

Drain Doctor Plumbing & Drainage

Watford & St Albans Office

01707 261424

Project Name:

12 Platts Lane

Report Date:

11 August 2016



DrainDoctor[®]
PLUMBING & DRAINAGE
COMPETITIVE PRICES ★ UNBEATABLE SERVICE

www.draindoctor.co.uk

Pipe Condition Grade Summary

STRUCTURAL CODE OBSERVATION SCORES

Structural defects			
Section	PLR	Grade	Fault description
2	Garden X	4	Joint displaced, 30mm of diameter
5	SVP X	3	Multiple defects at 0.0m
6	MH3 X	3	Fracture, circumferential, from 12 to 12 o'clock

- Grade 3:** Best practice suggests consideration should be given to repairs in the medium term.
- Grade 4:** Best practice suggests consideration should be given to repairs to avoid potential structural failure in the short term.
- Grade 5:** Best practice suggests this pipe is at risk from structural failure at any time and urgent consideration should be given to repairs to avoid risks to public health.

SERVICE CODE OBSERVATION SCORES

Service defects			
Section	PLR	Grade	Fault description
1	MH2 X	3	Multiple defects at 13.5m
3	Lat 1 X	3	Attached deposits, encrustation, from 12 to 12 o'clock, 5% cross-s
8	Interceptr X	3	Settled deposits, fine, 20% cross-sectional area loss

- Grade 3:** Best practice suggests consideration should be given to maintenance activities in the medium term.
- Grade 4:** Best practice suggests consideration should be given to maintenance activity to avoid potential operational failure in the short term.
- Grade 5:** Best practice suggests this pipe is at immediate risk of operational failure and/or causing flooding.

ABANDONED SURVEYS

Camera no access		
Section	PLR	Fault description
All Surveys Completed		

INFORMATION

These summaries are based on the Sewer Rehabilitation Manual grading system from the Water Research Centre. The condition grade scores are mathematically calculated values which offer an excellent guideline on the performance of the pipes.

Pipes with structural and service condition grade scores 1 & 2 are generally considered to be in an acceptable working order and will not be listed in the tables above.



Project Information / Inspection: 1

Project Name	Project Number	Contact	Report Date
12 Platts Lane			27/07/2016

Client: **Orly Weinberger**
Contact Name:
Department:
Road: **12 Platts Lane**
Town: **London**
County: **NW3 7NR**
Telephone:
Fax:
Mobile:
E-mail:

Site:
Contact Name:
Department:
Road:
Town:
County:
Telephone:
Fax:
Mobile:
E-mail:

Contractor **DRAIN DOCTOR**
Contact Name: **Mr David Grainger**
Area: **Watford & St Albans**
Road: **9 Lowlands**
Town: **Hatfield**
County: **Herts, AL9 5DY**
Telephone: **01707 261424**
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Mobile:
E-mail: **draindoctorwatford@yahoo.co.uk**



Project Information / Inspection: 1

Project Name 12 Platts Lane	Project Number	Contact	Report Date 27/07/2016
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Mr O Weinberger

I enclose our CCTV report together with images at points along both runs. A hard copy and DVD will be posted out to your office address.

12 Platts Lane, London NW3 7NR

CCTVSURVEY/REPORT

SURVEY DESCRIPTION:

Survey all accessible drain lines as instructed and within property boundaries.

As instructed we filmed all drains within property boundary. We can confirm that most of the lines are manufactured from Vitrified clay with a diameter of 100mm. Newer PVC pipework has been added from MH2

On the whole the drains are in average condition and only minor works are required to bring the system up to good condition. I have listed the sectional issues below for information.

Invert Levels

MH1 1900mm
MH2 1000mm
MH3 400mm

Section 1

The line is in good structural condition. We noted that the line changes material from Clay to Plastic at 13m approx'. Serviceability would improve greatly to remove encrusted scale and restore full mechanical efficiency. We also noted holding water in the newer plastic pipework which would indicate a belly in the pipework

Section 2

This line is a recent addition and is manufactured from PVC. We noted a very large displaced joint in the line which is likely to worsen over time. This can be repaired using 'No Dig' technology. I would recommend fitting a Point to Point structural repair to repair the joint.

Section 3

This line would benefit from a de-scale to improve mechanical efficiency. Structurally the line is in good condition.

Section 4

This line is in good condition with no defects to report.

Section 5

We noted a couple of fractures within the system here. We would recommend a full hydro-scrub prior to the fitment of a 6m structural liner

Section 6

The line only has one structural fault here. Recommend fitting a 'Point to Point' structural repair to permanently fix issue.

Section 7

No issues to report on this line.

Section 8 Sewer Outfall U/S to Interceptor MH1.

The line here is manufactured using Vitrified Clay with a diameter of 150mm. We noted settled



Project Information / Inspection: 1

Project Name 12 Platts Lane	Project Number	Contact	Report Date 27/07/2016
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deposits at approximately 1m D/S from MH1. The rest of the system is in good condition and the outfall to main sewer is approx. 13m d/s from MH1

Recommendations to return system to a good structural and serviceable condition.

Descale entire system to restore full mechanical efficiency. Total cost to complete this work is £340.00+vat.

Section 2, Supply and fit 'Point to Point repair on line. Total cost £435.00+vat.

Section 5, Supply and fit 6m liner to drain to complete permanent repair. Total cost £720.00+vat.

Section 6, Supply and fit 'Point to Point repair on line. Total cost £435.00+vat.

If you need any further information please let me know.

Kind regards
David Grainger



Inspection Report / Inspection: 1

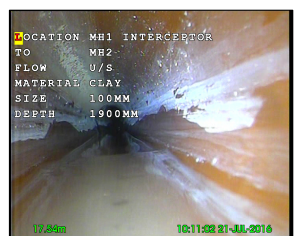
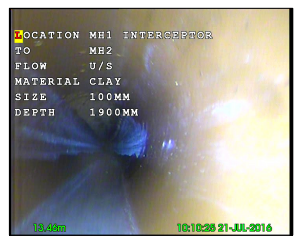
Section Number 1	Survey Date	Client's Job Number	Our Job Number	Weather	Inspected Length 18.57 m
Vehicle	Technician	Camera	Pipe Type	Pre Cleaned	Section Length 18.57 m

Place: London NW3 7NR	Location Details:	U/S Node: MH2
Road: 12 Platts Lane	Catchment:	U/S Depth (m):
Location: Property with buildings	Tape Number: 270716_1	D/S Node: MH1
Survey Section: MH1 U/S to MH2	Joint Length: 1.00 m	D/S Depth (m):

Flow Use:	Pipe Shape:
Year Laid:	Pipe Dia/Height: 100 mm
Inspection Purpose:	Pipe Material: Vitrified clay
	Lining:

Comment:

1:150	Position	Code	Observation	Grade
	MH1			
	0.00	MH	Start node type, manhole, reference number : MH1 (Constr) 0	
	0.00	WL	Water level, 0% of the vertical dimension	(Serv) 0
	0.66	S01 DEE	Attached deposits, encrustation, from 12 to 12 o'clock (Ser) 3 cross-sectional area loss, Start	(Ser) 3
				12.72 m
				13.46 m
				17.54 m
	12.72	JN	Junction, at 3 o'clock, diameter 100mm	(Constr) 0
	13.46	F01 DEE	Attached deposits, encrustation, from 12 to 12 o'clock (Ser) 3 cross-sectional area loss, End	(Ser) 3
	13.46	MC	Material changes, polyvinyl chloride	(Misc) 0
	17.54	WLC	Clear water level, 15% of the vertical dimension Rem (Ser) 0 Belly Start	(Ser) 0
	18.57	MHF	Finish node type, manhole reference number: MH2 (Constr) 0	
	MH2			



Structural Defects					Constructional Features				
Service Defects					Miscellaneous Features				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	0	0	0	1	1	2	1.38	25.6	3



Inspection Pictures / Inspection: 1

Section Number 1	Project Name 12 Platts Lane	Survey Date	City London NW3 7NR	Road 12 Platts Lane
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Photo: 1_1_5_A.jpg
 12.72m, Junction, at 3 o'clock, diameter 100mm

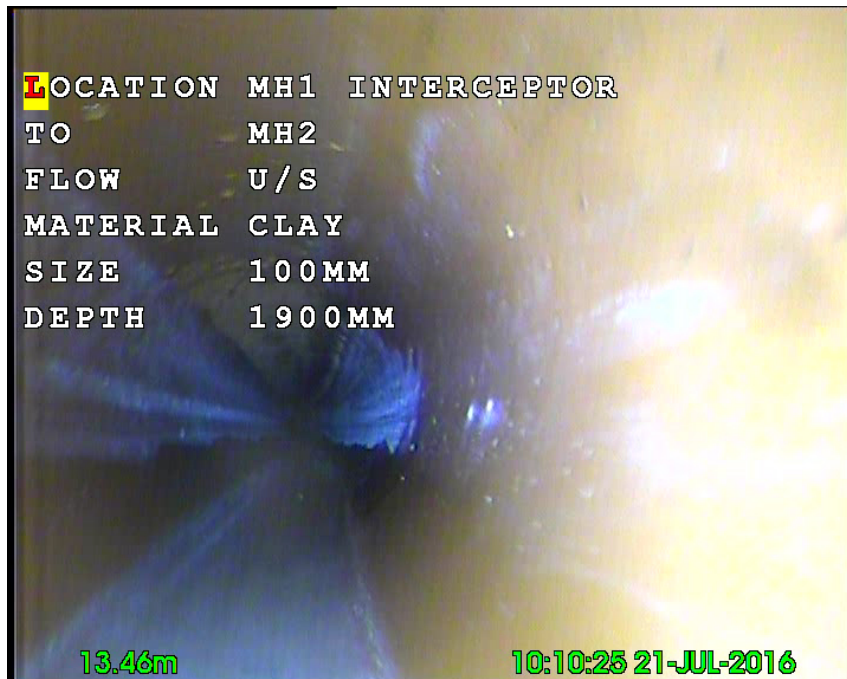


Photo: 1_1_7_A.jpg
 13.46m, Material changes, polyvinyl chloride



Inspection Pictures / Inspection: 1

Section Number 1	Project Name 12 Platts Lane	Survey Date	City London NW3 7NR	Road 12 Platts Lane
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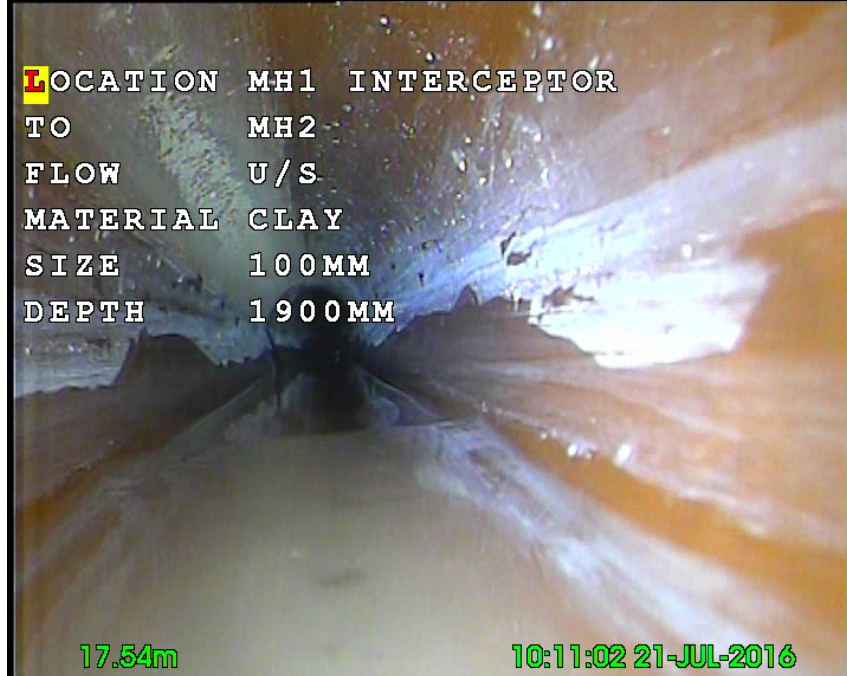


Photo: 1_1_8_A.jpg
17.54m, Clear water level, 15% of the vertical dimension Remarks:
Belly Start



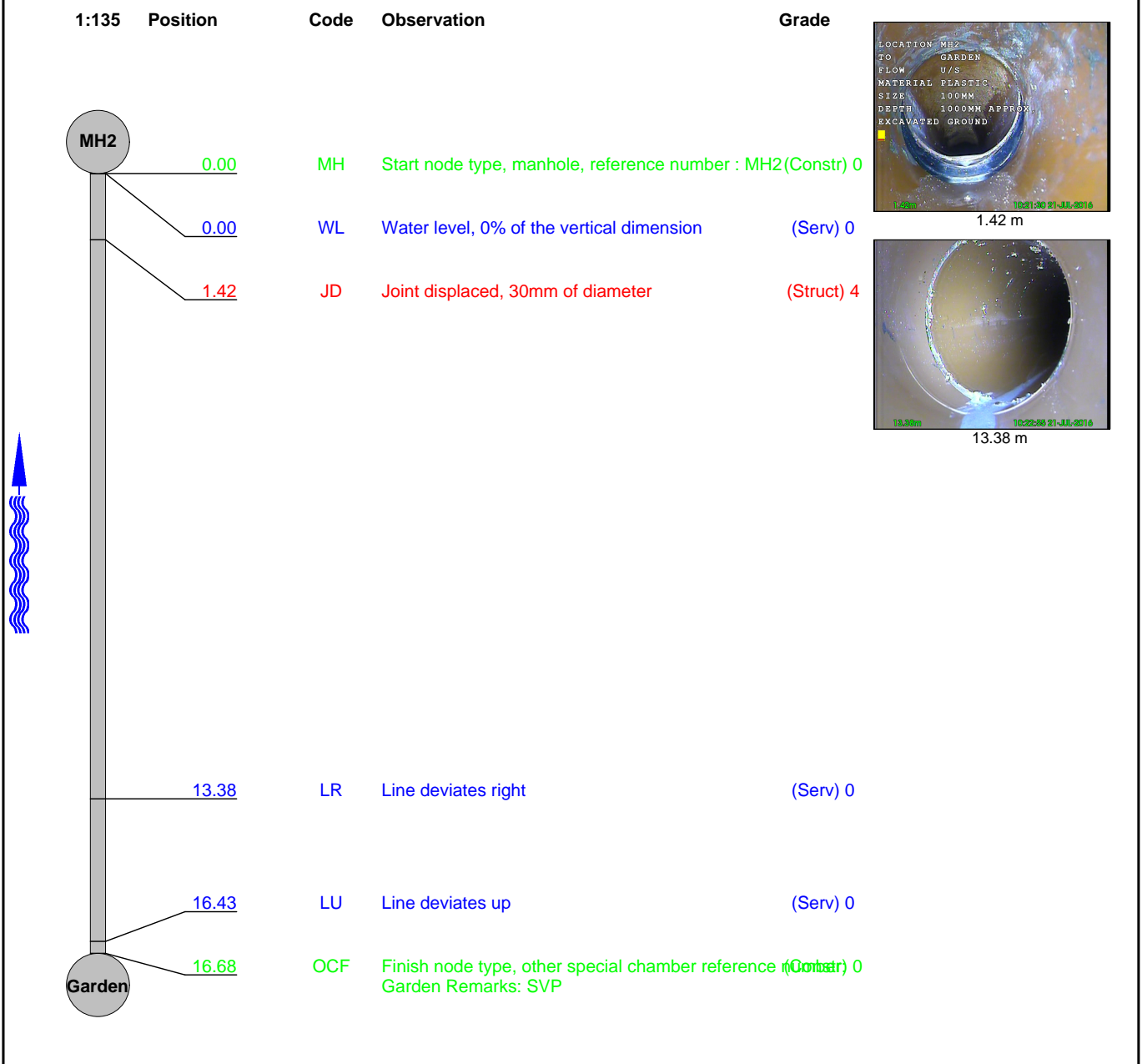
Inspection Report / Inspection: 1

Section Number 2	Survey Date	Client's Job Number	Our Job Number	Weather	Inspected Length 16.68 m
Vehicle	Technician	Camera	Pipe Type	Pre Cleaned	Section Length 16.68 m

Place: London NW3 7NR	Location Details:	U/S Node: Garden
Road: 12 Platts Lane	Catchment:	U/S Depth (m):
Location: Property with buildings	Tape Number: 270716_1	D/S Node: MH2
Survey Section: MH2 U/S to Garden	Joint Length: 1.00 m	D/S Depth (m):

Flow Use:	Pipe Shape:
Year Laid:	Pipe Dia/Height: 100 mm
Inspection Purpose:	Pipe Material: Vitrified clay
	Lining:

Comment:



Structural Defects					Constructional Features				
Service Defects					Miscellaneous Features				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
1	80	4.8	80	4	0	0	0	0	1



Inspection Pictures / Inspection: 1

Section Number 2	Project Name 12 Platts Lane	Survey Date	City London NW3 7NR	Road 12 Platts Lane
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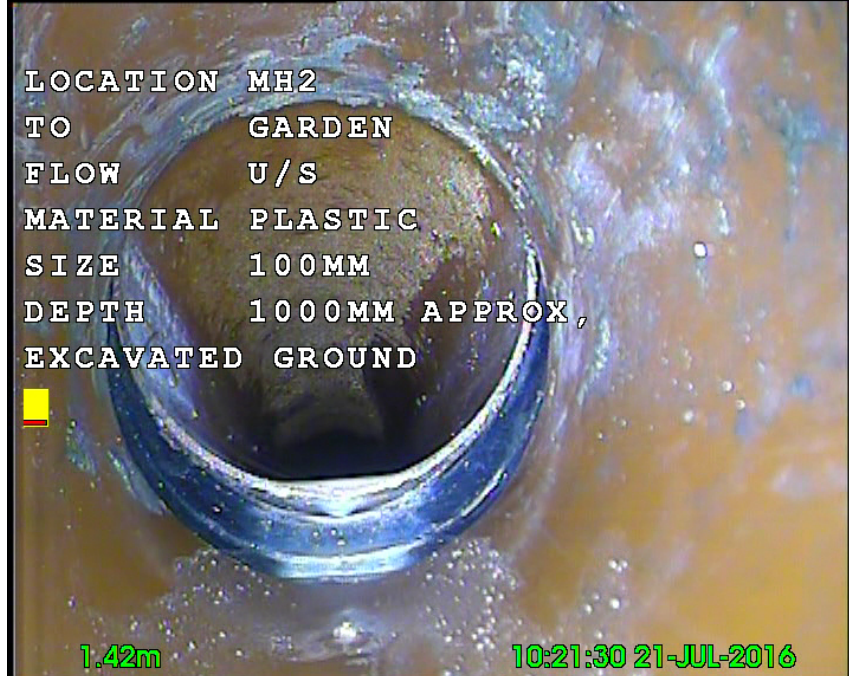


Photo: 2_3_12_A.jpg
1.42m, Joint displaced, 30mm of diameter

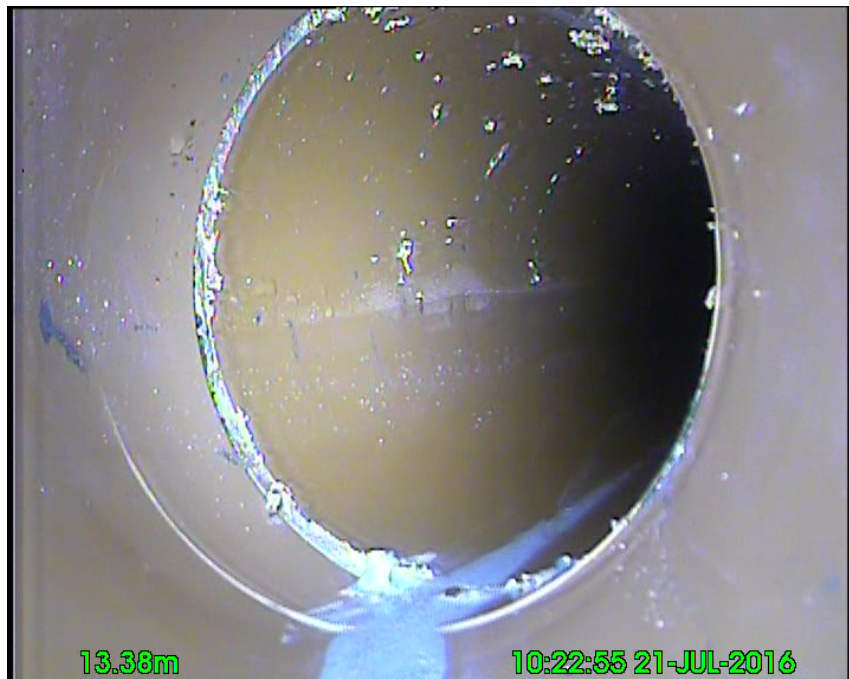


Photo: 2_3_13_A.jpg
13.38m, Line deviates right



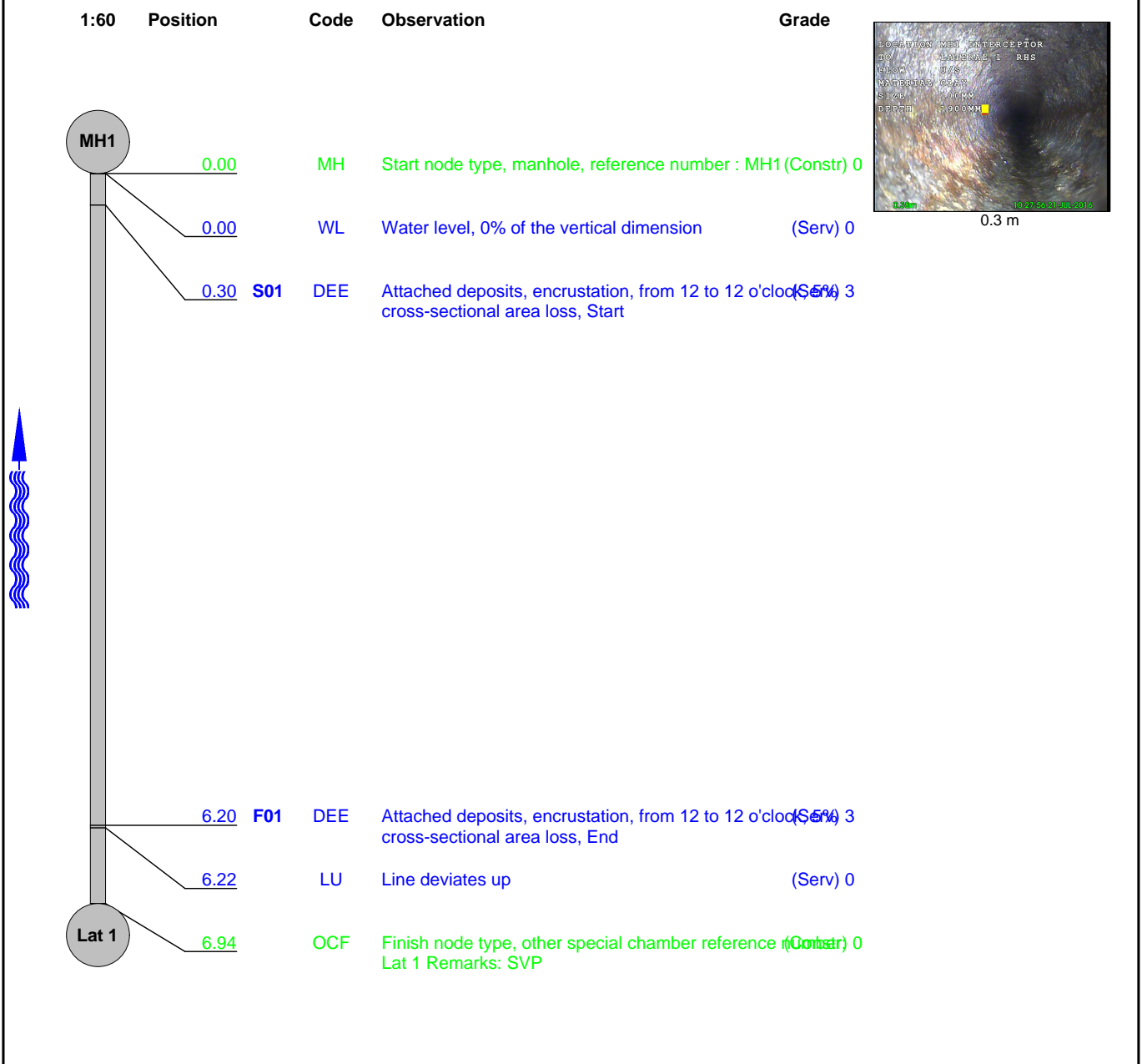
Inspection Report / Inspection: 1

Section Number 3	Survey Date	Client's Job Number	Our Job Number	Weather	Inspected Length 6.94 m
Vehicle	Technician	Camera	Pipe Type	Pre Cleaned	Section Length 6.94 m

Place: London NW3 7NR	Location Details:	U/S Node: Lat 1
Road: 12 Platts Lane	Catchment:	U/S Depth (m):
Location: Property with buildings	Tape Number: 270716_1	D/S Node: MH1
Survey Section: MH1 U/S to Lat 1	Joint Length: 1.00 m	D/S Depth (m):

Flow Use:	Pipe Shape:
Year Laid:	Pipe Dia/Height: 100 mm
Inspection Purpose:	Pipe Material: Vitrified clay
	Lining:

Comment:



Structural Defects					Constructional Features				
Service Defects					Miscellaneous Features				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	0	0	0	1	1	2	1.7	11.8	3



Inspection Pictures / Inspection: 1

Section Number 3	Project Name 12 Platts Lane	Survey Date	City London NW3 7NR	Road 12 Platts Lane
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Photo: 3_4_20_A.jpg
0.3m, Attached deposits, encrustation, from 12 to 12 o'clock, 5%
cross-sectional area loss, Start



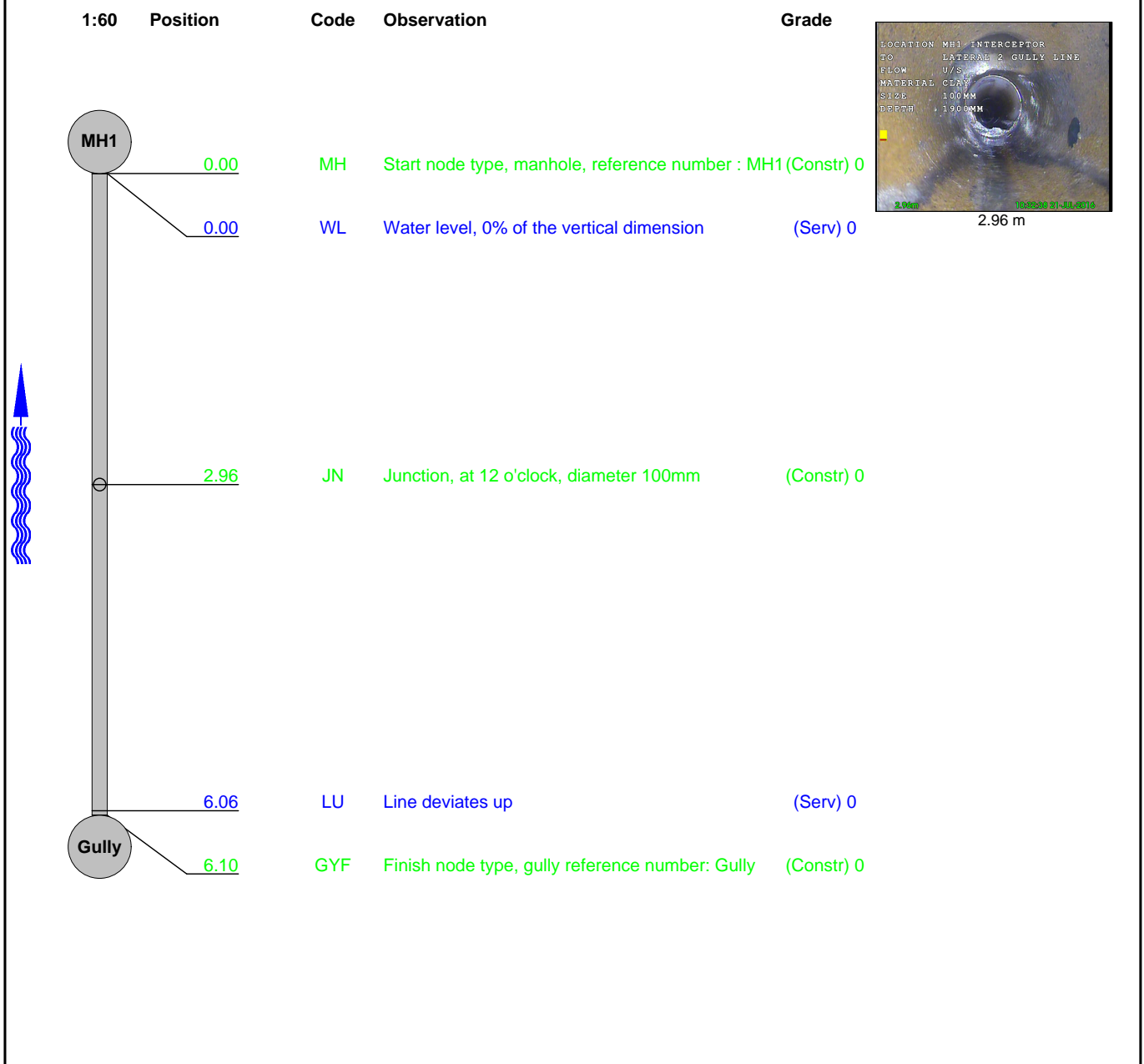
Inspection Report / Inspection: 1

Section Number 4	Survey Date	Client's Job Number	Our Job Number	Weather	Inspected Length 6.10 m
Vehicle	Technician	Camera	Pipe Type	Pre Cleaned	Section Length 6.10 m

Place: London NW3 7NR	Location Details:	U/S Node: Gully
Road: 12 Platts Lane	Catchment:	U/S Depth (m):
Location: Property with buildings	Tape Number: 270716_1	D/S Node: MH1
Survey Section: MH1 U/S to Gully	Joint Length: 1.00 m	D/S Depth (m):

Flow Use:	Pipe Shape:
Year Laid:	Pipe Dia/Height: 100 mm
Inspection Purpose:	Pipe Material: Vitrified clay
	Lining:

Comment:



Structural Defects					Constructional Features				
Service Defects					Miscellaneous Features				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade



Inspection Pictures / Inspection: 1

Section Number 4	Project Name 12 Platts Lane	Survey Date	City London NW3 7NR	Road 12 Platts Lane
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Photo: 4_5_26_A.jpg
2.96m, Junction, at 12 o'clock, diameter 100mm




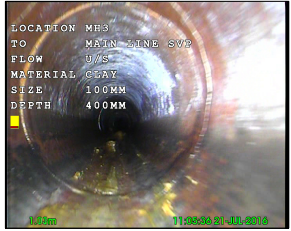

Inspection Report / Inspection: 1

Section Number 5	Survey Date	Client's Job Number	Our Job Number	Weather	Inspected Length 6.50 m
Vehicle	Technician	Camera	Pipe Type	Pre Cleaned	Section Length 6.50 m

Place: London NW3 7NR	Location Details:	U/S Node: SVP
Road: 12 Platts Lane	Catchment:	U/S Depth (m):
Location: Property with buildings	Tape Number: 270716_1	D/S Node: MH3
Survey Section: MH3 U/S to SVP	Joint Length: 1.00 m	D/S Depth (m):

Flow Use:	Pipe Shape:
Year Laid:	Pipe Dia/Height: 100 mm
Inspection Purpose:	Pipe Material: Vitrified clay
	Lining:

Comment:

1:60	Position	Code	Observation	Grade	
	MH3				
	0.00	MH	Start node type, manhole, reference number : MH3(Constr) 0		 0.02 m
	0.00	WL	Water level, 0% of the vertical dimension	(Serv) 0	
	0.02	FC	Fracture, circumferential, from 6 to 12 o'clock	(Struct) 3	 1.11 m
	1.11	FC	Fracture, circumferential, from 12 to 12 o'clock	(Struct) 3	
	5.56	LR	Line deviates right	(Serv) 0	
	5.97	LU	Line deviates up	(Serv) 0	
	6.50	OCF	Finish node type, other special chamber reference (Constr) 0 SVP Remarks: SVP		 5.56 m
	SVP				

Structural Defects					Constructional Features				
Service Defects					Miscellaneous Features				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
2	40	12.31	80	3	0	0	0	0	1



Inspection Pictures / Inspection: 1

Section Number 5	Project Name 12 Platts Lane	Survey Date	City London NW3 7NR	Road 12 Platts Lane
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Photo: 5_6_32_A.jpg
 0.02m, Fracture, circumferential, from 6 to 12 o'clock



Photo: 5_6_33_A.jpg
 1.11m, Fracture, circumferential, from 12 to 12 o'clock



Inspection Pictures / Inspection: 1

Section Number 5	Project Name 12 Platts Lane	Survey Date	City London NW3 7NR	Road 12 Platts Lane
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Photo: 5_6_34_A.jpg
5.56m, Line deviates right



Inspection Pictures / Inspection: 1

Section Number 6	Project Name 12 Platts Lane	Survey Date	City London NW3 7NR	Road 12 Platts Lane
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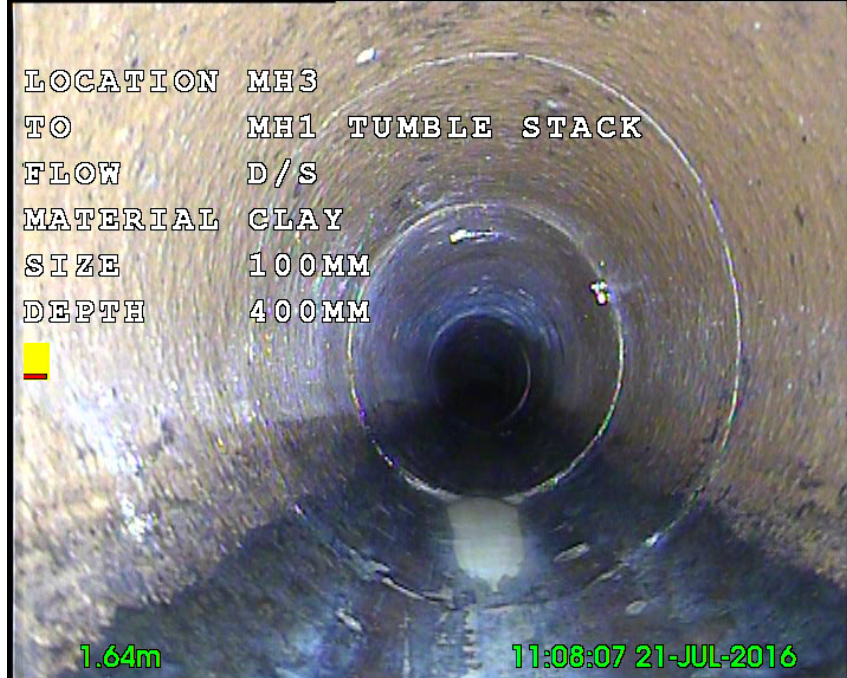


Photo: 6_7_39_A.jpg

1.64m, Fracture, circumferential, from 12 to 12 o'clock



Inspection Report / Inspection: 1

Section Number 7	Survey Date	Client's Job Number	Our Job Number	Weather	Inspected Length 0.80 m
Vehicle	Technician	Camera	Pipe Type	Pre Cleaned	Section Length 0.80 m

Place: London NW3 7NR	Location Details:	U/S Node: Gully
Road: 12 Platts Lane	Catchment:	U/S Depth (m):
Location: Property with buildings	Tape Number: 270716_1	D/S Node: MH3
Survey Section: MH3 U/S to Gully	Joint Length: 1.00 m	D/S Depth (m):

Flow Use:	Pipe Shape:
Year Laid:	Pipe Dia/Height: 100 mm
Inspection Purpose:	Pipe Material: Vitrified clay
	Lining:

Comment:

1:50	Position	Code	Observation	Grade
	0.00	MH	Start node type, manhole, reference number : MH3(Constr)	0
	0.00	WL	Water level, 0% of the vertical dimension	(Serv) 0
	0.73	LD	Line deviates down	(Serv) 0
	0.80	GYF	Finish node type, gully reference number: Gully	(Constr) 0

Structural Defects					Constructional Features				
Service Defects					Miscellaneous Features				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade



Inspection Report / Inspection: 1

Section Number 8	Survey Date	Client's Job Number	Our Job Number	Weather	Inspected Length 13.04 m
Vehicle	Technician	Camera	Pipe Type	Pre Cleaned	Section Length 13.04 m

Place: London NW3 7NR	Location Details:	U/S Node: Interceptr
Road: 12 Platts Lane	Catchment:	U/S Depth (m):
Location: Property with buildings	Tape Number:	D/S Node: Sewer
Survey Section: Sewer U/S to Interceptr	Joint Length: 1.00 m	D/S Depth (m):

Flow Use:	Pipe Shape:
Year Laid:	Pipe Dia/Height: 150 mm
Inspection Purpose:	Pipe Material: Vitrified clay
	Lining:

Comment:

1:105	Position	Code	Observation	Grade
	Sewer			
	0.00	OF	Start node type, outfall, reference number : Sewer R000000000	
	0.00	WL	Water level, 0% of the vertical dimension	(Serv) 0
	8.00	LD	Line deviates down Remarks: 1/2 Turn	(Serv) 0
	11.72	DES	Settled deposits, fine, 20% cross-sectional area loss	(Serv) 3
	13.04	MHF	Finish node type, manhole reference number: Interceptr	(Constr) 0
			Remarks: Interceptr	

LOCATION MH1 INTERCEPTR
 TO MAIN SEWER
 FLOW D/S
 MATERIAL CLAY
 SIZE 150MM
 DEPTH 1000MM
 REVERSE

Structural Defects					Constructional Features				
Service Defects					Miscellaneous Features				
STR no def	STR peak	STR mean	STR total	STR grade	SER no def	SER peak	SER mean	SER total	SER grade
0	0	0	0	1	1	2	0.15	2	3



Inspection Pictures / Inspection: 1

Section Number 8	Project Name 12 Platts Lane	Survey Date	City London NW3 7NR	Road 12 Platts Lane
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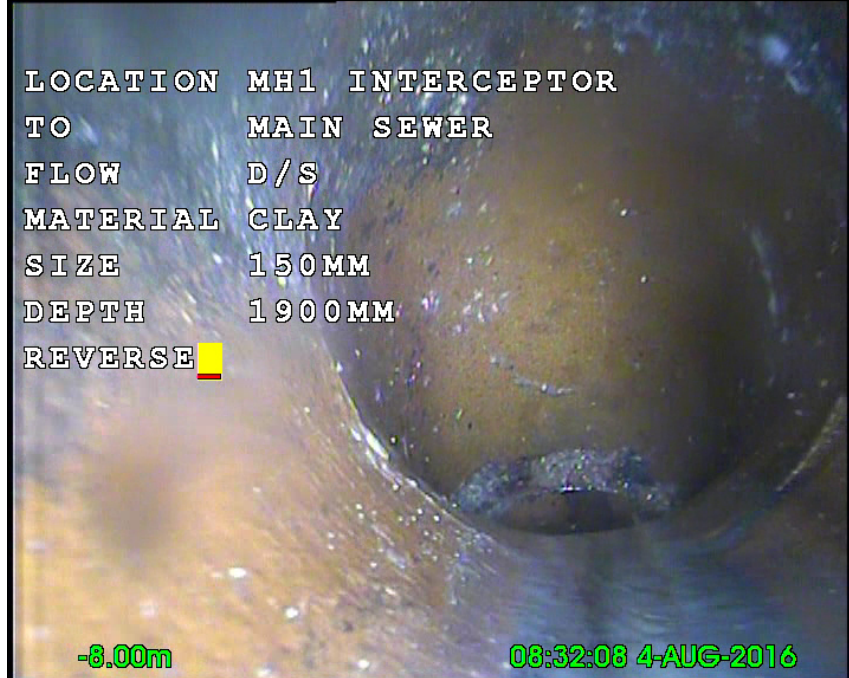


Photo: 8_9_49_A.jpg
8m, Line deviates down Remarks: 1/2 Turn

Standard Notes & Conditions

Drain Doctor Plumbing has made every concerted attempt to produce a qualitative and quantitative survey, outlining all the significant observations and where applicable, their appropriate remedial actions. However, we cannot accept any liability for any misinterpretation by third parties of the information contained herein. The conditions of the drains observed in this report are that of the day(s) of the survey only.

The clock reference system is used to indicate where observations are being made, relative to the absolute position of the invert (bottom) of the pipe. That is to say that the soffit (top) of the pipe is at 12 o'clock, the invert of the pipe is at 6 o'clock, the right hand edge is at 3 o'clock and the left hand edge is at 9 o'clock. Where observations are made between points of the clock face, they are done so in a clockwise direction i.e. from 3 to 9 o'clock is the bottom half of the pipe.

Unless stated otherwise, all invert depths are measured at the downstream end of the inspection chamber or manhole, vertically from the bottom of the channel to the top of the manhole cover.

The 'master' copy of the recording for this report will be kept at Drain Doctor Plumbing for a period of 12 months from the date of the survey, and further copies may be available to purchase on request. After this time, the master copy may be destroyed.

Any quotations for remedial works included with this report will remain valid for a minimum period of 3 calendar months from the date of the survey.

Clay pipes (sometimes called salt-glazed or vitrified clay) are the traditional type of drain pipe and are found at properties of all ages, but particularly pre-1960s. Older clay ware piping systems typically used socket and spigot joints that were caulked with lime mortar to provide a rigid string of drains. These older systems are commonly found to be cracked and broken due to the inflexibility of the joints coupled with slight ground movements, and have never had any degree of built in design-flex.

Old cast iron pipes are susceptible to considerable erosion during service, poor hydraulic performance due to rough internal surfaces and poorly constructed connections to clay or other pipe materials.

Modern versions of vitrified clay pipes and uPVC (plastic) pipes are jointed with polymeric flexible couplings, which allow the pipes in the ground to adapt to slight ground movements without breaking. The modern joints are just as susceptible to leakage and root intrusion as their older counterparts, often as a result of poor installation, overloading, excessive ground movement or direct damage.

The jointing systems of all below ground pipes are always constructed around the outside of the pipes, so are not usually visible on CCTV recordings. Hence, a detailed knowledge of past and present drainage construction techniques is usually used to draw conclusions about the integrity of the pipe joints, from the conditions observed on their inside surfaces.

Root intrusion into drains is very common, but only usually occurs where there is an existing defect such as a crack, fracture or hole in the pipe. Roots from trees and shrubs have the sole purpose in life to seek out water and nutrients. When they find entry into a drain or sewer, they often fill the available space to make best use of the available water, and this can lead to some considerable blockages if left unchecked. Drains with root intrusion can often be permanently repaired without the need for excavation, or any need to remove the offending tree or shrub.

It is an offence under Section 111 of the 1991 Water Industry Act (also Section 46 of the 1968 Sewerage Act 1968 in Scotland) to allow anything to enter the public sewerage network that might impede the flow of sewage, or is difficult to process at the local waste water treatment plant. This not only applies to solid objects such as gravel, bricks etc, but also particularly to FOGs (Fats, Oils and Greases).

During the 1940s, 50s and 60s, there was a large scale use of Pitch Fibre pipes in the UK construction industry. These pipes are often found to be delaminated, blistered and deformed, due to the way in which they deteriorate under ground pressure and in the damp conditions found in drains.

By definition, a drain serves one property only, and a sewer serves more than one property.

Under legislation enacted on 1st October 2011 in England and Wales, all previous 'private sewers' and 'private lateral drains' have now passed into the ownership of the local Water and Sewerage Company (WaSC). At the present time, there are a few exceptions to this ruling which include drains and sewers under Crown land, some pipes under Railway land, surface water pipes that lead directly to a moving water course and pipe systems upstream from and including sewage pumping stations. Under the new rules, pipes that were previously deemed to be 'Section 24' sewers are now public sewers under the ownership of the local WaSC.

Where a private drain runs out under a road to a sewer, the responsibility for the maintenance of the pipe hands over from the site owner to the WaSC at the point where it passes under the property boundary. All sewers are now under the ownership of the WaSCs.

Under Scottish law, the responsibility for drains beyond the property curtilage has not changed of late, and remains with Scottish Water.

Drain Doctor will keep this survey on file for 12 months from the date of the site investigation, after which time it may be permanently deleted. Whilst still on file, additional copies of the report and WinCan Viewer disk are available from Drain Doctor for £25 +VAT if required.

WinCan v8 uses the Sewer Rehabilitation Manual grading system for classifying pipes with a 0-5 scoring system under service and structural defect observations, where zero is good condition and 5 is poor condition. This system is a screening process which is extremely useful for quickly assessing which pipes are in most need of remedial works. Care should be taken when interpreting these scores with respect to plastic and renovated pipes.
