

Tower Surveys Associates

Chartered Surveyors

Geomatics - Land, Utilities, Engineering & Building

Tower Surveys Associates

18-20 The Ropewalk, Nottingham

james.hulme@towersurveysassociates.biz

Section Pictures - 17/10/2023 - RE

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
46	Upstream	RE	TSA-23-2537	TSA-23-2537



9, 00:00:53, 12.29 m
Settled deposits, coarse, 75% cross-sectional area loss, change



10, 00:00:53, 12.29 m
Finish node, rodding eye, reference: RE reached

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Section Inspection - 17/10/2023 - MH21 X

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
47	1	17/10/23	9:09	TSA-23-2537	No Rain Or Snow	No	MH21 X
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Dominic White		LM21 UHU		Minicam Solopro	Not Specified	Not Specified	Not Specified

Town or Village:

London

Road:

The Bank

Location:

Property or buildings

Surface Type:

Use:

Surface water

Type of Pipe:

Gravity drain/sewer

Flow Control:

No flow control

Year Constructed:

Not Specified

Inspection Purpose:

Routine inspection

Inspection Direction:

Downstream

Inspected Length:

10.45 m

Total Length:

10.45 m

Joint Length:

Upstream Node:

MH21 X

Upstream Pipe Depth:

Downstream Node:

MH22 UTL

Downstream Pipe Depth:

Pipe Shape:

Circular

Dia/Height:

100 mm

Pipe Material:

Vitrified clay

Lining Type:

No Lining

Lining Material:

No Lining

Comments:

Recommendations:

Scale:

1:91

Position [m]

Code

Observation

MPEG

Photo

Grade

Depth: m

MH21 X

0.00

MH

Start node, manhole, reference: MH21 X

00:00:00

0.00

WL

Water level, 0% of the vertical dimension

0.02

GP

General photograph taken at this point

00:00:02

1

1.73

JDM

Joint displaced, medium

00:00:12

2

1 / 3

5.02

GP

General photograph taken at this point

00:00:21

3

10.45

MHF

Finish node, manhole, reference: MH22 UTL reached

00:00:40

4

MH22 UTL

Depth: 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
1		1.0	0.1	1.0	1.0	1		2.0	0.2	2.0	3.0

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Section Pictures - 17/10/2023 - MH21 X

Item No. 47	Inspection Direction Downstream	PLR MH21 X	Client's Job Ref TSA-23-2537	Contractor's Job Ref TSA-23-2537
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1, 00:00:02, 0.02 m

General photograph taken at this point



2, 00:00:12, 1.73 m

Joint displaced, medium



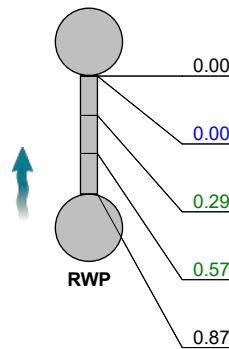
3, 00:00:21, 5.02 m

General photograph taken at this point



4, 00:00:40, 10.45 m

Finish node, manhole, reference: MH22 UTL reached

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Section Inspection - 17/10/2023 - RWP									
Item No. 48	Insp. No. 1	Date 17/10/23	Time 9:10	Client's Job Ref TSA-23-2537	Weather No Rain Or Snow	Pre Cleaned No	PLR RWP		
Operator Dominic White		Vehicle LM21 UHU		Camera Minicam Solopro	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified		
Town or Village:		London		Inspection Direction:		Upstream			
Road:		The Bank		Inspected Length:		0.87 m			
Location:		Property or buildings		Total Length:		0.87 m			
Surface Type:				Joint Length:					
Use:		Surface water			Pipe Shape:		Circular		
Type of Pipe:		Gravity drain/sewer			Dia/Height:		100 mm		
Flow Control:		No flow control			Pipe Material:		Vitrified clay		
Year Constructed:		Not Specified			Lining Type:		No Lining		
Inspection Purpose:		Routine inspection			Lining Material:		No Lining		
Comments:									
Recommendations:									
Scale:	1:50	Position [m]	Code	Observation		MPEG	Photo	Grade	
Depth: m									
MH21 A									
									
RWP									
Depth: m									
0.00		MH	Start node, manhole, reference: MH21 A			00:00:00			
0.00		WL	Water level, 5% of the vertical dimension						
0.29		LR	Line deviates right			00:00:06	1		
0.57		LR	Line deviates right			00:00:14	2		
0.87		GYF	Finish node, gully, reference: RWP reached			00:00:19	3		
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
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

Section Pictures - 17/10/2023 - RWP

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
48	Upstream	RWP	TSA-23-2537	TSA-23-2537



1, 00:00:06, 0.29 m
Line deviates right



2, 00:00:14, 0.57 m
Line deviates right



3, 00:00:19, 0.87 m
Finish node, gully, reference: RWP reached

Section Inspection - 17/10/2023 - MH20

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
49	1	17/10/23	9:10	TSA-23-2537	No Rain Or Snow	No	MH20
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Dominic White		LM21 UHU		Minicam Solopro	Not Specified	Not Specified	Not Specified

Town or Village:	London	Inspection Direction:	Upstream	Upstream Node:	MH20
Road:	The Bank	Inspected Length:	18.40 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	18.40 m	Downstream Node:	MH21 B
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Pipe Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:
Recommendations:

Scale:	1:160	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m							
MH21 B							
		0.00	MH	Start node, manhole, reference: MH21 B	00:00:00		
		0.00	WL	Water level, 0% of the vertical dimension			
		0.00	GP	General photograph taken at this point	00:00:02	1	
		5.22	JN	Junction at 2 o'clock, 100mm dia	00:00:24	2	
		5.86	GP	General photograph taken at this point	00:00:27	3	
		10.65	GP	General photograph taken at this point	00:00:45	4	
		15.67	JN	Junction at 2 o'clock, 100mm dia	00:01:01	5	
		18.40	JDL	Joint displaced, large	00:01:09	6	1 / 4
		18.40	SA	Survey abandoned: Unable to pass displaced joint	00:01:09		

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	2.0	0.1	2.0	1.0	1	5.0	0.3	5.0	4.0

Section Pictures - 17/10/2023 - MH20

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
49	Upstream	MH20	TSA-23-2537	TSA-23-2537



1, 00:00:02, 0.00 m
General photograph taken at this point



2, 00:00:24, 5.22 m
Junction at 2 o'clock, 100mm dia



3, 00:00:27, 5.86 m
General photograph taken at this point



4, 00:00:45, 10.65 m
General photograph taken at this point

Section Pictures - 17/10/2023 - MH20

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
49	Upstream	MH20	TSA-23-2537	TSA-23-2537



5, 00:01:01, 15.67 m
Junction at 2 o'clock, 100mm dia



6, 00:01:09, 18.40 m
Joint displaced, large

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Section Inspection - 17/10/2023 - MH22 X

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
50	1	17/10/23	9:10	TSA-23-2537	No Rain Or Snow	No	MH22 X
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Dominic White		LM21 UHU		Minicam Solopro	Not Specified	Not Specified	Not Specified

Town or Village:	London	Inspection Direction:	Downstream	Upstream Node:	MH22 X
Road:	The Bank	Inspected Length:	6.33 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	6.33 m	Downstream Node:	MAIN?
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Pipe Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:

Recommendations:

Scale:	1:55	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m							
MH22 X							
	0.00	MH		Start node, manhole, reference: MH22 X	00:00:00		
	0.00	WL		Water level, 0% of the vertical dimension			
	0.00	GP		General photograph taken at this point	00:00:02	1	
	0.38	LR		Line deviates right	00:00:10	2	
	0.38	LD		Line deviates down	00:00:10	3	
	0.62	JDM		Joint displaced, medium	00:00:12	4	1 / 3
	1.68	GP		General photograph taken at this point	00:00:19	5	
	3.46	LL		Line deviates left	00:00:30	6	
	4.82	RTJ		Roots, tap at joint	00:00:45	7	4
	4.82	S01	RM	Roots, mass, 20% cross-sectional area loss, start	00:00:45	8	5
	6.33	C01	RM	Roots, mass, 35% cross-sectional area loss, change	00:00:55	9	
	6.33	SA		Survey abandoned: Unable to pass mass roots	00:00:55		

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	0.2	1.0	1.0	3	5.0	2.7	17.0	4.0

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Section Pictures - 17/10/2023 - MH22 X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
50	Downstream	MH22 X	TSA-23-2537	TSA-23-2537



1, 00:00:02, 0.00 m
General photograph taken at this point



2, 00:00:10, 0.38 m
Line deviates right



3, 00:00:10, 0.38 m
Line deviates down



4, 00:00:12, 0.62 m
Joint displaced, medium

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Section Pictures - 17/10/2023 - MH22 X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
50	Downstream	MH22 X	TSA-23-2537	TSA-23-2537



5, 00:00:19, 1.68 m
General photograph taken at this point



6, 00:00:30, 3.46 m
Line deviates left



7, 00:00:45, 4.82 m
Roots, tap at joint



8, 00:00:45, 4.82 m
Roots, mass, 20% cross-sectional area loss, start

Section Pictures - 17/10/2023 - MH22 X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
50	Downstream	MH22 X	TSA-23-2537	TSA-23-2537



9, 00:00:55, 6.33 m
Roots, mass, 35% cross-sectional area loss, change

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Section Inspection - 17/10/2023 - MH23 X

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
51	1	17/10/23	9:10	TSA-23-2537	No Rain Or Snow	No	MH23 X
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Dominic White		LM21 UHU		Minicam Solopro	Not Specified	Not Specified	Not Specified

Town or Village:	London	Inspection Direction:	Downstream	Upstream Node:	MH23 X
Road:	The Bank	Inspected Length:	4.62 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	4.62 m	Downstream Node:	MH22 UTL
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Pipe Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:

Recommendations:

Scale: 1:50

Position [m]

Code

Observation

MPEG

Photo

Grade

Depth: m

MH23 X

0.00

MH

Start node, manhole, reference: MH23 X

00:00:00

0.00

WL

Water level, 0% of the vertical dimension

0.00

B

Broken pipe from 11 o'clock to 1 o'clock

00:00:01

1

4

1.70

GP

General photograph taken at this point

00:00:12

2

4.17

JDL

Joint displaced, large

00:00:21

3

1 / 4

4.62

MHF

Finish node, manhole, reference: MH22 UTL reached

00:00:31

4

MH22 UTL

Depth: 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	80.0	17.7	82.0	4.0	1	5.0	1.1	5.0	4.0

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Section Pictures - 17/10/2023 - MH23 X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
51	Downstream	MH23 X	TSA-23-2537	TSA-23-2537



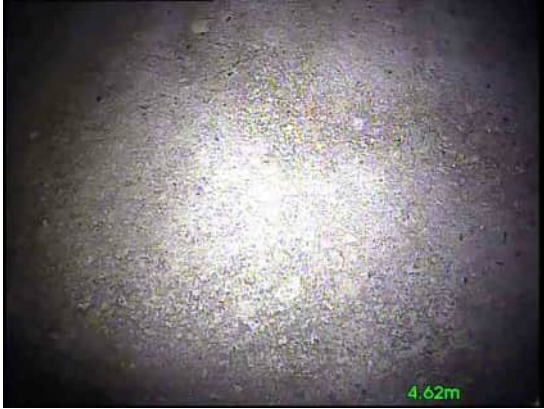
1, 00:00:01, 0.00 m
Broken pipe from 11 o'clock to 1 o'clock



2, 00:00:12, 1.70 m
General photograph taken at this point



3, 00:00:21, 4.17 m
Joint displaced, large



4, 00:00:31, 4.62 m
Finish node, manhole, reference: MH22 UTL reached

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Section Inspection - 17/10/2023 - RWP

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
53	1	17/10/23	9:10	TSA-23-2537	No Rain Or Snow	No	RWP
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Dominic White		LM21 UHU		Minicam Solopro	Not Specified	Not Specified	Not Specified

Town or Village:	London	Inspection Direction:	Upstream	Upstream Node:	RWP
Road:	The Bank	Inspected Length:	5.99 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	5.99 m	Downstream Node:	MH23 B
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Pipe Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:

Recommendations:

Scale:	1:52	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m MH23 B							
		0.00	MH	Start node, manhole, reference: MH23 B	00:00:00		
		0.00	WL	Water level, 0% of the vertical dimension			
		0.10	RFJ	Roots, fine at joint	00:00:05	1	2
		2.31	GP	General photograph taken at this point	00:00:17	2	
		4.64	LU	Line deviates up	00:00:26	3	
		5.22	JDM	Joint displaced, medium	00:00:30	4	1 / 3
		5.30	LU	Line deviates up	00:00:33	5	
		5.99	GYF	Finish node, gully, reference: RWP reached	00:00:42	6	
RWP Depth: 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
1	1.0	0.2	1.0	1.0	2	2.0	0.5	3.0	3.0

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Section Pictures - 17/10/2023 - RWP

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
53	Upstream	RWP	TSA-23-2537	TSA-23-2537



1, 00:00:05, 0.10 m
Roots, fine at joint



2, 00:00:17, 2.31 m
General photograph taken at this point



3, 00:00:26, 4.64 m
Line deviates up



4, 00:00:30, 5.22 m
Joint displaced, medium

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Section Pictures - 17/10/2023 - RWP

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
53	Upstream	RWP	TSA-23-2537	TSA-23-2537



5, 00:00:33, 5.30 m
Line deviates up



6, 00:00:42, 5.99 m
Finish node, gully, reference: RWP reached

Section Inspection - 17/10/2023 - MH25 X

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
54	1	17/10/23	9:11	TSA-23-2537	No Rain Or Snow	No	MH25 X
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Dominic White		LM21 UHU		Minicam Solopro	Not Specified	Not Specified	Not Specified

Town or Village:	London	Inspection Direction:	Downstream	Upstream Node:	MH25 X
Road:	The Bank	Inspected Length:	8.88 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	8.88 m	Downstream Node:	MH26
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Flow Control:	No flow control	Pipe Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:
Recommendations:

Scale:	1:77	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m MH25 X							
		0.00	MH	Start node, manhole, reference: MH25 X	00:00:00		
		0.00	WL	Water level, 0% of the vertical dimension			
		0.83	GP	General photograph taken at this point	00:00:04	1	
		5.44	GP	General photograph taken at this point	00:00:17	2	
		7.93	JN	Junction at 3 o'clock, 100mm dia	00:00:30	3	
		8.28	JN	Junction at 6 o'clock, 150mm dia: External Backdrop	00:00:38	4	
		8.88	MHF	Finish node, manhole, reference: MH26 reached	00:00:52	5	
		MH26 Depth: 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
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

Section Pictures - 17/10/2023 - MH25 X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
54	Downstream	MH25 X	TSA-23-2537	TSA-23-2537



1, 00:00:04, 0.83 m
General photograph taken at this point



2, 00:00:17, 5.44 m
General photograph taken at this point



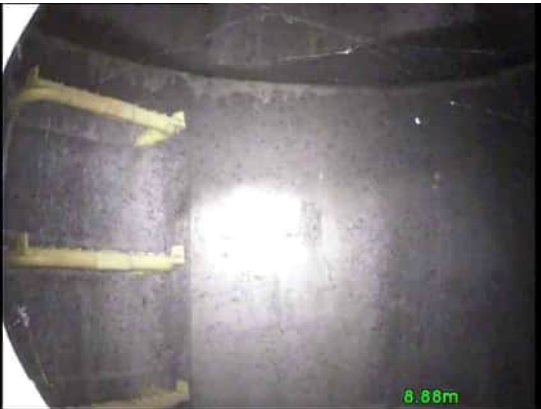
3, 00:00:30, 7.93 m
Junction at 3 o'clock, 100mm dia



4, 00:00:38, 8.28 m
Junction at 6 o'clock, 150mm dia, External Backdrop

Section Pictures - 17/10/2023 - MH25 X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
54	Downstream	MH25 X	TSA-23-2537	TSA-23-2537



5, 00:00:52, 8.88 m
Finish node, manhole, reference: MH26 reached

Section Pictures - 17/10/2023 - RWP

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
55	Upstream	RWP	TSA-23-2537	TSA-23-2537



5, 00:00:25, 3.34 m
Line deviates right



6, 00:00:34, 4.06 m
Junction at 11 o'clock, 100mm dia



7, 00:00:46, 5.20 m
Line deviates up



8, 00:00:50, 6.05 m
General remark, Sewer levels out at this point

Section Pictures - 17/10/2023 - RWP

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
55	Upstream	RWP	TSA-23-2537	TSA-23-2537



9, 00:01:01, 9.12 m
General photograph taken at this point



10, 00:01:20, 12.54 m
Finish node, other special chamber, reference: RWP, Internal RWP reached

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Section Inspection - 17/10/2023 - Unknown

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
56	1	17/10/23	9:11	TSA-23-2537	No Rain Or Snow	No	UNKNOWN
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Dominic White		LM21 UHU		Minicam Solopro	Not Specified	Not Specified	Not Specified

Town or Village:	London	Inspection Direction:	Upstream	Upstream Node:	UNKNOWN
Road:	The Bank	Inspected Length:	0.22 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	0.22 m	Downstream Node:	MH25 B
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Flow Control:	No flow control	Pipe Material:	Polyvinyl chloride		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:

Recommendations:

Scale: 1:50

Position [m]

Code

Observation

MPEG

Photo

Grade

Depth: m

MH25 B

0.00

0.00

0.22

0.22

MH

WL

DES

SA

Start node, manhole, reference: MH25 B

Water level, 5% of the vertical dimension

Settled deposits, fine, 35% cross-sectional area loss

Survey abandoned: Unable to pass silt

00:00:00

00:00:05

00:00:05

1

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
0	0.0	0.0	0.0	1.0	1	5.0	22.7	5.0	5.0

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Section Pictures - 17/10/2023 - Unknown

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
56	Upstream	UNKNOWN	TSA-23-2537	TSA-23-2537



1, 00:00:05, 0.22 m
Settled deposits, fine, 35% cross-sectional area loss

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
0	0.0	0.0	0.0	1.0	1	5.0	22.7	5.0	5.0

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Section Inspection - 17/10/2023 - MH26 X

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
57	1	17/10/23	9:19	TSA-23-2537	No Rain Or Snow	No	MH26 X
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Dominic White		LM21 UHU		Minicam Solopro	Not Specified	Not Specified	Not Specified

Town or Village:	London	Inspection Direction:	Downstream	Upstream Node:	MH26 X
Road:	The Bank	Inspected Length:	7.36 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	7.36 m	Downstream Node:	MH27
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Flow Control:	No flow control	Pipe Material:	Polyvinyl chloride		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:

Recommendations:

Scale: 1:64

Position [m]

Code

Observation

MPEG

Photo

Grade

Depth: m

MH26 X

0.00

MH

Start node, manhole, reference: MH26 X

00:00:00

0.00

WL

Water level, 5% of the vertical dimension

0.00

GP

General photograph taken at this point

00:00:01

1

1.48

DER

Settled deposits, coarse, 5% cross-sectional area loss

00:00:05

2

3

3.26

JN

Junction at 1 o'clock, 100mm dia

00:00:14

3

5.06

S01

DES

Settled deposits, fine, 10% cross-sectional area loss, start

00:00:23

4

3

7.36

MHF

Finish node, manhole, reference: MH27 reached

00:00:30

5

MH27

Depth: 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
0	0.0	0.0	0.0	1.0	2	2.0	0.5	4.0	3.0

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Section Pictures - 17/10/2023 - MH26 X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
57	Downstream	MH26 X	TSA-23-2537	TSA-23-2537



1, 00:00:01, 0.00 m
General photograph taken at this point



2, 00:00:05, 1.48 m
Settled deposits, coarse, 5% cross-sectional area loss



3, 00:00:14, 3.26 m
Junction at 1 o'clock, 100mm dia



4, 00:00:23, 5.06 m
Settled deposits, fine, 10% cross-sectional area loss, start

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Section Pictures - 17/10/2023 - MH26 X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
57	Downstream	MH26 X	TSA-23-2537	TSA-23-2537



5, 00:00:30, 7.36 m
Finish node, manhole, reference: MH27 reached

Section Inspection - 17/10/2023 - Unknown

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
58	1	17/10/23	9:12	TSA-23-2537	No Rain Or Snow	No	UNKNOWN
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Dominic White		LM21 UHU		Minicam Solopro	Not Specified	Not Specified	Not Specified

Town or Village:	London	Inspection Direction:	Upstream	Upstream Node:	UNKNOWN
Road:	The Bank	Inspected Length:	6.32 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	6.32 m	Downstream Node:	MH26 B
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Pipe Material:	Polyvinyl chloride		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:
Recommendations:

Scale:	1:55	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m							
MH26 B							
		0.00	MH	Start node, manhole, reference: MH26 B	00:00:00		
		0.00	WL	Water level, 0% of the vertical dimension			
		0.16	LU	Line deviates up	00:00:04	1	
		1.70	REM	General remark: Sewer levels out at this point	00:00:11	2	
		3.12	GP	General photograph taken at this point	00:00:18	3	
		6.01	LU	Line deviates up	00:00:26	4	
		6.32	OCF	Finish node, other special chamber, reference: Unknown: Unknown end point reached	00:00:30	5	
Unknown Depth: 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
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

Section Pictures - 17/10/2023 - Unknown				
Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
58	Upstream	UNKNOWN	TSA-23-2537	TSA-23-2537



1, 00:00:04, 0.16 m
Line deviates up



2, 00:00:11, 1.70 m
General remark, Sewer levels out at this point

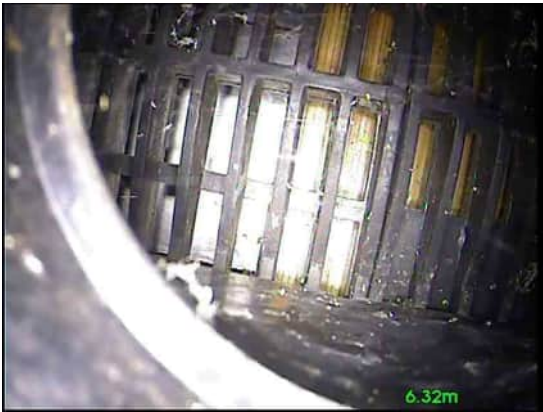


3, 00:00:18, 3.12 m
General photograph taken at this point



4, 00:00:26, 6.01 m
Line deviates up

Section Pictures - 17/10/2023 - Unknown				
Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
58	Upstream	UNKNOWN	TSA-23-2537	TSA-23-2537



5, 00:00:30, 6.32 m
Finish node, other special chamber, reference: Unknown,
Unknown end point reached

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Section Inspection - 17/10/2023 - Capped

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
60	1	17/10/23	9:12	TSA-23-2537	No Rain Or Snow	No	CAPPED
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Dominic White		LM21 UHU		Minicam Solopro	Not Specified	Not Specified	Not Specified

Town or Village:	London	Inspection Direction:	Upstream	Upstream Node:	CAPPED
Road:	The Bank	Inspected Length:	1.82 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	1.82 m	Downstream Node:	MH27 B
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Pipe Material:	Polyvinyl chloride		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:

Recommendations:

Scale: 1:50

Position [m]

Code

Observation

MPEG

Photo

Grade

Depth: m

MH27 B

0.00

MH

Start node, manhole, reference: MH27 B

00:00:00

0.00

WL

Water level, 0% of the vertical dimension

0.12

LR

Line deviates right

00:00:03

1

0.12

LU

Line deviates up

00:00:03

2

0.85

GP

General photograph taken at this point

00:00:10

3

Capped

1.74

JN

Junction at 3 o'clock, 100mm dia

00:00:22

4

1.82

OCF

Finish node, other special chamber, reference: Capped: Capped pipe reached

00:00:27

5

Depth: 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
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Section Pictures - 17/10/2023 - Capped

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
60	Upstream	CAPPED	TSA-23-2537	TSA-23-2537



1, 00:00:03, 0.12 m
Line deviates right



2, 00:00:03, 0.12 m
Line deviates up



3, 00:00:10, 0.85 m
General photograph taken at this point



4, 00:00:22, 1.74 m
Junction at 3 o'clock, 100mm dia

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Section Pictures - 17/10/2023 - Capped

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
60	Upstream	CAPPED	TSA-23-2537	TSA-23-2537



5, 00:00:27, 1.82 m
Finish node, other special chamber, reference: Capped,
Capped pipe reached

Section Inspection - 17/10/2023 - MH28 X

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
61	1	17/10/23	9:13	TSA-23-2537	No Rain Or Snow	No	MH28 X
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Dominic White		LM21 UHU		Minicam Solopro	Not Specified	Not Specified	Not Specified

Town or Village:	London	Inspection Direction:	Downstream	Upstream Node:	MH28 X
Road:	The Bank	Inspected Length:	9.36 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	9.36 m	Downstream Node:	MH30
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Flow Control:	No flow control	Pipe Material:	Polyvinyl chloride		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:
Recommendations:

Scale:	1:82	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m							
MH28 X							
	0.00	MH	Start node, manhole, reference: MH28 X		00:00:00		
	0.00	WL	Water level, 5% of the vertical dimension				
	0.63	GP	General photograph taken at this point		00:00:08	1	
	5.34	GP	General photograph taken at this point		00:00:20	2	
	9.36	MHF	Finish node, manhole, reference: MH30 reached		00:00:34	3	
MH30 Depth: 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
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Section Pictures - 17/10/2023 - MH28 X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
61	Downstream	MH28 X	TSA-23-2537	TSA-23-2537



1, 00:00:08, 0.63 m
General photograph taken at this point



2, 00:00:20, 5.34 m
General photograph taken at this point



3, 00:00:34, 9.36 m
Finish node, manhole, reference: MH30 reached

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Section Inspection - 17/10/2023 - Downpipe

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
62	1	17/10/23	9:13	TSA-23-2537	No Rain Or Snow	No	DOWNPIPE
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Dominic White		LM21 UHU		Minicam Solopro	Not Specified	Not Specified	Not Specified

Town or Village:

Road:

Location:

Surface Type:

Use:

Type of Pipe:

Flow Control:

Year Constructed:

Inspection Purpose:

London

The Bank

Property or buildings

Foul

Gravity drain/sewer

No flow control

Not Specified

Routine inspection

Inspection Direction:

Inspected Length:

Total Length:

Joint Length:

Pipe Shape:

Dia/Height:

Pipe Material:

Lining Type:

Lining Material:

Upstream

5.97 m

5.97 m

Circular

100 mm

Polyvinyl chloride

No Lining

No Lining

Upstream Node: DOWNPIPE

Upstream Pipe Depth:

Downstream Node: MH28 A

Downstream Pipe Depth:

Comments:

Recommendations:

Scale: 1:52

Position [m]

Code

Observation

MPEG

Photo

Grade

Depth: m

MH28 A

0.00

MH

Start node, manhole, reference: MH28 A

00:00:00

0.00

WL

Water level, 5% of the vertical dimension

0.00

GP

General photograph taken at this point

00:00:02

1

3.09

GP

General photograph taken at this point

00:00:29

2

5.97

OCF

Finish node, other special chamber, reference: Downpipe: Internal downpipe reached

00:00:43

3

Downpipe Depth: 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
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Tower Surveys Associates Chartered Surveyors Geomatics - Land, Utilities, Engineering & Building Tower Surveys Associates 18-20 The Ropewalk, Nottingham james.hulme@towersurveysassociates.biz		Section Pictures - 17/10/2023 - Downpipe		
Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
62	Upstream	DOWNPIPE	TSA-23-2537	TSA-23-2537



1, 00:00:02, 0.00 m
General photograph taken at this point



2, 00:00:29, 3.09 m
General photograph taken at this point



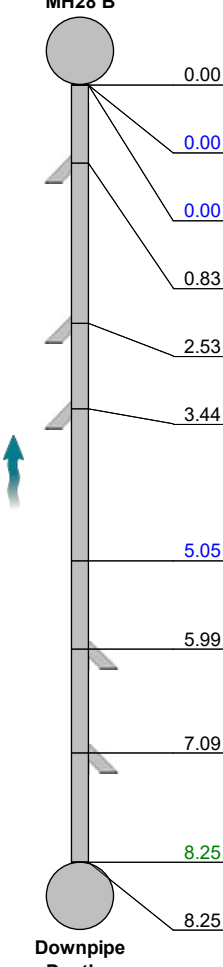
3, 00:00:43, 5.97 m
Finish node, other special chamber, reference: Downpipe,
Internal downpipe reached

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Tower Surveys Associates Chartered Surveyors Geomatics - Land, Utilities, Engineering & Building Tower Surveys Associates 18-20 The Ropewalk, Nottingham james.hulme@towersurveysassociates.biz		Section Inspection - 17/10/2023 - Downpipe					
Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
63	1	17/10/23	9:13	TSA-23-2537	No Rain Or Snow	No	DOWNPIPE
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Dominic White		LM21 UHU		Minicam Solopro	Not Specified	Not Specified	Not Specified

Town or Village:	London	Inspection Direction:	Upstream	Upstream Node:	DOWNPIPE
Road:	The Bank	Inspected Length:	8.25 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	8.25 m	Downstream Node:	MH28 B
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Pipe Material:	Polyvinyl chloride		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		
Comments:					
Recommendations:					

Scale:	1:72	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m							
MH28 B							
							
	0.00	MH		Start node, manhole, reference: MH28 B	00:00:00		
	0.00	WL		Water level, 10% of the vertical dimension: Constant flow through sewer			
	0.00	REM		General remark: Vision limited due to constant flow through sewer			
	0.83	JN		Junction at 3 o'clock, 100mm dia	00:00:10	1	
	2.53	JN		Junction at 2 o'clock, 100mm dia	00:00:17	2	
	3.44	JN		Junction at 3 o'clock, 100mm dia	00:01:53	3	
	5.05	GP		General photograph taken at this point	00:01:43	4	
	5.99	JN		Junction at 10 o'clock, 100mm dia	00:01:37	5	
	7.09	JN		Junction at 9 o'clock, 100mm dia	00:01:31	6	
	8.25	DER		Settled deposits, coarse, 5% cross-sectional area loss: At rest bend of internal downpipe	00:01:18	7	3
	8.25	OCF		Finish node, other special chamber, reference: Downpipe: Internal downpipe reached	00:01:18	8	
Downpipe Depth: 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
0	0.0	0.0	0.0	1.0	1	2.0	0.2	2.0	3.0

Section Pictures - 17/10/2023 - Downpipe

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
63	Upstream	DOWNPIPE	TSA-23-2537	TSA-23-2537



1, 00:00:10, 0.83 m
Junction at 3 o'clock, 100mm dia



2, 00:00:17, 2.53 m
Junction at 2 o'clock, 100mm dia



3, 00:01:53, 3.44 m
Junction at 3 o'clock, 100mm dia



4, 00:01:43, 5.05 m
General photograph taken at this point

Section Pictures - 17/10/2023 - Downpipe

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
63	Upstream	DOWNPIPE	TSA-23-2537	TSA-23-2537



5, 00:01:37, 5.99 m
Junction at 10 o'clock, 100mm dia



6, 00:01:31, 7.09 m
Junction at 9 o'clock, 100mm dia



7, 00:01:18, 8.25 m
Settled deposits, coarse, 5% cross-sectional area loss, At rest bend of internal downpipe



8, 00:01:18, 8.25 m
Finish node, other special chamber, reference: Downpipe, Internal downpipe reached

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Section Inspection - 17/10/2023 - MH29 X							
Item No. 64	Insp. No. 1	Date 17/10/23	Time 9:14	Client's Job Ref TSA-23-2537	Weather No Rain Or Snow	Pre Cleaned No	PLR MH29 X
Operator Dominic White		Vehicle LM21 UHU		Camera Minicam Solopro	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified
Town or Village:		London		Inspection Direction:		Downstream	
Road:		The Bank		Inspected Length:		12.81 m	
Location:		Property or buildings		Total Length:		12.81 m	
Surface Type:				Joint Length:			
Upstream Node:				Upstream Pipe Depth:		MH29 X	
Downstream Node:				Downstream Pipe Depth:		MH31 UTL	
Use:		Surface water		Pipe Shape:		Circular	
Type of Pipe:		Gravity drain/sewer		Dia/Height:		150 mm	
Flow Control:		No flow control		Pipe Material:		Polyvinyl chloride	
Year Constructed:		Not Specified		Lining Type:		No Lining	
Inspection Purpose:		Routine inspection		Lining Material:		No Lining	
Comments:							
Recommendations:							
Scale:	1:111	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m MH29 X <							

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Section Pictures - 17/10/2023 - MH29 X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
64	Downstream	MH29 X	TSA-23-2537	TSA-23-2537

1, 00:00:02, 0.04 m
Settled deposits, fine, 10% cross-sectional area loss, start

2, 00:00:17, 2.12 m
Open joint, medium

3, 00:00:17, 2.12 m
Line deviates right

4, 00:00:17, 2.12 m
Line deviates down

Section Pictures - 17/10/2023 - MH29 X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
64	Downstream	MH29 X	TSA-23-2537	TSA-23-2537



5, 00:00:27, 4.96 m
Open joint, medium



6, 00:00:27, 4.96 m
Line deviates left



7, 00:00:33, 5.65 m
General photograph taken at this point



8, 00:00:40, 8.24 m
Water level, 25% of the vertical dimension, Water standing in sewer at this point

Section Pictures - 17/10/2023 - MH29 X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
64	Downstream	MH29 X	TSA-23-2537	TSA-23-2537



9, 00:00:52, 10.38 m
Water level, 0% of the vertical dimension



10, 00:00:57, 11.92 m
Settled deposits, fine, 10% cross-sectional area loss, finish



11, 00:01:01, 12.81 m
Finish node, manhole, reference: MH31 UTL reached

Section Inspection - 17/10/2023 - Land Drain

Item No. 66	Insp. No. 1	Date 17/10/23	Time 9:14	Client's Job Ref TSA-23-2537	Weather No Rain Or Snow	Pre Cleaned No	PLR LAND DRAIN
Operator Dominic White		Vehicle LM21 UHU		Camera Minicam Solopro	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Town or Village:	London	Inspection Direction:	Upstream	Upstream Node:	LAND DRAIN
Road:	The Bank	Inspected Length:	1.00 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	1.00 m	Downstream Node:	MH29 C
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Pipe Material:	Polyvinyl chloride		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments: Recommendations:
--

Scale:	1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
			MH	Start node, manhole, reference: MH29 C	00:00:00		
			WL	Water level, 0% of the vertical dimension			
			LR	Line deviates right	00:00:01	1	
			LU	Line deviates up	00:00:01	2	
			GP	General photograph taken at this point	00:00:05	3	
			OCF	Finish node, other special chamber, reference: Land Drain: Buried land drain reached	00:00:09	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
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

Section Pictures - 17/10/2023 - Land Drain

Item No. 66	Inspection Direction Upstream	PLR LAND DRAIN	Client's Job Ref TSA-23-2537	Contractor's Job Ref TSA-23-2537
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1, 00:00:01, 0.00 m
Line deviates right



2, 00:00:01, 0.00 m
Line deviates up



3, 00:00:05, 0.49 m
General photograph taken at this point



4, 00:00:09, 1.00 m
Finish node, other special chamber, reference: Land Drain,
Buried land drain reached

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Section Inspection - 17/10/2023 - MH30 X

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
67	1	17/10/23	9:14	TSA-23-2537	No Rain Or Snow	No	MH30 X
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Dominic White		LM21 UHU		Minicam Solopro	Not Specified	Not Specified	Not Specified

Town or Village:	London	Inspection Direction:	Downstream	Upstream Node:	MH30 X
Road:	The Bank	Inspected Length:	16.72 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	16.72 m	Downstream Node:	MH33
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Flow Control:	No flow control	Pipe Material:	Polyvinyl chloride		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:

Recommendations:

Scale: 1:145

Position [m]

Code

Observation

MPEG

Photo

Grade

Depth: m

MH30 X

0.00

MH

Start node, manhole, reference: MH30 X

00:00:00

0.00

WL

Water level, 5% of the vertical dimension

0.00

GP

General photograph taken at this point

00:00:02

1

5.41

GP

General photograph taken at this point

00:00:18

2

10.02

GP

General photograph taken at this point

00:00:35

3

15.51

JN

Junction at 3 o'clock, 100mm dia, from MH34 X

00:00:48

4

16.72

MHF

Finish node, manhole, reference: MH33 reached

00:01:06

5

MH33

Depth: 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
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Section Pictures - 17/10/2023 - MH30 X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
67	Downstream	MH30 X	TSA-23-2537	TSA-23-2537



1, 00:00:02, 0.00 m
General photograph taken at this point



2, 00:00:18, 5.41 m
General photograph taken at this point



3, 00:00:35, 10.02 m
General photograph taken at this point



4, 00:00:48, 15.51 m
Junction at 3 o'clock, 100mm dia, from MH34 X

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Section Pictures - 17/10/2023 - MH30 X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
67	Downstream	MH30 X	TSA-23-2537	TSA-23-2537



5, 00:01:06, 16.72 m
Finish node, manhole, reference: MH33 reached

Section Inspection - 17/10/2023 - Downpipe

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
68	1	17/10/23	9:14	TSA-23-2537	No Rain Or Snow	No	DOWNPIPE
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Dominic White		LM21 UHU		Minicam Solopro	Not Specified	Not Specified	Not Specified

Town or Village:	London	Inspection Direction:	Upstream	Upstream Node:	DOWNPIPE
Road:	The Bank	Inspected Length:	6.03 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	6.03 m	Downstream Node:	MH30 A
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Pipe Material:	Polyvinyl chloride		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:
Recommendations:

Scale:	1:53	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m							
MH30 A							
		0.00	MH	Start node, manhole, reference: MH30 A	00:00:00		
		0.00	WL	Water level, 5% of the vertical dimension			
		0.35	LR	Line deviates right	00:00:05	1	
		3.60	GP	General photograph taken at this point	00:00:15	2	
		5.20	JN	Junction at 3 o'clock, 100mm dia	00:00:29	3	
		5.83	JN	Junction at 9 o'clock, 100mm dia	00:00:36	4	
		6.03	OCF	Finish node, other special chamber, reference: Downpipe: Internal downpipe reached	00:00:42	5	
Downpipe Depth: 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
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

Section Pictures - 17/10/2023 - Downpipe

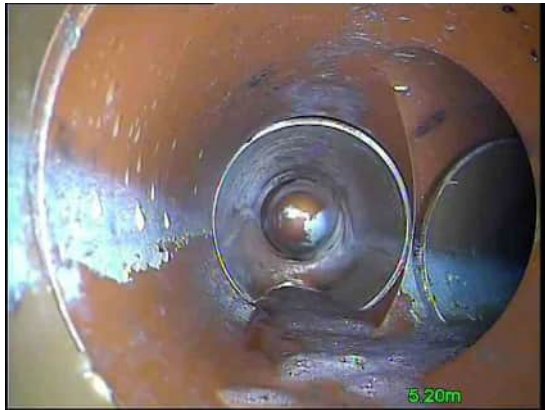
Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
68	Upstream	DOWNPIPE	TSA-23-2537	TSA-23-2537



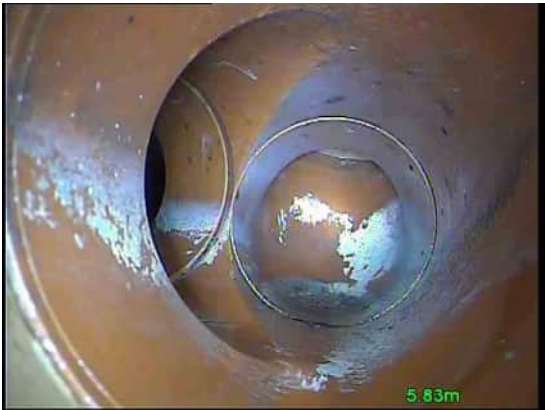
1, 00:00:05, 0.35 m
Line deviates right



2, 00:00:15, 3.60 m
General photograph taken at this point



3, 00:00:29, 5.20 m
Junction at 3 o'clock, 100mm dia



4, 00:00:36, 5.83 m
Junction at 9 o'clock, 100mm dia

Section Pictures - 17/10/2023 - Downpipe

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
68	Upstream	DOWNPIPE	TSA-23-2537	TSA-23-2537



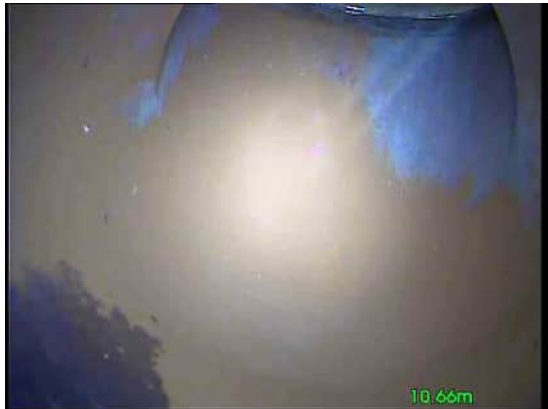
5, 00:00:42, 6.03 m
Finish node, other special chamber, reference: Downpipe,
Internal downpipe reached

Section Pictures - 17/10/2023 - Downpipe

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
69	Upstream	DOWNPIPE	TSA-23-2537	TSA-23-2537



5, 00:00:41, 9.16 m
Junction at 3 o'clock, 100mm dia



6, 00:00:47, 10.66 m
Finish node, other special chamber, reference: Downpipe,
Internal downpipe reached

Section Inspection - 17/10/2023 - MH32 X

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
70	1	17/10/23	9:15	TSA-23-2537	No Rain Or Snow	No	MH32 X
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Dominic White		LM21 UHU		Minicam Solopro	Not Specified	Not Specified	Not Specified

Town or Village:	London	Inspection Direction:	Downstream	Upstream Node:	MH32 X
Road:	The Bank	Inspected Length:	9.96 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	9.96 m	Downstream Node:	MH35
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Flow Control:	No flow control	Pipe Material:	Polyvinyl chloride		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:
Recommendations:

Scale:	1:87	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m MH32 X							
		0.00	MH	Start node, manhole, reference: MH32 X	00:00:00		
		0.00	WL	Water level, 0% of the vertical dimension			
		0.00	S01	DES Settled deposits, fine, 10% cross-sectional area loss, start	00:00:01	1	
		3.16	F01	DES Settled deposits, fine, 10% cross-sectional area loss, finish	00:00:14	2	3
		3.16	S02	DER Settled deposits, coarse, 10% cross-sectional area loss, start	00:00:14	3	
		5.44	GP	General photograph taken at this point	00:00:23	4	
		8.01	GP	General photograph taken at this point	00:00:36	5	
		9.90	F02	DER Settled deposits, coarse, 10% cross-sectional area loss, finish	00:00:44		3
		9.96	MHF	Finish node, manhole, reference: MH35 reached	00:00:46	6	
MH35 Depth: 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	
0	0.0	0.0	0.0	1.0	2	4.0	2.2	22.0	3.0	

Section Pictures - 17/10/2023 - MH32 X				
Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
70	Downstream	MH32 X	TSA-23-2537	TSA-23-2537



1, 00:00:01, 0.00 m
Settled deposits, fine, 10% cross-sectional area loss, start



2, 00:00:14, 3.16 m
Settled deposits, fine, 10% cross-sectional area loss, finish



3, 00:00:14, 3.16 m
Settled deposits, coarse, 10% cross-sectional area loss, start



4, 00:00:23, 5.44 m
General photograph taken at this point

Section Pictures - 17/10/2023 - MH32 X				
Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
70	Downstream	MH32 X	TSA-23-2537	TSA-23-2537



5, 00:00:36, 8.01 m
General photograph taken at this point



6, 00:00:46, 9.96 m
Finish node, manhole, reference: MH35 reached

Section Pictures - 17/10/2023 - SGY

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
71	Upstream	SGY	TSA-23-2537	TSA-23-2537



5, 00:00:40, 4.49 m
Finish node, gully, reference: SGY reached

Section Inspection - 17/10/2023 - Gully

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
72	1	17/10/23	9:15	TSA-23-2537	No Rain Or Snow	No	GULLY
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Dominic White		LM21 UHU		Minicam Solopro	Not Specified	Not Specified	Not Specified

Town or Village:	London	Inspection Direction:	Upstream	Upstream Node:	GULLY
Road:	The Bank	Inspected Length:	1.64 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	1.64 m	Downstream Node:	MH32 B
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Flow Control:	No flow control	Pipe Material:	Polyvinyl chloride		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:
Recommendations:

Scale:	1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m							
MH32 B							
	0.00	MH		Start node, manhole, reference: MH32 B	00:00:00		
	0.00	WL		Water level, 0% of the vertical dimension			
	0.00	LR		Line deviates right	00:00:01	1	
	0.00	LU		Line deviates up	00:00:01	2	
	0.89	LR		Line deviates right	00:00:10	3	
	1.64	GYF		Finish node, gully, reference: Gully reached	00:00:15	4	
Depth: 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
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Section Pictures - 17/10/2023 - Gully

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
72	Upstream	GULLY	TSA-23-2537	TSA-23-2537

1, 00:00:01, 0.00 m
Line deviates right

2, 00:00:01, 0.00 m
Line deviates up

3, 00:00:10, 0.89 m
Line deviates right

4, 00:00:15, 1.64 m
Finish node, gully, reference: Gully reached

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Section Inspection - 17/10/2023 - MH33 X

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
73	1	17/10/23	9:15	TSA-23-2537	No Rain Or Snow	No	MH33 X
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Dominic White		LM21 UHU		Minicam Solopro	Not Specified	Not Specified	Not Specified

Town or Village:

London

Road:

The Bank

Location:

Property or buildings

Surface Type:

Use:

Foul

Type of Pipe:

Gravity drain/sewer

Flow Control:

No flow control

Year Constructed:

Not Specified

Inspection Purpose:

Routine inspection

Inspection Direction:

Downstream

Inspected Length:

20.51 m

Total Length:

20.51 m

Joint Length:

Upstream Node:

MH33 X

Upstream Pipe Depth:

Downstream Node:

MH38

Downstream Pipe Depth:

Pipe Shape:

Circular

Dia/Height:

150 mm

Pipe Material:

Polyvinyl chloride

Lining Type:

No Lining

Lining Material:

No Lining

Comments:

Recommendations:

Scale:

1:178

Position [m]

Code

Observation

MPEG

Photo

Grade

Depth: m

MH33 X

0.00

MH

Start node, manhole, reference: MH33 X

00:00:00

0.00

WL

Water level, 5% of the vertical dimension

0.00

REM

General remark: Vision limited due to steam

1.26

GP

General photograph taken at this point

00:02:46

1

5.06

GP

General photograph taken at this point

00:02:36

2

8.30

DEFJ

Attached deposits, fouling at joint from 9 o'clock to 3 o'clock, 5% cross-sectional area loss

00:02:23

3

3

10.08

GP

General photograph taken at this point

00:02:18

4

15.31

GP

General photograph taken at this point

00:02:05

5

20.51

MHF

Finish node, manhole, reference: MH38 (Pumping Station) reached

00:01:50

6

MH38

Depth: 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
0		0.0	0.0	0.0	1.0	1		2.0	0.1	2.0	3.0

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Section Pictures - 17/10/2023 - MH33 X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
73	Downstream	MH33 X	TSA-23-2537	TSA-23-2537



1, 00:02:46, 1.26 m
General photograph taken at this point



2, 00:02:36, 5.06 m
General photograph taken at this point



3, 00:02:23, 8.30 m
Attached deposits, fouling at joint from 9 o'clock to 3 o'clock,
5% cross-sectional area loss



4, 00:02:18, 10.08 m
General photograph taken at this point

Section Pictures - 17/10/2023 - MH33 X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
73	Downstream	MH33 X	TSA-23-2537	TSA-23-2537



5, 00:02:05, 15.31 m
General photograph taken at this point



6, 00:01:50, 20.51 m
Finish node, manhole, reference: MH38 (Pumping Station)
reached

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Section Inspection - 17/10/2023 - MH34 X

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
74	1	17/10/23	9:15	TSA-23-2537	No Rain Or Snow	No	MH34 X
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Dominic White		LM21 UHU		Minicam Solopro	Not Specified	Not Specified	Not Specified

Town or Village:	London	Inspection Direction:	Downstream	Upstream Node:	MH34 X
Road:	The Bank	Inspected Length:	9.64 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	9.64 m	Downstream Node:	MAIN
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Pipe Material:	Polyvinyl chloride		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:

Recommendations:

Scale: 1:84

Position [m]

Code

Observation

MPEG

Photo

Grade

Depth: m

MH34 X

0.00

MH

Start node, manhole, reference: MH34 X

00:00:00

0.00

WL

Water level, 5% of the vertical dimension

0.59

GP

General photograph taken at this point

00:00:07

1

5.26

DER

Settled deposits, coarse, 5% cross-sectional area loss

00:00:30

2

3

6.31

GP

General photograph taken at this point

00:00:36

3

9.64

BRF

Finish node, major connection without manhole, reference: Main sewer reached

00:00:52

4

Main

Depth: 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
0	0.0	0.0	0.0	1.0	1	2.0	0.2	2.0	3.0

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Section Pictures - 17/10/2023 - MH34 X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
74	Downstream	MH34 X	TSA-23-2537	TSA-23-2537



1, 00:00:07, 0.59 m
General photograph taken at this point



2, 00:00:30, 5.26 m
Settled deposits, coarse, 5% cross-sectional area loss



3, 00:00:36, 6.31 m
General photograph taken at this point



4, 00:00:52, 9.64 m
Finish node, major connection without manhole, reference: Main sewer reached

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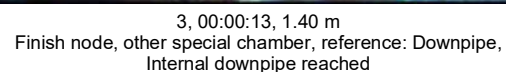
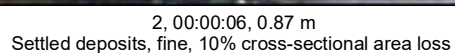
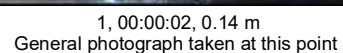
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Item No. 75	Insp. No. 1	Date 17/10/23	Time 9:15	Client's Job Ref TSA-23-2537	Weather No Rain Or Snow	Pre Cleaned No	PLR DOWNPIPE
Operator Dominic White		Vehicle LM21 UHU		Camera Minicam Solopro	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Comments:
Recommendations:

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
0	0.0	0.0	0.0	1.0	1	2.0	1.4	2.0	3.0

Item No. 75	Inspection Direction Upstream	PLR DOWNPIPE	Client's Job Ref TSA-23-2537	Contractor's Job Ref TSA-23-2537
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Section Inspection - 17/10/2023 - MH35 X

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
76	1	17/10/23	9:16	TSA-23-2537	No Rain Or Snow	No	MH35 X
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Dominic White		LM21 UHU		Minicam Solopro	Not Specified	Not Specified	Not Specified

Town or Village:	London	Inspection Direction:	Downstream	Upstream Node:	MH35 X
Road:	The Bank	Inspected Length:	9.88 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	9.88 m	Downstream Node:	MH37
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Flow Control:	No flow control	Pipe Material:	Polyvinyl chloride		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:

Recommendations:

Scale: 1:86

Position [m]

Code

Observation

MPEG

Photo

Grade

Depth: m

MH35 X

0.00

MH

Start node, manhole, reference: MH35 X

00:00:00

0.00

WL

Water level, 0% of the vertical dimension

1.21

JN

Junction at 1 o'clock, 100mm dia

00:00:04

1

1.45

LL

Line deviates left

00:00:09

2

5.66

GP

General photograph taken at this point

00:00:22

3

9.12

LL

Line deviates left

00:00:33

4

9.88

MHF

Finish node, manhole, reference: MH37 (Pumping Station) reached

00:00:36

5

MH37

Depth: 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
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Section Pictures - 17/10/2023 - MH35 X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
76	Downstream	MH35 X	TSA-23-2537	TSA-23-2537



1, 00:00:04, 1.21 m
Junction at 1 o'clock, 100mm dia



2, 00:00:09, 1.45 m
Line deviates left



3, 00:00:22, 5.66 m
General photograph taken at this point



4, 00:00:33, 9.12 m
Line deviates left

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Section Pictures - 17/10/2023 - MH35 X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
76	Downstream	MH35 X	TSA-23-2537	TSA-23-2537



5, 00:00:36, 9.88 m
Finish node, manhole, reference: MH37 (Pumping Station)
reached

Section Inspection - 17/10/2023 - Unknown

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
77	1	17/10/23	9:16	TSA-23-2537	No Rain Or Snow	No	UNKNOWN
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Dominic White		LM21 UHU		Minicam Solopro	Not Specified	Not Specified	Not Specified

Town or Village:	London	Inspection Direction:	Upstream	Upstream Node:	UNKNOWN
Road:	The Bank	Inspected Length:	1.03 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	1.03 m	Downstream Node:	MH35 A
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Flow Control:	No flow control	Pipe Material:	Polyvinyl chloride		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:
Recommendations:

Scale:	1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m MH35 A							
		0.00	MH	Start node, manhole, reference: MH35 A	00:00:00		
		0.00	WL	Water level, 0% of the vertical dimension			
		0.32	LU	Line deviates up	00:00:07	1	
		0.71	REM	General remark: Sewer levels out at this point	00:00:13	2	
		1.03	JDL	Joint displaced, large	00:00:18	3	1 / 4
		1.03	SA	Survey abandoned: Unable to pass displaced joint	00:00:18		

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	2.0	1.9	2.0	1.0	1	5.0	4.9	5.0	4.0

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Section Pictures - 17/10/2023 - Unknown

Item No. 77	Inspection Direction Upstream	PLR UNKNOWN	Client's Job Ref TSA-23-2537	Contractor's Job Ref TSA-23-2537
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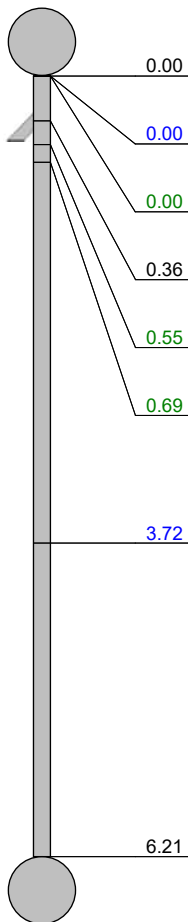
1, 00:00:07, 0.32 m
Line deviates up



2, 00:00:13, 0.71 m
General remark, Sewer levels out at this point



3, 00:00:18, 1.03 m
Joint displaced, large

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Section Inspection - 17/10/2023 - RWP									
Item No. 78	Insp. No. 1	Date 17/10/23	Time 9:16	Client's Job Ref TSA-23-2537	Weather No Rain Or Snow	Pre Cleaned No	PLR RWP		
Operator Dominic White		Vehicle LM21 UHU		Camera Minicam Solopro	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified		
Town or Village:		London		Inspection Direction:		Upstream			
Road:		The Bank		Inspected Length:		6.21 m			
Location:		Property or buildings		Total Length:		6.21 m			
Surface Type:				Joint Length:					
Upstream Node:				Upstream Pipe Depth:		RWP			
Downstream Node:				Downstream Pipe Depth:		MH35 B			
Use:		Surface water		Pipe Shape:		Circular			
Type of Pipe:		Gravity drain/sewer		Dia/Height:		100 mm			
Flow Control:		No flow control		Pipe Material:		Polyvinyl chloride			
Year Constructed:		Not Specified		Lining Type:		No Lining			
Inspection Purpose:		Routine inspection		Lining Material:		No Lining			
Comments:									
Recommendations:									
Scale:	1:54	Position [m]	Code	Observation		MPEG	Photo	Grade	
Depth: m MH35 B									
		0.00	MH	Start node, manhole, reference: MH35 B		00:00:00			
		0.00	WL	Water level, 0% of the vertical dimension					
		0.00	LL	Line deviates left		00:00:02			
		0.36	JN	Junction at 3 o'clock, 100mm dia		00:00:09	1		
		0.55	LU	Line deviates up		00:00:11	2		
		0.69	LR	Line deviates right		00:00:13	3		
		3.72	GP	General photograph taken at this point		00:00:23	4		
		6.21	OCF	Finish node, other special chamber, reference: RWP: Internal RWP reached		00:00:37	5		
			RWP	Depth: 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
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

Section Pictures - 17/10/2023 - RWP				
Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
78	Upstream	RWP	TSA-23-2537	TSA-23-2537



1, 00:00:09, 0.36 m
Junction at 3 o'clock, 100mm dia



2, 00:00:11, 0.55 m
Line deviates up



3, 00:00:13, 0.69 m
Line deviates right



4, 00:00:23, 3.72 m
General photograph taken at this point

Section Pictures - 17/10/2023 - RWP				
Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
78	Upstream	RWP	TSA-23-2537	TSA-23-2537



5, 00:00:37, 6.21 m
Finish node, other special chamber, reference: RWP, Internal RWP reached

Section Inspection - 17/10/2023 - MH36 X

Item No. 79	Insp. No. 1	Date 17/10/23	Time 9:16	Client's Job Ref TSA-23-2537	Weather No Rain Or Snow	Pre Cleaned No	PLR MH36 X
Operator Dominic White		Vehicle LM21 UHU		Camera Minicam Solopro	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Town or Village:	London	Inspection Direction:	Downstream	Upstream Node:	MH36 X
Road:	The Bank	Inspected Length:	3.62 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	3.62 m	Downstream Node:	MH37
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Pipe Material:	Polyvinyl chloride		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments: Recommendations:
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Scale:	1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m MH36 X 0.00 0.00 0.26 0.26 1.74 2.46 3.62 MH37 Depth: m	MH	Start node, manhole, reference: MH36 X	00:00:00				
	WL	Water level, 5% of the vertical dimension					
	LD	Line deviates down	00:00:05	1			
	JN	Junction at 12 o'clock, 100mm dia	00:00:05	2			
	GP	General photograph taken at this point	00:00:16	3			
	REM	General remark: Sewer levels out at this point	00:00:18	4			
	MHF	Finish node, manhole, reference: MH37 reached	00:00:55	5			

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
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

Section Pictures - 17/10/2023 - MH36 X

Item No. 79	Inspection Direction Downstream	PLR MH36 X	Client's Job Ref TSA-23-2537	Contractor's Job Ref TSA-23-2537
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1, 00:00:05, 0.26 m
Line deviates down



2, 00:00:05, 0.26 m
Junction at 12 o'clock, 100mm dia



3, 00:00:16, 1.74 m
General photograph taken at this point



4, 00:00:18, 2.46 m
General remark, Sewer levels out at this point



1, 00:00:04, 0.79 m
Line deviates left



2, 00:00:22, 1.89 m
General photograph taken at this point



3, 00:00:30, 3.57 m
Water level, 25% of the vertical dimension, Water standing in sewer at this point



4, 00:00:57, 6.93 m
Water level, 5% of the vertical dimension



5, 00:01:02, 7.45 m
Junction at 12 o'clock, 100mm dia, from RE



6, 00:01:12, 7.80 m
Line deviates up



7, 00:01:12, 7.80 m
Line deviates right



8, 00:01:16, 8.18 m
General remark, Sewer levels out at this point

Section Pictures - 17/10/2023 - RWP

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
80	Upstream	RWP	TSA-23-2537	TSA-23-2537



9, 00:01:23, 9.67 m
Finish node, other special chamber, reference: RWP, Internal RWP reached

Section Inspection - 17/10/2023 - RWP

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
81	1	17/10/23	9:17	TSA-23-2537	No Rain Or Snow	No	RWP
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Dominic White		LM21 UHU		Minicam Solopro	Not Specified	Not Specified	Not Specified

Town or Village:	London	Inspection Direction:	Upstream	Upstream Node:	RWP
Road:	The Bank	Inspected Length:	1.34 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	1.34 m	Downstream Node:	MH36 B
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Pipe Material:	Polyvinyl chloride		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:
Recommendations:

Scale:	1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m							
MH36 B							
		0.00	MH	Start node, manhole, reference: MH36 B	00:00:00		
		0.00	WL	Water level, 0% of the vertical dimension			
		0.00	LD	Line deviates down	00:00:02	1	
		0.69	GP	General photograph taken at this point	00:00:08	2	
RWP		1.34	OCF	Finish node, other special chamber, reference: RWP: Internal RWP reached	00:00:16	3	
Depth: 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
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Section Pictures - 17/10/2023 - RWP

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
81	Upstream	RWP	TSA-23-2537	TSA-23-2537

1, 00:00:02, 0.00 m
Line deviates down

2, 00:00:08, 0.69 m
General photograph taken at this point

3, 00:00:16, 1.34 m
Finish node, other special chamber, reference: RWP, Internal RWP reached

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Section Inspection - 17/10/2023 - SGY

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
82	1	17/10/23	9:17	TSA-23-2537	No Rain Or Snow	No	SGY
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Dominic White		LM21 UHU		Minicam Solopro	Not Specified	Not Specified	Not Specified

Town or Village:

Road:

Location:

Surface Type:

Use:

Type of Pipe:

Flow Control:

Year Constructed:

Inspection Purpose:

London

The Bank

Property or buildings

Surface water

Gravity drain/sewer

No flow control

Not Specified

Routine inspection

Inspection Direction:

Inspected Length:

Total Length:

Joint Length:

Pipe Shape:

Dia/Height:

Pipe Material:

Lining Type:

Lining Material:

Upstream

0.96 m

0.96 m

Circular

100 mm

Polyvinyl chloride

No Lining

No Lining

Upstream Node:

Upstream Pipe Depth:

Downstream Node:

Downstream Pipe Depth:

SGY

MH36 C

Comments:

Recommendations:

Scale: 1:50

Position [m]

Code

Observation

MPEG

Photo

Grade

Depth: m

MH36 C

0.00

0.00

0.04

0.75

0.96

MH

WL

LR

LU

GYF

Start node, manhole, reference: MH36 C

Water level, 0% of the vertical dimension

Line deviates right

Line deviates up

Finish node, gully, reference: SGY reached

00:00:00

00:00:03

00:00:11

00:00:18

1

2

3

Depth: 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
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Section Pictures - 17/10/2023 - SGY

Item No. 82	Inspection Direction Upstream	PLR SGY	Client's Job Ref TSA-23-2537	Contractor's Job Ref TSA-23-2537
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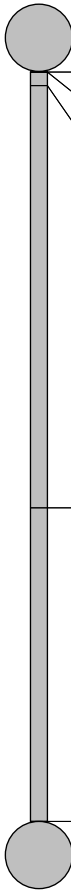
1, 00:00:03, 0.04 m
Line deviates right



2, 00:00:11, 0.75 m
Line deviates up



3, 00:00:18, 0.96 m
Finish node, gully, reference: SGY reached

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Section Inspection - 17/10/2023 - MH39 X									
Item No. 83	Insp. No. 1	Date 17/10/23	Time 9:17	Client's Job Ref TSA-23-2537	Weather No Rain Or Snow	Pre Cleaned No	PLR MH39 X		
Operator Dominic White		Vehicle LM21 UHU		Camera Minicam Solopro	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified		
Town or Village:		London		Inspection Direction:	Downstream		Upstream Node:	MH39 X	
Road:		The Bank		Inspected Length:	5.52 m		Upstream Pipe Depth:		
Location:		Property or buildings		Total Length:	5.52 m		Downstream Node:	OFFSITE MH	
Surface Type:				Joint Length:			Downstream Pipe Depth:		
Use:		Surface water			Pipe Shape:	Circular			
Type of Pipe:		Gravity drain/sewer			Dia/Height:	150 mm			
Flow Control:		No flow control			Pipe Material:	Vitrified clay			
Year Constructed:		Not Specified			Lining Type:	No Lining			
Inspection Purpose:		Routine inspection			Lining Material:	No Lining			
Comments:									
Recommendations:									
Scale:	1:50	Position [m]	Code	Observation		MPEG	Photo	Grade	
Depth: m MH39 X									
		0.00	MH	Start node, manhole, reference: MH39 X		00:00:00			
		0.00	WL	Water level, 0% of the vertical dimension					
		0.10	GP	General photograph taken at this point		00:00:05	1		
		3.21	GP	General photograph taken at this point		00:00:15	2		
		5.52	MHF	Finish node, manhole, reference: Offsite MH reached		00:00:30	3		
Offsite MH Depth: 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
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Section Pictures - 17/10/2023 - MH39 X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
83	Downstream	MH39 X	TSA-23-2537	TSA-23-2537



1, 00:00:05, 0.10 m
General photograph taken at this point



2, 00:00:15, 3.21 m
General photograph taken at this point



3, 00:00:30, 5.52 m
Finish node, manhole, reference: Offsite MH reached

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Section Inspection - 17/10/2023 - MH31 UTL

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
84	1	17/10/23	9:17	TSA-23-2537	No Rain Or Snow	No	MH31 UTL
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Dominic White		LM21 UHU		Minicam Solopro	Not Specified	Not Specified	Not Specified

Town or Village:

London

Road:

The Bank

Location:

Property or buildings

Surface Type:

Use:

Surface water

Type of Pipe:

Gravity drain/sewer

Flow Control:

No flow control

Year Constructed:

Not Specified

Inspection Purpose:

Routine inspection

Inspection Direction:

Upstream

Inspected Length:

18.72 m

Total Length:

18.72 m

Joint Length:

Upstream Node:

MH31 UTL

Upstream Pipe Depth:

Downstream Node:

MH39 A

Downstream Pipe Depth:

Pipe Shape:

Circular

Dia/Height:

150 mm

Pipe Material:

Vitrified clay

Lining Type:

No Lining

Lining Material:

No Lining

Comments:

Recommendations:

Scale:

1:163

Position [m]

Code

Observation

MPEG

Photo

Grade

Depth: m

MH39 A

0.00

MH

Start node, manhole, reference: MH39 A

00:00:00

0.00

WL

Water level, 0% of the vertical dimension

0.02

MCPVC

Pipe material changes to polyvinyl chloride at this point

00:00:03

1

0.02

JDM

Joint displaced, medium

00:00:03

2

1 / 3

0.22

LL

Line deviates left

00:00:05

3

1.40

S01

DES

Settled deposits, fine, 5% cross-sectional area loss, start

00:00:08

4

5.24

GP

General photograph taken at this point

00:00:17

5

10.28

GP

General photograph taken at this point

00:00:30

6

16.33

OJM

Open joint, medium

00:00:53

7

1

16.33

F01

DES

Settled deposits, fine, 5% cross-sectional area loss, finish

00:00:53

3

18.33

LR

Line deviates right

00:00:57

8

18.72

MH31 UTL

Finish node, manhole, reference: MH31 UTL reached

00:01:01

9

Depth: m

Construction Features

Miscellaneous Features

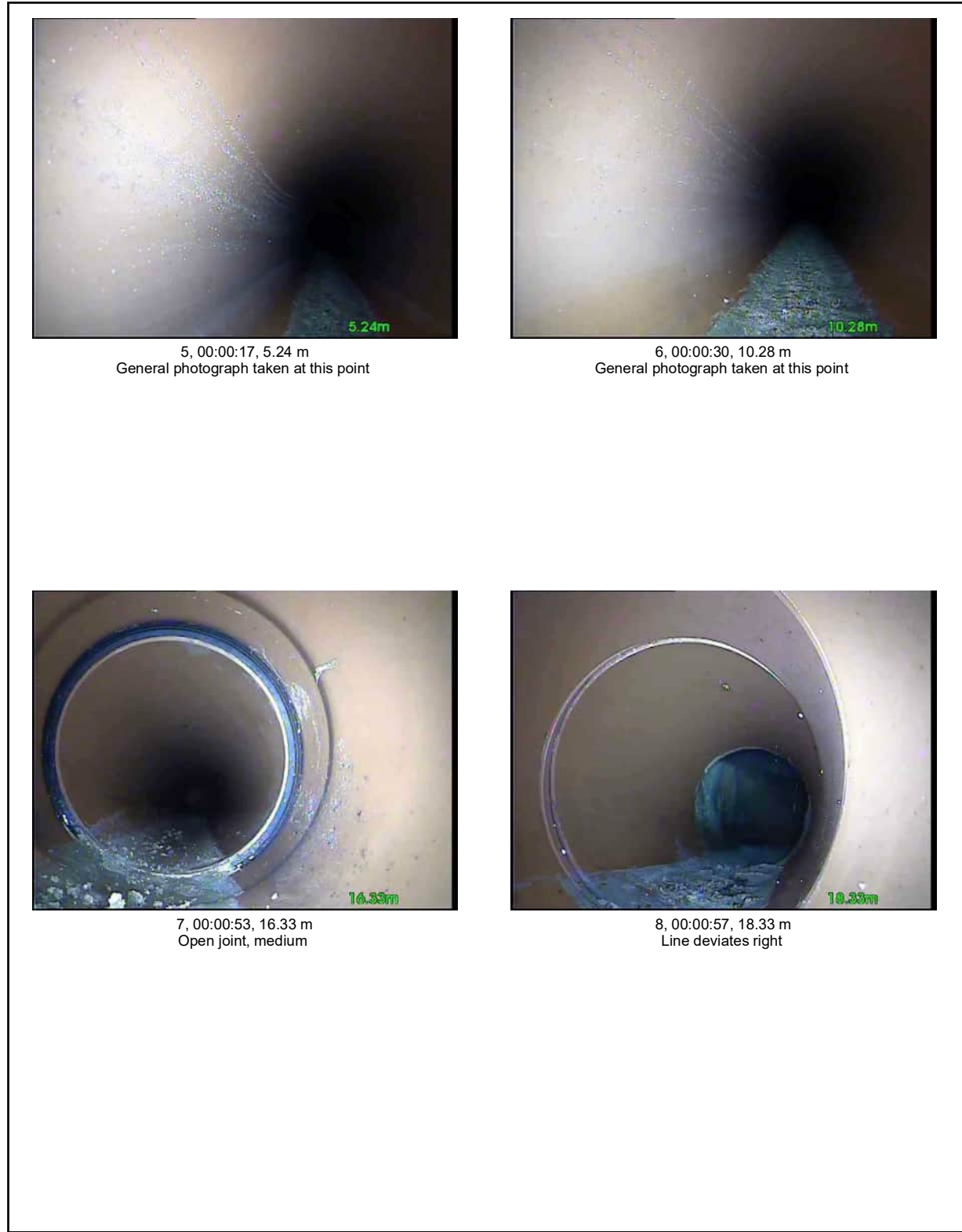
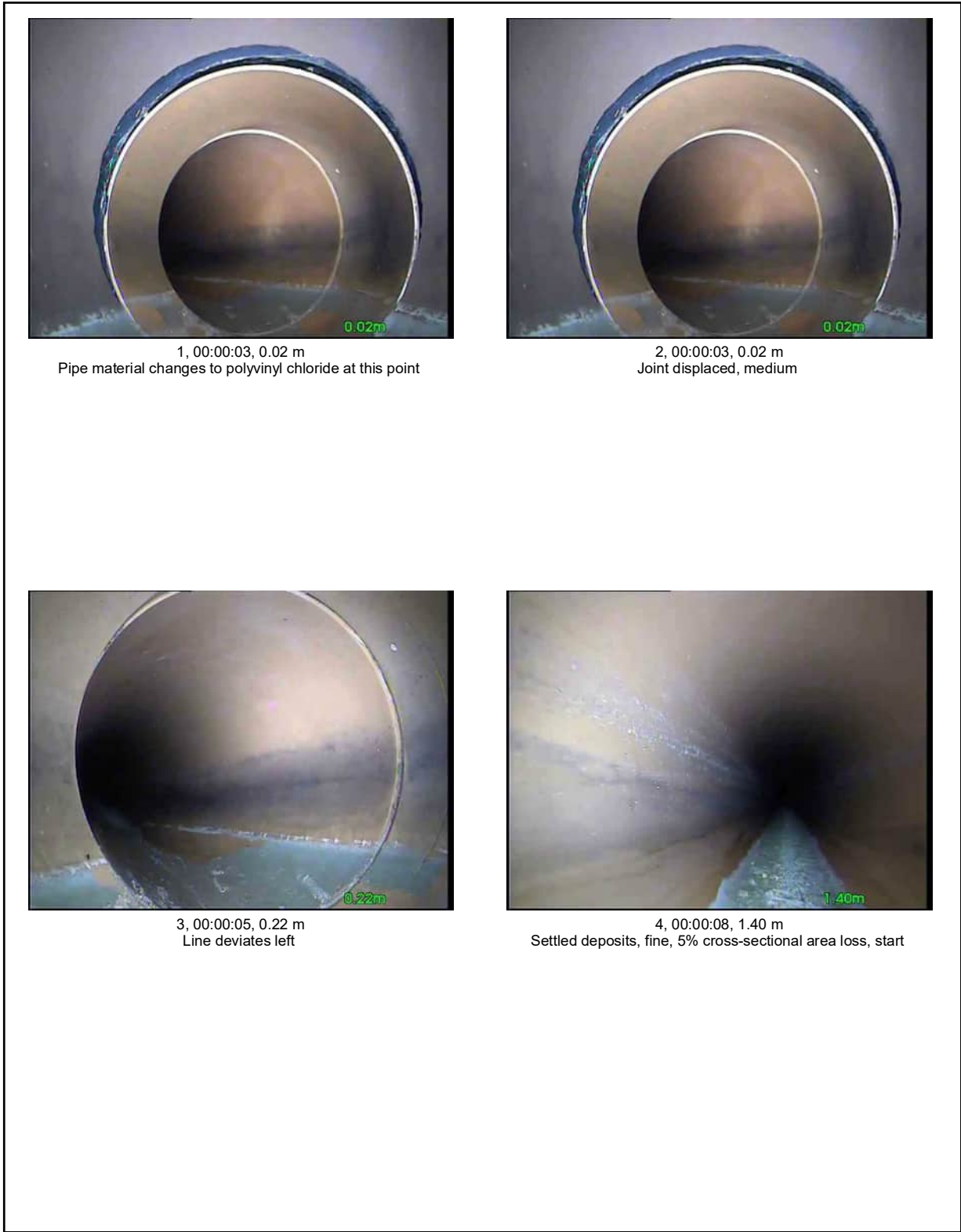
Structural Defects

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	1.0	0.1	2.0	1.0	2	2.0	1.7	32.0	3.0

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Section Pictures - 17/10/2023 - MH31 UTL

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
84	Upstream	MH31 UTL	TSA-23-2537	TSA-23-2537



9, 00:01:01, 18.72 m
Finish node, manhole, reference: MH31 UTL reached

Section Inspection - 17/10/2023 - MH40 X

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
85	1	17/10/23	9:17	TSA-23-2537	No Rain Or Snow	No	MH40 X
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Dominic White		LM21 UHU		Minicam Solopro	Not Specified	Not Specified	Not Specified

Town or Village:	London	Inspection Direction:	Downstream	Upstream Node:	MH40 X
Road:	The Bank	Inspected Length:	8.06 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	8.06 m	Downstream Node:	OFFSITE MH
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Flow Control:	No flow control	Pipe Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:
Recommendations:

Scale:	1:70	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m							
MH40 X							
		0.00	MH	Start node, manhole, reference: MH40 X	00:00:00		
		0.00	WL	Water level, 5% of the vertical dimension			
		0.34	GP	General photograph taken at this point	00:00:04	1	
		5.47	GP	General photograph taken at this point	00:00:22	2	
		8.06	MHF	Finish node, manhole, reference: Offsite MH reached	00:00:33	3	
Offsite MH Depth: 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
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Section Pictures - 17/10/2023 - MH40 X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
85	Downstream	MH40 X	TSA-23-2537	TSA-23-2537



1, 00:00:04, 0.34 m
General photograph taken at this point



2, 00:00:22, 5.47 m
General photograph taken at this point



3, 00:00:33, 8.06 m
Finish node, manhole, reference: Offsite MH reached

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Section Inspection - 17/10/2023 - Unknown

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
86	1	17/10/23	9:17	TSA-23-2537	No Rain Or Snow	No	UNKNOWN
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Dominic White		LM21 UHU		Minicam Solopro	Not Specified	Not Specified	Not Specified

Town or Village:

London

Road:

The Bank

Location:

Property or buildings

Surface Type:

Use:

Foul

Type of Pipe:

Gravity drain/sewer

Flow Control:

No flow control

Year Constructed:

Not Specified

Inspection Purpose:

Routine inspection

Inspection Direction:

Upstream

Inspected Length:

7.95 m

Total Length:

7.95 m

Joint Length:

Upstream Node:

UNKNOWN

Upstream Pipe Depth:

Downstream Node:

MH40 A

Downstream Pipe Depth:

Pipe Shape:

Circular

Dia/Height:

100 mm

Pipe Material:

Polyvinyl chloride

Lining Type:

No Lining

Lining Material:

No Lining

Comments:

Recommendations:

Scale: 1:69

Position [m]

Code

Observation

MPEG

Photo

Grade

Depth: m

MH40 A

0.00

MH

Start node, manhole, reference: MH40 A

00:00:00

0.00

WL

Water level, 0% of the vertical dimension

0.00

GP

General photograph taken at this point

00:00:01

1

4.21

GP

General photograph taken at this point

00:00:10

2

7.95

DES

Settled deposits, fine, 60% cross-sectional area loss

00:00:24

3

4

7.95

SA

Survey abandoned: Unable to pass silt

00:00:24

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
0	0.0	0.0	0.0	1.0	1	8.0	1.0	8.0	4.0

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Section Pictures - 17/10/2023 - Unknown

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
86	Upstream	UNKNOWN	TSA-23-2537	TSA-23-2537



1, 00:00:01, 0.00 m
General photograph taken at this point



2, 00:00:10, 4.21 m
General photograph taken at this point



3, 00:00:24, 7.95 m
Settled deposits, fine, 60% cross-sectional area loss

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Section Inspection - 17/10/2023 - MH41 X

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
87	1	17/10/23	9:17	TSA-23-2537	No Rain Or Snow	No	MH41 X
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Dominic White		LM21 UHU		Minicam Solopro	Not Specified	Not Specified	Not Specified

Town or Village:

Road:

Location:

Surface Type:

Use:

Type of Pipe:

Flow Control:

Year Constructed:

Inspection Purpose:

London

The Bank

Property or buildings

Combined

Gravity drain/sewer

No flow control

Not Specified

Routine inspection

Inspection Direction:

Inspected Length:

Total Length:

Joint Length:

Pipe Shape:

Dia/Height:

Pipe Material:

Lining Type:

Lining Material:

Downstream

1.98 m

1.98 m

Circular

100 mm

Vitrified clay

No Lining

No Lining

Upstream Node: MH41 X

Upstream Pipe Depth:

Downstream Node: MAIN

Downstream Pipe Depth:

Comments:

Recommendations:

Scale: 1:50

Position [m]

Code

Observation

MPEG

Photo

Grade

Depth: m

MH41 X

0.00

MH

Start node, manhole, reference: MH41 X

00:00:00

0.00

WL

Water level, 5% of the vertical dimension

0.00

REM

General remark: Winsor trap visible

00:00:01

1

0.19

LD

Line deviates down

00:00:10

2

0.79

JDM

Joint displaced, medium

00:00:15

3

1 / 3

1.36

LR

Line deviates right

00:00:20

4

1.36

LD

Line deviates down

00:00:20

5

1.78

JDM

Joint displaced, medium

00:00:26

6

1 / 3

1.98

BRF

Finish node, major connection without manhole, reference: Main public sewer reached

00:00:32

7

Depth: m

Construction Features

Miscellaneous Features

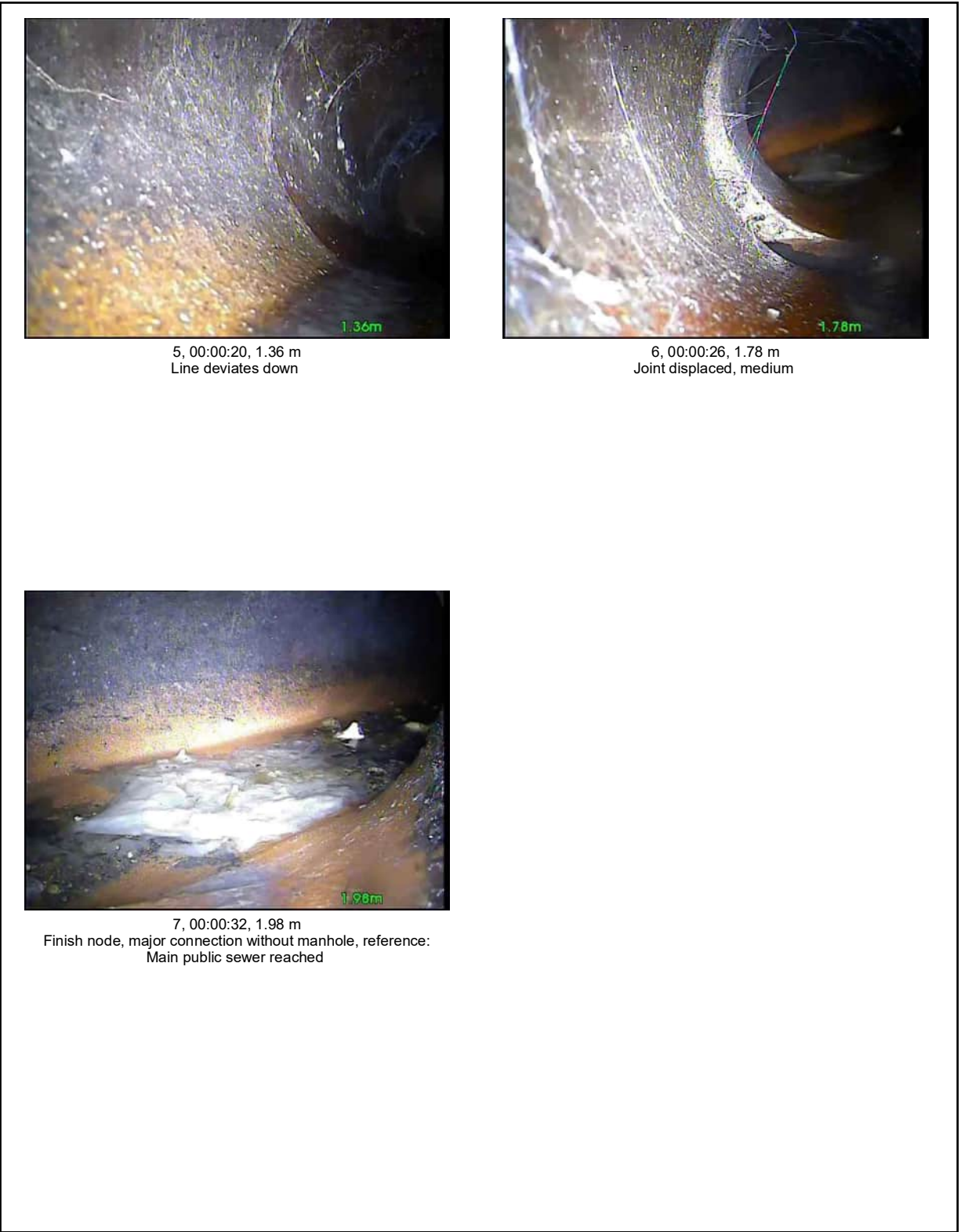
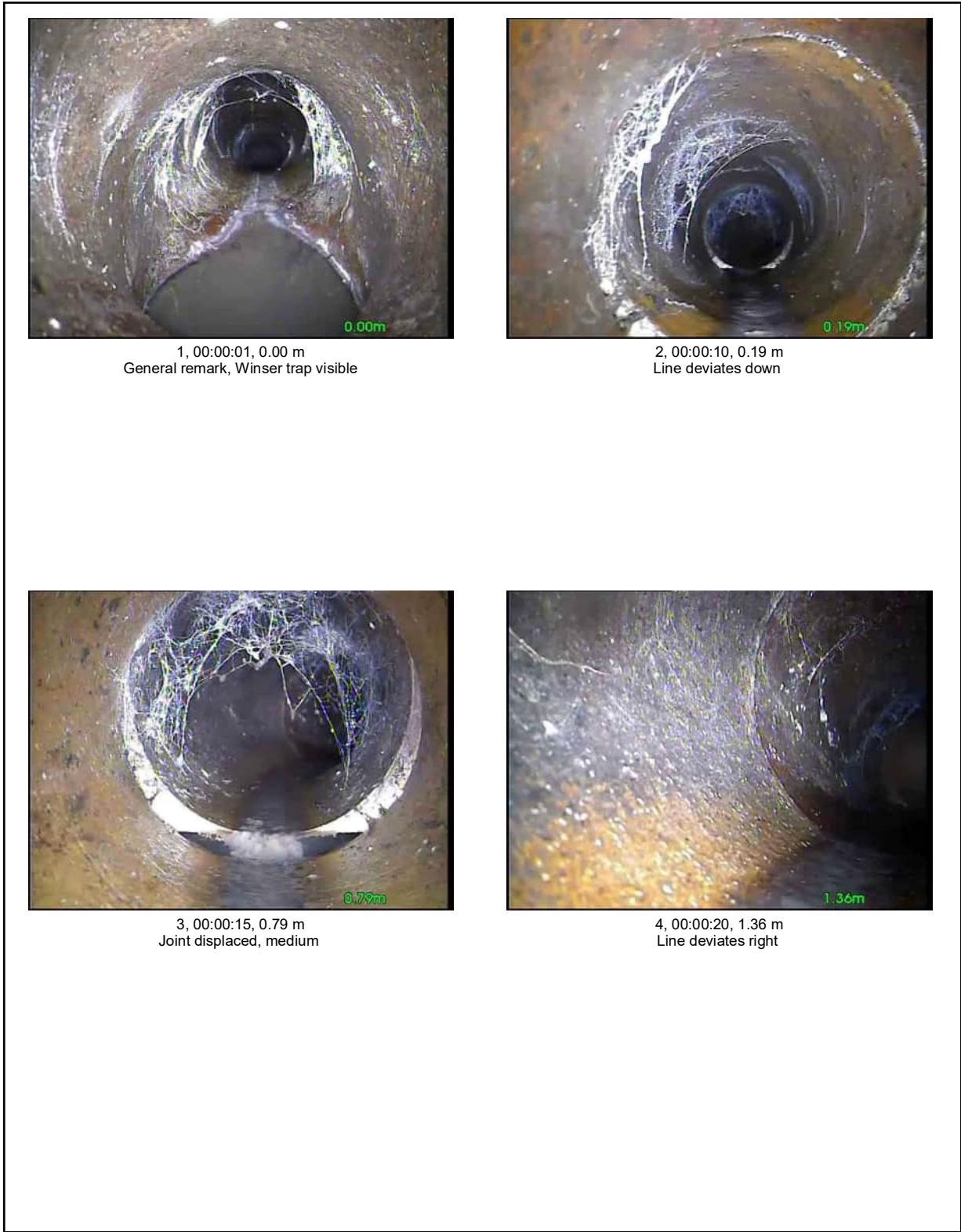
Structural Defects

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	1.0	1.0	2.0	1.0	2	2.0	2.0	4.0	3.0

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Section Inspection - 17/10/2023 - RWP

Item No. 88	Insp. No. 1	Date 17/10/23	Time 9:17	Client's Job Ref TSA-23-2537	Weather No Rain Or Snow	Pre Cleaned No	PLR RWP
Operator Dominic White		Vehicle LM21 UHU		Camera Minicam Solopro	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Town or Village:	London	Inspection Direction:	Upstream	Upstream Node:	RWP
Road:	The Bank	Inspected Length:	1.08 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	1.08 m	Downstream Node:	MH41 A
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Pipe Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments: Recommendations:
--

Scale:	1:50	Position [m]	Code	Observation	MPEG	Photo	Grade																														
Depth: m MH41 A RWP <table><tr><td>MH</td><td>Start node, manhole, reference: MH41 A</td><td>00:00:00</td><td></td><td></td></tr><tr><td>WL</td><td>Water level, 0% of the vertical dimension</td><td></td><td></td><td></td></tr><tr><td>GP</td><td>General photograph taken at this point</td><td>00:00:02</td><td>1</td><td></td></tr><tr><td>LU</td><td>Line deviates up</td><td>00:00:06</td><td>2</td><td></td></tr><tr><td>REM</td><td>General remark: Sewer levels out at this point</td><td>00:00:11</td><td>3</td><td></td></tr><tr><td>GYF</td><td>Finish node, gully, reference: RWP reached</td><td>00:00:19</td><td>4</td><td></td></tr></table>								MH	Start node, manhole, reference: MH41 A	00:00:00			WL	Water level, 0% of the vertical dimension				GP	General photograph taken at this point	00:00:02	1		LU	Line deviates up	00:00:06	2		REM	General remark: Sewer levels out at this point	00:00:11	3		GYF	Finish node, gully, reference: RWP reached	00:00:19	4	
MH	Start node, manhole, reference: MH41 A	00:00:00																																			
WL	Water level, 0% of the vertical dimension																																				
GP	General photograph taken at this point	00:00:02	1																																		
LU	Line deviates up	00:00:06	2																																		
REM	General remark: Sewer levels out at this point	00:00:11	3																																		
GYF	Finish node, gully, reference: RWP reached	00:00:19	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
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

Section Pictures - 17/10/2023 - RWP

Item No. 88	Inspection Direction Upstream	PLR RWP	Client's Job Ref TSA-23-2537	Contractor's Job Ref TSA-23-2537
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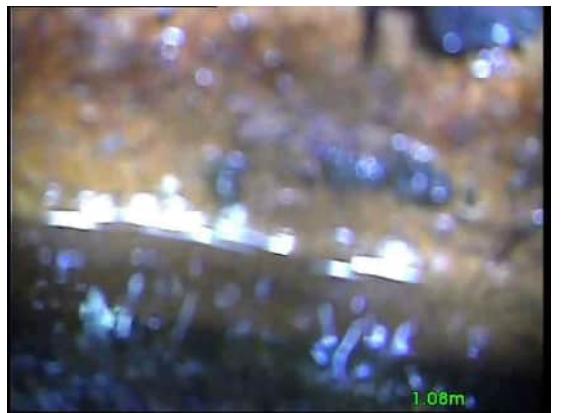
1, 00:00:02, 0.02 m
General photograph taken at this point



2, 00:00:06, 0.25 m
Line deviates up



3, 00:00:11, 0.50 m
General remark, Sewer levels out at this point



4, 00:00:19, 1.08 m
Finish node, gully, reference: RWP reached

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Section Inspection - 17/10/2023 - MH42 X

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
89	1	17/10/23	9:18	TSA-23-2537	No Rain Or Snow	No	MH42 X
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Dominic White		LM21 UHU		Minicam Solopro	Not Specified	Not Specified	Not Specified

Town or Village:	London	Inspection Direction:	Downstream	Upstream Node:	MH42 X
Road:	The Bank	Inspected Length:	7.59 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	7.59 m	Downstream Node:	MAIN
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Combined	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Flow Control:	No flow control	Pipe Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:

Recommendations:

Scale:	1:66	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m MH42 X							
0.00	MH		Start node, manhole, reference: MH42 X	00:00:00			
0.00	WL		Water level, 5% of the vertical dimension				
0.19	REM		General remark: Winsor trap visible	00:00:07	1		
0.75	WL		Water level, 20% of the vertical dimension	00:00:11	2		
1.48	JDM		Joint displaced, medium	00:00:15	3		1 / 3
1.48	WL		Water level, 5% of the vertical dimension	00:00:15			
2.27	LD		Line deviates down	00:00:18	4		
4.05	GP		General photograph taken at this point	00:00:29	5		
6.04	JDM		Joint displaced, medium	00:00:41	6		1 / 3
6.87	LL		Line deviates left	00:00:45	7		
6.87	LD		Line deviates down	00:00:45	8		
7.59	BRF		Finish node, major connection without manhole, reference: Main public sewer reached	00:00:50	9		

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	1.0	0.3	2.0	1.0	2	2.0	0.5	4.0	3.0

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Section Pictures - 17/10/2023 - MH42 X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
89	Downstream	MH42 X	TSA-23-2537	TSA-23-2537

1, 00:00:07, 0.19 m
General remark, Winsor trap visible

2, 00:00:11, 0.75 m
Water level, 20% of the vertical dimension

3, 00:00:15, 1.48 m
Joint displaced, medium

4, 00:00:18, 2.27 m
Line deviates down

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Section Pictures - 17/10/2023 - MH42 X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
89	Downstream	MH42 X	TSA-23-2537	TSA-23-2537



5, 00:00:29, 4.05 m
General photograph taken at this point



6, 00:00:41, 6.04 m
Joint displaced, medium



7, 00:00:45, 6.87 m
Line deviates left



8, 00:00:45, 6.87 m
Line deviates down

Section Pictures - 17/10/2023 - MH42 X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
89	Downstream	MH42 X	TSA-23-2537	TSA-23-2537



9, 00:00:50, 7.59 m
Finish node, major connection without manhole, reference:
Main public sewer reached

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Section Inspection - 17/10/2023 - Downpipe

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
90	1	17/10/23	9:18	TSA-23-2537	No Rain Or Snow	No	DOWNPIPE
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Dominic White		LM21 UHU		Minicam Solopro	Not Specified	Not Specified	Not Specified

Town or Village:	London	Inspection Direction:	Upstream	Upstream Node:	DOWNPIPE
Road:	The Bank	Inspected Length:	0.38 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	0.38 m	Downstream Node:	MH42 B
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Pipe Material:	Polyvinyl chloride		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		
Comments:					
Recommendations:					

Scale: 1:50

Position [m]

Code

Observation

MPEG

Photo

Grade

Depth: m

MH42 B

0.00

0.00

0.00

0.18

0.38

0.38

MH

WL

GP

LR

JN

SA

Start node, manhole, reference: MH42 B

Water level, 5% of the vertical dimension

General photograph taken at this point

Line deviates right

Junction at 9 o'clock, 100mm dia

Survey abandoned: Unable to pass junction

00:00:00

00:00:01

00:00:09

00:00:20

00:00:20

1

2

3

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
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Section Pictures - 17/10/2023 - Downpipe

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
90	Upstream	DOWNPIPE	TSA-23-2537	TSA-23-2537

1, 00:00:01, 0.00 m
General photograph taken at this point

2, 00:00:09, 0.18 m
Line deviates right

3, 00:00:20, 0.38 m
Junction at 9 o'clock, 100mm dia

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Section Inspection - 17/10/2023 - Downpipe

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
91	1	17/10/23	9:18	TSA-23-2537	No Rain Or Snow	No	DOWNPIPE
Operator Dominic White		Vehicle LM21 UHU		Camera Minicam Solopro	Preset Length Not Specified	Legal Status Not Specified	Alternative ID Not Specified

Town or Village:	London	Inspection Direction:	Upstream	Upstream Node:	DOWNPIPE
Road:	The Bank	Inspected Length:	0.54 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	0.54 m	Downstream Node:	MH42 C
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Pipe Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments: Recommendations:
--

Scale:	1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m MH42 C	MH	Start node, manhole, reference: MH42 C	00:00:00				
	WL	Water level, 0% of the vertical dimension					
	LU	Line deviates up	00:00:03	1			
	MCPVC	Pipe material changes to polyvinyl chloride at this point	00:00:06	2			
	LR	Line deviates right	00:00:16	3			
	JN	Junction at 9 o'clock, 100mm dia	00:00:16	4			
	SA	Survey abandoned: Unable to pass junction	00:00:16				

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
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

Section Pictures - 17/10/2023 - Downpipe

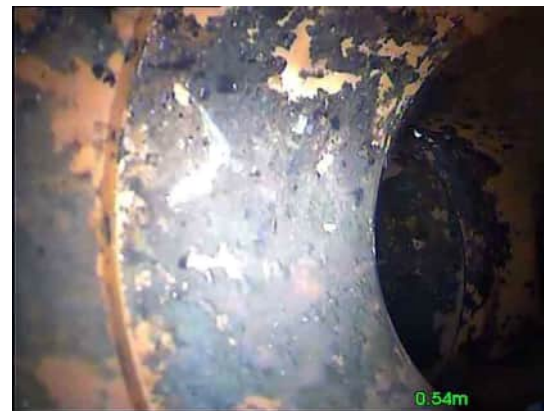
Item No. 91	Inspection Direction Upstream	PLR DOWNPIPE	Client's Job Ref TSA-23-2537	Contractor's Job Ref TSA-23-2537
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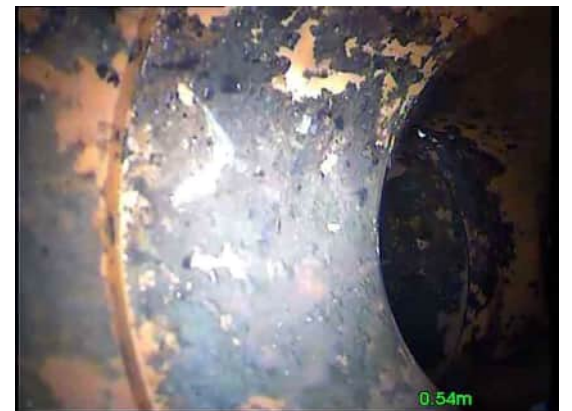
1, 00:00:03, 0.04 m
Line deviates up



2, 00:00:06, 0.18 m
Pipe material changes to polyvinyl chloride at this point



3, 00:00:16, 0.54 m
Line deviates right



4, 00:00:16, 0.54 m
Junction at 9 o'clock, 100mm dia

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Section Inspection - 17/10/2023 - MH45 UTL

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
92	1	17/10/23	9:18	TSA-23-2537	No Rain Or Snow	No	MH45 UTL
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Dominic White		LM21 UHU		Minicam Solopro	Not Specified	Not Specified	Not Specified

Town or Village:	London	Inspection Direction:	Upstream	Upstream Node:	MH45 UTL
Road:	The Bank	Inspected Length:	3.56 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	3.56 m	Downstream Node:	MH43 A
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Combined	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Flow Control:	No flow control	Pipe Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:

Recommendations:

Scale: 1:50

Position [m]

Code

Observation

MPEG

Photo

Grade

Depth: m

MH43 A

0.00

MH

Start node, manhole, reference: MH43 A

00:00:00

0.00

WL

Water level, 10% of the vertical dimension

0.00

GP

General photograph taken at this point

00:00:01

1

2.28

GP

General photograph taken at this point

00:00:10

2

3.56

MHF

Finish node, manhole, reference: MH45 UTL reached

00:00:17

3

MH45 UTL

Depth: 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
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Section Pictures - 17/10/2023 - MH45 UTL

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
92	Upstream	MH45 UTL	TSA-23-2537	TSA-23-2537



1, 00:00:01, 0.00 m
General photograph taken at this point



2, 00:00:10, 2.28 m
General photograph taken at this point



3, 00:00:17, 3.56 m
Finish node, manhole, reference: MH45 UTL reached

TSA-23-2537 Channing School for Girls CCTV Report_303_Issue01

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Tower Surveys Associates

18-20 The Ropewalk, Nottingham

james.hulme@towersurveysassociates.biz

Section Inspection - 17/10/2023 - MH19 UTL

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
93	1	17/10/23	9:18	TSA-23-2537	No Rain Or Snow	No	MH19 UTL
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Dominic White		LM21 UHU		Minicam Solopro	Not Specified	Not Specified	Not Specified

Town or Village:	London	Inspection Direction:	Upstream	Upstream Node:	MH19 UTL
Road:	The Bank	Inspected Length:	4.51 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	4.51 m	Downstream Node:	MH43 B
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Combined	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Flow Control:	No flow control	Pipe Material:	Vitrified clay		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:

Recommendations:

Scale:	1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m							
MH43 B							
	0.00	MH		Start node, manhole, reference: MH43 B	00:00:00		
	0.00	WL		Water level, 0% of the vertical dimension			
	0.00	LU		Line deviates up	00:00:02	1	
	0.22	DECJ		Settled deposits, hard or compacted at joint, 5% cross-sectional area loss	00:00:06	2	3
	0.22	SC		Pipe size changes, new size(s), 100mm high	00:00:06	3	
	1.57	SW		Surface damage, increased roughness from 12 o'clock to 2 o'clock	00:00:19	4	1
	2.93	GP		General photograph taken at this point	00:00:29	5	
	4.51	MHF		Finish node, manhole, reference: MH19 UTL reached	00:00:41	6	
MH19 UTL							
Depth: 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
1	5.0	1.1	5.0	1.0	1	2.0	0.4	2.0	3.0

TSA-23-2537 Channing School for Girls CCTV Report_303_Issue01

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Section Pictures - 17/10/2023 - MH19 UTL

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
93	Upstream	MH19 UTL	TSA-23-2537	TSA-23-2537

1, 00:00:02, 0.00 m
Line deviates up

2, 00:00:06, 0.22 m
Settled deposits, hard or compacted at joint, 5% cross-sectional area loss

3, 00:00:06, 0.22 m
Pipe size changes, new size(s), 100mm high

4, 00:00:19, 1.57 m
Surface damage, increased roughness from 12 o'clock to 2 o'clock

TSA-23-2537 Channing School for Girls CCTV Report_303_Issue01

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Section Pictures - 17/10/2023 - MH19 UTL

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
93	Upstream	MH19 UTL	TSA-23-2537	TSA-23-2537



5, 00:00:29, 2.93 m
General photograph taken at this point



6, 00:00:41, 4.51 m
Finish node, manhole, reference: MH19 UTL reached

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18-20 The Ropewalk, Nottingham

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Section Inspection - 17/10/2023 - Buried Gly

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
94	1	17/10/23	9:18	TSA-23-2537	No Rain Or Snow	No	BURIED GLY
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Dominic White		LM21 UHU		Minicam Solopro	Not Specified	Not Specified	Not Specified

Town or Village:

London

Road:

The Bank

Location:

Property or buildings

Surface Type:

Use:

Foul

Type of Pipe:

Gravity drain/sewer

Flow Control:

No flow control

Year Constructed:

Not Specified

Inspection Purpose:

Routine inspection

Inspection Direction:

Upstream

Inspected Length:

0.19 m

Total Length:

0.19 m

Joint Length:

Upstream Node:

BURIED GLY

Upstream Pipe Depth:

Downstream Node:

MH43 C

Downstream Pipe Depth:

Pipe Shape:

Circular

Dia/Height:

100 mm

Pipe Material:

Vitrified clay

Lining Type:

No Lining

Lining Material:

No Lining

Comments:

Recommendations:

Scale: 1:50

Position [m]

Code

Observation

MPEG

Photo

Grade

Depth: m

MH43 C

0.00

MH

Start node, manhole, reference: MH43 C

00:00:00

0.00

WL

Water level, 0% of the vertical dimension

0.00

GP

General photograph taken at this point

00:00:01

1

0.19

GYF

Finish node, gully, reference: Buried Gly reached

00:00:08

2

Depth: 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
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

TSA-23-2537 Channing School for Girls CCTV Report_303_Issue01

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Section Pictures - 17/10/2023 - Buried Gly

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
94	Upstream	BURIED GLY	TSA-23-2537	TSA-23-2537



1, 00:00:01, 0.00 m
General photograph taken at this point



2, 00:00:08, 0.19 m
Finish node, gully, reference: Buried Gly reached

Section Inspection - 17/10/2023 - MH44 X

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
95	1	17/10/23	9:18	TSA-23-2537	No Rain Or Snow	No	MH44 X
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Dominic White		LM21 UHU		Minicam Solopro	Not Specified	Not Specified	Not Specified

Town or Village:	London	Inspection Direction:	Downstream	Upstream Node:	MH44 X
Road:	The Bank	Inspected Length:	5.70 m	Upstream Pipe Depth:	
Location:	Property or buildings	Total Length:	5.70 m	Downstream Node:	MH42
Surface Type:		Joint Length:		Downstream Pipe Depth:	
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Flow Control:	No flow control	Pipe Material:	Cast iron		
Year Constructed:	Not Specified	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:
Recommendations:

Scale:	1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m MH44 X							
		0.00	MH	Start node, manhole, reference: MH44 X	00:00:00		
		0.00	WL	Water level, 5% of the vertical dimension			
		0.00	GP	General photograph taken at this point	00:00:01	1	
		2.23	GP	General photograph taken at this point	00:00:09	2	
		4.98	WL	Water level, 50% of the vertical dimension: Water in sewer due to water standing in MH42 downstream	00:00:21	3	
		5.70	WL	Water level, 100% of the vertical dimension: Water in sewer due to water standing in MH42 downstream	00:00:24		
		5.70	CUW	Loss of vision, camera under water	00:00:24		
		5.70	SA	Survey abandoned: Vision lost	00:00:24		

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
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

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Section Pictures - 17/10/2023 - MH44 X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
95	Downstream	MH44 X	TSA-23-2537	TSA-23-2537



1, 00:00:01, 0.00 m
General photograph taken at this point



2, 00:00:09, 2.23 m
General photograph taken at this point



3, 00:00:21, 4.98 m
Water level, 50% of the vertical dimension, Water in sewer due to water standing in MH42 downstream

TSA-23-2537 Channing School for Girls CCTV Report_303_Issue01

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18-20 The Ropewalk, Nottingham

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Section Inspection - 17/10/2023 - Downpipe

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
96	1	17/10/23	9:19	TSA-23-2537	No Rain Or Snow	No	DOWNPIPE
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Dominic White		LM21 UHU		Minicam Solopro	Not Specified	Not Specified	Not Specified

Town or Village: London

Road: The Bank

Location: Property or buildings

Surface Type:

Use: Foul

Type of Pipe: Gravity drain/sewer

Flow Control: No flow control

Year Constructed: Not Specified

Inspection Purpose: Routine inspection

Inspection Direction: Upstream

Inspected Length: 5.52 m

Total Length: 5.52 m

Joint Length:

Pipe Shape: Circular

Dia/Height: 100 mm

Pipe Material: Vitrified clay

Lining Type: No Lining

Lining Material: No Lining

Upstream Node: DOWNPIPE

Upstream Pipe Depth:

Downstream Node: MH44 B

Downstream Pipe Depth:

Comments:

Recommendations:

Scale: 1:50

Position [m]

Code

Observation

MPEG

Photo

Grade

Depth: m

MH44 B

0.00

MH

Start node, manhole, reference: MH44 B

00:00:00

0.00

WL

Water level, 5% of the vertical dimension

0.32

GP

General photograph taken at this point

00:00:051

2.91

GP

General photograph taken at this point

00:00:182

5.52

OCF

Finish node, other special chamber, reference: Downpipe: Internal downpipe reached

00:00:313

Downpipe

Depth: 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
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

TSA-23-2537 Channing School for Girls CCTV Report_303_Issue01

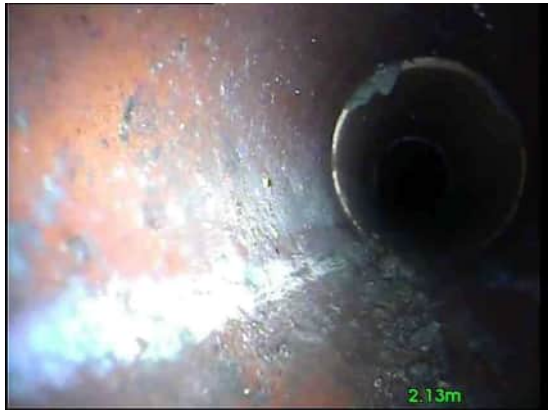
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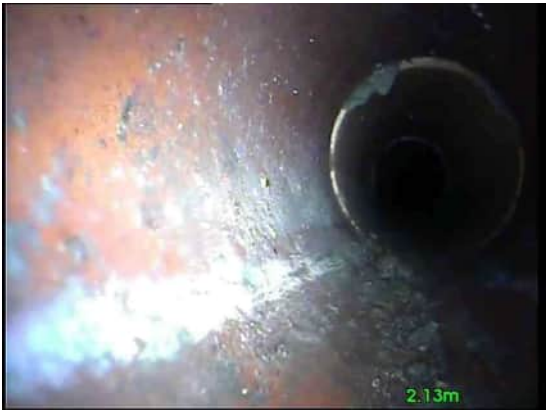
1, 00:00:02, 0.00 m
General photograph taken at this point



2, 00:00:05, 0.41 m
Settled deposits, fine, 25% cross-sectional area loss, start



3, 00:00:15, 2.13 m
Settled deposits, fine, 5% cross-sectional area loss, change



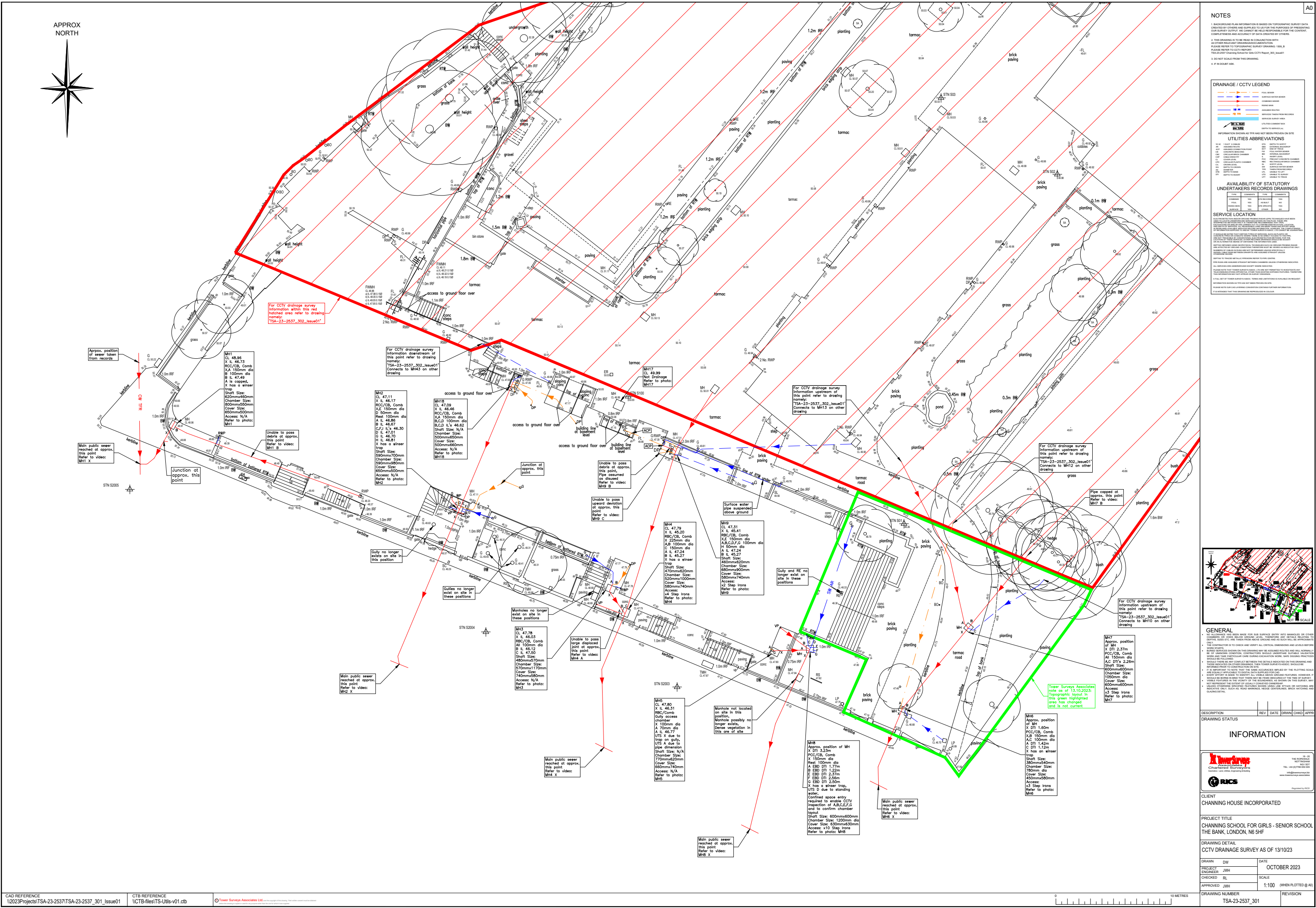
4, 00:00:15, 2.13 m
Settled deposits, hard or compacted at joint, 5% cross-sectional area loss, start



5, 00:00:30, 5.26 m
Junction at 10 o'clock, 100mm dia



6, 00:00:39, 5.52 m
Settled deposits, other, 100% cross-sectional area loss, Pipe full of loose plastic



DRAINAGE / CCTV LEGEND

	FULL SEWER
	SURFACE WATER SEWER
	COMBINED SEWER
	RISING MAIN
	ASSUMED ROUTER
	SERVICES TAKEN FROM RECORDS
	SERVICES SURVEY AREA
	FILTERED COMMENT BOX
	ROUTING TO SEWERAGE (S4)

10-NC	1 TIGHT & LOOSE	UTS	DEPTH TO SPENT
AK	ASSIGNED ROUTE	EWB	EXTENDING MEMBER
ACF	ANALOGOUS CONNECTION POINT	BNP	KNOW OF
CB	CONCRETE	FWO	FLAT WALKER DESIGN
CRC	CHUCKER-BLOCK CHAMBER	BN	INTERNAL BARRIER
CSP	CORNER	W	WALKWAY
CL	CHILLER LINE	PCC	PRECAST CONCRETE CHAMBER
QMB	QUICK-RELEASE MEMBER	W	WALKWAY
CA	CHAMBER	SL	SOFT LIFT
DEP	DEPTH TO LEVEL	TR	TRANSVERSE MEMBER
DA	DEMANDER	TFR	TAPER FROM DESIGNER
DB	DEPTH TO BARRIER	UCL	UNABLE TO LIFT
DB	DEPTH TO BARRIER	UTS	UNABLE TO SURVIVE
		UTL	UNABLE TO TRUCK

[illegible]

GENERAL

NO ALLOWANCE HAS BEEN MADE FOR SURF SUBSISTENCE ENTRY MANHOLES OR OTHER STRUCTURES THAT MAY BE BELOW GROUND LEVEL. THEREFORE ANY ENTRY RELATING TO DEPTHS, SIZES, ETC. ARE TAKEN FROM ABOVE GROUND AND AS SUCH WILL BE APPROXIMATIONS.

THE CONTRACTOR IS TO CHECK AND VERIFY ALL CRITICAL DIMENSIONS AND LEVELS BEFORE COMMENCING ANY WORK.

BURIED SERVICES SHOWN ON THIS DRAWING MAY BE ASSUMED ROUTES AND WILL NORMALLY BE LOCATED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF WORK AND TAKE PARTICULAR CARE DURING EXCAVATION WORK. SAFE DIGGING PRACTICES SHALL BE FOLLOWED AT ALL TIMES.

IT SHOULD THERE BE ANY CONFLICT BETWEEN THE DETAILS INDICATED ON THIS DRAWING AND THE INFORMATION PROVIDED BY THE TOWN OF SURF SERVICES ASSOC., SHOULD BE INFORMED PRIOR TO CONSTRUCTION ON SITE.

IT IS IMPORTANT TO NOTE THAT THE SAME ACCURACIES APPLIED BY THE PLOTTING SCALE OF THIS DRAWING ARE TO BE USED FOR ALL DIMENSIONS. THEREFORE, THE CONTRACTOR MUST BE AWARE THAT ANY DIMENSIONS SHOWN ON THIS DRAWING ARE APPROXIMATE. HOWEVER, ANY DISCREPANCY BETWEEN THE DIMENSIONS SHOWN ON THIS DRAWING AND THE TIME TO VISUAL INSPECTION OF THE VERTICALLY OF THE BOUNDARIES, AS SHOWN ON THIS SURVEY, MAY BE USED TO DETERMINE THE LOCATION OF THE BOUNDARIES.

UNLESS OTHERWISE SPECIFIED FEATURES SHOWN USING LINE STYLES OR HATCHING ARE TO BE CONSIDERED AS APPROXIMATE LOCATIONS ONLY.

DESCRIPTION	REV	DATE	DRWN	CHKD	APPR
DRAWING STATUS					

INFORMATION



CLIENT
CHANNING HOUSE INCORPORATED

PROJECT TITLE
CHANNING SCHOOL FOR GIRLS - SENIOR SCHOOL
THE BANK, LONDON, N6 5HF

DRAWING DETAIL
CCTV DRAINAGE SURVEY AS OF 13/10/23

DRAWN	DW	DATE
PROJECT		OCTOBER 2023

CHECKED	RL	SCALE
		1:100

DRAWING NUMBER	REVISION
TSA-23-2537 301	

CAD REFERENCE
\\2023Projects\TSA-23-2537\TSA-23-2537 301 Issue01

CTB REFERENCE
\\CTB-files\TS-Utils-v01.ctb

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A1

1. BACKGROUND PLAN INFORMATION IS BASED ON TOPOGRAPHIC SURVEY DATA CREATED BY OTHERS AND SUPPLIED TO US FOR THE PURPOSES OF PRESENTING OUR SURVEY OUTPUT. WE CANNOT BE HELD RESPONSIBLE FOR THE CONTENT, COMPLETENESS AND ACCURACY OF DATA CREATED BY OTHERS.

DRAINAGE / CCTV LEGEND



INFORMATION SHOWN AS TFR HAS NOT BEEN PROVEN ON SITE

UTILITIES ABBREVIATIONS

10 AC	1 DUCT & CABLES	DTS	DEPTH TO SPLIT
AS	ASSUMED RADIUS	DRS	INTERNAL BACKDROP
ACP	ASSUMED CONNECTION POINT	END	END OF TRACE
BC	CONCRETE BENCHING	FW	FOUL WATER SEWER
CB	CIRCULAR BRICK CHAMBER	BDI	INTERNAL DEPTH
CD	CHAMBER DEPTH	INVT	INVERT LEVEL
CL	COVER LEVEL	PCB	PRECAST CONCRETE CHAMBER
CPC	CIRCULAR PRECAST CHAMBER	RCC	RECTANGULAR BRICK CHAMBER
CS	CHAMBER SIZE	SPF	SOFT LEVEL
DD	DEPTH TO CHOWN	SW	SURFACE WATER SEWER
DE	DRAINAGE	TRN	TAKEN FROM RECORDS
DTS	DEPTH TO DRAINAGE	UNL	UNABLE TO LOCATE
DTI	DEPTH TO INVERT	UNL	UNABLE TO SURVEY
		UTT	UNABLE TO TRACE

DATE	TIME	SERVICE LOCATION
------	------	------------------

ELECTRODETECTION AND/OR GROUND PROBING RADAR (GPR) TECHNIQUES HAVE BEEN USED TO LOCATE UNDERGROUND SERVICES SHOWN ON THIS PLAN. THESE ARE INTERPRETIVE METHODS AND IT IS THEREFORE RECOMMENDED THAT TRIAL EXCAVATIONS OR SIMILAR ARE CARRIED OUT TO CONFIRM IDENTIFICATION, LOCATION AND DEPTH OF SERVICES. ALL REASONABLE CARE HAS BEEN TAKEN AND EFFORT MADE IN SEARCHING AVAILABLE SERVICES RECORD INFORMATION. HOWEVER, THE COMPLETENESS OF INFORMATION SUPPLIED TO AND BY TOWER SURVEYS ASSOC. LTD CANNOT BE GUARANTEED.

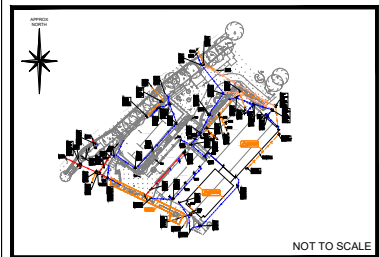
IT SHOULD BE NOTED THAT CERTAIN TYPES OF SERVICES, SUCH AS PLASTIC OR CONCRETE PIPES OR CONDUITS WHERE THERE IS NO DIRECT ACCESS TO THE PIPE, ARE TRACED BY CONVENTIONAL METHODS AND CROSSCHECKS. FOR THE LOCATION OF THESE SERVICES, EITHER THE RECORDS DRAWINGS SHOULD BE SOUGHT OR AN ALTERNATIVE MEANS OF OBTAINING THE INFORMATION USED.

DEPTHS OBTAINED USING GEOPHYSICAL TECHNIQUES SUCH AS GROUND PROBING RADAR ARE AFFECTED BY GROUND CONDITIONS THEREFORE MUST BE VIEWED AS INDICATIVE ONLY.

NUMBERS OF CABLES IN RUNS ARE NOT DETERMINED UNLESS SPECIFICALLY SHOWN. CABLES BETWEEN DRAUGHTS ARE ASSUMED STRAIGHT UNLESS OTHERWISE SHOWN.

DEPTHS TO TRACED METALLIC PIPEWORK REFER TO PIPE CENTRE.
PIPE RUNS ARE ASSUMED STRAIGHT BETWEEN CHAMBERS UNLESS OTHERWISE INDICATED.
ALL SERVICES ARE UNDERGROUND EXCEPT WHERE INDICATED.
PLEASE NOTE THAT TOWER SURVEYS ASSOC. LTD ARE NOT PERMITTED TO INVESTIGATE ANT
TELECOMMUNICATIONS APPARATUS, OTHER THAN EXISTING EXPOSED FEATURES. THEREFOR
THIS INFORMATION MAY NOT APPEAR ON SURVEY DRAWINGS.

A FULL SET OF TOWER SURVEYS ASSOC. TERMS AND LIMITATIONS IS AVAILABLE ON REQUEST.
INFORMATION SHOWN AS TFR HAS NOT BEEN PROVEN ON SITE.
PLEASE NOTE OUR CAD LAYERING CONVENTION CONTAINS FURTHER INFORMATION.
IT IS INTENDED THAT THIS DRAWING BE REPRODUCED IN COLOUR.



GENERAL

- [illegible]

DESCRIPTION	REV	DATE	DRWN	CHKD	APPR
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DRAWING STATUS	
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INFORMATION



18 - 20
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NOTTINGHAM
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TEL: +44 (0)7786 650 005
info@towersurveys.biz

Regulated by RICS

CLIENT

CHANNING HOUSE INCORPORATED

PROJECT TITLE

CHANNING SCHOOL FOR GIRLS - SENIOR SCHOOL
THE BANK, LONDON, N6 5HF

DRAWING DETAIL

CCTV DRAINAGE SURVEY AS OF 13/10/23

DRAWN DW	DATE OCTOBER 2023
PROJECT ENGINEER JWH	
CHECKED RL	SCALE
APPROVED JWH	1:200 (WHEN PLOTTED @ A1)

DRAWING NUMBER
TSA-23-

REVISION

CAD REFERENCE
\\2023Projects\TSA-23-2537\TSA-23-2537 302 Issue01

CTB REFERENCE
\\CTB-files\TS-Utills-v01.ctb

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Appendix F

LBH SuDS Proforma

1. Project & Site Details	Project / Site Name (including sub-catchment / stage / phase where appropriate)	Brunner House Redevelopment
	Address & post code	Channing School, The Bank, London N6 5HF
	OS Grid ref. (Easting, Northing)	E 528715 N 187337
	LPA reference (if applicable)	
	Brief description of proposed work	Extension of the Brunner House building, with ground floor, first floor and basement proposed.
	Total site Area	1460 m ²
	Total existing impervious area	1460 m ²
	Total proposed impervious area	1351 m ²
	Is the site in a surface water flood risk catchment (ref. local Surface Water Management Plan)?	No
	Existing drainage connection type and location	Separate foul and surface water connection located north east of the building.
	Designer Name	Matthew Woo
	Designer Position	Civil Engineer

2. Proposed Discharge Arrangements	2a. Infiltration Feasibility		
	Superficial geology classification		
	Bedrock geology classification	Made Ground	
	Site infiltration rate	m/s	
	Depth to groundwater level	m below ground level	
	Is infiltration feasible?	No	
	2b. Drainage Hierarchy		
		Feasible (Y/N)	Proposed (Y/N)
	1 store rainwater for later use	N	N
	2 use infiltration techniques, such as porous surfaces in non-clay areas	N	N
	3 attenuate rainwater in ponds or open water features for gradual release	N	N
	4 attenuate rainwater by storing in tanks or sealed water features for gradual release	Y	Y
	5 discharge rainwater direct to a watercourse	N	N
	6 discharge rainwater to a surface water sewer/drain	Y	Y
	7 discharge rainwater to the combined sewer.	N	N
2c. Proposed Discharge Details			
Proposed discharge location	Foul and surface water sewer along Cholmeley Park		
Has the owner/regulator of the discharge location been consulted?	Yes		

	Designer Company	Heyne Tillett Stell
--	------------------	---------------------

	consulted?	
--	------------	--

3. Drainage Strategy	3a. Discharge Rates & Required Storage				
		Greenfield (GF) runoff rate (l/s)	Existing discharge rate (l/s)	Required storage for GF rate (m ³)	Proposed discharge rate (l/s)
	Qbar	0.66			
	1 in 1	0.56	19.46		
	1 in 30	1.52	50.9		
	1 in 100	2.1	67.38		
	1 in 100 + CC				
	Climate change allowance used		40%		
	3b. Principal Method of Flow Control				
	3c. Proposed SuDS Measures				
		Catchment area (m ²)	Plan area (m ²)	Storage vol. (m ³)	
	Rainwater harvesting	0			0
	Infiltration systems	0			0
	Green roofs	0	0		0
	Blue roofs	207	109		12
	Filter strips	0	0		0
	Filter drains	0	0		0
	Bioretention / tree pits	0	0		0
	Pervious pavements	0	0		0
	Swales	0	0		0
	Basins/ponds	0	0		0
	Attenuation tanks	0			0
	Total	207	109		12

4. Supporting Information	4a. Discharge & Drainage Strategy	Page/section of drainage report
	Infiltration feasibility (2a) – geotechnical factual and interpretive reports, including infiltration results	
	Drainage hierarchy (2b)	
	Proposed discharge details (2c) – utility plans, correspondence / approval from owner/regulator of discharge location	
	Discharge rates & storage (3a) – detailed hydrologic and hydraulic calculations	
	Proposed SuDS measures & specifications (3b)	
	4b. Other Supporting Details	Page/section of drainage report
	Detailed Development Layout	
	Detailed drainage design drawings, including exceedance flow routes	
	Detailed landscaping plans	
	Maintenance strategy	
	Demonstration of how the proposed SuDS measures improve:	
	a) water quality of the runoff?	
	b) biodiversity?	
	c) amenity?	

Appendix G

Hydraulic Calculations



Project Title

Brunner House, Highgate

Design Number

Notes / Reference

Roof

Design Storm Event	1:100
Climate Change	40 %
Runoff Coefficient	1.00
Location	London
Roof Area m²	211.7
Additional Contributing Areas (m²)	
Total Catchment Area (m²)	211.7
Net Roof Area (m²)	105.4
Permitted Outflow (l/s)	0.950
Blue or Blue/Green Roof	Unknown
If B/G, Green Roof Type	Extensive
a. Permanent reservoir above or in storage void	None
b. Required Reservoir Depth (mm)	

Required Net Storm Storage Volume (m³)	11.49
Actual Depth (mm)	121
Porosity	90 %
Selected depth of storage tank (mm)	125
Provided Storage Volume (m³)	11.86
Utilisation	96.9 %

Item	kN/m²
Weight of Product (Tank / Cell)	0.162
Weight of Product (Tray)	0.000
Geotextile	0.005
Weight of Permanent Storage	0.000
Weight of Stormwater Storage	1.158

R: l/s

M5-60: mm/h

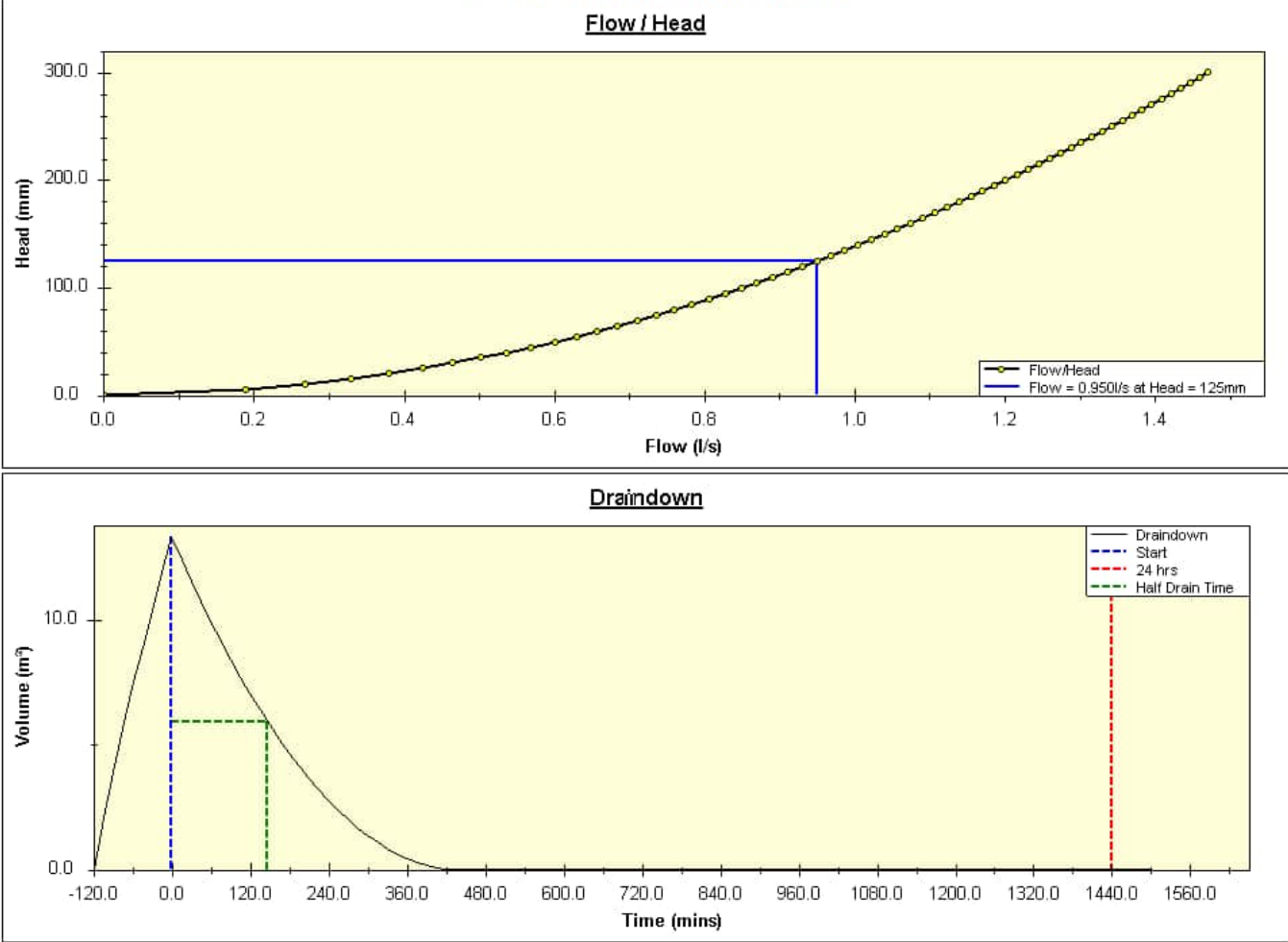
DURATION (mins)	INTENSITY (mm/h)	REQUIRED STORAGE VOLUME (m³)
5 mins	445.31	7.57
10 mins	264.78	8.77
15 mins	176.85	8.50
30 mins	113.40	10.29
1 hour	69.10	11.21
2 hours	43.30	11.49
4 hours	26.56	8.81
6 hours	19.63	4.41
10 hours	13.06	0.00
24 hours	6.17	0.00
48 hours	3.32	0.00

Required aperture / outlet plate size: 35 mm

Half Empty Time: 146 mins

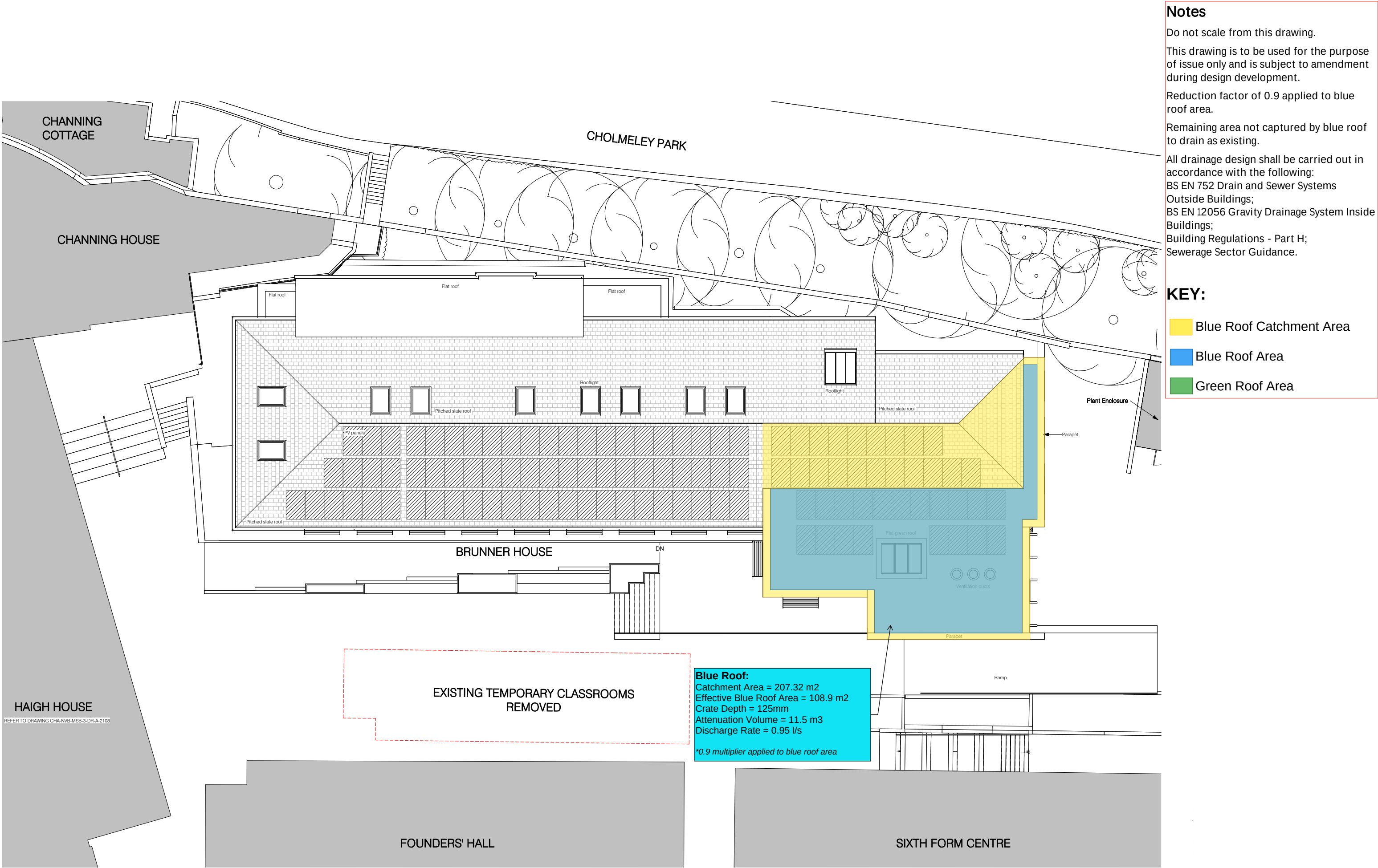
Project Status: PASS

Level & Draindown Graphs



Appendix H

SuDS Plan



Appendix I

Drainage Inspection and Maintenance Strategy

Drainage Inspection and Maintenance Strategy

This document has been prepared to support the inspection and maintenance of the proposed below ground drainage of the Brunner House site. The drainage network comprises surface and foul water drainage systems:

- Surface water network will route all the rainwater towards the existing outfall. Blue/Green roof surface water will also be routed towards the existing outfall.
- Foul water network from above ground level will be routed towards basement level and pumped to high level, then draining to the outfall manhole via gravity.

In accordance with CIRIA C625 it is recommended that a private SuDS maintenance agreement is undertaken as a simple contract between the property owner and the maintenance provider (the maintainer). It is mainly to facilitate continuing maintenance of the SuDS that are in private ownership. The maintenance requirements are in accordance with the CIRIA C753 SuDS Manual 2015 and product manufacturer’s requirements.

The following Drainage / SuDS measures are proposed within the development:

- General Drainage:

Maintenance Period	Maintenance Task	Frequency
Regular maintenance	Inspect and identify areas that are not operating correctly. If required, take remedial action.	Monthly
	Inspect surface structures and covers removing obstructions and silt as necessary.	Monthly or as required
	Top-up traps to floor gullies and internal channel drains.	
	Check there is no physical damage.	
	Remove overgrown vegetation 1m min. around structures and keep hard aprons free from silt and debris.	
Occasional Maintenance	Remove sediment from pre-treatment structures (e.g. gullies, channels silt traps) and non-return valves.	Six-monthly or as required after large storm events
	Remove cover and inspect inside, ensuring water is flowing freely and that the exit route for water is unobstructed.	Annually or as required after large storm events.
	Remove debris and silt.	
	Undertake inspection after leaf fall in autumn.	
Remedial Actions	Repair/rehabilitation of inlets, outlets, overflows and vents.	As required
Monitoring	Inspect all manholes, inspection chambers, inlets, outlets, overflows and vents to ensure they are in good condition and operating as designed.	Annually or after large storms.

- Inlets, Outlets and Inspection Chambers:

Maintenance Period	Maintenance Task	Frequency
Regular Maintenance	Inspect surface structures and covers removing obstructions and silt as necessary.	Monthly or as required
	Check there is no physical damage. Remove overgrown vegetation 1m min. around structures and keep hard aprons free from silt and debris.	
	Remove cover and inspect inside, ensuring water is flowing freely and that the exit route for water is unobstructed. Remove debris and silt. Undertake inspection after leaf fall in autumn.	Annually
Occasional Maintenance	Check topsoil levels are 20mm above edges off baskets and chambers to avoid mower damage.	As necessary
Remedial Work	Unpack stone in basket features and unblock or repair and repack stone as design detail as necessary.	As required
	Repair physical damage is necessary.	

- Green / Blue / Brown Roofs:

Maintenance Period	Maintenance Task	Frequency
Regular Maintenance	During establishment, replace dead plants as required (for 12 months following installation).	Monthly
	Mow grasses (where required) and remove resultant clippings.	
	Remove fallen leaves and debris from deciduous plant foliage.	Six Monthly
	Remove nuisance and invasive vegetation, including weeds.	
	Remove debris & litter to prevent clogging of inlet drains and interference with plant growth.	
	Noxious weed treatment (3 times a year).	
Occasional Maintenance	Replace dead plants as required (typically in the Autumn).	Annually
	Inspect all components including soil substrate, vegetation, drains, irrigation systems (if applicable), membranes, and roof structure for proper operation, integrity of waterproofing and structural stability, act where required.	
	Inspect soil substrate for evidence of erosion channels and identify any sediment sources, act where required.	
	Inspect drain inlets to ensure unrestricted runoff from the drainage layer to the conveyance or roof drain system, act where required.	
	Inspect underside of roof for evidence of leakage, act where required.	
Remedial Action	Inspect and document the presence of wildlife.	Following all significant storm events
	Inspect and carry out essential recovery works to return the feature to full working order.	

- Non-return Valve:

The non-return valves should be maintained in line with manufacturer’s recommendations.

- Pump Installations:

Maintenance Period	Maintenance Task	Frequency
Regular Maintenance	Visual inspection of the unit. Rise and inspection of the pump. Seal chamber oil check. Level control equipment cleaned and tested. Inspection and test of Control Panel functionality. Motor Insulation tested and recorded.	Annually or as agreed with manufacturer to maintain efficient and reliable system in operation
Remedial Action	Repair / rehabilitation of inlets, outlets, vents and other components.	As required or stated by manufacturer

- Rain Garden / Stormwater Planter:

Maintenance Period	Maintenance Task	Frequency
Regular maintenance	Litter and debris removal .	Monthly
	Mulching (where required).	
	Inspect/check all inlets, outlets, surface and overflows (where required) to ensure that they are in good condition, free from blockages and operating as designed. Act where required.	
	Removal of nuisance and invasive vegetation.	Six Monthly
	Pruning and trimming of trees.	Annually
	Inspect and document the presence of wildlife.	
	Check for poor vegetation growth due to lack of sunlight or dropping of leaf litter and cut back adjacent vegetation where required.	
Remedial Actions	Repair erosion or other damage by re-mulching or re-seeding.	As Required
	Re-seed areas of poor vegetation growth. Alter plant types to better suit conditions, if required.	
	Scarify and spike topsoil layer to improve infiltration performance, break up silt deposits and prevent compaction of the soil surface (typically every 60-month period).	
	Remove build-up of sediment, reinstate design levels (typically every 60-month period).	
	Remove and dispose of oils or petrol residues using safe standard practices.	
Monitoring	Inspect and carry out essential recovery works to return the feature to full working order.	Following all significant storm events

Reference shall be made to CIRIA publication C753 (The SuDS Manual) and to the relevant maintenance guidance from the products manufacturers.

