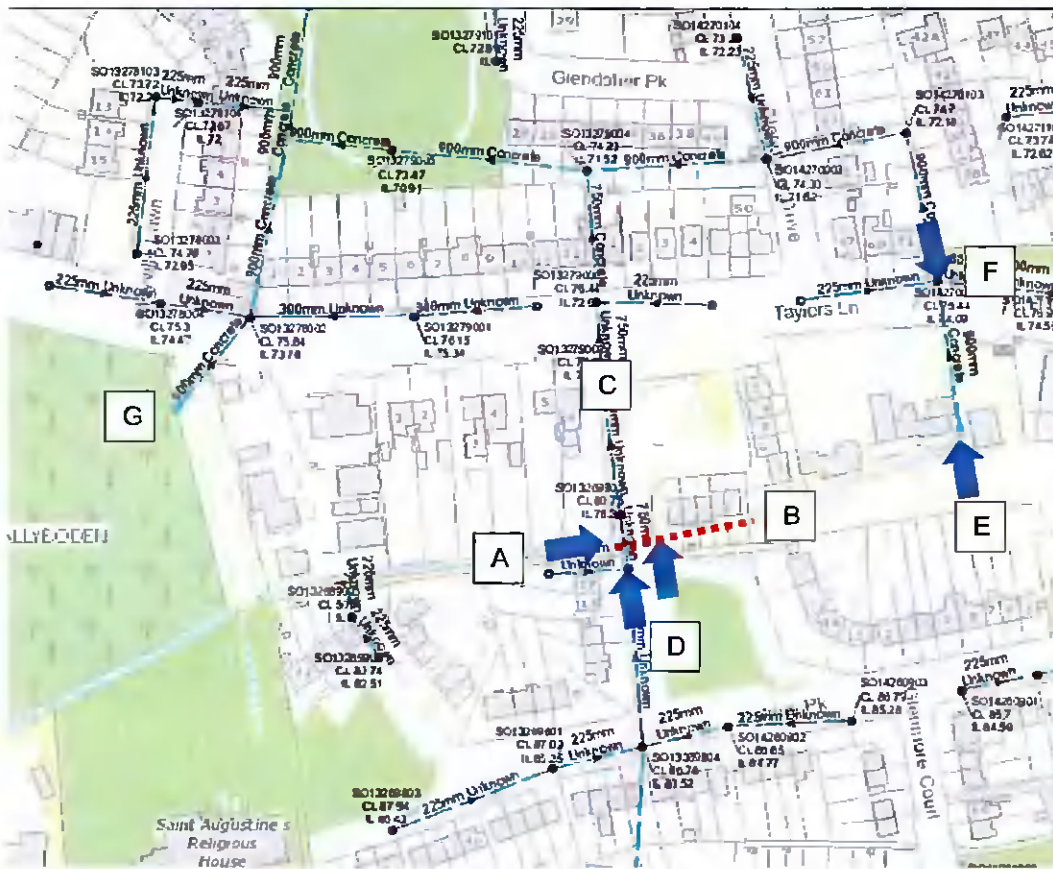




cowal design

civil + structural

The scope of this CCTV Survey / Investigation to determine no Surface Water enters the existing 900mm diameter Culvert with the demise of the site development denoted as Point E below from the existing Old Mill Drainage Channel flowing from west to east through Points A, B and E:-



Drainage Investigation / Survey should verify Surface Water following routes networks: -

- Verify route / connection / blockages from points A – B (We believe the existing drainage channel has been divert to existing 750mm diameter culvert below Palmer Street flowing towards point C).
- Examine Surface water route from Point A (in stream) to Point C
- Verify Surface water routes by lifting manholes on Palmers Park at Point D towards point C.
- Verify existing Surface water routes by lifting manholes on Taylor Lane east and west of Point F.
- CCTV Survey of existing 900mm diameter Surface water Culvert from Point F to Point E.
- Verify existing Surface water routes by lifting manholes on Taylor Lane east and west of Point G.



WinCan

Project

Project Name: douglas and stewart con23198

Project Description: WinCan Import in Miraculix Standard

Project Date: 4/19/2022



Table of Contents

Project Name
douglas and stewart con23198

Project Number

Project Date
4/19/2022

Project Information	P-2
Scoring Summary	P-3
Legend of Classification (Section)	P-10
Section Profile-4/14/2022-END OF CULVERTX	P-11
Section Summary	P-13
Section Item 1: END OF CULVERT > START OF CULVERT (END OF CULVERTX)	5



WinCan

Project Information

Project Name	Project Number	Project Date
douglas and stewart con23198		4/19/2022

Large empty rectangular area for project details.



Scoring Summary

Project Name
douglas and stewart con23198

Project Number

Project Date
4/19/2022

Structural Defects

Section	PLR	Grade	Description
All inspected pipes are in an acceptable structural condition (< grade 3).			

Service / Operational Condition

Section	PLR	Grade	Description
All inspected pipes are in an acceptable service condition (< grade 3).			

Abandoned Surveys

Section	PLR	Description
All inspections complete, none are abandoned.		

Information

These scoring summaries are based on the SRM grading from the WRC.



Legend of Classification (Section)

Project Name
douglas and stewart con23198

Project Number

Project Date
4/19/2022

1: Brick: No structural defects.

Pipe: No structural defects.

Acceptable structural condition.

2: Brick: Circumferential cracking; single longitudinal crack; surface mortar loss (depth missing < 15mm); surface damage - slight spalling (breaking away of small fragments from the surface); surface damage - slight wear (increased roughness).

Pipe: Circumferential crack; moderate joint defects (i.e. medium open joint or medium displaced joint); surface damage - slight spalling (breaking away of small fragments from the surface) or slight wear (increased roughness).

Minimal collapse likelihood in the short term but potential for further deterioration.

3: Brick: Medium mortar loss (depth missing 15-50mm) without other defects; more than one longitudinal crack (at a single location); multiple cracking; single bricks displaced; deformation < 5%; no fracture and only moderate mortar loss; surface damage - medium spalling (large areas of chipped brick); surface damage - medium wear (large area of brick surface is missing).

Pipe: Fracture with no deformation or deformation < 5%; longitudinal cracking or multiple cracking; minor loss of level; severe joint defects (i.e. large open joint or large displaced joint); surface damage - partial area of pipe surface is missing or worn.

I Collapse unlikely in the near future but further deterioration likely I

4: Brick: Total mortar loss (depth missing > 50mm) with deformation > 10%; deformation up to 10% and fractured; displaced or hanging brickwork; small number of missing bricks; dropped invert (drop > 20mm); moderate loss of level; surface damage - large spalling (entire surface of brick is missing); surface damage - large wear (entire surface of brick is missing).

Pipe: Broken; deformation up to 10% and broken; fracture with deformation 5-10%; multiple fractures; serious loss of level; serious joint defects with voids or soil visible (open joint with > 50mm soil or void visible or joint displacement > 25% of diameter); surface damage - entire area of pipe surface is missing or severely worn.

!! Collapse likely in the foreseeable future !!

5: Brick: Already collapsed; missing Invert; deformation > 10% and fractured; displaced or hanging brickwork and deformation < 10%; extensive areas of missing brickwork.

Pipe: Already collapsed; deformation > 10% and broken; extensive areas of pipe fabric missing; fractures with deformation > 10%

!!! Collapsed or collapse imminent !!!



WinCan

Section Profile - 4/14/2022 - END OF CULVERTX

Project Name
douglas and stewart con23198

Project Number

Project Date
4/19/2022

Arched (with flat bottom), 1525 mm

Item No.	Upstream Node	Downstream Node	Date	Road	Material	Total Length	Inspected Length
1	END OF CULVERT	START OF CULVERT	4/14/2022	PALMERS ST RATHFARNHAM	Brick	36.77 m	36.77 m

Total: 1 Inspection x Arched (with flat bottom) 1525 mm = 36.77 m Total Length and 36.77 m Inspected Length

Total: 1 Inspection = 36.77 m Total Length and 36.77 m Inspected Length



Section Summary

Project Name
douglas and stewart con23198

Project Number

Project Date
4/19/2022

Number of sections	1
Total length of sections	36.77 m
Total length of inspected sections	36.77 m
Total length of not inspected sections	0.00 m
Total abandoned inspections	0
Number of section inspection photos	20
Number of section inspection videos	1
Number of section inspection scans	0
Number of section inclination measurements	0

PLR:	END OF CULVERTX	Upstream Node:	END OF CULVERT
Inspection Direction:	Upstream	Downstream Node:	START OF CULVERT
Inspected Length:	36.77 m	Dia/Height:	1,525 mm
Total Length:	36.77 m	Material:	Brick

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: START OF CULVERT
2	0.00	WL	Water level, 15% of the vertical dimension
3	0.32	CN	Connection other than junction at 11 o'clock, 100mm dia
4	0.89	H	Hole in drain or sewer from 11 o'clock to 12 o'clock
5	1.29	REM	General remark
6	8.07	CN	Connection other than junction at 10 o'clock, 100mm dia
7	12.47	CN	Connection other than junction at 1 o'clock, 100mm dia
8	12.47	CN	Connection other than junction at 3 o'clock, 225mm dia
9	17.71	CN	Connection other than junction at 12 o'clock, 300mm dia
10	21.60	H	Hole in drain or sewer from 8 o'clock to 12 o'clock
11	22.36	REM	General remark
12	25.00	CN	Connection other than junction at 9 o'clock, 300mm dia
13	26.15	H	Hole in drain or sewer at 9 o'clock
14	26.19	CN	Connection other than junction at 3 o'clock, 300mm dia
15	26.56	CN	Connection other than junction at 3 o'clock, 100mm dia
16	27.62	H	Hole in drain or sewer at 3 o'clock
17	27.62	H	Hole in drain or sewer at 5 o'clock
18	27.70	H	Hole in drain or sewer at 9 o'clock
19	27.70	H	Hole in drain or sewer at 7 o'clock
20	29.08	CN	Connection other than junction at 11 o'clock, 100mm dia
21	29.14	H	Hole in drain or sewer at 7 o'clock



WinCan

Section Summary

Project Name douglas and stewart con23198	Project Number	Project Date 4/19/2022
---	-----------------------	----------------------------------

No.	m+	Code	Observation
22	32.27	REM	General remark
23	36.77	MHF	Finish node, manhole, reference: END OF CULVERT



Completed section inspection

Item No. 1	Insp. No. 1	Date 14/04/22	Time 11:20	Client's Job Ref 23198	Weather No Rain Or Snow	Pre Cleaned Yes	PLR END OF CULVERTX
Operator KILLIAN		Vehicle Not Specified		Camera Pushrod	Preset Length Not Specified	Legal Status Not Specified	Alternative ID 1

Town or Village: Rathfarnham Dublin	Inspection Direction: Upstream	Upstream Node: END OF CULVERT
Road: PalmersStRathfarnham	Inspected Length: 36.77 m	Upstream Pipe Depth:
Location: Verge	Total Length: 36.77 m	Downstream Node: START OF CULVERT
Surface Type:	Joint Length:	Downstream Pipe Depth:

Use: Surface water	Pipe Shape: Arched (with flat bottom)
Type of Pipe: Gravity drain/sewer	Dia/Height: 1,525 mm
Flow Control: No flow control	Material: Brick
Year Constructed: Not Specified	Lining Type: No Lining
Inspection Purpose: Sample condition survey	Lining Material: No Lining

Comments:
Recommendations:

Scale: 1:235	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m						
START OF CULVERT 0.00						
	0.00	MH	Start node, manhole, reference: START OF CULVERT	00:00:02		
	0.00	WL	Water level, 15% of the vertical dimension	00:00:02		
	0.32	CN	Connection other than junction at 11 o'clock, 100mm dia: PIPE GOING THRU CULLVERT	00:00:12		
	0.89	H	Hole in drain or sewer from 11 o'clock to 12 o'clock: STONE MISSING	00:00:45		
	1.29	REM	General remark: STONE NOT MISSING INLET COMING	00:00:55		
	8.07	CN	Connection other than junction at 10 o'clock, 100mm dia: X2	00:02:29		
	12.47	CN	Connection other than junction at 1 o'clock, 100mm dia	00:04:20		
	12.47	CN	Connection other than junction at 3 o'clock, 225mm dia	00:04:26		
	17.71	CN	Connection other than junction at 12 o'clock, 300mm dia: ROAD GULLY	00:05:31		
	21.60	H	Hole in drain or sewer from 8 o'clock to 12 o'clock	00:06:32		
	22.36	REM	General remark: CHANGE OF MATERIL ON ROOF	00:06:51		
	25.00	CN	Connection other than junction at 9 o'clock, 300mm dia: INLET NOT SURE OF EXACT SIZE	00:07:29		
	26.15	H	Hole in drain or sewer at 9 o'clock: STONE MISSING 2 BESIDE EACH	00:07:49		
	26.19	CN	Connection other than junction at 3 o'clock, 300mm dia: INLET NOT SURE OF SIZE	00:08:07		
	26.56	CN	Connection other than junction at 3 o'clock, 100mm dia	00:08:22		



Completed section inspection

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
1	1	14/04/22	11:20	23198	No Rain Or Snow	Yes	END OF CULVERTX
Operator KILLIAN		Vehicle Not Specified		Camera Pushrod	Preset Length Not Specified	Legal Status Not Specified	Alternative ID 1

Scale:	1:235	Position [m]	Code	Observation	MPEG	Photo	Grade		
<p>END OF CULVERT</p> <p>Depth: m</p>	27.62	H	Hole in drain or sewer at 3 o'clock: STONE MISSING	00:08:44					
	27.62	H	Hole in drain or sewer at 5 o'clock: STONE MISSING	00:08:49					
	27.70	H	Hole in drain or sewer at 9 o'clock: STONE MISSING	00:09:01					
	27.70	H	Hole in drain or sewer at 7 o'clock: STONE MISSING	00:09:10					
	29.08	CN	Connection other than junction at 11 o'clock, 100mm dia	00:09:25					
	29.14	H	Hole in drain or sewer at 7 o'clock: STONE MISSING	00:09:32					
	32.27	REM	General remark: ROCK ON THE SIDES BUILD UP SCALE	00:10:16					
	36.77	MHF	Finish node, manhole, reference: END OF CULVERT: END OF CULVERT CAGED	00:11:17					
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 - 4/14/2022 - END OF CULVERTX

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
1	Upstream	END OF CULVERTX	23198	DOUGLAS AND STEWART



START OF CULVERT US TO END_0-89m_113251.jpg,
00:00:45, 0.89 m
Hole in drain or sewer from 11 o'clock to 12 o'clock, STONE



START OF CULVERT US TO END_1-29m_113327.jpg,
00:00:55, 1.29 m
General remark, STONE NOT MISSING INLET COMING



START OF CULVERT US TO END_8-07m_113514.jpg,
00:02:29, 8.07 m
Connection other than junction at 10 o'clock, 100mm dia, X2



START OF CULVERT US TO END_12-47m_113714.jpg,
00:04:20, 12.47 m
Connection other than junction at 1 o'clock, 100mm dia



START OF CULVERT US TO END_12-47m_113746.jpg,
00:04:26, 12.47 m
Connection other than junction at 3 o'clock, 225mm dia

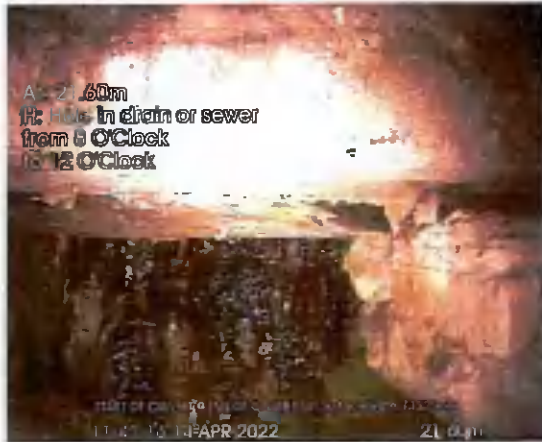


START OF CULVERT US TO END_17-71m_113949.jpg,
00:05:31, 17.71 m
Connection other than junction at 12 o'clock, 300mm dia,



Section Pictures - 4/14/2022 - END OF CULVERTX

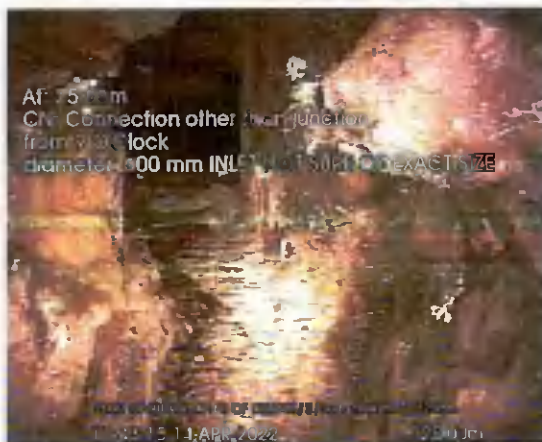
Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
1	Upstream	END OF CULVERTX	23198	DOUGLAS AND STEWART



START OF CULVERT US TO END_21-60m_114116.jpg,
00:06:32, 21.60 m
Hole in drain or sewer from 8 o'clock to 12 o'clock



START OF CULVERT US TO END_22-36m_114205.jpg,
00:06:51, 22.36 m
General remark, CHANGE OF MATERIL ON ROOF



START OF CULVERT US TO END_25-00m_114315.jpg,
00:07:29, 25.00 m
Connection other than junction at 9 o'clock, 300mm dia, INLET



START OF CULVERT US TO END_26-15m_114405.jpg,
00:07:49, 26.15 m
Hole in drain or sewer at 9 o'clock, STONE MISSING 2



START OF CULVERT US TO END_26-19m_114449.jpg,
00:08:07, 26.19 m
Connection other than junction at 3 o'clock, 300mm dia, INLET



START OF CULVERT US TO END_26-56m_114514.jpg,
00:08:22, 26.56 m
Connection other than junction at 3 o'clock, 100mm dia



Section Pictures - 4/14/2022 - END OF CULVERTX

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
1	Upstream	END OF CULVERTX	23198	DOUGLAS AND STEWART



START OF CULVERT US TO END_27-62m_114555.jpg,
00:08:44, 27.62 m
Hole in drain or sewer at 3 o'clock, STONE MISSING



START OF CULVERT US TO END_27-62m_114625.jpg,
00:08:49, 27.62 m
Hole in drain or sewer at 5 o'clock, STONE MISSING



START OF CULVERT US TO END_27-70m_114655.jpg,
00:09:01, 27.70 m
Hole in drain or sewer at 9 o'clock, STONE MISSING



START OF CULVERT US TO END_27-70m_114722.jpg,
00:09:10, 27.70 m
Hole in drain or sewer at 7 o'clock, STONE MISSING



START OF CULVERT US TO END_29-08m_114747.jpg,
00:09:25, 29.08 m
Connection other than junction at 11 o'clock, 100mm dia



START OF CULVERT US TO END_29-14m_114810.jpg,
00:09:32, 29.14 m
Hole in drain or sewer at 7 o'clock, STONE MISSING

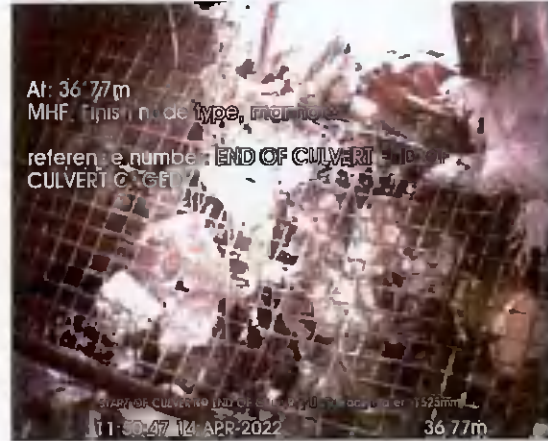


Section Pictures - 4/14/2022 - END OF CULVERTX

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
1	Upstream	END OF CULVERTX	23198	DOUGLAS AND STEWART



START OF CULVERT US TO END_32-27m_114928.jpg,
00:10:16, 32.27 m
General remark, ROCK ON THE SIDES BUILD UP SCALE



START OF CULVERT US TO END_36-77m_115047.jpg,
00:11:17, 36.77 m
Finish node, manhole, reference: END OF CULVERT, END OF



Project

Project Name: 2022_03_29 DOUGLAS & STEWART CONSTRUCTION LTD
JOB 22712

Project Description: WinCan Import in Miraculix Standard

Project Number: 22712

Project Status: On Site

Project Date: 29/03/2022

Inspection Standard: MSCC5 Sewers & Drainage GB (SRM5 Scoring)

Table of Contents

Project Name	Project Number	Project Date
2022_03_29 DOUGLAS & STEWART CONSTRUCTION LTD JOB	22712	29/03/2022

Project Information	P-1
Scoring Summary	P-2
Section: 1; CULVERT > S1 (CULVERTX)	1
Section: 2; S1.1 > S1 (S1.1X)	4
Section: 3; S1.2 > S1 (S1.2X)	6
Section: 4; DEADLINE > S1 (DEADLINEX)	8
Section: 5; S1.3 > S2 (S1.3X)	10
Section: 6; S1.3 > S2 (S1.3X)	11
Section: 7; S1.5 > S2 (S1.5X)	13
Section: 8; S1.6 > S2 (S1.6X)	15
Section: 9; S6 > S7 (S6X)	17
Section: 10; S3 > S4 (S3X)	20
Section: 11; S4 > S5 (S4X)	21
Section: 12; S5 > S6 (S5X)	23
Section: 13; G1 > S4 (G1X)	25
Section: 14; LINE1 > S5 (LINE1X)	27
Section: 15; G2 > S4 (G2X)	29
Section: 16; LINE2 > S5 (LINE2X)	31

Project Information

Project Name	Project Number	Project Date
2022_03_29 DOUGLAS & STEWART CONSTRUCTION LTD JOB	22712	29/03/2022

Client

Company: DOUGLAS AND STEWART CONSTRUCTION IRELAND LTD
Description: CCTV SURVEY
Contact: CIARAN REDMOND
Street: LACKABEG, KILDAVIN
Town or City: BUNCLODY
County: WEXFORD
Phone: 059 915 7787
Mobile: 0872302465
Email: ciaran@andsconstruction.ie

Site

Company: DOUGLAS AND STEWART CONSTRUCTION IRELAND LTD
Description: CCTV SURVEY
Contact: CIARAN REDMOND
Street: TAYLORS LANE
Town or City: RATHFARNHAM
County: DUBLIN
Mobile: 0872302465
Email: ciaran@andsconstruction.ie

Contractor

Company: TANK PIPE AND DRAIN
Description: CCTV SURVEYING
Contact: DARREN WHITE
Department: CONTRACTS MANAGER
Street: REDLEAF HOUSE
Town or City: LONGFORD
County: LONGFORD
Mobile: 086 790 0300
Email: darren.white@tankpipeanddrain.ie

Scoring Summary

Project Name	Project Number	Project Date
2022_03_29 DOUGLAS & STEWART CONSTRUCTION LTD JOB	22712	29/03/2022

Structural Defects

Grade 3: Best practice suggests consideration should be given to repairs in the medium term.

Grade 4: Best practice suggests consideration should be given to repairs to avoid a potential collapse.

Grade 5: Best practice suggests that this pipe is at risk of collapse at any time. Urgent consideration should be given to repairs to avoid total failure.

Section	PLR	Grade	Description
8	S1.6X	4	Multiple defects
12	S5X	3	Fracture, longitudinal at 12 o'clock, finish

Service / Operational Condition

Grade 3: Best practice suggests consideration should be given to maintenance activities in the medium term.

Grade 4: Best practice suggests consideration should be given to maintenance activity to avoid potential blockages.

Grade 5: Best practice suggests that this pipe is at a high risk of backing up or causing flooding.

Section	PLR	Grade	Description
1	CULVERTX	4	Connection defective, connecting pipe is intruding at 2 o'clock, 225mm dia, intrusion: 20%
2	S1.1X	3	Connection defective, connecting pipe is intruding at 10 o'clock, 150mm dia, intrusion: 5%
9	S6X	3	Settled deposits, hard or compacted at joint, 5% cross-sectional area loss, finish
11	S4X	3	Multiple defects
12	S5X	5	Roots, mass, 25% cross-sectional area loss, finish
13	G1X	4	Joint displaced, large
14	LINE1X	5	Roots, mass, 40% cross-sectional area loss
15	G2X	3	Settled deposits, hard or compacted at joint, 10% cross-sectional area loss
16	LINE2X	5	Roots, mass, 50% cross-sectional area loss

Abandoned Surveys

Section	PLR	Description
4	DEAD LINEX	Survey abandoned
12	S5X	Survey abandoned
14	LINE1X	Survey abandoned
16	LINE2X	Survey abandoned

Information

Scoring Summary

Project Name	Project Number	Project Date
2022_03_29 DOUGLAS & STEWART CONSTRUCTION LTD JOB	22712	29/03/2022

These scoring summaries are based on the SRM grading from the WRc.

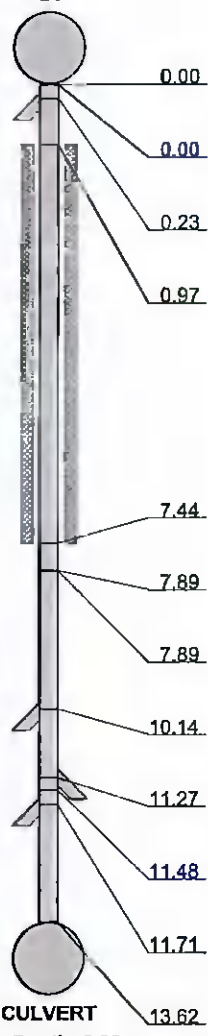
Section Inspection - 29/03/2022 - CULVERT

Item No. 1	Insp. No. 1	Date 29/03/22	Time 10:38	Client's Job Ref 22712	Weather No Rain Or Snow	Pre Cleaned Yes	PLR CULVERTX
Operator GM		Vehicle 172LD302		Camera Mainline	Preset Length 0.80 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village: Rathfarnham Dublin	Inspection Direction: Upstream	Upstream Node: CULVERT
Road: Taylors Lane	Inspected Length: 13.62 m	Upstream Pipe Depth: 0.000 m
Location: Verge	Total Length: 13.62 m	Downstream Node: S1
Surface Type: Concrete Footway	Joint Length:	Downstream Pipe Depth: 0.000 m
Use: Surface water	Pipe Shape: Circular	
Type of Pipe: Gravity drain/sewer	Dia/Height: 900 mm	
Flow Control: No flow control	Material: Concrete	
Year Constructed: 1990	Lining Type: No Lining	
Inspection Purpose: Sample condition survey	Lining Material: No Lining	

Comments:

Recommendations: CUTTING

Scale:	1:118	Position [m]	Code	Observation	MPEG	Photo	Grade																																																																																																								
<div style="display: flex; align-items: center;"> <div style="flex: 1;">  </div> <table border="1" style="margin-left: 10px; border-collapse: collapse;"> <tr> <td style="width: 15%;">Depth: 0.00 m</td> <td style="width: 15%;">S1</td> <td style="width: 15%;"></td> <td style="width: 10%;"></td> <td style="width: 40%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> <td style="width: 10%;"></td> </tr> <tr> <td>0.00</td> <td>MH</td> <td>Start node, manhole, reference: S1</td> <td></td> <td>00:00:04</td> <td></td> <td></td> <td></td> </tr> <tr> <td>0.00</td> <td>WL</td> <td>Water level, 5% of the vertical dimension</td> <td></td> <td>00:00:04</td> <td></td> <td></td> <td></td> </tr> <tr> <td>0.23</td> <td>CN</td> <td>Connection other than junction at 1 o'clock, 150mm dia</td> <td></td> <td>00:00:34</td> <td></td> <td></td> <td></td> </tr> <tr> <td>0.97</td> <td>S01</td> <td>DECJ Settled deposits, hard or compacted at joint, 5% cross-sectional area loss, start</td> <td></td> <td>00:00:42</td> <td>CULVERT</td> <td>X_48eba2</td> <td>45-cec1-4f</td> </tr> <tr> <td>7.44</td> <td>F01</td> <td>DECJ Settled deposits, hard or compacted at joint, 5% cross-sectional area loss, finish</td> <td></td> <td>00:01:13</td> <td></td> <td></td> <td>3</td> </tr> <tr> <td>7.89</td> <td>LL</td> <td>Line deviates left: SLIGHT</td> <td></td> <td>00:01:17</td> <td></td> <td></td> <td></td> </tr> <tr> <td>7.89</td> <td>MCPP</td> <td>Pipe material changes to polypropylene at this point</td> <td></td> <td>00:01:19</td> <td>CULVERT</td> <td>X_6f57a13</td> <td>1-da16-41</td> </tr> <tr> <td>10.14</td> <td>CXI</td> <td>Connection defective, connecting pipe is intruding at 2 o'clock, 225mm dia, intrusion: 15%</td> <td></td> <td>00:01:39</td> <td>CULVERT</td> <td>X_a9b2f89</td> <td>0-dc0d-4c</td> </tr> <tr> <td>11.27</td> <td>CN</td> <td>Connection other than junction at 9 o'clock, 225mm dia</td> <td></td> <td>00:01:53</td> <td></td> <td></td> <td></td> </tr> <tr> <td>11.48</td> <td>REM</td> <td>General remark: ROCK INTRUDING INTO PIPE</td> <td></td> <td>00:02:30</td> <td>CULVERT</td> <td>X_e39f477</td> <td>b-5958-4e</td> </tr> <tr> <td>11.71</td> <td>CXI</td> <td>Connection defective, connecting pipe is intruding at 2 o'clock, 225mm dia, intrusion: 20%</td> <td></td> <td>00:02:38</td> <td>CULVERT</td> <td>X_7c944c</td> <td>0c-449c-4</td> </tr> <tr> <td>13.62</td> <td>MHF</td> <td>Finish node, manhole, reference: CULVERT</td> <td></td> <td>00:02:59</td> <td></td> <td></td> <td></td> </tr> </table> </div>								Depth: 0.00 m	S1							0.00	MH	Start node, manhole, reference: S1		00:00:04				0.00	WL	Water level, 5% of the vertical dimension		00:00:04				0.23	CN	Connection other than junction at 1 o'clock, 150mm dia		00:00:34				0.97	S01	DECJ Settled deposits, hard or compacted at joint, 5% cross-sectional area loss, start		00:00:42	CULVERT	X_48eba2	45-cec1-4f	7.44	F01	DECJ Settled deposits, hard or compacted at joint, 5% cross-sectional area loss, finish		00:01:13			3	7.89	LL	Line deviates left: SLIGHT		00:01:17				7.89	MCPP	Pipe material changes to polypropylene at this point		00:01:19	CULVERT	X_6f57a13	1-da16-41	10.14	CXI	Connection defective, connecting pipe is intruding at 2 o'clock, 225mm dia, intrusion: 15%		00:01:39	CULVERT	X_a9b2f89	0-dc0d-4c	11.27	CN	Connection other than junction at 9 o'clock, 225mm dia		00:01:53				11.48	REM	General remark: ROCK INTRUDING INTO PIPE		00:02:30	CULVERT	X_e39f477	b-5958-4e	11.71	CXI	Connection defective, connecting pipe is intruding at 2 o'clock, 225mm dia, intrusion: 20%		00:02:38	CULVERT	X_7c944c	0c-449c-4	13.62	MHF	Finish node, manhole, reference: CULVERT		00:02:59			
Depth: 0.00 m	S1																																																																																																														
0.00	MH	Start node, manhole, reference: S1		00:00:04																																																																																																											
0.00	WL	Water level, 5% of the vertical dimension		00:00:04																																																																																																											
0.23	CN	Connection other than junction at 1 o'clock, 150mm dia		00:00:34																																																																																																											
0.97	S01	DECJ Settled deposits, hard or compacted at joint, 5% cross-sectional area loss, start		00:00:42	CULVERT	X_48eba2	45-cec1-4f																																																																																																								
7.44	F01	DECJ Settled deposits, hard or compacted at joint, 5% cross-sectional area loss, finish		00:01:13			3																																																																																																								
7.89	LL	Line deviates left: SLIGHT		00:01:17																																																																																																											
7.89	MCPP	Pipe material changes to polypropylene at this point		00:01:19	CULVERT	X_6f57a13	1-da16-41																																																																																																								
10.14	CXI	Connection defective, connecting pipe is intruding at 2 o'clock, 225mm dia, intrusion: 15%		00:01:39	CULVERT	X_a9b2f89	0-dc0d-4c																																																																																																								
11.27	CN	Connection other than junction at 9 o'clock, 225mm dia		00:01:53																																																																																																											
11.48	REM	General remark: ROCK INTRUDING INTO PIPE		00:02:30	CULVERT	X_e39f477	b-5958-4e																																																																																																								
11.71	CXI	Connection defective, connecting pipe is intruding at 2 o'clock, 225mm dia, intrusion: 20%		00:02:38	CULVERT	X_7c944c	0c-449c-4																																																																																																								
13.62	MHF	Finish node, manhole, reference: CULVERT		00:02:59																																																																																																											

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	3	5.0	21.6	21.0	5.0

Section Pictures - 29/03/2022 - CULVERTX

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
1	Upstream	CULVERTX	22712	22712



CULVERTX_48eba245-cec1-4feb-a1db-320766e1c5b2_2022
 0329_104036_757.jpg, 00:00:42, 0.97 m
 Settled deposits, hard or compacted at joint, 5%
 cross-sectional area loss, start



CULVERTX_6f57a131-da16-41a9-9b17-a8bc14d7d968_2022
 0329_104149_390.jpg, 00:01:19, 7.89 m
 Pipe material changes to polypropylene at this point



CULVERTX_a9b2f890-dc0d-4c0c-8ca4-898a1a8e911e_20220
 329_104225_728.jpg, 00:01:39, 10.14 m
 Connection defective, connecting pipe is intruding at 2 o'clock,
 225mm dia, intrusion: 15%



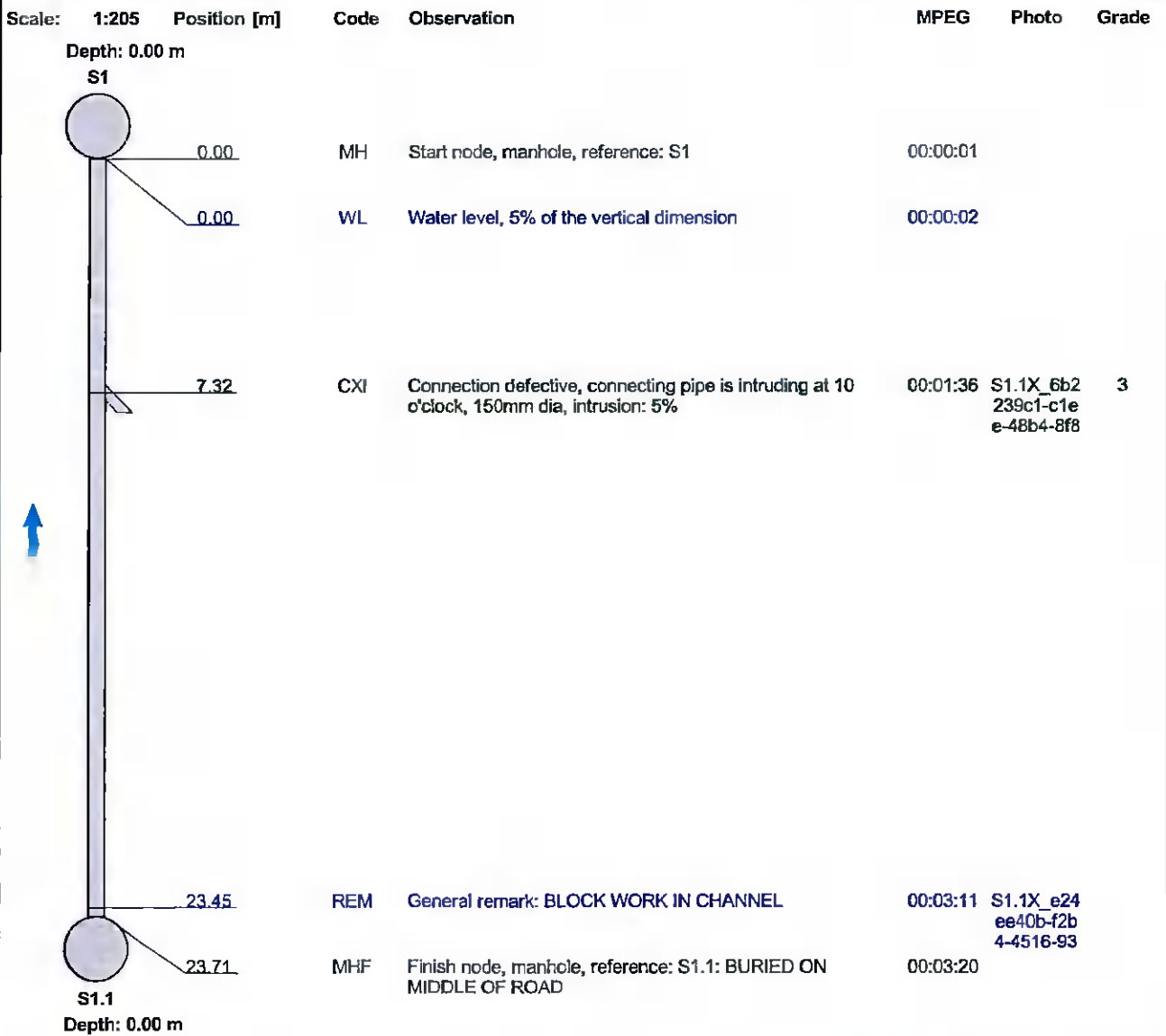
CULVERTX_e39f477b-5958-4e6a-b631-86e679e6465d_2022
 0329_104457_213.jpg, 00:02:30, 11.48 m
 General remark, ROCK INTRUDING INTO PIPE

Section Inspection - 29/03/2022 - S1.1X

Item No. 2	Insp. No. 1	Date 29/03/22	Time 11:34	Client's Job Ref 22712	Weather No Rain Or Snow	Pre Cleaned Yes	PLR S1.1X
Operator GM		Vehicle 172LD302		Camera Mainline	Preset Length 0.80 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Rathfarnham Dublin	Inspection Direction:	Upstream	Upstream Node:	S1.1
Road:	Taylor's Lane	Inspected Length:	23.71 m	Upstream Pipe Depth:	0.000 m
Location:	Verge	Total Length:	23.71 m	Downstream Node:	S1
Surface Type:	Concrete Footway	Joint Length:		Downstream Pipe Depth:	0.000 m
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	300 mm		
Flow Control:	No flow control	Material:	Concrete		
Year Constructed:	1990	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

Comments:
Recommendations: CUTTING



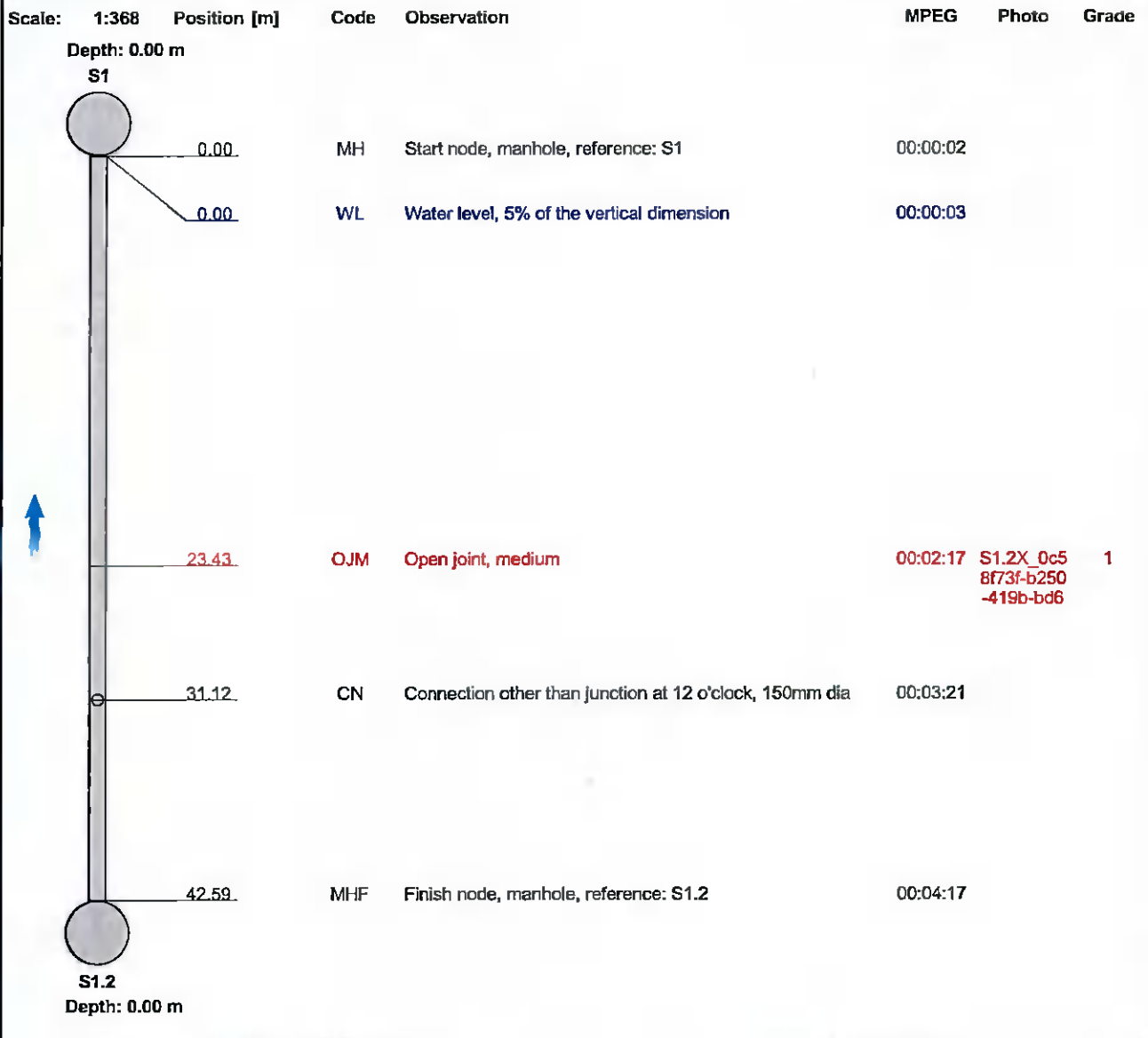
Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	1	2.0	0.3	2.0	3.0

Section Inspection - 29/03/2022 - S1.2X

Item No. 3	Insp. No. 1	Date 29/03/22	Time 12:03	Client's Job Ref 22712	Weather No Rain Or Snow	Pre Cleaned Yes	PLR S1.2X
Operator GM		Vehicle 172LD302		Camera Mainline	Preset Length 0.80 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village: Rathfarnham Dublin	Inspection Direction: Upstream	Upstream Node: S1.2
Road: Taylors Lane	Inspected Length: 42.59 m	Upstream Pipe Depth: 0.000 m
Location: Verge	Total Length: 42.59 m	Downstream Node: S1
Surface Type: Concrete Footway	Joint Length:	Downstream Pipe Depth: 0.000 m
Use: Surface water	Pipe Shape: Circular	
Type of Pipe: Gravity drain/sewer	Dia/Height: 300 mm	
Flow Control: No flow control	Material: Polyethylene	
Year Constructed: 1990	Lining Type: No Lining	
Inspection Purpose: Sample condition survey	Lining Material: No Lining	

Comments:
Recommendations: PATCHING



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	0.0	1.0	1.0	0	0.0	0.0	0.0	1.0

Section Pictures - 29/03/2022 - S1.2X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
3	Upstream	S1.2X	22712	22712



S1.2X_0c58f73f-b250-419b-bd60-b753574c6322_20220329_120551_242.jpg, 00:02:17, 23.43 m
Open joint, medium

Section Inspection - 29/03/2022 - DEAD LINEX

Item No. 4	Insp. No. 1	Date 29/03/22	Time 12:20	Client's Job Ref 22712	Weather No Rain Or Snow	Pre Cleaned Yes	PLR DEAD LINEX
Operator GM		Vehicle 172LD302		Camera Mainline	Preset Length 0.80 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Rathfarnham Dublin	Inspection Direction:	Upstream	Upstream Node:	DEAD LINE
Road:	Taylor's Lane	Inspected Length:	0.05 m	Upstream Pipe Depth:	0.000 m
Location:	Verge	Total Length:	0.05 m	Downstream Node:	S1
Surface Type:	Concrete Footway	Joint Length:		Downstream Pipe Depth:	0.000 m
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	300 mm		
Flow Control:	No flow control	Material:	Concrete		
Year Constructed:	1990	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

Comments:
Recommendations: None

Scale:	1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
		0.00	MH	Start node, manhole, reference: S1	00:00:03		
		0.00	WL	Water level, 5% of the vertical dimension	00:00:03		
		0.05	SA	Survey abandoned: DEAD LINE	00:00:19	DEAD LINEX_8f3 aa075-dae	

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 - 29/03/2022 - DEAD LINEX

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
4	Upstream	DEAD LINEX	22712	22712



00:16 29.03.22 0.05m

DEAD

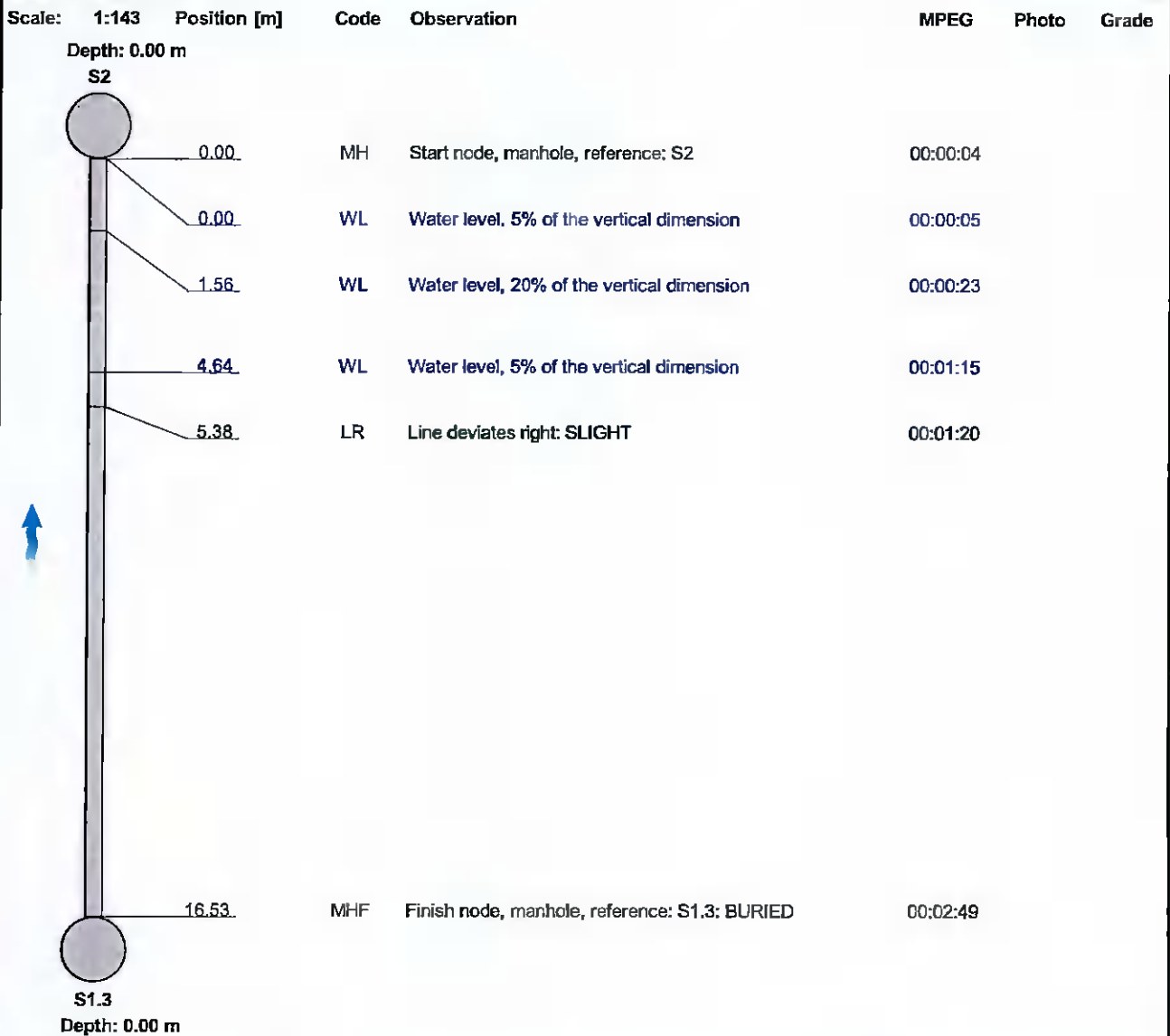
LINEX_8f3aa075-daec-467a-ad4d-637659431ff0_20220329_1
 22052_023.jpg, 00:00:19, 0.05 m
 Survey abandoned, DEAD LINE

Section Inspection - 29/03/2022 - S1.3X

Item No. 5	Insp. No. 1	Date 29/03/22	Time 13:51	Client's Job Ref 22712	Weather No Rain Or Snow	Pre Cleaned Yes	PLR S1.3X
Operator GM		Vehicle 172LD302		Camera Mainline	Preset Length 0.80 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Rathfarnham Dublin	Inspection Direction:	Upstream	Upstream Node:	S1.3
Road:	Taylor's Lane	Inspected Length:	16.53 m	Upstream Pipe Depth:	0.000 m
Location:	Verge	Total Length:	16.53 m	Downstream Node:	S2
Surface Type:	Concrete Footway	Joint Length:		Downstream Pipe Depth:	0.000 m
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	300 mm		
Flow Control:	No flow control	Material:	Polyethylene		
Year Constructed:	1990	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

Comments:
Recommendations: None



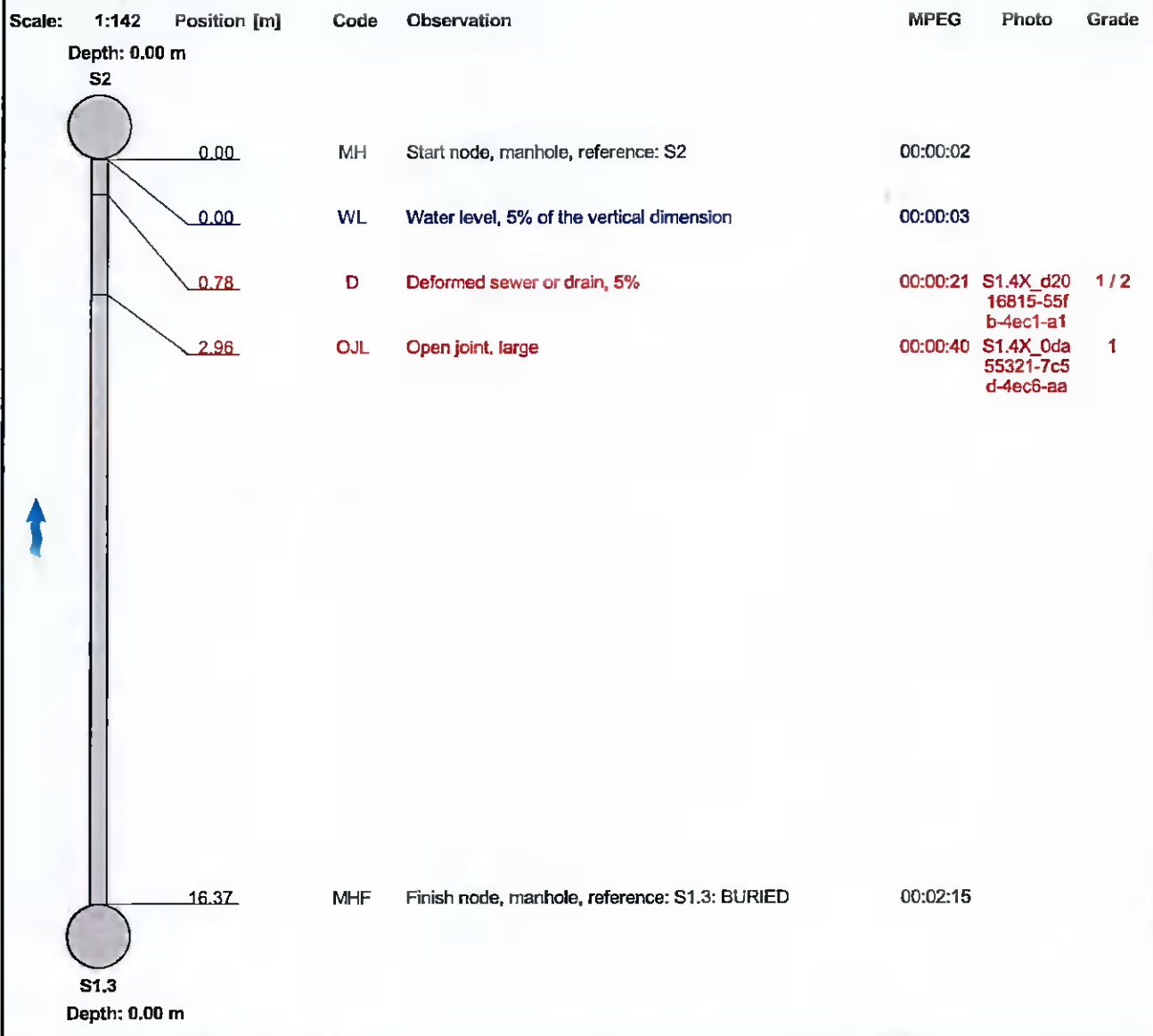
Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

Section Inspection - 29/03/2022 - S1.3X

Item No. 6	Insp. No. 1	Date 29/03/22	Time 14:06	Client's Job Ref 22712	Weather No Rain Or Snow	Pre Cleaned Yes	PLR S1.3X
Operator GM		Vehicle 172LD302		Camera Mainline	Preset Length 0.80 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Rathfarnham Dublin	Inspection Direction:	Upstream	Upstream Node:	S1.3
Road:	Taylor's Lane	Inspected Length:	16.37 m	Upstream Pipe Depth:	0.000 m
Location:	Verge	Total Length:	16.37 m	Downstream Node:	S2
Surface Type:	Concrete Footway	Joint Length:		Downstream Pipe Depth:	0.000 m
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	300 mm		
Flow Control:	No flow control	Material:	Polypropylene		
Year Constructed:	1990	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

Comments:
Recommendations: PATCHING



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	2.0	0.1	2.0	1.0	1	1.0	0.1	1.0	2.0

Section Pictures - 29/03/2022 - S1.3X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
6	Upstream	S1.3X	22712	22712



S1.4X_d2016815-55fb-4ec1-a17c-6af5c72a6526_20220329_1
 40627_546.jpg, 00:00:21, 0.78 m
 Deformed sewer or drain, 5%



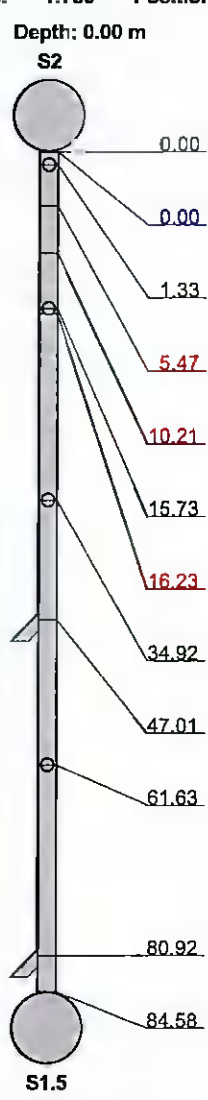
S1.4X_0da55321-7c5d-4ec6-aaa1-ee1b9d635355_20220329
 _140650_859.jpg, 00:00:40, 2.96 m
 Open joint, large

Section Inspection - 29/03/2022 - S1.5X

Item No. 7	Insp. No. 1	Date 29/03/22	Time 14:30	Client's Job Ref 22712	Weather No Rain Or Snow	Pre Cleaned Yes	PLR S1.5X
Operator GM		Vehicle 172LD302		Camera Mainline	Preset Length 0.80 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Rathfarnham Dublin	Inspection Direction:	Upstream	Upstream Node:	S1.5
Road:	Taylor's Lane	Inspected Length:	84.58 m	Upstream Pipe Depth:	0.000 m
Location:	Verge	Total Length:	84.58 m	Downstream Node:	S2
Surface Type:	Concrete Footway	Joint Length:		Downstream Pipe Depth:	0.000 m
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	225 mm		
Flow Control:	No flow control	Material:	Polyethylene		
Year Constructed:	1990	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

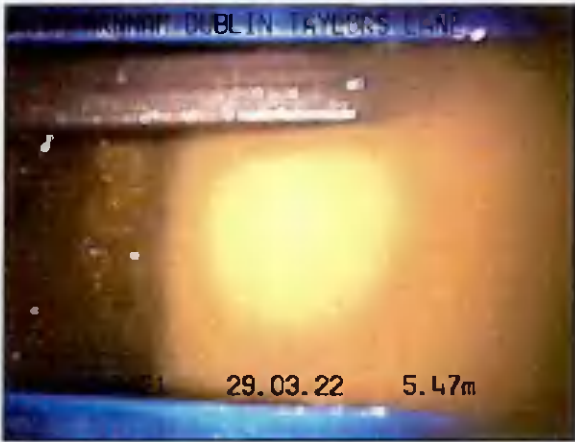
Comments:
Recommendations: PATCHING

Scale:	1:730	Position [m]	Code	Observation	MPEG	Photo	Grade
							
		0.00	MH	Start node, manhole, reference: S2	00:00:03		
		0.00	WL	Water level, 5% of the vertical dimension	00:00:04		
		1.33	CN	Connection other than junction at 12 o'clock, 150mm dia	00:00:23		
		5.47	OJM	Open joint, medium	00:00:54	S1.5X_56c f7e4f-ee3f-42b9-b3f8-	1
		10.21	OJM	Open joint, medium	00:01:55	S1.5X_e49 f8bd9-b689-4d84-87	1
		15.73	CN	Connection other than junction at 12 o'clock, 150mm dia	00:02:36		
		16.23	OJL	Open joint, large	00:02:54	S1.5X_50f 16f44-8b2b-41d9-bf2	1
		34.92	CN	Connection other than junction at 12 o'clock, 150mm dia	00:05:01		
		47.01	CN	Connection other than junction at 1 o'clock, 150mm dia	00:06:13		
		61.63	CN	Connection other than junction at 12 o'clock, 150mm dia	00:07:38		
		80.92	CN	Connection other than junction at 1 o'clock, 150mm dia	00:09:45		
		84.58	MHF	Finish node, manhole, reference: S1.5	00:10:09		

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
3	2.0	0.7	4.0	1.0	0	0.0	0.0	0.0	1.0

Section Pictures - 29/03/2022 - S1.5X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
7	Upstream	S1.5X	22712	22712



S1.5X_56cf7e4f-ee3f-42b9-b3f8-9e8232db7e6b_20220329_143157_275.jpg, 00:00:54, 5.47 m
 Open joint, medium



S1.5X_e49f8bd9-b689-4d84-8727-58ddcba34920_20220329_143300_016.jpg, 00:01:55, 10.21 m
 Open joint, medium



S1.5X_50f16f44-8b2b-41d9-bf27-89650614e110_20220329_143426_104.jpg, 00:02:54, 16.23 m
 Open joint, large

Section Inspection - 30/03/2022 - S1.6X

Item No. 8	Insp. No. 1	Date 30/03/22	Time 11:11	Client's Job Ref 22712	Weather No Rain Or Snow	Pre Cleaned Yes	PLR S1.6X
Operator GM		Vehicle 172LD302		Camera Mainline	Preset Length 0.80 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Rathfarnham Dublin	Inspection Direction:	Upstream	Upstream Node:	S1.6
Road:	Taylor's Lane	Inspected Length:	79.31 m	Upstream Pipe Depth:	0.000 m
Location:	Verge	Total Length:	79.31 m	Downstream Node:	S2
Surface Type:	Concrete Footway	Joint Length:		Downstream Pipe Depth:	0.000 m
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	225 mm		
Flow Control:	No flow control	Material:	Polyethylene		
Year Constructed:	1990	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

Comments:
Recommendations: PATCHING

Scale:	1:684	Position [m]	Code	Observation	MPEG	Photo	Grade				
Depth: 0.00 m											
S2											
	0.00		MH	Start node, manhole, reference: S2	00:00:03						
	0.00		WL	Water level, 5% of the vertical dimension	00:00:04						
	14.91		CN	Connection other than junction at 11 o'clock, 150mm dia	00:02:13						
	24.34		CN	Connection other than junction at 11 o'clock, 150mm dia	00:03:35						
	39.79		CN	Connection other than junction at 2 o'clock, 150mm dia	00:05:08						
	42.23		CN	Connection other than junction at 10 o'clock, 150mm dia	00:05:27						
	60.54		CN	Connection other than junction at 3 o'clock, 150mm dia	00:07:24						
	76.18		H	Hole in drain or sewer at 12 o'clock	00:09:08	S1.6X_1ba ee87f-36f9 -4e0f-b874	4				
	76.34		H	Hole in drain or sewer at 12 o'clock	00:09:20	S1.6X_0c4 2c29f-49f0 -4671-9a2	4				
	79.31		MHF	Finish node, manhole, reference: S1.6	00:09:42						
Depth: 0.00 m											
Construction Features				Miscellaneous Features							
Structural Defects				Service & Operational Observations							
STR No.	Def	STR Peak	STR Mean	STR Total	STR Grade	SER No.	Def	SER Peak	SER Mean	SER Total	SER Grade
2		80.0	2.1	160.0	4.0	0		0.0	0.0	0.0	1.0

Section Pictures - 30/03/2022 - S1.6X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
8	Upstream	S1.6X	22712	22712



S1.6X_1baee87f-36f9-4e0f-b874-52db4dacc49b_20220330_1
 12052_465.jpg, 00:09:08, 76.18 m
 Hole in drain or sewer at 12 o'clock



S1.6X_0c42c29f-49f0-4671-9a28-23decd23b8fc_20220330_1
 12110_822.jpg, 00:09:20, 76.34 m
 Hole in drain or sewer at 12 o'clock

Section Inspection - 30/03/2022 - S6X

Item No. 9	Insp. No. 1	Date 30/03/22	Time 12:43	Client's Job Ref 22712	Weather No Rain Or Snow	Pre Cleaned Yes	PLR S6X
Operator GM		Vehicle 172LD302		Camera Mainline	Preset Length 0.80 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village: Rathfarnham Dublin	Inspection Direction: Upstream	Upstream Node: S6
Road: Taylors Lane	Inspected Length: 18.96 m	Upstream Pipe Depth: 0.000 m
Location: Verge	Total Length: 18.96 m	Downstream Node: S7
Surface Type: Concrete Footway	Joint Length:	Downstream Pipe Depth: 0.000 m
Use: Surface water	Pipe Shape: Circular	
Type of Pipe: Gravity drain/sewer	Dia/Height: 900 mm	
Flow Control: No flow control	Material: Concrete	
Year Constructed: 1990	Lining Type: No Lining	
Inspection Purpose: Sample condition survey	Lining Material: No Lining	

Comments:
 Recommendations: PATCHING

Scale: 1:164	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: 0.00 m						
S7						
	0.00	MH	Start node, manhole, reference: S7	00:00:03		
	0.00	WL	Water level, 5% of the vertical dimension	00:00:03		
	0.46	CN	Connection other than junction at 12 o'clock, 150mm dia	00:00:14		
	3.75	S01	DECJ Settled deposits, hard or compacted at joint, 5% cross-sectional area loss, start	00:00:53	S6X_2c89 ba3a-d39c -4a24-869f	
	11.87	OJL	Open joint, large	00:02:19	S6X_e184 c169-363a -4da8-88e	1
	12.75	F01	DECJ Settled deposits, hard or compacted at joint, 5% cross-sectional area loss, finish	00:02:31		3
	13.28	CL	Crack, longitudinal at 10 o'clock	00:02:42	S6X_7f8d e206-7f78- 4a4a-8268	2 / 2
	13.28	CL	Crack, longitudinal at 3 o'clock	00:02:45	S6X_bc99 ee6a-22e3 -4f6c-b082	2 / 2
	13.28	CL	Crack, longitudinal at 4 o'clock	00:02:49	S6X_5c0d 0b39-e48c -4253-82f3	2 / 2
	13.28	S02	CL Crack, longitudinal at 12 o'clock, start	00:02:53	S6X_7eb2 e6a5-88f2- 4002-b479	
	18.96	F02	CL Crack, longitudinal at 12 o'clock, finish	00:03:35		2 / 2
	18.96	MHF	Finish node, manhole, reference: S6	00:03:36		
Depth: 0.00 m						
S6						

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
5	40.0	24.5	92.0	2.0	5	4.0	7.2	27.0	5.0

Section Pictures - 30/03/2022 - S6X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
9	Upstream	S6X	22712	22712



S6X_2c89ba3a-d39c-4a24-869f-47e9db03a731_20220330_1
24509_496.jpg, 00:00:53, 3.75 m
Settled deposits, hard or compacted at joint, 5%
cross-sectional area loss, start



S6X_e184c169-363a-4da8-88e6-14cf39badc3a_20220330_12
4638_960.jpg, 00:02:19, 11.87 m
Open joint, large



RATHFARNHAM DUBLIN TAYLORS LANE
S6X S7
Circular 900mm Concrete
S6X_7f8de206-7f78-4a4a-8268-73c4d8761dac_20220330_12
4723_357.jpg, 00:02:42, 13.28 m
Crack, longitudinal at 10 o'clock



S6X_bc99ee6a-22e3-4f6c-b082-614ea2d5b775_20220330_1
24738_566.jpg, 00:02:45, 13.28 m
Crack, longitudinal at 3 o'clock

Section Pictures - 30/03/2022 - S6X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
9	Upstream	S6X	22712	22712



S6X_5c0d0b39-e48c-4253-82f3-0e5c4f26af42_20220330_124752_449.jpg, 00:02:49, 13.28 m
 Crack, longitudinal at 4 o'clock



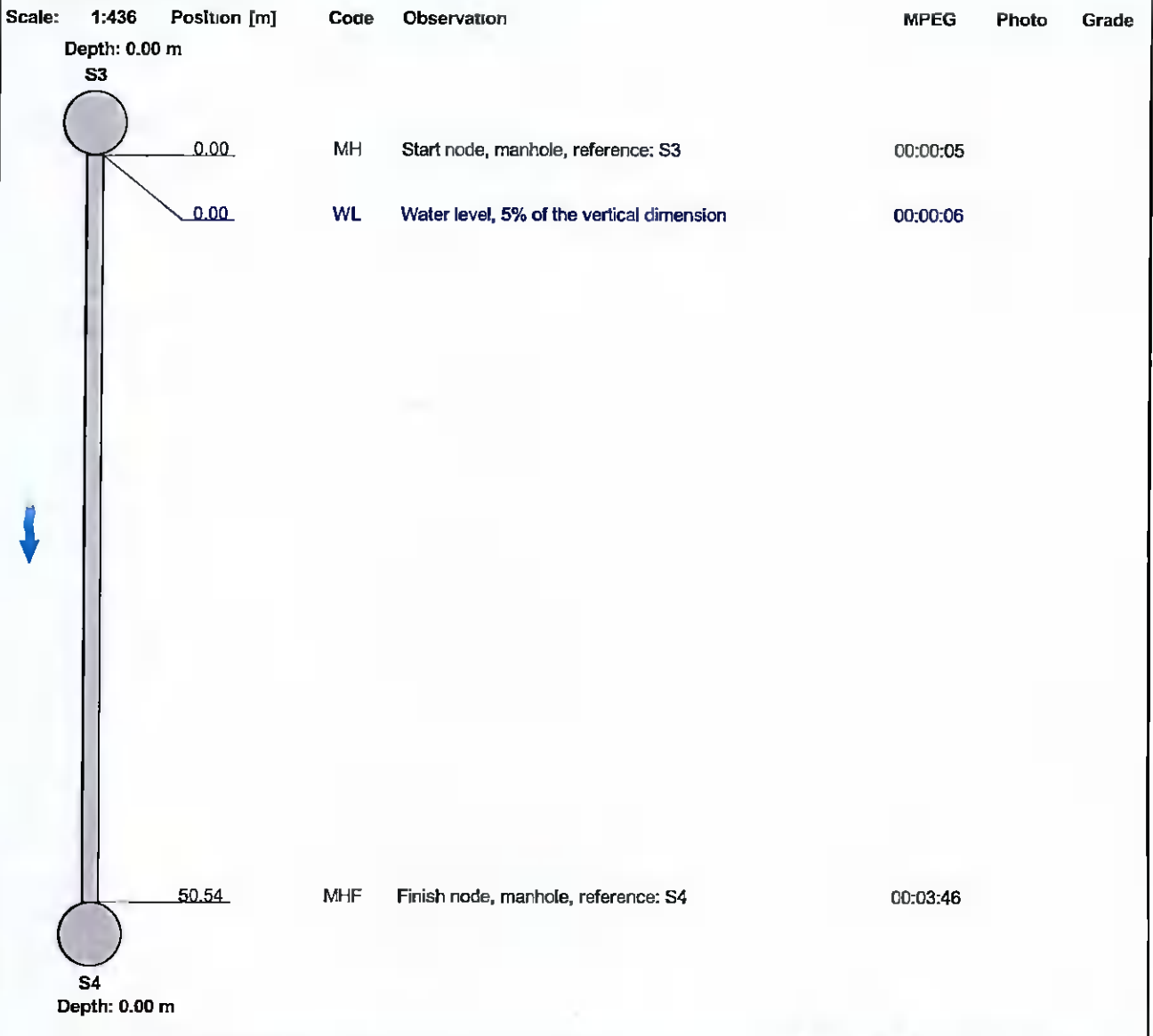
S6X_7eb2e6a5-88f2-4002-b479-51d6eb647213_20220330_124806_940.jpg, 00:02:53, 13.28 m
 Crack, longitudinal at 12 o'clock, start

Section Inspection - 30/03/2022 - S3X

Item No. 10	Insp. No. 1	Date 30/03/22	Time 14:31	Client's Job Ref 22712	Weather No Rain Or Snow	Pre Cleaned Yes	PLR S3X
Operator GM	Vehicle 172LD302	Camera Mainline	Preset Length 0.80 m	Legal Status Private Sewer	Alternative ID Not Specified		

Town or Village:	Rathfarnham Dublin	Inspection Direction:	Downstream	Upstream Node:	S3
Road:	Taylor's Lane	Inspected Length:	50.54 m	Upstream Pipe Depth:	0.000 m
Location:	Verge	Total Length:	50.54 m	Downstream Node:	S4
Surface Type:	Concrete Footway	Joint Length:		Downstream Pipe Depth:	0.000 m
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	750 mm		
Flow Control:	No flow control	Material:	Concrete		
Year Constructed:	1990	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

Comments:
Recommendations: None



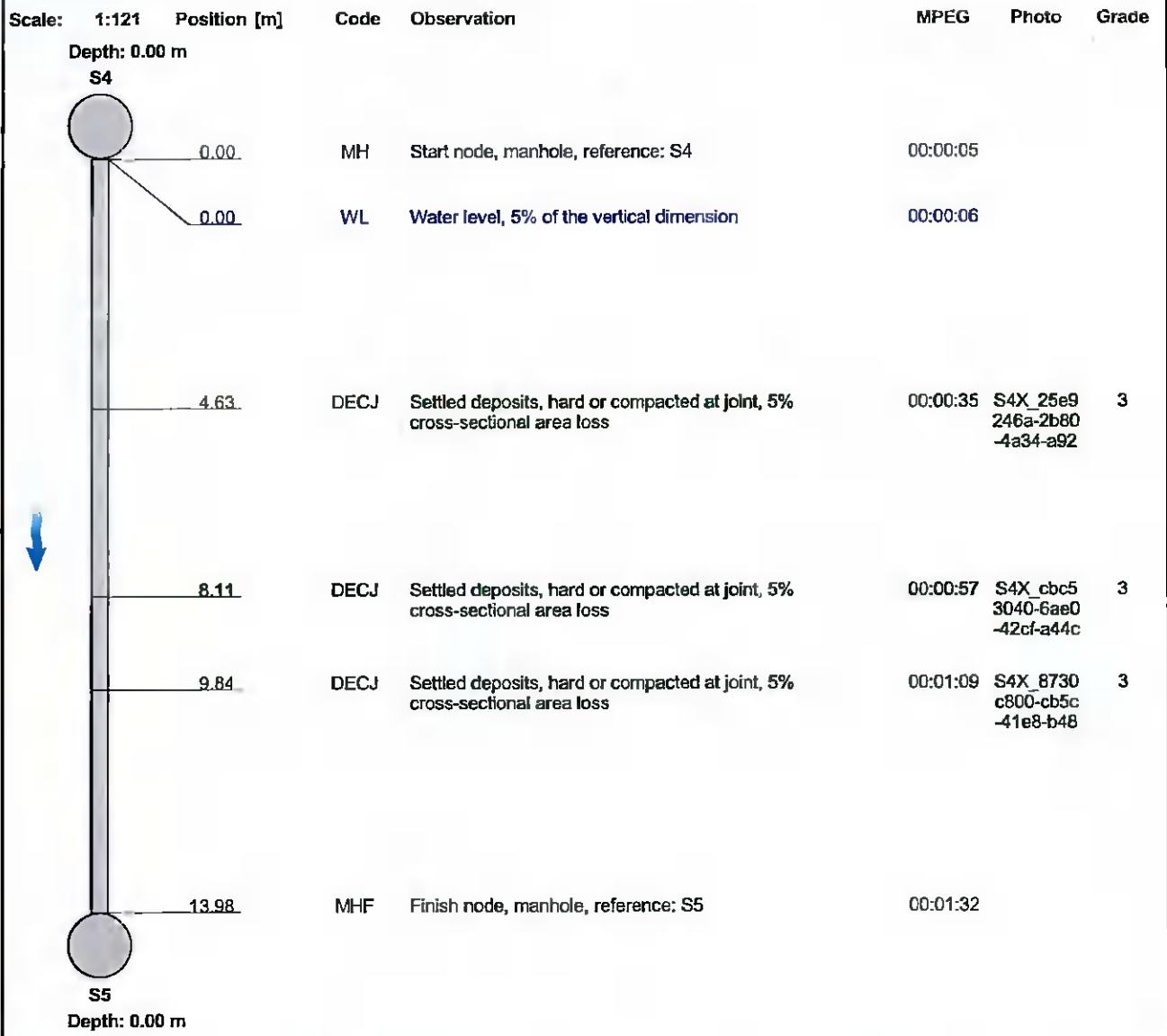
Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

Section Inspection - 30/03/2022 - S4X

Item No. 11	Insp. No. 1	Date 30/03/22	Time 14:57	Client's Job Ref 22712	Weather No Rain Or Snow	Pre Cleaned Yes	PLR S4X
Operator GM		Vehicle 172LD302		Camera Mainline	Preset Length 0.80 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Rathfarnham Dublin	Inspection Direction:	Downstream	Upstream Node:	S4
Road:	Taylor's Lane	Inspected Length:	13.98 m	Upstream Pipe Depth:	0.000 m
Location:	Verge	Total Length:	13.98 m	Downstream Node:	S5
Surface Type:	Concrete Footway	Joint Length:		Downstream Pipe Depth:	0.000 m
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	750 mm		
Flow Control:	No flow control	Material:	Concrete		
Year Constructed:	1990	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

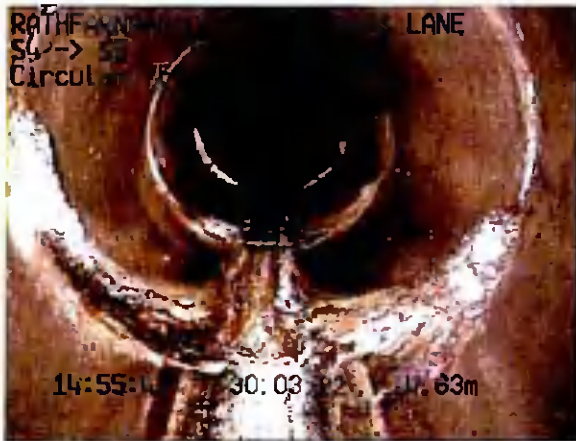
Comments:
Recommendations: CUTTING



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	3	2.0	1.3	6.0	3.0

Section Pictures - 30/03/2022 - S4X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
11	Downstream	S4X	22712	22712



S4X_25e9246a-2b80-4a34-a92a-f87247c0ce68_20220330_1
 45824_162.jpg, 00:00:35, 4.63 m
 Settled deposits, hard or compacted at joint, 5%
 cross-sectional area loss



S4X_cbc53040-6ae0-42cf-a44c-890966af4f43_20220330_145
 850_844.jpg, 00:00:57, 8.11 m
 Settled deposits, hard or compacted at joint, 5%
 cross-sectional area loss



S4X_8730c800-cb5c-41e8-b48b-5606efc9a2ca_20220330_14
 5908_327.jpg, 00:01:09, 9.84 m
 Settled deposits, hard or compacted at joint, 5%
 cross-sectional area loss

Section Pictures - 31/03/2022 - S5X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
12	Downstream	S5X	22712	22712



S5X_183cbfbc-eafe-4075-8f26-a2a1f653bb64_20220331_100250_351.jpg, 00:01:28, 4.39 m
 Fracture, longitudinal at 12 o'clock, start



S5X_7dd5fbb8-d536-49ae-93d3-42e36104fe12_20220331_100329_720.jpg, 00:01:53, 4.53 m
 Crack, circumferential from 9 o'clock to 11 o'clock



S5X_70bcc9d2-7e16-46d6-ac68-2d55e5bc361e_20220331_100312_436.jpg, 00:01:42, 4.69 m
 Crack, circumferential from 2 o'clock to 4 o'clock

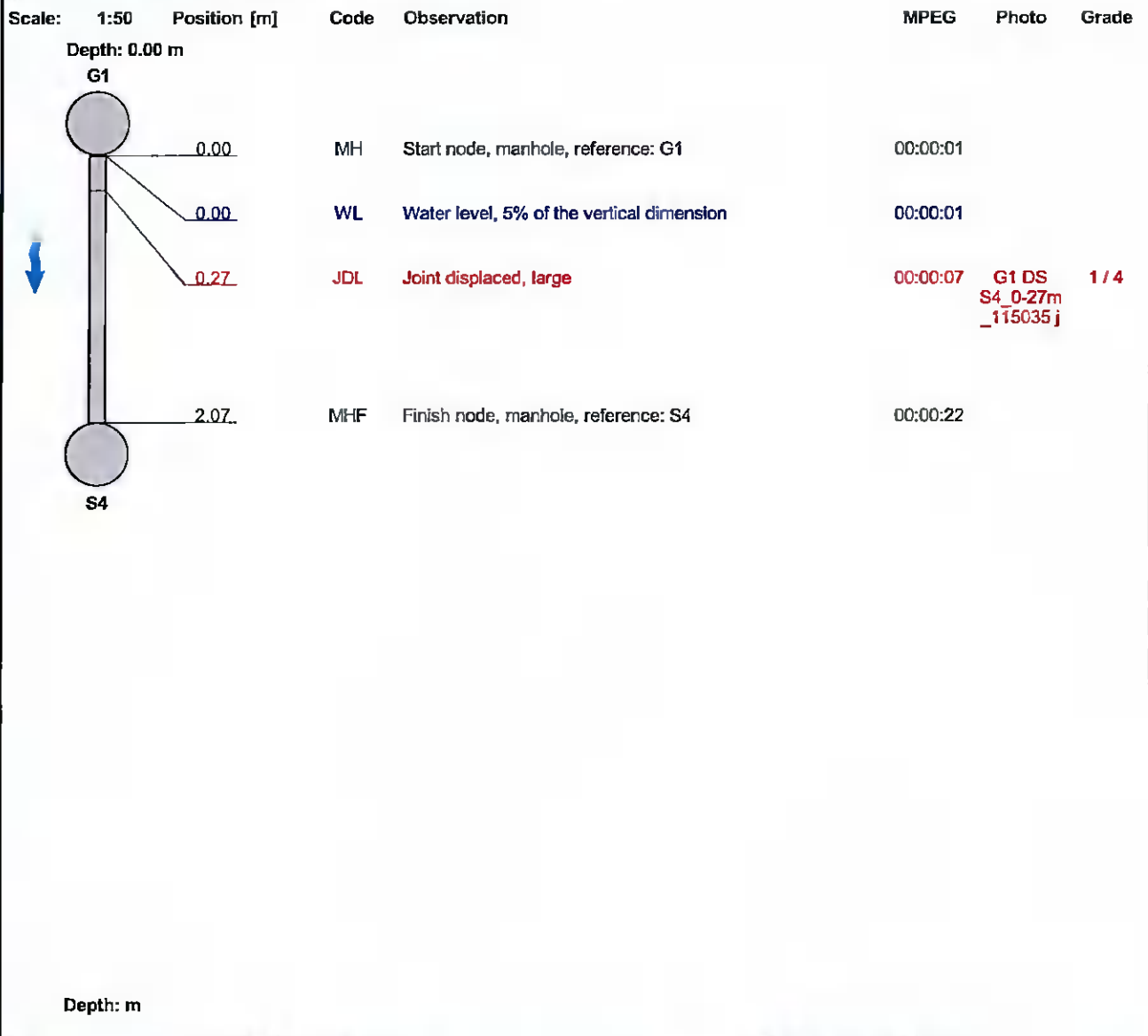


S5X_a89bf5fe-b788-48ab-b650-d55207f2059_20220331_100438_511.jpg, 00:02:25, 6.15 m
 Roots, mass, 25% cross-sectional area loss, start, ROOTS

Section Inspection - 31/03/2022 - G1X

Item No. 13	Insp. No. 3	Date 31/03/22	Time 11:48	Client's Job Ref CCTV SURVEY	Weather No Rain Or Snow	Pre Cleaned Yes	PLR G1X
Operator GARY		Vehicle 172LD302		Camera Pushrod	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID 1

Town or Village:	Rathfarnham	Inspection Direction:	Downstream	Upstream Node:	G1
Road:	Palmer PK	Inspected Length:	2.07 m	Upstream Pipe Depth:	0.000 m
Location:	Other walkway	Total Length:	2.07 m	Downstream Node:	S4
Surface Type:	Asphalt Footway	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	Material:	Concrete		
Year Constructed:	1990	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		
Comments:					
Recommendations:	PATCHING				



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	1.0	2.0	1.0	1	5.0	2.4	5.0	4.0

Section Pictures - 31/03/2022 - G1X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
13	Downstream	G1X	CCTV SURVEY	22712



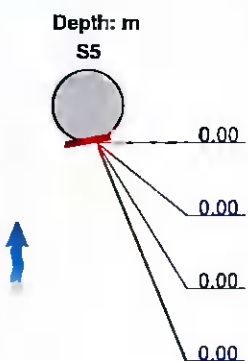
G1 DS S4_0-27m_115035.jpg, 00:00:07, 0.27 m
 Joint displaced, large

Section Inspection - 31/03/2022 - LINE1X

Item No. 14	Insp. No. 1	Date 31/03/22	Time 11:33	Client's Job Ref CCTV SURVEY	Weather No Rain Or Snow	Pre Cleaned Yes	PLR LINE1X
Operator GARY		Vehicle 172LD302		Camera Pushrod	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID 1

Town or Village:	Rathfarnham	Inspection Direction:	Upstream	Upstream Node:	LINE1
Road:	Palmer Pk	Inspected Length:	0.00 m	Upstream Pipe Depth:	0.000 m
Location:	Other walkway	Total Length:	0.00 m	Downstream Node:	S5
Surface Type:	Asphalt Footway	Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	225 mm		
Flow Control:	No flow control	Material:	Concrete		
Year Constructed:	1990	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:
Recommendations: CUTTING

Scale:	1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
							
		0.00	MH	Start node, manhole, reference: S5	00:00:00		
		0.00	WL	Water level, 5% of the vertical dimension	00:00:01		
		0.00	RM	Roots, mass, 40% cross-sectional area loss: ROOTS	00:00:02	S5 US	5
		0.00	SA	Survey abandoned: TOO MUCH ROOTS	00:00:05	LINE1_0-0 0m_11373	

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	10.0	0.0	10.0	5.0

Section Pictures - 31/03/2022 - LINE1X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
14	Upstream	LINE1X	CCTV SURVEY	22712



S5 US LINE1_0-00m_113732.jpg, 00:00:02, 0.00 m
Roots, mass, 40% cross-sectional area loss, ROOTS

Section Inspection - 31/03/2022 - G2X

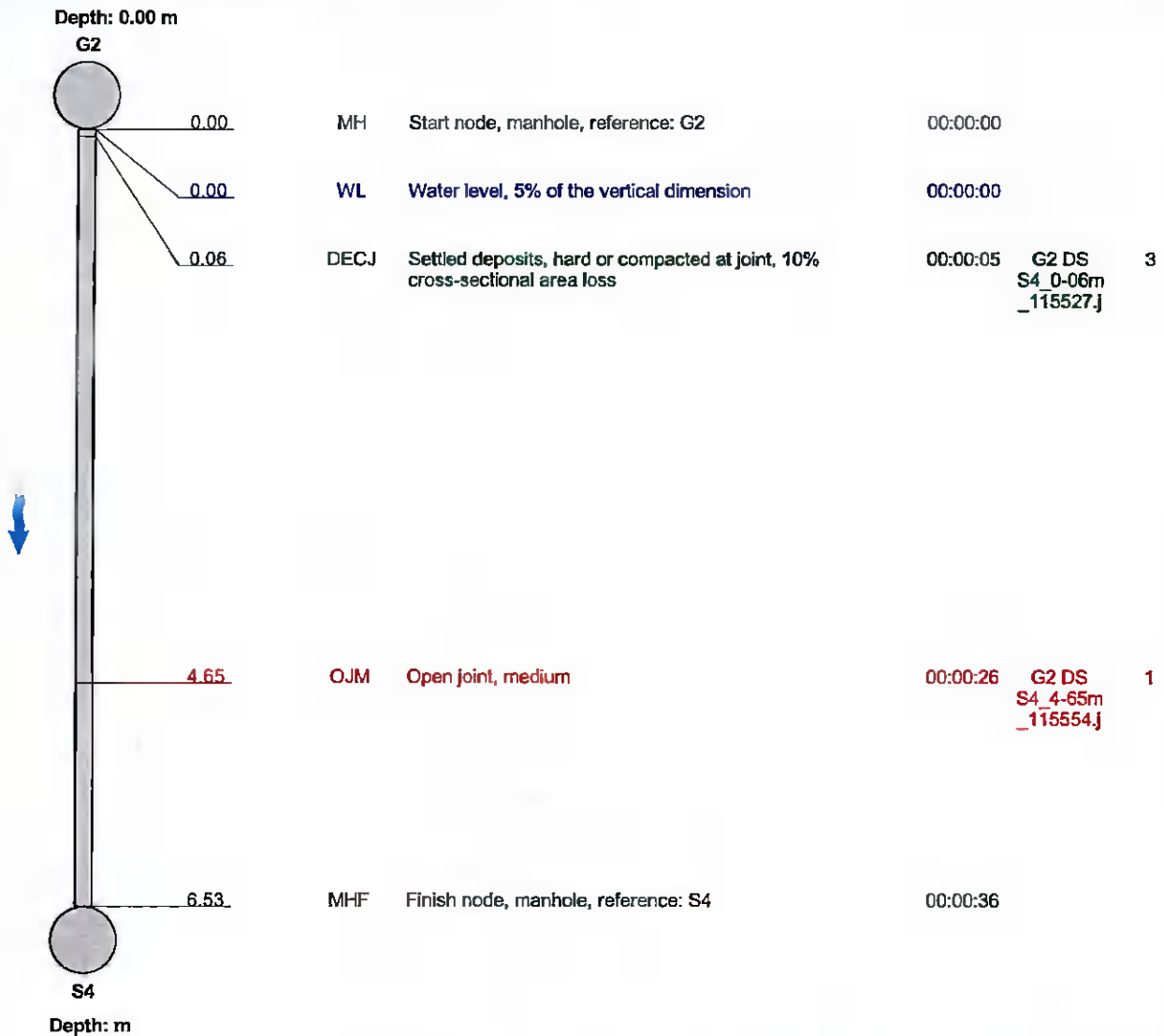
Item No. 15	Insp. No. 4	Date 31/03/22	Time 11:51	Client's Job Ref CCTV SURVEY	Weather No Rain Or Snow	Pre Cleaned Yes	PLR G2X
Operator GARY		Vehicle 172LD302		Camera Pushrod	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID 1

Town or Village:	Rathfarnham	Inspection Direction:	Downstream	Upstream Node:	G2
Road:	Palmer Pk	Inspected Length:	6.53 m	Upstream Pipe Depth:	0.000 m
Location:	Other walkway	Total Length:	6.53 m	Downstream Node:	S4
Surface Type:	Asphalt Footway	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	Material:	Concrete		
Year Constructed:	1990	Lining Type:	No Lining		
Inspection Purpose:	Routine inspection	Lining Material:	No Lining		

Comments:

Recommendations: CUTTING AND PATCHING

Scale: 1:57 Position [m] Code Observation MPEG Photo Grade



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	1	2.0	0.3	2.0	3.0

Section Pictures - 31/03/2022 - G2X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
15	Downstream	G2X	CCTV SURVEY	22712



G2 DS S4_0-06m_115527.jpg, 00:00:05, 0.06 m
 Settled deposits, hard or compacted at joint, 10%
 cross-sectional area loss



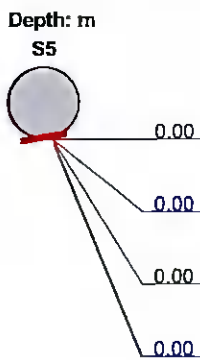
G2 DS S4_4-65m_115554.jpg, 00:00:26, 4.65 m
 Open joint, medium

Section Inspection - 31/03/2022 - LINE2X

Item No. 16	Insp. No. 2	Date 31/03/22	Time 11:38	Client's Job Ref CCTV SURVEY	Weather No Rain Or Snow	Pre Cleaned Yes	PLR LINE2X
Operator GARY		Vehicle 172LD302		Camera Pushrod	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID 1

Town or Village:	Rathfarnham	Inspection Direction:	Upstream	Upstream Node:	LINE2
Road:	Palmer Pk	Inspected Length:	0.00 m	Upstream Pipe Depth:	0.000 m
Location:	Other walkway	Total Length:	0.00 m	Downstream Node:	S5
Surface Type:	Asphalt Footway	Joint Length:		Downstream Pipe Depth:	
Use:	Surface water	Pipe Shape:	Circular	Dia/Height:	225 mm
Type of Pipe:	Gravity drain/sewer	Material:	Concrete	Lining Type:	No Lining
Flow Control:	No flow control	Lining Material:	No Lining		
Year Constructed:	1990				
Inspection Purpose:	Routine inspection				

Comments:
Recommendations: CUTTING

Scale:	1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
							
		0.00	MH	Start node, manhole, reference. S5	00:00:00		
		0.00	WL	Water level, 0% of the vertical dimension	00:00:00		
		0.00	RM	Roots, mass, 90% cross-sectional area loss	00:00:02	S5 US LINE2_0-0 0m_11394	5
		0.00	SA	Survey abandoned: TOO MUCH ROOTS	00:00:05		

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	20.0	0.0	20.0	5.0


Section Pictures - 31/03/2022 - LINE2X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
16	Upstream	LINE2X	CCTV SURVEY	22712



S5 US LINE2_0-00m_113945.jpg, 00:00:02, 0.00 m
 Roots, mass, 90% cross-sectional area loss

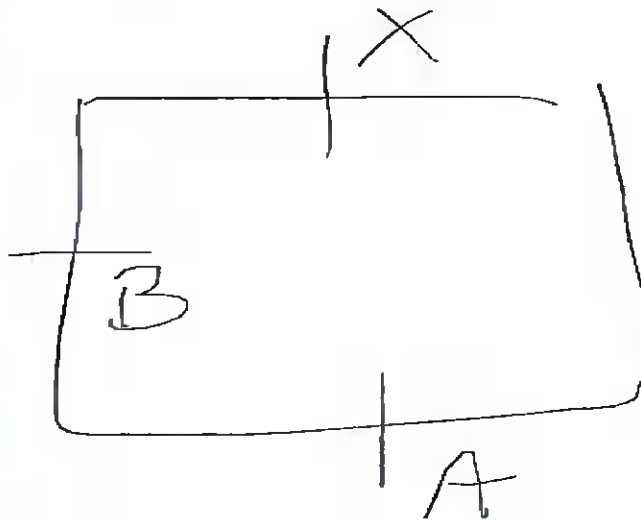
Tank Pipe and Drain Manhole survey

Start	2022-04-06 09:44:51	Node name	S3	Location	 Tank Pipe and Drain			
1	Road Type	Road	19	Cover Size			650	49 Palmer Park, Rathfarnham, Dublin, D16 FD80, Ireland
2	Comment	0.73m	20	Frame Material			Cast Iron	
3	Map number		21	Frame Depth			0.1	
4	Node type	Manhole	22	Frame Size	650	37	Chamber Infiltration	None
5	Location	49 Palmer Park, R	23	Shaft access	None	38	Chamber Roots	None
6	GPS X	613919.679	24	Access condition	OK	39	Shaft Infiltration	None
7	GPS Y	726928.276	25	Shaft Depth	0.41	40	Shaft Roots	None
8	GPS Cover level	86.793	26	Shaft Size	600x600	41	Bench Infiltration	None
9	Weather	Above freezing	27	Chamber Steps		42	Bench Roots	None
10	Manhole Status	Local Authority	28	Chamber Lads	4	43	Invert Infiltration	None
11	Survey status	Yes	29	Chamber Ldns		44	Invert Roots	None
12	Soffit type	Reducing Slab	30	Chamber Size	1000x1000	45	Cover Condition	OK
13	System Type	Surface	31	Chamber Construction	In-Situ	46	Shaft Condition	OK
14	Cover Shape	Circular	32	Toxic Atmosphere	N/A	47	Chamber Condition	OK
15	Cover material	Cast Iron	33	Vermin	N/A	48	Benching Condition	OK
16	Cover Duty	Heavy	34	Flow %	10	49	Frame condition	Not Defective
17	Cover Hinged	No	35	Silt %	0	50	Year Built	2000-2004
18	Cover Locked	No	36	Surcharge		51	Comments	

Manhole photo




Manhole drawing



Incoming Pipe A			Incoming Pipe C			Incoming Pipe E			Downstream Pipe X		
1	MH Ref	US	1	MH Ref		1	MH Ref		1	MH Ref	
2	Pipe Size	600	2	Shape		2	Shape		2	Shape	Circular
3	Shape	Circular	3	Backdrop		3	Pipe Size		3	Pipe Size	600
4	Backdrop		4	Backdrop Depth		4	Backdrop		4	Backdrop	
5	Backdrop Depth		5	Pipe Size		5	Backdrop Depth		5	Backdrop Depth	
6	Material	Concrete	6	Material		6	Material		6	Material	Concrete
7	Lining		7	Lining		7	Lining		7	Lining	
8	Depth	2.15	8	Depth		8	Depth		8	Depth	3.13
Incoming Pipe B			Incoming Pipe D			Incoming Pipe F			Downstream Pipe Y		
1	MH Ref	?	1	MH Ref		1	MH Ref		1	MH Ref	
2	Pipe Size	225	2	Shape		2	Shape		2	Shape	
3	Shape	Circular	3	Pipe Size		3	Pipe Size		3	Pipe Size	
4	Backdrop		4	Backdrop		4	Backdrop		4	Backdrop	
5	Backdrop Depth		5	Backdrop Depth		5	Backdrop Depth		5	Backdrop Depth	
6	Material	Concrete	6	Material		6	Material		6	Material	
7	Lining		7	Lining		7	Lining		7	Lining	
8	Depth	2.05	8	Depth		8	Depth		8	Depth	

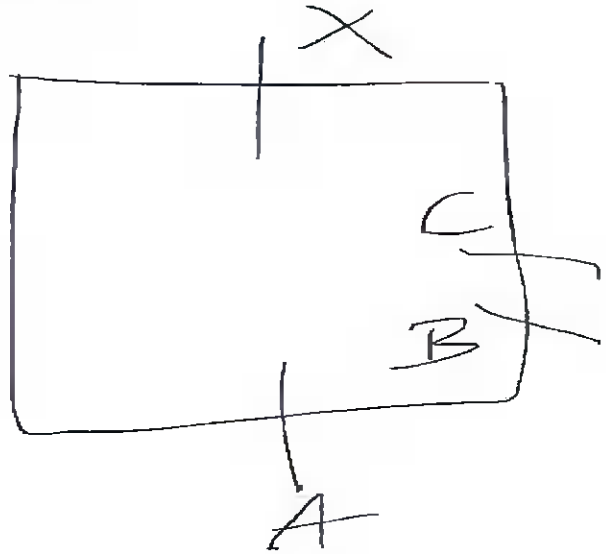
Tank Pipe and Drain Manhole survey

Start	2022-04-06 09:55:33	Node name	S4	Location	 Tank Pipe and Drain 17 Palmer Park, Rathfarnham, Dublin, D16 CF21, Ireland		
1 Road Type	Footpath	19 Cover Size	600	37 Chamber Infiltration		None	
2 Comment	0.81m	20 Frame Material	Cast Iron	38 Chamber Roots		None	
3 Map number		21 Frame Depth	0.07	39 Shaft Infiltration		Seeper	
4 Node type	Manhole	22 Frame Size	600	40 Shaft Roots		None	
5 Location	17 Palmer Park, R	23 Shaft access	None	41 Bench Infiltration		None	
6 GPS X	713912.625	24 Access condition	OK	42 Bench Roots		None	
7 GPS Y	726981.091	25 Shaft Depth	0.64	43 Invert Infiltration		None	
8 GPS Cover level	82.263	26 Shaft Size	700x700	44 Invert Roots		None	
9 Weather	Above freezing	27 Chamber Steps		45 Cover Condition		OK	
10 Manhole Status	Irish Water	28 Chamber Lads	5	46 Shaft Condition		Attention Needed	
11 Survey status	Yes	29 Chamber Ldns		47 Chamber Condition		OK	
12 Soffit type	Reducing Slab	30 Chamber Size	1000x1000	48 Benching Condition		Attention Needed	
13 System Type	Surface	31 Chamber Construction	In-Situ	49 Frame condition		Not Defective	
14 Cover Shape	Circular	32 Toxic Atmosphere	N/A	50 Year Built		2000-2004	
15 Cover material	Cast Iron	33 Vermin	N/A	51 Comments			
16 Cover Duty	Medium	34 Flow %	10				
17 Cover Hinged	No	35 Silt %	0				
18 Cover Locked	No	36 Surcharge					

Manhole photo




Manhole drawing



Incoming Pipe A			Incoming Pipe C			Incoming Pipe E			Downstream Pipe X		
1	MH Ref	S3	1	MH Ref	Gully	1	MH Ref		1	MH Ref	
2	Pipe Size	600	2	Shape	Circular	2	Shape		2	Shape	Circular
3	Shape	Circular	3	Backdrop		3	Pipe Size		3	Pipe Size	600
4	Backdrop		4	Backdrop Depth		4	Backdrop		4	Backdrop	
5	Backdrop Depth		5	Pipe Size	150	5	Backdrop Depth		5	Backdrop Depth	
6	Material	Concrete	6	Material	Concrete	6	Material		6	Material	Concrete
7	Lining		7	Lining		7	Lining		7	Lining	
8	Depth	2.22	8	Depth	1.2	8	Depth		8	Depth	3
Incoming Pipe B			Incoming Pipe D			Incoming Pipe F			Downstream Pipe Y		
1	MH Ref	Gully	1	MH Ref		1	MH Ref		1	MH Ref	
2	Pipe Size	150	2	Shape		2	Shape		2	Shape	
3	Shape	Circular	3	Pipe Size		3	Pipe Size		3	Pipe Size	
4	Backdrop		4	Backdrop		4	Backdrop		4	Backdrop	
5	Backdrop Depth		5	Backdrop Depth		5	Backdrop Depth		5	Backdrop Depth	
6	Material	Concrete	6	Material		6	Material		6	Material	
7	Lining		7	Lining		7	Lining		7	Lining	
8	Depth	1.18	8	Depth		8	Depth		8	Depth	

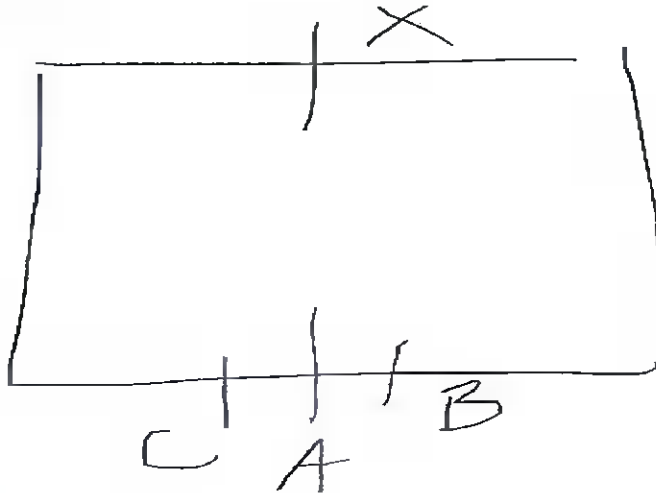
Tank Pipe and Drain Manhole survey

Start	2022-04-06 10:06:25	Node name	S5	Location	12 Kingston Ct, Rathfarnham, Dublin, D16 PV38, Ireland			
1	Road Type	Footpath	19	Cover Size	600			
2	Comment	0.69m	20	Frame Material	Cast Iron			
3	Map number		21	Frame Depth	0.07			
4	Node type	Manhole	22	Frame Size	600	37	Chamber Infiltration	None
5	Location	12 Kingston Ct, Ra	23	Shaft access	None	38	Chamber Roots	Mass
6	GPS X	713911.115	24	Access condition	OK	39	Shaft Infiltration	None
7	GPS Y	726997.797	25	Shaft Depth	0.23	40	Shaft Roots	None
8	GPS Cover level	80.788	26	Shaft Size	700x700	41	Bench Infiltration	None
9	Weather	Above freezing	27	Chamber Steps		42	Bench Roots	None
10	Manhole Status	Local Authority	28	Chamber Lads	5	43	Invert Infiltration	None
11	Survey status	Yes	29	Chamber Ldns		44	Invert Roots	None
12	Soffit type	Reducing Slab	30	Chamber Size	1000x1000	45	Cover Condition	OK
13	System Type	Surface	31	Chamber Construction	In-Situ	46	Shaft Condition	OK
14	Cover Shape	Circular	32	Toxic Atmosphere	N/A	47	Chamber Condition	OK
15	Cover material	Cast Iron	33	Vermin	N/A	48	Benching Condition	Attention Needed
16	Cover Duty	Medium	34	Flow %	10	49	Frame condition	Not Defective
17	Cover Hinged	No	35	Silt %	0	50	Year Built	2000-2004
18	Cover Locked	No	36	Surcharge		51	Comments	


Manhole photo



Manhole drawing



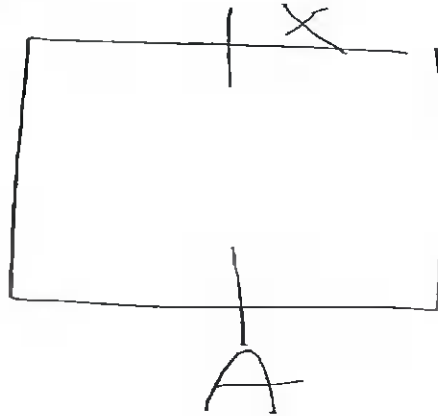
Incoming Pipe A			Incoming Pipe C			Incoming Pipe E			Downstream Pipe X		
1	MH Ref	S4	1	MH Ref	?	1	MH Ref		1	MH Ref	
2	Pipe Size	600	2	Shape	Circular	2	Shape		2	Shape	Circular
3	Shape	Circular	3	Backdrop		3	Pipe Size		3	Pipe Size	900
4	Backdrop		4	Backdrop Depth		4	Backdrop		4	Backdrop	
5	Backdrop Depth		5	Pipe Size	225	5	Backdrop Depth		5	Backdrop Depth	
6	Material	Concrete	6	Material	Concrete	6	Material		6	Material	Concrete
7	Lining		7	Lining		7	Lining		7	Lining	
8	Depth	2.35	8	Depth	1.38	8	Depth		8	Depth	2.32
Incoming Pipe B			Incoming Pipe D			Incoming Pipe F			Downstream Pipe Y		
1	MH Ref	?	1	MH Ref		1	MH Ref		1	MH Ref	
2	Pipe Size	225	2	Shape		2	Shape		2	Shape	
3	Shape	Circular	3	Pipe Size		3	Pipe Size		3	Pipe Size	
4	Backdrop		4	Backdrop		4	Backdrop		4	Backdrop	
5	Backdrop Depth		5	Backdrop Depth		5	Backdrop Depth		5	Backdrop Depth	
6	Material	Concrete	6	Material		6	Material		6	Material	
7	Lining		7	Lining		7	Lining		7	Lining	
8	Depth	1.4	8	Depth		8	Depth		8	Depth	

Start	2022-04-06 10:24:00	Node name	S6	Location				
1	Road Type	Footpath	19	Cover Size	600	Boden Villas, 6 Taylor's Ln, Rathfarnham, Dublin 16, Ireland		
2	Comment	1.23m	20	Frame Material	Cast Iron			
3	Map number		21	Frame Depth	0.07			
4	Node type	Manhole	22	Frame Size	600	37	Chamber Infiltration	None
5	Location	Boden Villas, 6 Ta	23	Shaft access	None	38	Chamber Roots	None
6	GPS X	713902.564	24	Access condition	Urgent Attention	39	Shaft Infiltration	Seeper
7	GPS Y	727052.857	25	Shaft Depth	0.83	40	Shaft Roots	None
8	GPS Cover level	77.257	26	Shaft Size	400x400	41	Bench Infiltration	None
9	Weather	Above freezing	27	Chamber Steps		42	Bench Roots	None
10	Manhole Status	Local Authority	28	Chamber Lads	4	43	Invert Infiltration	None
11	Survey status	UTS (Unable to su	29	Chamber Ldms		44	Invert Roots	None
12	Soffit type	Reducing Slab	30	Chamber Size	1000x1000	45	Cover Condition	OK
13	System Type	Surface	31	Chamber Construction	In-Situ	46	Shaft Condition	Urgent Attention Needed
14	Cover Shape	Circular	32	Toxic Atmosphere	N/A	47	Chamber Condition	OK
15	Cover material	Cast Iron	33	Vermin	N/A	48	Benching Condition	Attention Needed
16	Cover Duty	Medium	34	Flow %	10	49	Frame condition	Defective
17	Cover Hinged	No	35	Silt %	0	50	Year Built	2000-2004
18	Cover Locked	No	36	Surcharge		51	Comments	unable to measure outlet and to

Manhole photo




Manhole drawing



Incoming Pipe A		Incoming Pipe C		Incoming Pipe E		Downstream Pipe X		
1	MH Ref	S5	1	MH Ref		1	MH Ref	
2	Pipe Size	900	2	Shape		2	Shape	Circular
3	Shape	Circular	3	Backdrop		3	Pipe Size	900
4	Backdrop		4	Backdrop Depth		4	Backdrop	
5	Backdrop Depth		5	Pipe Size		5	Backdrop Depth	
6	Material	Concrete	6	Material		6	Material	Concrete
7	Lining		7	Lining		7	Lining	
8	Depth		8	Depth		8	Depth	
Incoming Pipe B		Incoming Pipe D		Incoming Pipe F		Downstream Pipe Y		
1	MH Ref		1	MH Ref		1	MH Ref	
2	Pipe Size		2	Shape		2	Shape	
3	Shape		3	Pipe Size		3	Pipe Size	
4	Backdrop		4	Backdrop		4	Backdrop	
5	Backdrop Depth		5	Backdrop Depth		5	Backdrop Depth	
6	Material		6	Material		6	Material	
7	Lining		7	Lining		7	Lining	
8	Depth		8	Depth		8	Depth	

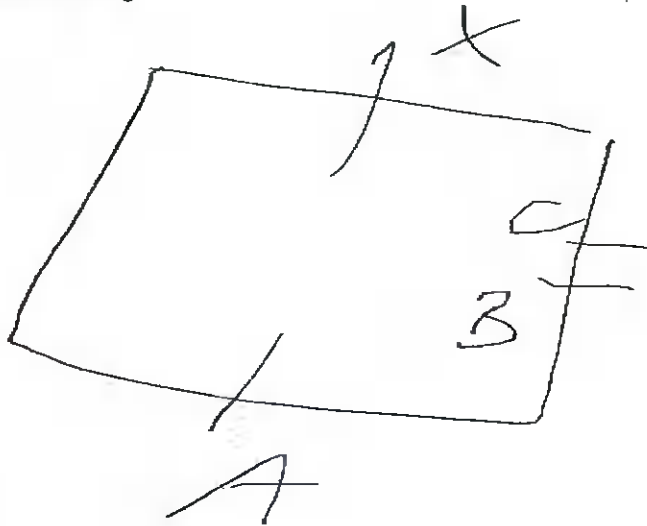
Tank Pipe and Drain Manhole survey

Start	2022-04-06 10:33:43	Node name	S7	Location	1 Taylor's Ln, Ballyboden, Dublin, D16 TOV6, Ireland				
1	Road Type	Footpath	19	Cover Size	600				
2	Comment	1.10m	20	Frame Material	Cast Iron				
3	Map number		21	Frame Depth	0.07				
4	Node type	Manhole	22	Frame Size	600	37		Chamber Infiltration	Seeper
5	Location	1 Taylor's Ln, Bally	23	Shaft access	None	38		Chamber Roots	None
6	GPS X	713902.809	24	Access condition	OK	39		Shaft Infiltration	None
7	GPS Y	727074.283	25	Shaft Depth	0.35	40		Shaft Roots	None
8	GPS Cover level	76.599	26	Shaft Size	600x600	41		Bench Infiltration	None
9	Weather	Above freezing	27	Chamber Steps		42		Bench Roots	None
10	Manhole Status	Local Authority	28	Chamber Lads	4	43		Invert Infiltration	None
11	Survey status	Yes	29	Chamber Ldns		44		Invert Roots	None
12	Soffit type	Reducing Slab	30	Chamber Size	1000x1000	45		Cover Condition	OK
13	System Type	Surface	31	Chamber Construction	Precast Units	46		Shaft Condition	OK
14	Cover Shape	Circular	32	Toxic Atmosphere	N/A	47		Chamber Condition	Attention Needed
15	Cover material	Cast Iron	33	Vermin	N/A	48		Benching Condition	Attention Needed
16	Cover Duty	Medium	34	Flow %	10	49		Frame condition	Not Defective
17	Cover Hinged	No	35	Silt %	0	50		Year Built	2000-2004
18	Cover Locked	No	36	Surcharge		51	Comments		

Manhole photo



Manhole drawing



Incoming Pipe A			Incoming Pipe C			Incoming Pipe E			Downstream Pipe X		
1	MH Ref	S6	1	MH Ref	?	1	MH Ref		1	MH Ref	
2	Pipe Size	900	2	Shape	Circular	2	Shape		2	Shape	Circular
3	Shape	Circular	3	Backdrop		3	Pipe Size		3	Pipe Size	900
4	Backdrop		4	Backdrop Depth		4	Backdrop		4	Backdrop	
5	Backdrop Depth		5	Pipe Size	225	5	Backdrop Depth		5	Backdrop Depth	
6	Material	Concrete	6	Material	PVC	6	Material		6	Material	Concrete
7	Lining		7	Lining		7	Lining		7	Lining	
8	Depth	2.46	8	Depth	2.25	8	Depth		8	Depth	3.9
Incoming Pipe B			Incoming Pipe D			Incoming Pipe F			Downstream Pipe Y		
1	MH Ref	?	1	MH Ref		1	MH Ref		1	MH Ref	
2	Pipe Size	225	2	Shape		2	Shape		2	Shape	
3	Shape	Circular	3	Pipe Size		3	Pipe Size		3	Pipe Size	
4	Backdrop		4	Backdrop		4	Backdrop		4	Backdrop	
5	Backdrop Depth		5	Backdrop Depth		5	Backdrop Depth		5	Backdrop Depth	
6	Material	PVC	6	Material		6	Material		6	Material	
7	Lining		7	Lining		7	Lining		7	Lining	
8	Depth	1.05	8	Depth		8	Depth		8	Depth	

Tank Pipe and Drain Manhole survey

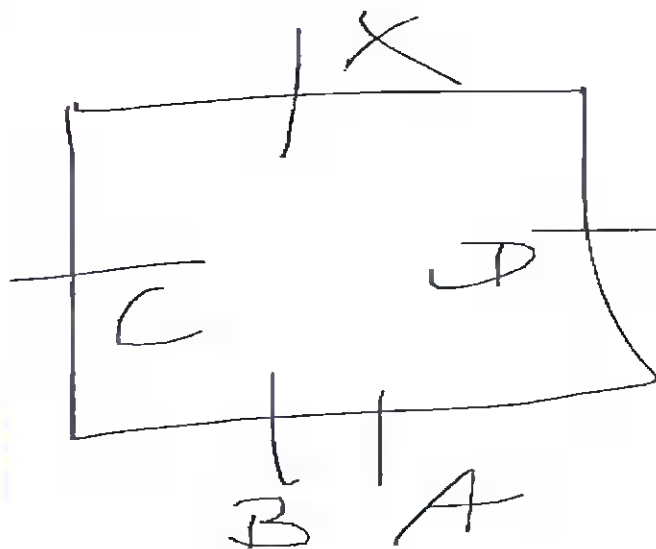
Start	2022-04-06 11:33:06	Node name	S2	Location		
1	Road Type	Footpath	19	Cover Size	650x650	
2	Comment	no lader	20	Frame Material	Cast Iron	
3	Map number		21	Frame Depth	0.05	
4	Node type	Manhole	22	Frame Size	650x650	
5	Location	Newbrook Estate,	23	Shaft access	None	
6	GPS X	713783.293	24	Access condition	OK	
7	GPS Y	727064.839	25	Shaft Depth	0.47	
8	GPS Cover level	75.684	26	Shaft Size	600x600	
9	Weather	Above freezing	27	Chamber Steps	0	
10	Manhole Status	Local Authority	28	Chamber Lads	0	
11	Survey status	Yes	29	Chamber Ldrns	0	
12	Soffit type	Reducing Slab	30	Chamber Size	1200x1000	
13	System Type	Surface	31	Chamber Construction	In-Situ	
14	Cover Shape	Square	32	Toxic Atmosphere	N/A	
15	Cover material	Cast Iron	33	Vermin	N/A	
16	Cover Duty	Medium	34	Flow %	5	
17	Cover Hinged	No	35	Silt %	0	
18	Cover Locked	No	36	Surcharge		
				37	Chamber Infiltration	None
				38	Chamber Roots	None
				39	Shaft infiltration	None
				40	Shaft Roots	None
				41	Bench Infiltration	None
				42	Bench Roots	None
				43	Invert Infiltration	None
				44	Invert Roots	None
				45	Cover Condition	OK
				46	Shaft Condition	OK
				47	Chamber Condition	OK
				48	Benching Condition	Urgent Attention Needed
				49	Frame condition	Not Defective
				50	Year Built	2000-2004
				51	Comments	



Manhole photo




Manhole drawing



Incoming Pipe A		Incoming Pipe C		Incoming Pipe E		Downstream Pipe X	
1	MH Ref	S1.3	1	MH Ref	S1.6	1	MH Ref
2	Pipe Size	300	2	Shape	Circular	2	Shape
3	Shape	Circular	3	Backdrop		3	Pipe Size
4	Backdrop		4	Backdrop Depth		4	Backdrop
5	Backdrop Depth		5	Pipe Size	225	5	Backdrop Depth
6	Material	PVC	6	Material	PVC	6	Material
7	Lining		7	Lining		7	Lining
8	Depth	1.75	8	Depth	1.79	8	Depth
Incoming Pipe B		Incoming Pipe D		incoming Pipe F		Downstream Pipe Y	
1	MH Ref	S1.3	1	MH Ref	S1.5	1	MH Ref
2	Pipe Size	300	2	Shape	Circular	2	Shape
3	Shape	Circular	3	Pipe Size	225	3	Pipe Size
4	Backdrop		4	Backdrop		4	Backdrop
5	Backdrop Depth		5	Backdrop Depth		5	Backdrop Depth
6	Material	PVC	6	Material	PVC	6	Material
7	Lining		7	Lining		7	Lining
8	Depth	1.78	8	Depth	1.76	8	Depth

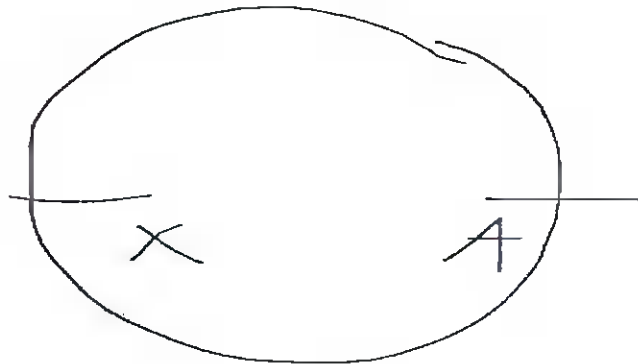
Tank Pipe and Drain Manhole survey

Start	2022-04-06 12:44:39	Node name	S1.5	Location	 Tank Pipe and Drain 10 Taylor's Ln, Ballyboden, Dublin 16, D16 V4Y6, Ireland	
1 Road Type	Footpath	19 Cover Size	650x650			
2 Comment	0.54m	20 Frame Material	Cast Iron			
3 Map number		21 Frame Depth	0.05			
4 Node type	Manhole	22 Frame Size	650x650	37 Chamber Infiltration	None	
5 Location	10 Taylor's Ln, Bal	23 Shaft access	None	38 Chamber Roots	None	
6 GPS X	713870.104	24 Access condition	OK	39 Shaft Infiltration	None	
7 GPS Y	727070.831	25 Shaft Depth	0.39	40 Shaft Roots	None	
8 GPS Cover level	76.405	26 Shaft Size	600	41 Bench Infiltration	None	
9 Weather	Above freezing	27 Chamber Steps		42 Bench Roots	None	
10 Manhole Status	Local Authority	28 Chamber Lads	2	43 Invert Infiltration	None	
11 Survey status	Yes	29 Chamber Ldns		44 Invert Roots	None	
12 Soffit type	Reducing Slab	30 Chamber Size	900	45 Cover Condition	OK	
13 System Type	Surface	31 Chamber Construction	Precast Units	46 Shaft Condition	OK	
14 Cover Shape	Square	32 Toxic Atmosphere	N/A	47 Chamber Condition	OK	
15 Cover material	Cast Iron	33 Vermin	N/A	48 Benching Condition	OK	
16 Cover Duty	Medium	34 Flow %	0	49 Frame condition	Not Defective	
17 Cover Hinged	No	35 Silt %	0	50 Year Built	2000-2004	
18 Cover Locked	No	36 Surcharge		51 Comments		

Manhole photo




Manhole drawing



Incoming Pipe A		Incoming Pipe C		Incoming Pipe E		Downstream Pipe X	
1 MH Ref	?	1 MH Ref		1 MH Ref		1 MH Ref	
2 Pipe Size	225	2 Shape		2 Shape		2 Shape	Circular
3 Shape	Circular	3 Backdrop		3 Pipe Size		3 Pipe Size	225
4 Backdrop		4 Backdrop Depth		4 Backdrop		4 Backdrop	
5 Backdrop Depth		5 Pipe Size		5 Backdrop Depth		5 Backdrop Depth	
6 Material	PVC	6 Material		6 Material		6 Material	PVC
7 Lining		7 Lining		7 Lining		7 Lining	
8 Depth	1.36	8 Depth		8 Depth		8 Depth	1.39
Incoming Pipe B		Incoming Pipe D		Incoming Pipe F		Downstream Pipe Y	
1 MH Ref		1 MH Ref		1 MH Ref		1 MH Ref	
2 Pipe Size		2 Shape		2 Shape		2 Shape	
3 Shape		3 Pipe Size		3 Pipe Size		3 Pipe Size	
4 Backdrop		4 Backdrop		4 Backdrop		4 Backdrop	
5 Backdrop Depth		5 Backdrop Depth		5 Backdrop Depth		5 Backdrop Depth	
6 Material		6 Material		6 Material		6 Material	
7 Lining		7 Lining		7 Lining		7 Lining	
8 Depth		8 Depth		8 Depth		8 Depth	

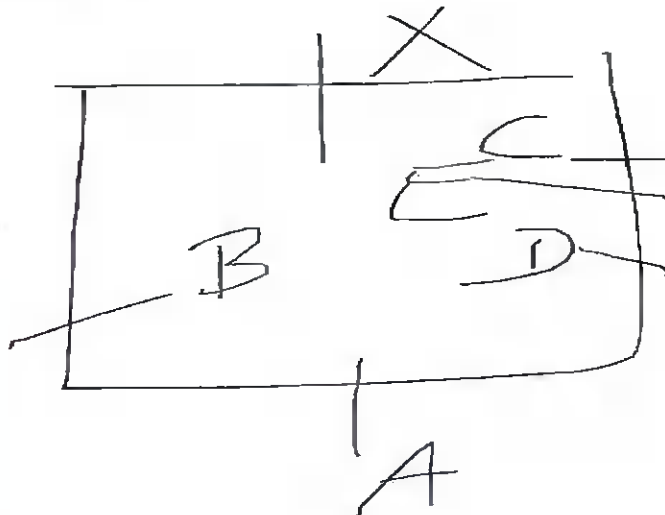
Tank Pipe and Drain Manhole survey

Start	2022-04-06 12:54:33	Node name	S1	Location		
1	Road Type	Footpath	19	Cover Size		650x650
2	Comment	0.48m	20	Frame Material		Cast Iron
3	Map number		21	Frame Depth		0.05
4	Node type	Manhole	22	Frame Size		650x650
5	Location	Mountain View, T	23	Shaft access	None	
6	GPS X	714013.700	24	Access condition	OK	
7	GPS Y	727082.904	25	Shaft Depth	0.39	
8	GPS Cover level	76.563	26	Shaft Size	600x600	
9	Weather	Above freezing	27	Chamber Steps		
10	Manhole Status	Local Authority	28	Chamber Lads	2	
11	Survey status	Yes	29	Chamber Ldns		
12	Soffit type	Reducing Slab	30	Chamber Size	1200x1200	
13	System Type	Surface	31	Chamber Construction	In-Situ	
14	Cover Shape	Square	32	Toxic Atmosphere	N/A	
15	Cover material	Cast Iron	33	Vermin	N/A	
16	Cover Duty	Medium	34	Flow %	10	
17	Cover Hinged	No	35	Silt %	0	
18	Cover Locked	No	36	Surcharge		
				37	Chamber Infiltration	Seeper
				38	Chamber Roots	None
				39	Shaft Infiltration	None
				40	Shaft Roots	None
				41	Bench Infiltration	None
				42	Bench Roots	None
				43	Invert Infiltration	None
				44	Invert Roots	None
				45	Cover Condition	Attention Needed
				46	Shaft Condition	OK
				47	Chamber Condition	Attention Needed
				48	Benching Condition	OK
				49	Frame condition	Not Defective
				50	Year Built	2000-2004
				51	Comments	

Manhole photo




Manhole drawing



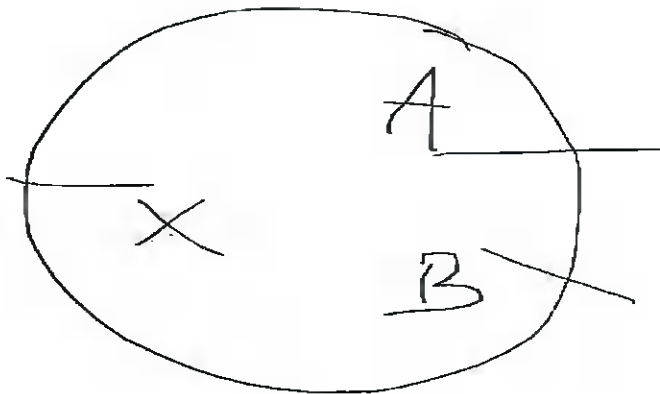
Incoming Pipe A		Incoming Pipe C		Incoming Pipe E		Downstream Pipe X					
1	MH Ref	Culvert	1	MH Ref	S1.2	1	MH Ref	Gully	1	MH Ref	
2	Pipe Size	900	2	Shape	Circular	2	Shape	Circular	2	Shape	Circular
3	Shape	Circular	3	Backdrop		3	Pipe Size	150	3	Pipe Size	900
4	Backdrop		4	Backdrop Depth		4	Backdrop		4	Backdrop	
5	Backdrop Depth		5	Pipe Size	300	5	Backdrop Depth		5	Backdrop Depth	
6	Material	Concrete	6	Material	PVC	6	Material	PVC	6	Material	Concrete
7	Lining		7	Lining		7	Lining		7	Lining	
8	Depth	2.42	8	Depth	2.07	8	Depth	1.1	8	Depth	2.43
Incoming Pipe B		Incoming Pipe D		Incoming Pipe F		Downstream Pipe Y					
1	MH Ref	Dead line	1	MH Ref	S1.1	1	MH Ref		1	MH Ref	
2	Pipe Size	300	2	Shape	Circular	2	Shape		2	Shape	
3	Shape	Circular	3	Pipe Size	300	3	Pipe Size		3	Pipe Size	
4	Backdrop		4	Backdrop		4	Backdrop		4	Backdrop	
5	Backdrop Depth		5	Backdrop Depth		5	Backdrop Depth		5	Backdrop Depth	
6	Material	Concrete	6	Material	Concrete	6	Material		6	Material	
7	Lining		7	Lining		7	Lining		7	Lining	
8	Depth	1.7	8	Depth	2.15	8	Depth		8	Depth	

Tank Pipe and Drain Manhole survey

Start	2022-04-06 13:08:45		Node name	S1.1		Location		
1	Road Type	Footpath	19	Cover Size	650x650	36 Whitecliff, Rathfarnham, Dublin 16, D16 HY72, Ireland		
2	Comment	0.45	20	Frame Material	Cast Iron			
3	Map number		21	Frame Depth	0.05			
4	Node type	Manhole	22	Frame Size	650x650	37	Chamber Infiltration	None
5	Location	36 Whitecliff, Rathfarnham, Dublin 16, D16 HY72, Ireland	23	Shaft access	None	38	Chamber Roots	None
6	GPS X	714058.010	24	Access condition	OK	39	Shaft Infiltration	None
7	GPS Y	727085.407	25	Shaft Depth	0.30	40	Shaft Roots	None
8	GPS Cover level	76.707	26	Shaft Size	700x700	41	Bench Infiltration	None
9	Weather	Above freezing	27	Chamber Steps		42	Bench Roots	None
10	Manhole Status	Local Authority	28	Chamber Lads	4	43	Invert Infiltration	None
11	Survey status	Yes	29	Chamber Ldms		44	Invert Roots	None
12	Soffit type	Reducing Slab	30	Chamber Size	1200	45	Cover Condition	OK
13	System Type	Surface	31	Chamber Construction	Precast Units	46	Shaft Condition	OK
14	Cover Shape	Square	32	Toxic Atmosphere	N/A	47	Chamber Condition	OK
15	Cover material	Cast Iron	33	Vermin	N/A	48	Benching Condition	OK
16	Cover Duty	Medium	34	Flow %	0	49	Frame condition	Not Defective
17	Cover Hinged	No	35	Silt %	0	50	Year Built	2000-2004
18	Cover Locked	No	36	Surcharge		51	Comments	


Manhole photo

Manhole drawing

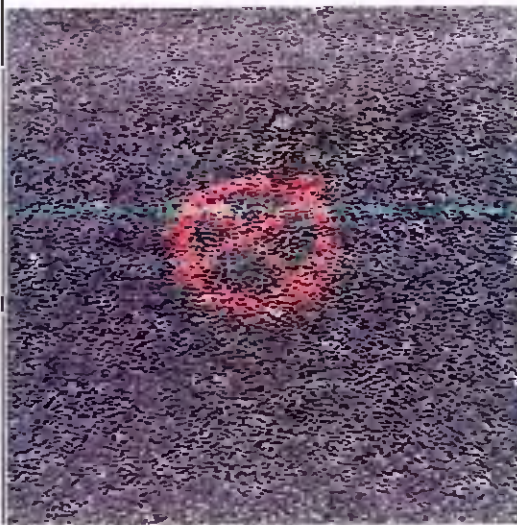


Incoming Pipe A		Incoming Pipe C		Incoming Pipe E		Downstream Pipe X		
1	MH Ref	?	1	MH Ref		1	MH Ref	
2	Pipe Size	225	2	Shape		2	Shape	Circular
3	Shape	Circular	3	Backdrop		3	Pipe Size	300
4	Backdrop		4	Backdrop Depth		4	Backdrop	
5	Backdrop Depth		5	Pipe Size		5	Backdrop Depth	
6	Material	Concrete	6	Material		6	Material	PVC
7	Lining		7	Lining		7	Lining	
8	Depth	1.63	8	Depth		8	Depth	1.72
Incoming Pipe B		Incoming Pipe D		Incoming Pipe F		Downstream Pipe Y		
1	MH Ref	?	1	MH Ref		1	MH Ref	
2	Pipe Size	225	2	Shape		2	Shape	
3	Shape	Circular	3	Pipe Size		3	Pipe Size	
4	Backdrop		4	Backdrop		4	Backdrop	
5	Backdrop Depth		5	Backdrop Depth		5	Backdrop Depth	
6	Material	Concrete	6	Material		6	Material	
7	Lining		7	Lining		7	Lining	
8	Depth	1.65	8	Depth		8	Depth	

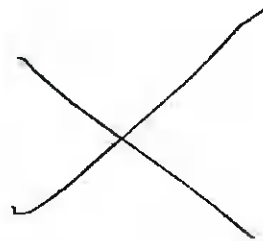
Tank Pipe and Drain Manhole survey

Start	2022-04-06 13:33:32	Node name	51.2	Location	 37 Whitecliff, Rathfarnham, Dublin 16, D16 WY07, Ireland	
1	Road Type	Road	19	Cover Size		
2	Comment		20	Frame Material		
3	Map number		21	Frame Depth		
4	Node type	Manhole	22	Frame Size		
5	Location	37 Whitecliff, Rath	23	Shaft access		
6	GPS X	714038.449	24	Access condition		
7	GPS Y	727080.341	25	Shaft Depth		
8	GPS Cover level	76.801	26	Shaft Size		
9	Weather	Above freezing	27	Chamber Steps		
10	Manhole Status	Local Authority	28	Chamber Lads		
11	Survey status	Buried	29	Chamber Ldns		
12	Soffit type		30	Chamber Size		
13	System Type		31	Chamber Construction		
14	Cover Shape		32	Toxic Atmosphere		
15	Cover material		33	Vermin		
16	Cover Duty		34	Flow %		
17	Cover Hinged		35	Silt %		
18	Cover Locked		36	Surcharge		
				51	Comments	MH BURIED UNDER TARMAC

Manhole photo



Manhole drawing



Incoming Pipe A		Incoming Pipe C		Incoming Pipe E		Downstream Pipe X	
1	MH Ref	1	MH Ref	1	MH Ref	1	MH Ref
2	Pipe Size	2	Shape	2	Shape	2	Shape
3	Shape	3	Backdrop	3	Pipe Size	3	Pipe Size
4	Backdrop	4	Backdrop Depth	4	Backdrop	4	Backdrop
5	Backdrop Depth	5	Pipe Size	5	Backdrop Depth	5	Backdrop Depth
6	Material	6	Material	6	Material	6	Material
7	Lining	7	Lining	7	Lining	7	Lining
8	Depth	8	Depth	8	Depth	8	Depth
Incoming Pipe B		Incoming Pipe D		Incoming Pipe F		Downstream Pipe Y	
1	MH Ref	1	MH Ref	1	MH Ref	1	MH Ref
2	Pipe Size	2	Shape	2	Shape	2	Shape
3	Shape	3	Pipe Size	3	Pipe Size	3	Pipe Size
4	Backdrop	4	Backdrop	4	Backdrop	4	Backdrop
5	Backdrop Depth	5	Backdrop Depth	5	Backdrop Depth	5	Backdrop Depth
6	Material	6	Material	6	Material	6	Material
7	Lining	7	Lining	7	Lining	7	Lining
8	Depth	8	Depth	8	Depth	8	Depth



Restaurants

Hotels

Attractions

Transit

G

31.6

S13
ENTERED

BOTH LINES FROM
MANHOLE GO
UPSTREAM INTO

Layers