</b>	Circular	<b>Dia/Height:</b>	100 mm
<b>Type of Pipe:</b>	Gravity drain/sewer	<b>Pipe Material:</b>	Vitrified clay pipe (i.e. all clayware)	<b>Lining Type:</b>	No Lining
<b>Year Constructed:</b>		<b>Lining Material:</b>	No Lining		
<b>Flow Control:</b>	No flow control				
<b>Inspection Purpose:</b>	Sample survey to determine asset condition				
<b>Comments:</b>	Fracture adjacent to rest bend				
<b>Recommendations:</b>	CIPP patch line				

Scale:	1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
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Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
1	40.0	21.1	40.0	3.0	0	0.0	0.0	0.0	1.0

**Section Pictures - 10/09/2020 - SVPX**

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
4	Upstream	SVPX	0652906207	S20074



1, 00:00:05, 0.00 m  
Water level, 0% of the vertical dimension



2, 00:00:22, 1.29 m  
Fracture, circumferential from 12 o'clock to 12 o'clock



3, 00:00:36, 1.79 m  
Finish node type, major connection without manhole, reference number: SVP



## Section Inspection - 10/09/2020 - MH2X

Section 5	Inspection 5	Date 10/09/20	Time 12:52	Client's Job Ref 0652906207	Weather No Rain Or Snow	Pre Cleaned No	PLR MH2X
Operator 8020/B10703/C1092		Vehicle Not Specified		Camera Not Specified	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Town or Village:	London	Inspection Direction:	Downstream	Upstream Node:	MH2
Road:	164 Hamsteead Way	Inspected Length:	7.90 m	Upstream Pipe Depth:	1.200 m
Location:	Under a permanent building	Total Length:	7.90 m	Downstream Node:	MAIN SEWER
Surface Type:		Joint Length:	0.00 m	Downstream Pipe Depth:	0.000 m
Use:	Combined	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Year Constructed:		Pipe Material:	Vitrified clay pipe (i.e. all clayware)		
Flow Control:	No flow control	Lining Type:	No Lining		
Inspection Purpose:	Sample survey to determine asset condition	Lining Material:	No Lining		
Comments:	Multiple defects				
Recommendations:	HPWJ / CIPP line / Excavate and renew SWG and junction				

Scale:	1:69	Position [m]	Code	Observation	MPEG	Photo	Grade																																																																																				
<div style="display: flex; align-items: center;"> <div style="flex: 1;"> <p>Depth: 1.20 m MH2</p> <p>Depth: 0.00 m</p> </div> <table border="1" style="margin-left: 10px; border-collapse: collapse;"> <tr> <td style="width: 10%;">0.00</td> <td style="width: 10%;">MH</td> <td style="width: 40%;">Start node type, manhole, reference number: MH2</td> <td style="width: 10%;">00:00:02</td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> </tr> <tr> <td>0.65</td> <td>WL</td> <td>Water level, 0% of the vertical dimension</td> <td>00:00:20</td> <td>1</td> <td></td> <td></td> </tr> <tr> <td>1.25</td> <td>CC</td> <td>Crack, circumferential from 8 o'clock to 2 o'clock</td> <td>00:00:23</td> <td>2</td> <td>2</td> <td></td> </tr> <tr> <td>1.60</td> <td>JN</td> <td>Junction at 9 o'clock, diameter: 100mm: Junction to SWG</td> <td>00:00:31</td> <td>3</td> <td></td> <td></td> </tr> <tr> <td>1.60</td> <td>CC</td> <td>Crack, circumferential from 12 o'clock to 12 o'clock: Crack in junction from SWG</td> <td>00:00:31</td> <td></td> <td>2</td> <td></td> </tr> <tr> <td>1.71</td> <td>S01</td> <td>CL Crack, longitudinal at 11 o'clock, start: Fine root ingress through crack</td> <td>00:00:41</td> <td>4</td> <td>2</td> <td></td> </tr> <tr> <td>2.01</td> <td>JDM</td> <td>Joint displaced, medium</td> <td>00:00:42</td> <td>5</td> <td>1</td> <td></td> </tr> <tr> <td>2.17</td> <td>F01</td> <td>CL Crack, longitudinal at 11 o'clock, finish: Fine root ingress through crack</td> <td>00:00:43</td> <td></td> <td>2</td> <td></td> </tr> <tr> <td>6.23</td> <td>DEZ</td> <td>Attached deposits, other at 12 o'clock, 20% cross-sectional area loss: Grease</td> <td>00:01:16</td> <td>6</td> <td>3</td> <td></td> </tr> <tr> <td>6.48</td> <td>WL</td> <td>Water level, 20% of the vertical dimension</td> <td>00:01:19</td> <td>7</td> <td></td> <td></td> </tr> <tr> <td>7.90</td> <td>SA</td> <td>Survey abandoned: Camera submerged</td> <td>00:01:59</td> <td>8</td> <td></td> <td></td> </tr> <tr> <td>7.90</td> <td></td> <td>End of pipe</td> <td></td> <td></td> <td></td> <td></td> </tr> </table> </div>								0.00	MH	Start node type, manhole, reference number: MH2	00:00:02				0.65	WL	Water level, 0% of the vertical dimension	00:00:20	1			1.25	CC	Crack, circumferential from 8 o'clock to 2 o'clock	00:00:23	2	2		1.60	JN	Junction at 9 o'clock, diameter: 100mm: Junction to SWG	00:00:31	3			1.60	CC	Crack, circumferential from 12 o'clock to 12 o'clock: Crack in junction from SWG	00:00:31		2		1.71	S01	CL Crack, longitudinal at 11 o'clock, start: Fine root ingress through crack	00:00:41	4	2		2.01	JDM	Joint displaced, medium	00:00:42	5	1		2.17	F01	CL Crack, longitudinal at 11 o'clock, finish: Fine root ingress through crack	00:00:43		2		6.23	DEZ	Attached deposits, other at 12 o'clock, 20% cross-sectional area loss: Grease	00:01:16	6	3		6.48	WL	Water level, 20% of the vertical dimension	00:01:19	7			7.90	SA	Survey abandoned: Camera submerged	00:01:59	8			7.90		End of pipe				
0.00	MH	Start node type, manhole, reference number: MH2	00:00:02																																																																																								
0.65	WL	Water level, 0% of the vertical dimension	00:00:20	1																																																																																							
1.25	CC	Crack, circumferential from 8 o'clock to 2 o'clock	00:00:23	2	2																																																																																						
1.60	JN	Junction at 9 o'clock, diameter: 100mm: Junction to SWG	00:00:31	3																																																																																							
1.60	CC	Crack, circumferential from 12 o'clock to 12 o'clock: Crack in junction from SWG	00:00:31		2																																																																																						
1.71	S01	CL Crack, longitudinal at 11 o'clock, start: Fine root ingress through crack	00:00:41	4	2																																																																																						
2.01	JDM	Joint displaced, medium	00:00:42	5	1																																																																																						
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6.23	DEZ	Attached deposits, other at 12 o'clock, 20% cross-sectional area loss: Grease	00:01:16	6	3																																																																																						
6.48	WL	Water level, 20% of the vertical dimension	00:01:19	7																																																																																							
7.90	SA	Survey abandoned: Camera submerged	00:01:59	8																																																																																							
7.90		End of pipe																																																																																									

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
5	20.0	5.2	41.0	2.0	1	2.0	0.3	2.0	3.0

**Section Pictures - 10/09/2020 - MH2X**

Section	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
5	Downstream	PLR MH2X	0652906207	S20074



1, 00:00:20, 0.65 m  
Water level, 0% of the vertical dimension



2, 00:00:23, 1.25 m  
Crack, circumferential from 8 o'clock to 2 o'clock



3, 00:00:31, 1.60 m  
Junction at 9 o'clock, diameter: 100mm, Junction to SWG



4, 00:00:41, 1.71 m  
Crack, longitudinal at 11 o'clock, start, Fine root ingress through crack



5, 00:00:42, 2.01 m  
Joint displaced, medium



6, 00:01:16, 6.23 m  
Attached deposits, other at 12 o'clock, 20% cross-sectional area loss, Grease

**Section Pictures - 10/09/2020 - MH2X**

<b>Section</b> 5	<b>Inspection Direction</b> Downstream	<b>PLR</b> MH2X	<b>Client's Job Ref</b> 0652906207	<b>Contractor's Job Ref</b> S20074
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7, 00:01:19, 6.48 m  
Water level, 20% of the vertical dimension



8, 00:01:59, 7.90 m  
Survey abandoned, Camera submerged



## NOTES

Please note that the meterage supplied in this report should be used as a guideline only and not solely relied on for accuracy. Nicholls Colton does not accept any liability for any claim made against inaccuracy of the meterage shown in report.

The drainage layout is not to scale and is a diagrammatic representation of the layout established from the survey.

To find out about the range of services Nicholls Colton can offer, please visit our website [www.nicholls-colton.co.uk](http://www.nicholls-colton.co.uk)

Date of Issue: 18.04.2019  
UNCONTROLLED DOCUMENT IF PRINTED  
Owner: Nick Hutt – Director  
Authorised by: Tanweer Sharif – Southern Manager  
Q:\Controlled Documents\Reports

**SECTION 11.0**  
**CRACK/LEVEL MONITORING LOCATIONS**

# S20074 Crack/Level Monitoring location

Client:  
**Claims Consortium Group**

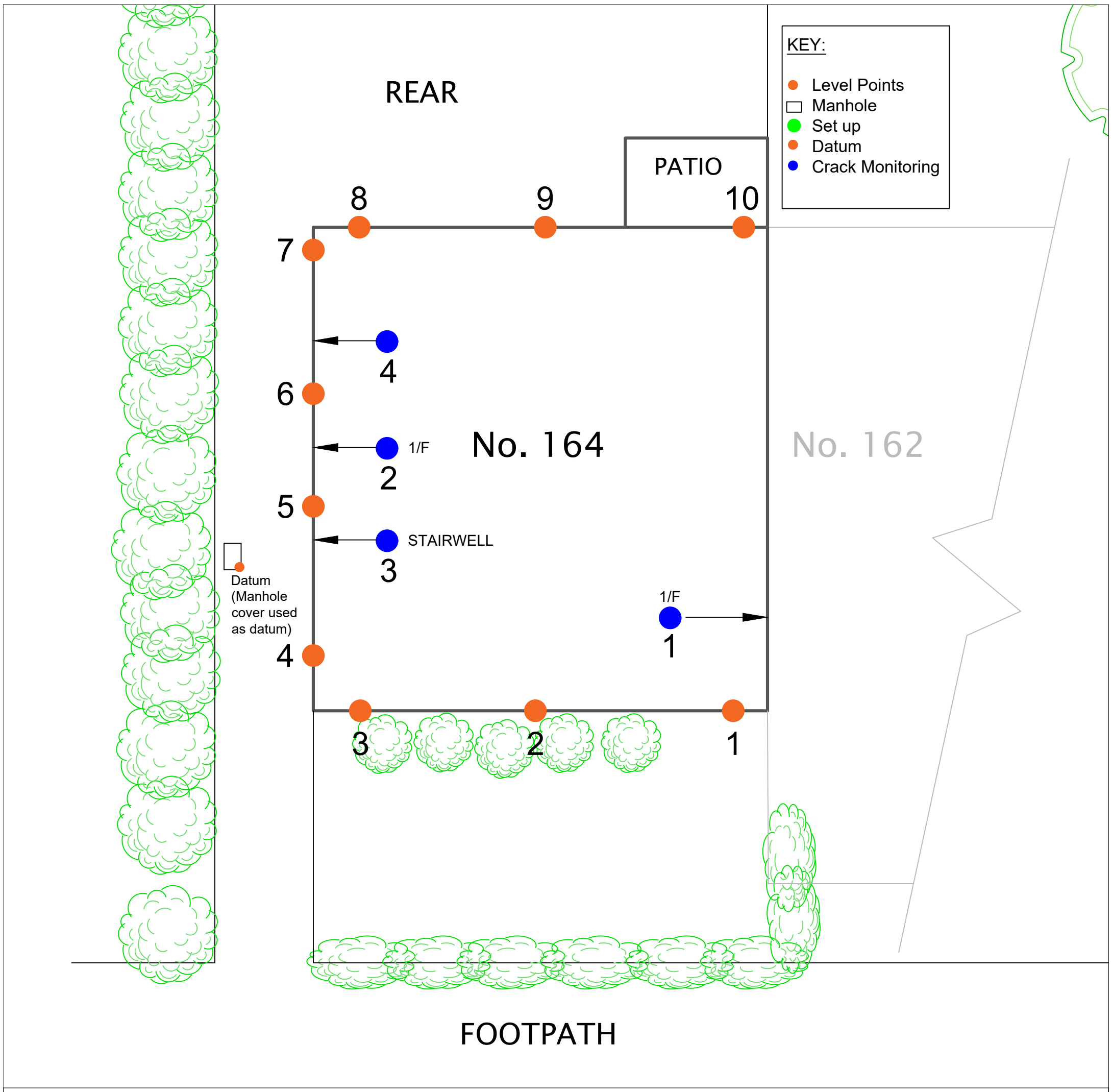
Project Title:  
 164 Hampstead Way, London,  
 NW11 7XD

Date of site works:  
 03/09/20

Weather:  
 Dry



Airport House, Purley Way, Croydon  
 CR0 0XZ  
 Tel: 020 8288 3513  
 E-mail: info@nicholls-colton.co.uk  
 Web site: www.nicholls-colton.co.uk



Surface water drainage	TPBH Trial pit with borehole	IC Inspection chamber	RWS Rainwater pipe (discharges onto ground)
Foul water drainage	TP Trial pit	GY Gully (grey waste)	SWG Yard gully
Combined water drainage	BH Borehole	CG Combined gully	SVP Soil vent pipe
Assumed drainage	RWG Rainwater gully	VP Vent pipe	Tree (approx. height in m)
MH Manhole	RWP Rainwater pipe	SS Soil stack (no vent)	All dimensions are given in mm.