



ARCH
ASSOCIATES

APPENDIX 5

DRAINAGE CCTV REPORT

CCTV survey report

Project Name – Novartis site Horsham - CCTV Survey

Project Number – 60950

Client – TPS Management

Document Register

Rev	Date	Prepared by	Role	Checked by	Role	Revision Reason
A	02/12/24	IF	CCTV Analyst	ER	OM	Original Issue

Introduction

An investigative CCTV survey was carried out at Novartis site, Horsham in order to assist in the redevelopment of the site.

The objective of the CCTV survey was to inspect all private and public drainage systems previously surveyed by Lanes Group in August 2018, as detailed in the report titled *Hampshire CC-Novartis RH12 2EE-PJ00305566* provided by the client.

The relevant manholes, along with their corresponding numbers from the recent utility survey conducted by MGS, are listed in the table below. We were unable to match certain manholes to the new survey due to the absence of a reference plan for cross-checking.

Lanes Group PIC	Murphy Geospatial
MHSW25	MH61
MHSW26	MH52
MHSW27	MH50
MHSW28	MH44
MHSW29	MH33
MHSW30	MH22
MHSW31	MH23
MHSW31A	MH24
MHSW32	Unable to identify
MHSW33	Unable to identify
MHSW34	Unable to identify
MHSW34A	Unable to identify
MHSW35	Unable to identify
MHSW36	Unable to identify
MHSW X	MH92
FW1	MH28
FW2	MH30
FW3	MH31
FW10	MH63
FW11	MH64
FW12	MH69

The following report includes:

- Abbreviated condition summary index with recommendations and associated costings
- Full details condition report with still images
- Full CCTV footage
- Site plan showing the location of inspection chambers and drain runs.

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 MURPHY GEOSPATIAL - HORSHAM

Project Number

Project Date
 25/11/2024

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Scoring Summary

Project Name
MURPHY GEOSPATIAL - HORSHAM

Project Number

Project Date
25/11/2024

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
15	MH66X	5	Collapsed drain or sewer, 100% cross-sectional area loss

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
4	MH30X	4	Joint displaced, large
5	MH31X	3	Joint displaced, medium
9	MH44X	3	Multiple defects
10	MH52X	4	Multiple defects
11	MH61X	4	Settled deposits, coarse, 20% cross-sectional area loss, finish
16	MH33X	3	Settled deposits, hard or compacted, 5% cross-sectional area loss

Abandoned Surveys

Section	PLR	Description
1	MH22X	Survey abandoned
2	MH23X	Survey abandoned
2	MH23X	Survey abandoned
8	MH27X	Survey abandoned
10	MH52X	Survey abandoned
10	MH52X	Survey abandoned
15	MH66X	Survey abandoned

Information

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

Section Profile

Project Name
MURPHY GEOSPATIAL - HORSHAM

Project Number

Project Date
25/11/2024

Circular, 0 mm

Item No.	Upstream Node	Downstream Node	Date	Road	Material	Total Length	Inspected Length
8	MH27	DOWNSTREAM	25/11/2024	WIMBLEHURST ROAD	Unidentified material	10.00 m	0.00 m

Total: 1 Inspection x Circular 0 mm, 0 mm = 10.00 m Total Length and 0.00 m Inspected Length

Circular, 75 mm

Item No.	Upstream Node	Downstream Node	Date	Road	Material	Total Length	Inspected Length
6	MH32	MH31	25/11/2024	WIMBLEHURST ROAD	Polyvinyl chloride	14.78 m	14.78 m

Total: 1 Inspection x Circular 75 mm, 0 mm = 14.78 m Total Length and 14.78 m Inspected Length

Circular, 100 mm

Item No.	Upstream Node	Downstream Node	Date	Road	Material	Total Length	Inspected Length
7	MH29	MH27	25/11/2024	WIMBLEHURST ROAD	Polyvinyl chloride	7.64 m	7.64 m
14	MH70	MH69	25/11/2024	WIMBLEHURST ROAD	Cast iron	0.50 m	0.50 m
15	MH66	UNKNOWN	25/11/2024	WIMBLEHURST ROAD	Vitrified clay	15.00 m	0.00 m

Total: 3 Inspections x Circular 100 mm, 0 mm = 23.14 m Total Length and 8.14 m Inspected Length

Circular, 150 mm

Item No.	Upstream Node	Downstream Node	Date	Road	Material	Total Length	Inspected Length
1	MH22	MH23	25/11/2024	WIMBLEHURST ROAD	Vitrified clay	9.00 m	0.00 m
2	MH23	MH24	25/11/2024	WIMBLEHURST ROAD	Vitrified clay	3.00 m	0.00 m
2	MH23	MH24	25/11/2024	WIMBLEHURST ROAD	Vitrified clay	3.00 m	0.00 m
3	MH28	MH30	25/11/2024	WIMBLEHURST ROAD	Vitrified clay	5.49 m	5.49 m
4	MH30	MH31	25/11/2024	WIMBLEHURST ROAD	Vitrified clay	6.18 m	6.18 m
5	MH31	MH41	25/11/2024	WIMBLEHURST ROAD	Vitrified clay	14.10 m	14.10 m
12	MH64	MH69	25/11/2024	WIMBLEHURST ROAD	Cast iron	12.02 m	12.02 m
13	MH63	MH69	25/11/2024	WIMBLEHURST ROAD	Vitrified clay	7.64 m	7.64 m

Total: 8 Inspections x Circular 150 mm, 0 mm = 57.43 m Total Length and 45.43 m Inspected Length

Circular, 600 mm

Item No.	Upstream Node	Downstream Node	Date	Road	Material	Total Length	Inspected Length
9	MH44	MH33	25/11/2024	WIMBLEHURST ROAD	Concrete	53.36 m	53.36 m
10	MH52	MH50	25/11/2024	WIMBLEHURST ROAD	Concrete	20.00 m	0.10 m
10	MH52	MH50	25/11/2024	WIMBLEHURST ROAD	Concrete	20.00 m	0.21 m

Section Profile

Project Name MURPHY GEOSPATIAL - HORSHAM	Project Number	Project Date 25/11/2024
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11	MH61	MH52	25/11/2024	WIMBLEHURST ROAD	Concrete	32.42 m	32.41 m
16	MH33	MH92	25/11/2024	WIMBLEHURST ROAD	Concrete	29.66 m	29.66 m

Total: 5 Inspections x Circular 600 mm, 0 mm = 135.44 m Total Length and 115.74 m Inspected Length

Total: 18 Inspections = 240.79 m Total Length and 184.09 m Inspected Length

Section Summary

Project Name MURPHY GEOSPATIAL - HORSHAM	Project Number	Project Date 25/11/2024
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Number of sections	16
Total length of sections	240.79 m
Total length of inspected sections	184.09 m
Total length of not inspected sections	56.69 m
Number of abandoned inspections	7
Number of section inspection photos	60
Number of section inspection videos	13
Number of section inspection scans	0
Number of section inclination measurements	0

PLR:	MH22X	Upstream Node:	MH22
Inspection Direction:	Downstream	Downstream Node:	MH23
Inspected Length:	0.00 m	Dia/Height:	150 mm
Total Length:	9.00 m	Material:	Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH22
2	0.00	WL	Water level, 100% of the vertical dimension
3	0.00	REM	General remark
4	0.00	SA	Survey abandoned

PLR:	MH23X	Upstream Node:	MH23
Inspection Direction:	Upstream	Downstream Node:	MH24
Inspected Length:	0.00 m	Dia/Height:	150 mm
Total Length:	3.00 m	Material:	Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH24
2	0.00	WL	Water level, 100% of the vertical dimension
3	0.00	REM	General remark
4	0.00	SA	Survey abandoned

PLR:	MH23X	Upstream Node:	MH23
Inspection Direction:	Downstream	Downstream Node:	MH24
Inspected Length:	0.00 m	Dia/Height:	150 mm
Total Length:	3.00 m	Material:	Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH23
2	0.00	WL	Water level, 100% of the vertical dimension
3	0.00	REM	General remark

Section Summary

Project Name MURPHY GEOSPATIAL - HORSHAM	Project Number	Project Date 25/11/2024
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No.	m+	Code	Observation																
4	0.00	SA	Survey abandoned																
<table> <tr> <td>PLR:</td><td>MH28X</td><td>Upstream Node:</td><td>MH28</td></tr> <tr> <td>Inspection Direction:</td><td>Downstream</td><td>Downstream Node:</td><td>MH30</td></tr> <tr> <td>Inspected Length:</td><td>5.49 m</td><td>Dia/Height:</td><td>150 mm</td></tr> <tr> <td>Total Length:</td><td>5.49 m</td><td>Material:</td><td>Vitrified clay</td></tr> </table>				PLR:	MH28X	Upstream Node:	MH28	Inspection Direction:	Downstream	Downstream Node:	MH30	Inspected Length:	5.49 m	Dia/Height:	150 mm	Total Length:	5.49 m	Material:	Vitrified clay
PLR:	MH28X	Upstream Node:	MH28																
Inspection Direction:	Downstream	Downstream Node:	MH30																
Inspected Length:	5.49 m	Dia/Height:	150 mm																
Total Length:	5.49 m	Material:	Vitrified clay																
No.	m+	Code	Observation																
1	0.00	MH	Start node, manhole, reference: MH28																
2	0.00	WL	Water level, 0% of the vertical dimension																
3	5.49	MHF	Finish node, manhole, reference: MH30																
<table> <tr> <td>PLR:</td><td>MH30X</td><td>Upstream Node:</td><td>MH30</td></tr> <tr> <td>Inspection Direction:</td><td>Downstream</td><td>Downstream Node:</td><td>MH31</td></tr> <tr> <td>Inspected Length:</td><td>6.18 m</td><td>Dia/Height:</td><td>150 mm</td></tr> <tr> <td>Total Length:</td><td>6.18 m</td><td>Material:</td><td>Vitrified clay</td></tr> </table>				PLR:	MH30X	Upstream Node:	MH30	Inspection Direction:	Downstream	Downstream Node:	MH31	Inspected Length:	6.18 m	Dia/Height:	150 mm	Total Length:	6.18 m	Material:	Vitrified clay
PLR:	MH30X	Upstream Node:	MH30																
Inspection Direction:	Downstream	Downstream Node:	MH31																
Inspected Length:	6.18 m	Dia/Height:	150 mm																
Total Length:	6.18 m	Material:	Vitrified clay																
No.	m+	Code	Observation																
1	0.00	MH	Start node, manhole, reference: MH30																
2	0.00	WL	Water level, 0% of the vertical dimension																
3	0.28	JDL	Joint displaced, large																
4	6.18	MHF	Finish node, manhole, reference: MH31																
<table> <tr> <td>PLR:</td><td>MH31X</td><td>Upstream Node:</td><td>MH31</td></tr> <tr> <td>Inspection Direction:</td><td>Downstream</td><td>Downstream Node:</td><td>MH41</td></tr> <tr> <td>Inspected Length:</td><td>14.10 m</td><td>Dia/Height:</td><td>150 mm</td></tr> <tr> <td>Total Length:</td><td>14.10 m</td><td>Material:</td><td>Vitrified clay</td></tr> </table>				PLR:	MH31X	Upstream Node:	MH31	Inspection Direction:	Downstream	Downstream Node:	MH41	Inspected Length:	14.10 m	Dia/Height:	150 mm	Total Length:	14.10 m	Material:	Vitrified clay
PLR:	MH31X	Upstream Node:	MH31																
Inspection Direction:	Downstream	Downstream Node:	MH41																
Inspected Length:	14.10 m	Dia/Height:	150 mm																
Total Length:	14.10 m	Material:	Vitrified clay																
No.	m+	Code	Observation																
1	0.00	MH	Start node, manhole, reference: MH31																
2	0.00	WL	Water level, 0% of the vertical dimension																
3	9.62	JDM	Joint displaced, medium																
4	12.66	LR	Line deviates right																
5	14.10	MHF	Finish node, manhole, reference: MH41																
<table> <tr> <td>PLR:</td><td>MH32X</td><td>Upstream Node:</td><td>MH32</td></tr> <tr> <td>Inspection Direction:</td><td>Upstream</td><td>Downstream Node:</td><td>MH31</td></tr> <tr> <td>Inspected Length:</td><td>14.78 m</td><td>Dia/Height:</td><td>75 mm</td></tr> <tr> <td>Total Length:</td><td>14.78 m</td><td>Material:</td><td>Polyvinyl chloride</td></tr> </table>				PLR:	MH32X	Upstream Node:	MH32	Inspection Direction:	Upstream	Downstream Node:	MH31	Inspected Length:	14.78 m	Dia/Height:	75 mm	Total Length:	14.78 m	Material:	Polyvinyl chloride
PLR:	MH32X	Upstream Node:	MH32																
Inspection Direction:	Upstream	Downstream Node:	MH31																
Inspected Length:	14.78 m	Dia/Height:	75 mm																
Total Length:	14.78 m	Material:	Polyvinyl chloride																
No.	m+	Code	Observation																
1	0.00	MH	Start node, manhole, reference: MH31																
2	0.00	WL	Water level, 0% of the vertical dimension																
3	8.53	WL	Water level, 50% of the vertical dimension																
4	8.55	WL	Water level, 100% of the vertical dimension																
5	8.55	CUW	Loss of vision, camera under water, start																
6	14.78	CUW	Loss of vision, camera under water, finish																
7	14.78	MHF	Finish node, manhole, reference: MH32																

Section Summary

Project Name MURPHY GEOSPATIAL - HORSHAM	Project Number	Project Date 25/11/2024
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PLR:	MH29X	Upstream Node:	MH29
Inspection Direction:	Downstream	Downstream Node:	MH27
Inspected Length:	7.64 m	Dia/Height:	100 mm
Total Length:	7.64 m	Material:	Polyvinyl chloride

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH29
2	0.00	WL	Water level, 0% of the vertical dimension
3	6.44	LL	Line deviates left
4	7.08	REM	General remark
5	7.64	MHF	Finish node, manhole, reference: MH27

PLR:	MH27X	Upstream Node:	MH27
Inspection Direction:	Downstream	Downstream Node:	DOWNSTREAM
Inspected Length:	0.00 m	Dia/Height:	
Total Length:	10.00 m	Material:	Unidentified material

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH27
2	0.00	WL	Water level, 100% of the vertical dimension
3	0.00	REM	General remark
4	0.00	SA	Survey abandoned

PLR:	MH44X	Upstream Node:	MH44
Inspection Direction:	Upstream	Downstream Node:	MH33
Inspected Length:	53.36 m	Dia/Height:	600 mm
Total Length:	53.36 m	Material:	Concrete

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH33
2	0.00	WL	Water level, 5% of the vertical dimension
3	4.19	DEC	Settled deposits, hard or compacted, 5% cross-sectional area loss
4	5.27	LL	Line deviates left
5	8.71	WL	Water level, 10% of the vertical dimension
6	16.29	WL	Water level, 5% of the vertical dimension
7	25.09	LL	Line deviates left
8	37.62	DEC	Settled deposits, hard or compacted, 5% cross-sectional area loss
9	49.61	DEC	Settled deposits, hard or compacted, 5% cross-sectional area loss
10	53.36	MHF	Finish node, manhole, reference: MH44

PLR:	MH52X	Upstream Node:	MH52
Inspection Direction:	Downstream	Downstream Node:	MH50
Inspected Length:	0.10 m	Dia/Height:	600 mm
Total Length:	20.00 m	Material:	Concrete

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH52
2	0.00	WL	Water level, 30% of the vertical dimension
3	0.01	DES	Settled deposits, fine, 30% cross-sectional area loss
4	0.10	REM	General remark

Section Summary

Project Name MURPHY GEOSPATIAL - HORSHAM	Project Number	Project Date 25/11/2024
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No.	m+	Code	Observation																
5	0.10	SA	Survey abandoned																
<table> <tr> <td>PLR:</td><td>MH52X</td><td>Upstream Node:</td><td>MH52</td></tr> <tr> <td>Inspection Direction:</td><td>Upstream</td><td>Downstream Node:</td><td>MH50</td></tr> <tr> <td>Inspected Length:</td><td>0.21 m</td><td>Dia/Height:</td><td>600 mm</td></tr> <tr> <td>Total Length:</td><td>20.00 m</td><td>Material:</td><td>Concrete</td></tr> </table>				PLR:	MH52X	Upstream Node:	MH52	Inspection Direction:	Upstream	Downstream Node:	MH50	Inspected Length:	0.21 m	Dia/Height:	600 mm	Total Length:	20.00 m	Material:	Concrete
PLR:	MH52X	Upstream Node:	MH52																
Inspection Direction:	Upstream	Downstream Node:	MH50																
Inspected Length:	0.21 m	Dia/Height:	600 mm																
Total Length:	20.00 m	Material:	Concrete																
No.	m+	Code	Observation																
1	0.00	MH	Start node, manhole, reference: MH50																
2	0.00	WL	Water level, 5% of the vertical dimension																
3	0.16	DEC	Settled deposits, hard or compacted, 20% cross-sectional area loss																
4	0.21	REM	General remark																
5	0.21	SA	Survey abandoned																
<table> <tr> <td>PLR:</td><td>MH61X</td><td>Upstream Node:</td><td>MH61</td></tr> <tr> <td>Inspection Direction:</td><td>Upstream</td><td>Downstream Node:</td><td>MH52</td></tr> <tr> <td>Inspected Length:</td><td>32.41 m</td><td>Dia/Height:</td><td>600 mm</td></tr> <tr> <td>Total Length:</td><td>32.42 m</td><td>Material:</td><td>Concrete</td></tr> </table>				PLR:	MH61X	Upstream Node:	MH61	Inspection Direction:	Upstream	Downstream Node:	MH52	Inspected Length:	32.41 m	Dia/Height:	600 mm	Total Length:	32.42 m	Material:	Concrete
PLR:	MH61X	Upstream Node:	MH61																
Inspection Direction:	Upstream	Downstream Node:	MH52																
Inspected Length:	32.41 m	Dia/Height:	600 mm																
Total Length:	32.42 m	Material:	Concrete																
No.	m+	Code	Observation																
1	0.00	MH	Start node, manhole, reference: MH52																
2	0.00	WL	Water level, 30% of the vertical dimension																
3	0.09	DER	Settled deposits, coarse, 20% cross-sectional area loss, start																
4	19.72	WL	Water level, 20% of the vertical dimension																
5	20.52	DER	Settled deposits, coarse, 20% cross-sectional area loss, finish																
6	20.52	DES	Settled deposits, fine, 10% cross-sectional area loss, start																
7	25.95	LL	Line deviates left																
8	32.41	DES	Settled deposits, fine, 10% cross-sectional area loss, finish																
9	32.41	MHF	Finish node, manhole, reference: MH61																
<table> <tr> <td>PLR:</td><td>MH64X</td><td>Upstream Node:</td><td>MH64</td></tr> <tr> <td>Inspection Direction:</td><td>Downstream</td><td>Downstream Node:</td><td>MH69</td></tr> <tr> <td>Inspected Length:</td><td>12.02 m</td><td>Dia/Height:</td><td>150 mm</td></tr> <tr> <td>Total Length:</td><td>12.02 m</td><td>Material:</td><td>Cast iron</td></tr> </table>				PLR:	MH64X	Upstream Node:	MH64	Inspection Direction:	Downstream	Downstream Node:	MH69	Inspected Length:	12.02 m	Dia/Height:	150 mm	Total Length:	12.02 m	Material:	Cast iron
PLR:	MH64X	Upstream Node:	MH64																
Inspection Direction:	Downstream	Downstream Node:	MH69																
Inspected Length:	12.02 m	Dia/Height:	150 mm																
Total Length:	12.02 m	Material:	Cast iron																
No.	m+	Code	Observation																
1	0.00	MH	Start node, manhole, reference: MH64																
2	0.00	WL	Water level, 0% of the vertical dimension																
3	1.74	LL	Line deviates left																
4	12.02	MHF	Finish node, manhole, reference: MH69																
<table> <tr> <td>PLR:</td><td>MH63X</td><td>Upstream Node:</td><td>MH63</td></tr> <tr> <td>Inspection Direction:</td><td>Downstream</td><td>Downstream Node:</td><td>MH69</td></tr> <tr> <td>Inspected Length:</td><td>7.64 m</td><td>Dia/Height:</td><td>150 mm</td></tr> <tr> <td>Total Length:</td><td>7.64 m</td><td>Material:</td><td>Vitrified clay</td></tr> </table>				PLR:	MH63X	Upstream Node:	MH63	Inspection Direction:	Downstream	Downstream Node:	MH69	Inspected Length:	7.64 m	Dia/Height:	150 mm	Total Length:	7.64 m	Material:	Vitrified clay
PLR:	MH63X	Upstream Node:	MH63																
Inspection Direction:	Downstream	Downstream Node:	MH69																
Inspected Length:	7.64 m	Dia/Height:	150 mm																
Total Length:	7.64 m	Material:	Vitrified clay																
No.	m+	Code	Observation																
1	0.00	MH	Start node, manhole, reference: MH63																
2	0.00	WL	Water level, 0% of the vertical dimension																
3	7.20	REM	General remark																

Section Summary

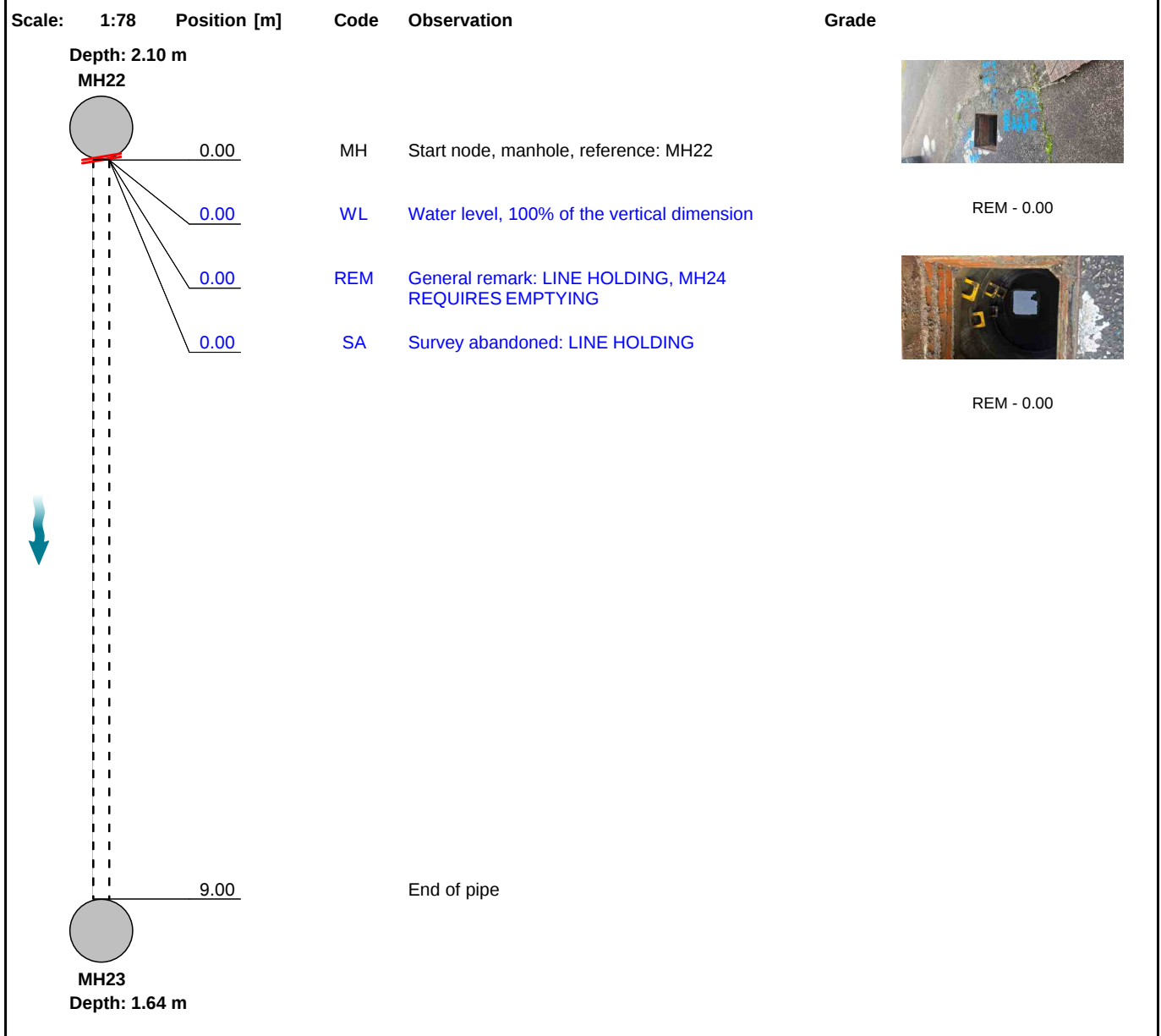
Project Name MURPHY GEOSPATIAL - HORSHAM	Project Number	Project Date 25/11/2024
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No.	m+	Code	Observation																
4	7.64	MHF	Finish node, manhole, reference: MH69																
<table> <tr> <td>PLR:</td><td>MH70X</td><td>Upstream Node:</td><td>MH70</td></tr> <tr> <td>Inspection Direction:</td><td>Downstream</td><td>Downstream Node:</td><td>MH69</td></tr> <tr> <td>Inspected Length:</td><td>0.50 m</td><td>Dia/Height:</td><td>100 mm</td></tr> <tr> <td>Total Length:</td><td>0.50 m</td><td>Material:</td><td>Cast iron</td></tr> </table>				PLR:	MH70X	Upstream Node:	MH70	Inspection Direction:	Downstream	Downstream Node:	MH69	Inspected Length:	0.50 m	Dia/Height:	100 mm	Total Length:	0.50 m	Material:	Cast iron
PLR:	MH70X	Upstream Node:	MH70																
Inspection Direction:	Downstream	Downstream Node:	MH69																
Inspected Length:	0.50 m	Dia/Height:	100 mm																
Total Length:	0.50 m	Material:	Cast iron																
No.	m+	Code	Observation																
1	0.00	MH	Start node, manhole, reference: MH70																
2	0.00	WL	Water level, 0% of the vertical dimension																
3	0.50	MHF	Finish node, manhole, reference: MH69																
<table> <tr> <td>PLR:</td><td>MH66X</td><td>Upstream Node:</td><td>MH66</td></tr> <tr> <td>Inspection Direction:</td><td>Downstream</td><td>Downstream Node:</td><td>UNKNOWN</td></tr> <tr> <td>Inspected Length:</td><td>0.00 m</td><td>Dia/Height:</td><td>100 mm</td></tr> <tr> <td>Total Length:</td><td>15.00 m</td><td>Material:</td><td>Vitrified clay</td></tr> </table>				PLR:	MH66X	Upstream Node:	MH66	Inspection Direction:	Downstream	Downstream Node:	UNKNOWN	Inspected Length:	0.00 m	Dia/Height:	100 mm	Total Length:	15.00 m	Material:	Vitrified clay
PLR:	MH66X	Upstream Node:	MH66																
Inspection Direction:	Downstream	Downstream Node:	UNKNOWN																
Inspected Length:	0.00 m	Dia/Height:	100 mm																
Total Length:	15.00 m	Material:	Vitrified clay																
No.	m+	Code	Observation																
1	0.00	MH	Start node, manhole, reference: MH66																
2	0.00	WL	Water level, 0% of the vertical dimension																
3	0.00	REM	General remark																
4	0.00	XP	Collapsed drain or sewer, 100% cross-sectional area loss																
5	0.00	REM	General remark																
6	0.00	SA	Survey abandoned																
<table> <tr> <td>PLR:</td><td>MH33X</td><td>Upstream Node:</td><td>MH33</td></tr> <tr> <td>Inspection Direction:</td><td>Upstream</td><td>Downstream Node:</td><td>MH92</td></tr> <tr> <td>Inspected Length:</td><td>29.66 m</td><td>Dia/Height:</td><td>600 mm</td></tr> <tr> <td>Total Length:</td><td>29.66 m</td><td>Material:</td><td>Concrete</td></tr> </table>				PLR:	MH33X	Upstream Node:	MH33	Inspection Direction:	Upstream	Downstream Node:	MH92	Inspected Length:	29.66 m	Dia/Height:	600 mm	Total Length:	29.66 m	Material:	Concrete
PLR:	MH33X	Upstream Node:	MH33																
Inspection Direction:	Upstream	Downstream Node:	MH92																
Inspected Length:	29.66 m	Dia/Height:	600 mm																
Total Length:	29.66 m	Material:	Concrete																
No.	m+	Code	Observation																
1	0.00	MH	Start node, manhole, reference: MH92																
2	0.00	WL	Water level, 10% of the vertical dimension																
3	0.62	DEC	Settled deposits, hard or compacted, 5% cross-sectional area loss																
4	11.51	WL	Water level, 20% of the vertical dimension																
5	20.72	WL	Water level, 10% of the vertical dimension																
6	29.66	MHF	Finish node, manhole, reference: MH33																

Section Inspection - 25/11/2024 - MH22X

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
1	1	25/11/24	9:58	NOVARTIS SITE	No Rain Or Snow	No	MH22X
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Simon		LL72AXU		Pushrod	0.00 m	Private Drain	Not Specified

Town or Village:	Horsham	Inspection Direction:	Downstream	Upstream Node:	MH22
Road:	Wimblehurst Road	Inspected Length:	0.00 m	Upstream Pipe Depth:	2.100 m
Location:	Difficult access	Total Length:	9.00 m	Downstream Node:	MH23
Surface Type:	Concrete Highway	Joint Length:	1.00 m	Downstream Pipe Depth:	1.640 m
Use:	Surface water		Pipe Shape:	Circular	
Type of Pipe:	Gravity drain/sewer		Dia/Height:	150 mm	
Flow Control:	No flow control		Material:	Vitrified clay	
Year Constructed:	1900		Lining Type:	No Lining	
Inspection Purpose:	Sample condition survey		Lining Material:	No Lining	
Comments:	LINE HOLDING FROM INTERCEPTOR - MH24				
Recommendations:	INTERCEPTOR REQUIRES EMPTYING TO CLEAN				



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 - 25/11/2024 - MH22X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
1	Downstream	MH22X	NOVARTIS SITE	NOVARTIS SITE



MH22X_85d67e76-ba9a-4451-bc9d-5637e654a12e_20241125_100811.jpg, 00:00:03, 0.00 m
 General remark, LINE HOLDING, MH24 REQUIRES EMPTYING

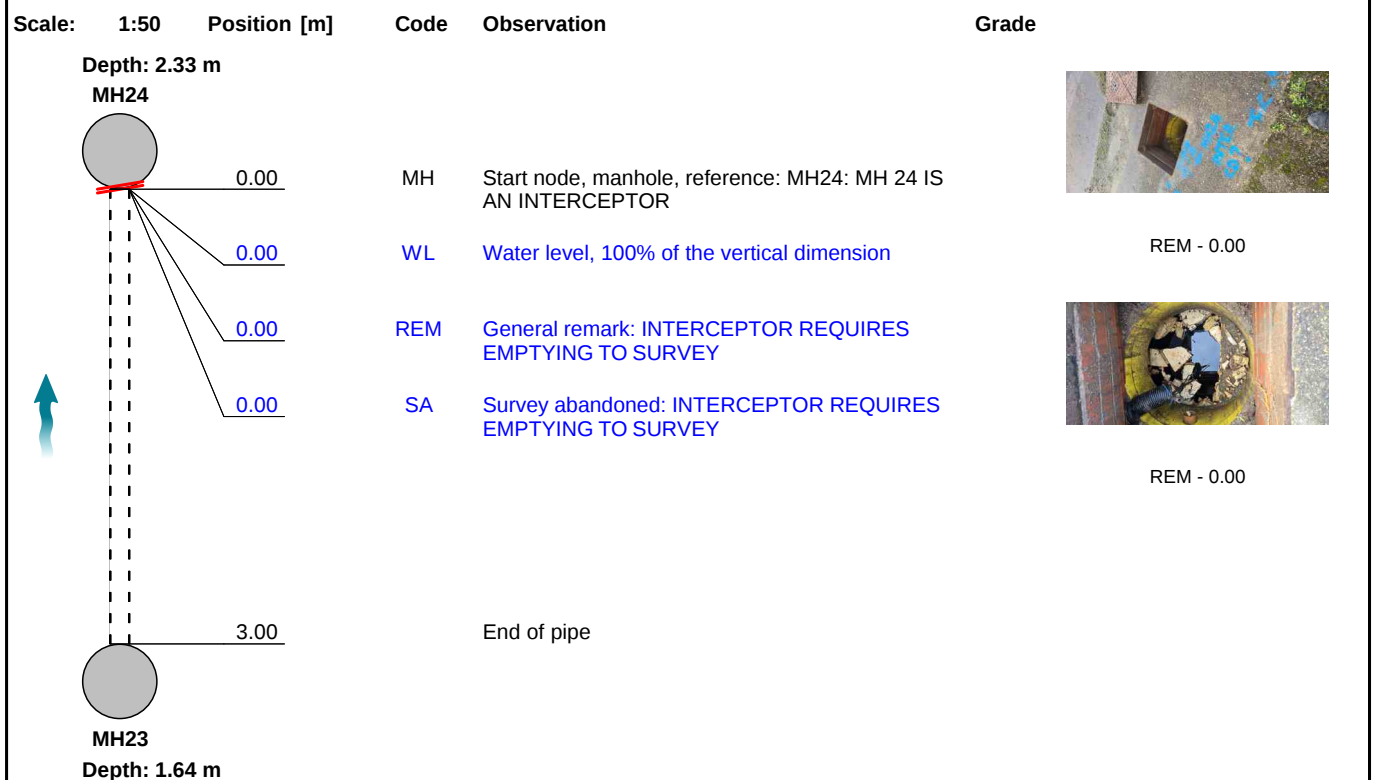


MH22X_36af7140-474c-43e1-a1e5-436e68e3ebf7_20241125_100827.jpg, 00:00:03, 0.00 m
 General remark, LINE HOLDING, MH24 REQUIRES EMPTYING

Section Inspection - 25/11/2024 - MH23X

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
2	2	25/11/24	10:09	NOVARTIS SITE	No Rain Or Snow	No	MH23X
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Simon		LL72AXU		Pushrod	0.00 m	Private Drain	Not Specified

Town or Village:	Horsham	Inspection Direction:	Upstream	Upstream Node:	MH23
Road:	Wimblehurst Road	Inspected Length:	0.00 m	Upstream Pipe Depth:	1.640 m
Location:	Difficult access	Total Length:	3.00 m	Downstream Node:	MH24
Surface Type:	Concrete Highway	Joint Length:	1.00 m	Downstream Pipe Depth:	2.330 m
Use:	Surface water	Pipe Shape: Circular Dia/Height: 150 mm Material: Vitrified clay Lining Type: No Lining Lining Material: No Lining			
Type of Pipe:	Gravity drain/sewer				
Flow Control:	No flow control				
Year Constructed:	1900				
Inspection Purpose:	Sample condition survey				
Comments:	REQUIRES SUCKING OUT TO SURVEY				
Recommendations:	REQUIRES SUCKING OUT TO EMPTY				



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 - 25/11/2024 - MH23X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
2	Upstream	MH23X	NOVARTIS SITE	NOVARTIS SITE



MH23X_1657776c-ee6a-4a16-afa8-c539fb257ac9_20241125_100929.jpg, 00:00:03, 0.00 m
 General remark, INTERCEPTOR REQUIRES EMPTYING TO SURVEY

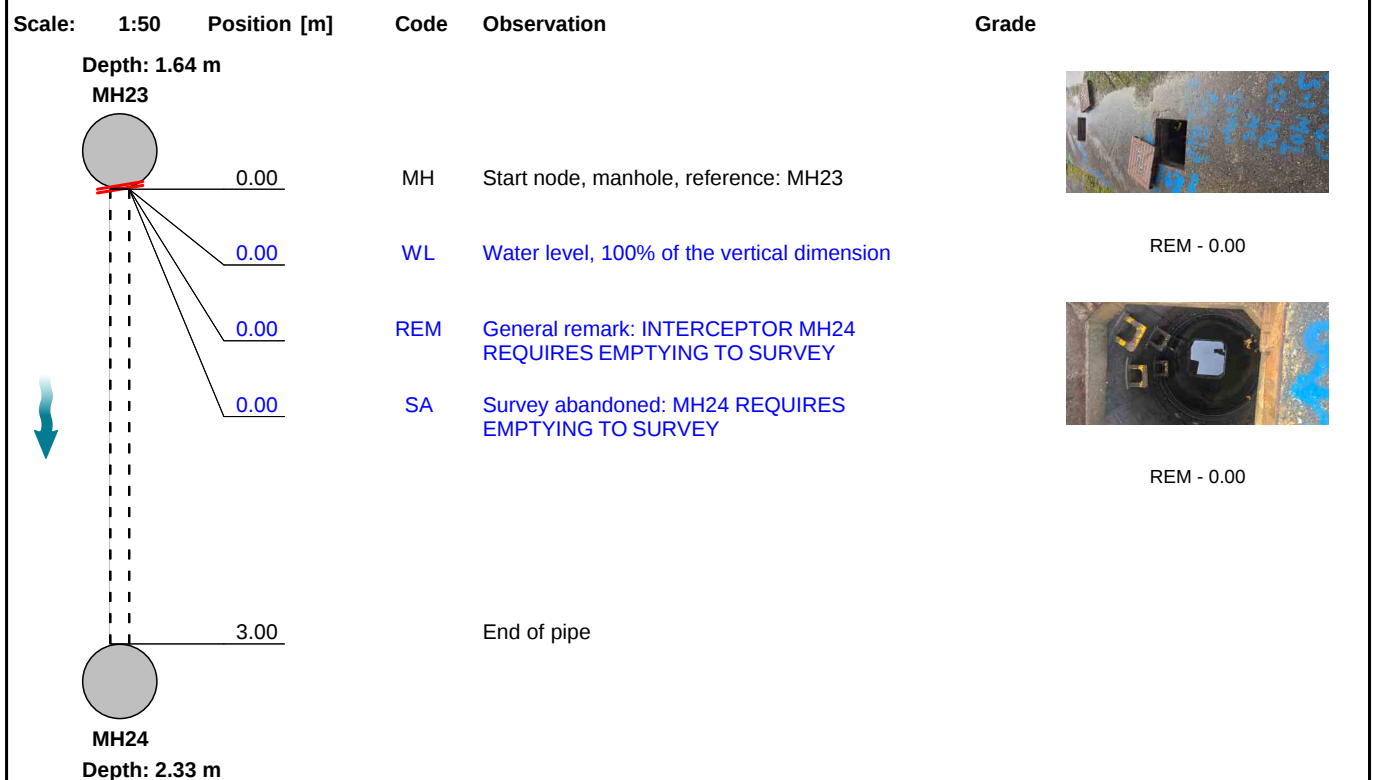


MH23X_b2a02f52-d2a0-40f8-8de7-244e290f80c2_20241125_100934.jpg, 00:00:03, 0.00 m
 General remark, INTERCEPTOR REQUIRES EMPTYING TO SURVEY

Section Inspection - 25/11/2024 - MH23X

Item No. 2	Insp. No. 1	Date 25/11/24	Time 10:05	Client's Job Ref NOVARTIS SITE	Weather No Rain Or Snow	Pre Cleaned No	PLR MH23X
Operator Simon		Vehicle LL72AXU		Camera Pushrod	Preset Length 0.00 m	Legal Status Private Drain	Alternative ID Not Specified

Town or Village:	Horsham	Inspection Direction:	Downstream	Upstream Node:	MH23
Road:	Wimblehurst Road	Inspected Length:	0.00 m	Upstream Pipe Depth:	1.640 m
Location:	Difficult access	Total Length:	3.00 m	Downstream Node:	MH24
Surface Type:	Concrete Highway	Joint Length:	1.00 m	Downstream Pipe Depth:	2.330 m
Use:	Surface water	Pipe Shape: Circular Dia/Height: 150 mm Material: Vitrified clay Lining Type: No Lining Lining Material: No Lining			
Type of Pipe:	Gravity drain/sewer				
Flow Control:	No flow control				
Year Constructed:	1900				
Inspection Purpose:	Sample condition survey				
Comments:	INTERCEPTOR - MH24 REQUIRES EMPTYING TO SURVEY				
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 Pictures - 25/11/2024 - MH23X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
2	Downstream	MH23X	NOVARTIS SITE	NOVARTIS SITE



MH23X_7e7af6c9-528c-478b-9e05-63c4d5869097_20241125_100835.jpg, 00:00:03, 0.00 m
 General remark, INTERCEPTOR MH24 REQUIRES EMPTYING TO SURVEY



MH23X_6dcffdca-c3d8-4f4e-adff-02b165a218c5_20241125_100841.jpg, 00:00:03, 0.00 m
 General remark, INTERCEPTOR MH24 REQUIRES EMPTYING TO SURVEY

Section Inspection - 25/11/2024 - MH28X

Item No. 3	Insp. No. 1	Date 25/11/24	Time 10:46	Client's Job Ref NOVARTIS SITE	Weather No Rain Or Snow	Pre Cleaned Yes	PLR MH28X
Operator Simon		Vehicle LL72AXU		Camera Pushrod	Preset Length 0.00 m	Legal Status Private Drain	Alternative ID Not Specified

Town or Village:	Horsham	Inspection Direction:	Downstream	Upstream Node:	MH28
Road:	Wimblehurst Road	Inspected Length:	5.49 m	Upstream Pipe Depth:	1.080 m
Location:	Difficult access	Total Length:	5.49 m	Downstream Node:	MH30
Surface Type:	Concrete Highway	Joint Length:	1.00 m	Downstream Pipe Depth:	1.200 m
Use:	Foul		Pipe Shape:	Circular	
Type of Pipe:	Gravity drain/sewer		Dia/Height:	150 mm	
Flow Control:	No flow control		Material:	Vitrified clay	
Year Constructed:	1900		Lining Type:	No Lining	
Inspection Purpose:	Sample condition survey		Lining Material:	No Lining	
Comments:	SURVEY COMPLETE				
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 Pictures - 25/11/2024 - MH28X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
3	Downstream	MH28X	NOVARTIS SITE	NOVARTIS SITE



MH28X_e42b9812-bda0-4a33-aaa0-95b41106b23d_20241125_104542.jpg, 00:00:01, 0.00 m
 Start node, manhole, reference: MH28

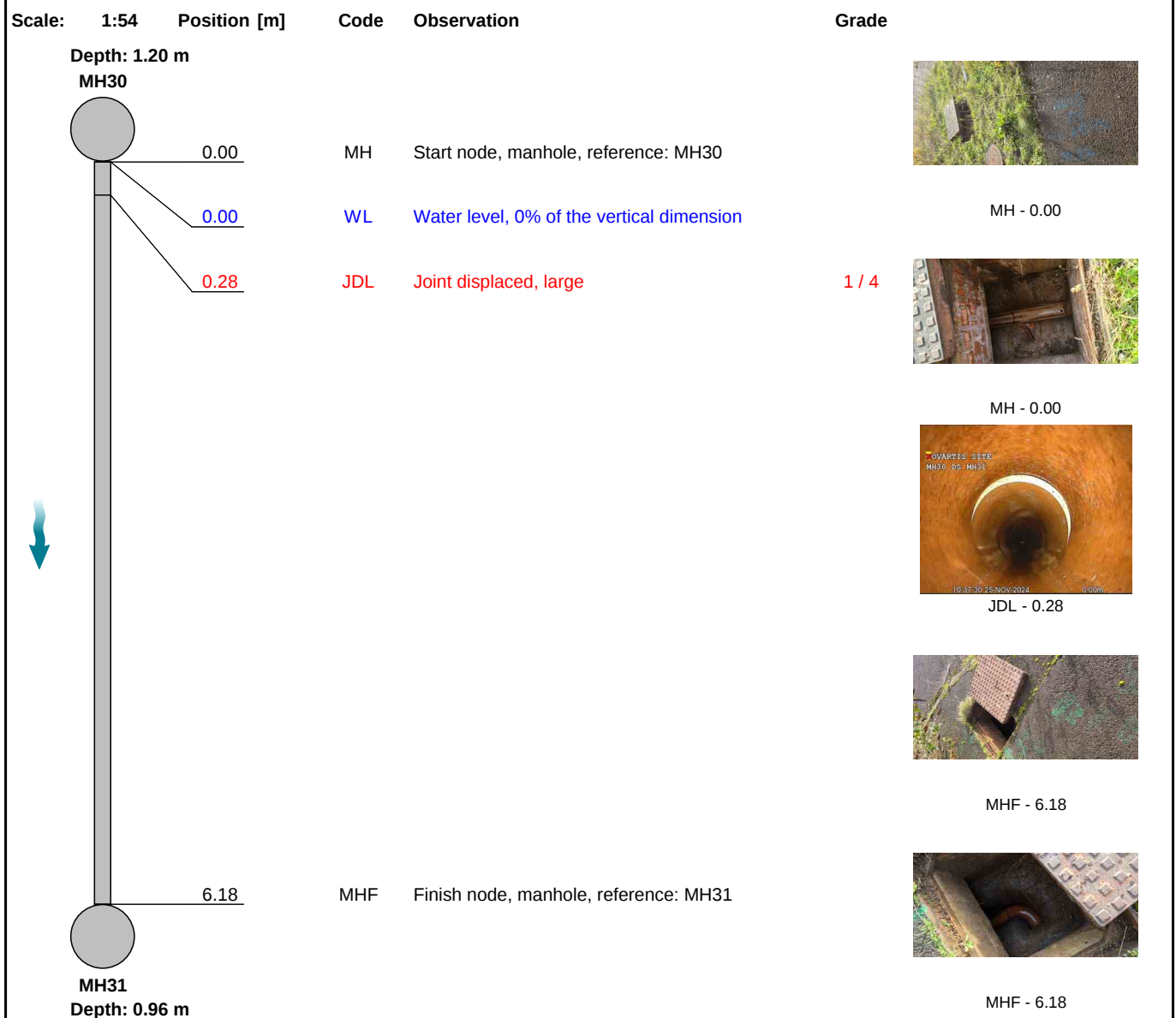


MH28X_122d1d2b-3703-4886-af15-0fd485a07d1e_20241125_104619.jpg, 00:00:01, 0.00 m
 Start node, manhole, reference: MH28

Section Inspection - 25/11/2024 - MH30X

Item No. 4	Insp. No. 1	Date 25/11/24	Time 10:46	Client's Job Ref NOVARTIS SITE	Weather No Rain Or Snow	Pre Cleaned Yes	PLR MH30X
Operator Simon		Vehicle LL72AXU		Camera Pushrod	Preset Length 0.00 m	Legal Status Private Drain	Alternative ID Not Specified

Town or Village:	Horsham	Inspection Direction:	Downstream	Upstream Node:	MH30
Road:	Wimblehurst Road	Inspected Length:	6.18 m	Upstream Pipe Depth:	1.200 m
Location:	Difficult access	Total Length:	6.18 m	Downstream Node:	MH31
Surface Type:	Concrete Highway	Joint Length:	1.00 m	Downstream Pipe Depth:	0.960 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	1900	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		
Comments:	SURVEY COMPLETE				
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
1	2.0	0.3	2.0	1.0	1	5.0	0.8	5.0	4.0

Section Pictures - 25/11/2024 - MH30X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
4	Downstream	MH30X	NOVARTIS SITE	NOVARTIS SITE



MH30X_d83866e5-e9f4-46b6-9dfc-659515171af2_20241125_104625.jpg, 00:00:01, 0.00 m
Start node, manhole, reference: MH30



MH30X_a250596f-879c-4699-83ad-ff6263b89e11_20241125_104630.jpg, 00:00:01, 0.00 m
Start node, manhole, reference: MH30



MH30X_be1fa4e2-0bad-4938-8c7d-66491d64b79e_20241125_104944_019.jpg, 00:00:10, 0.28 m
Joint displaced, large



MH30X_36e63094-db5f-4636-ba2e-040563ca36ee_20241125_105029.jpg, 00:00:41, 6.18 m
Finish node, manhole, reference: MH31

Section Pictures - 25/11/2024 - MH30X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
4	Downstream	MH30X	NOVARTIS SITE	NOVARTIS SITE

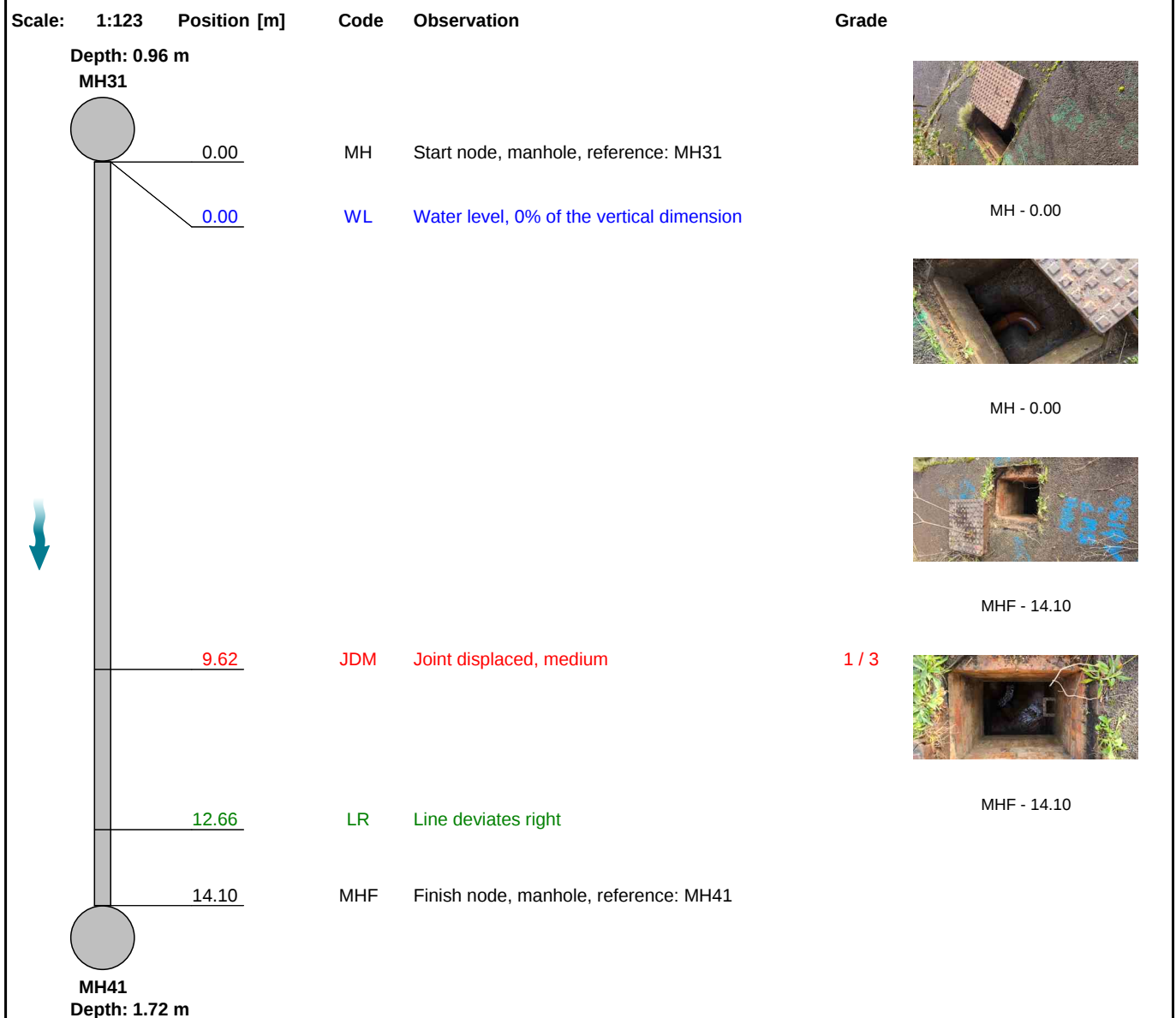


MH30X_b643d12d-21e5-451e-830b-d44a5a618a26_20241125_105037.jpg, 00:00:41, 6.18 m
 Finish node, manhole, reference: MH31

Section Inspection - 25/11/2024 - MH31X

Item No. 5	Insp. No. 1	Date 25/11/24	Time 10:46	Client's Job Ref NOVARTIS SITE	Weather No Rain Or Snow	Pre Cleaned Yes	PLR MH31X
Operator Simon		Vehicle LL72AXU		Camera Pushrod	Preset Length 0.00 m	Legal Status Private Drain	Alternative ID Not Specified

Town or Village:	Horsham	Inspection Direction:	Downstream	Upstream Node:	MH31
Road:	Wimblehurst Road	Inspected Length:	14.10 m	Upstream Pipe Depth:	0.960 m
Location:	Difficult access	Total Length:	14.10 m	Downstream Node:	MH41
Surface Type:	Concrete Highway	Joint Length:	1.00 m	Downstream Pipe Depth:	1.720 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	150 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	1900	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		
Comments:	SURVEY COMPLETE				
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
1	1.0	0.1	1.0	1.0	1	2.0	0.1	2.0	3.0

Section Pictures - 25/11/2024 - MH31X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
5	Downstream	MH31X	NOVARTIS SITE	NOVARTIS SITE



MH31X_1b539d62-dc46-4c8c-884b-19607f4dc15a_20241125_104636.jpg, 00:00:01, 0.00 m
 Start node, manhole, reference: MH31



MH31X_692cda61-f981-4fc9-8050-62c47045bd7c_20241125_104641.jpg, 00:00:01, 0.00 m
 Start node, manhole, reference: MH31



MH31X_ebb73134-f690-408e-8e0d-5e6dd5cd9f5c_20241125_104914.jpg, 00:01:07, 14.10 m
 Finish node, manhole, reference: MH41

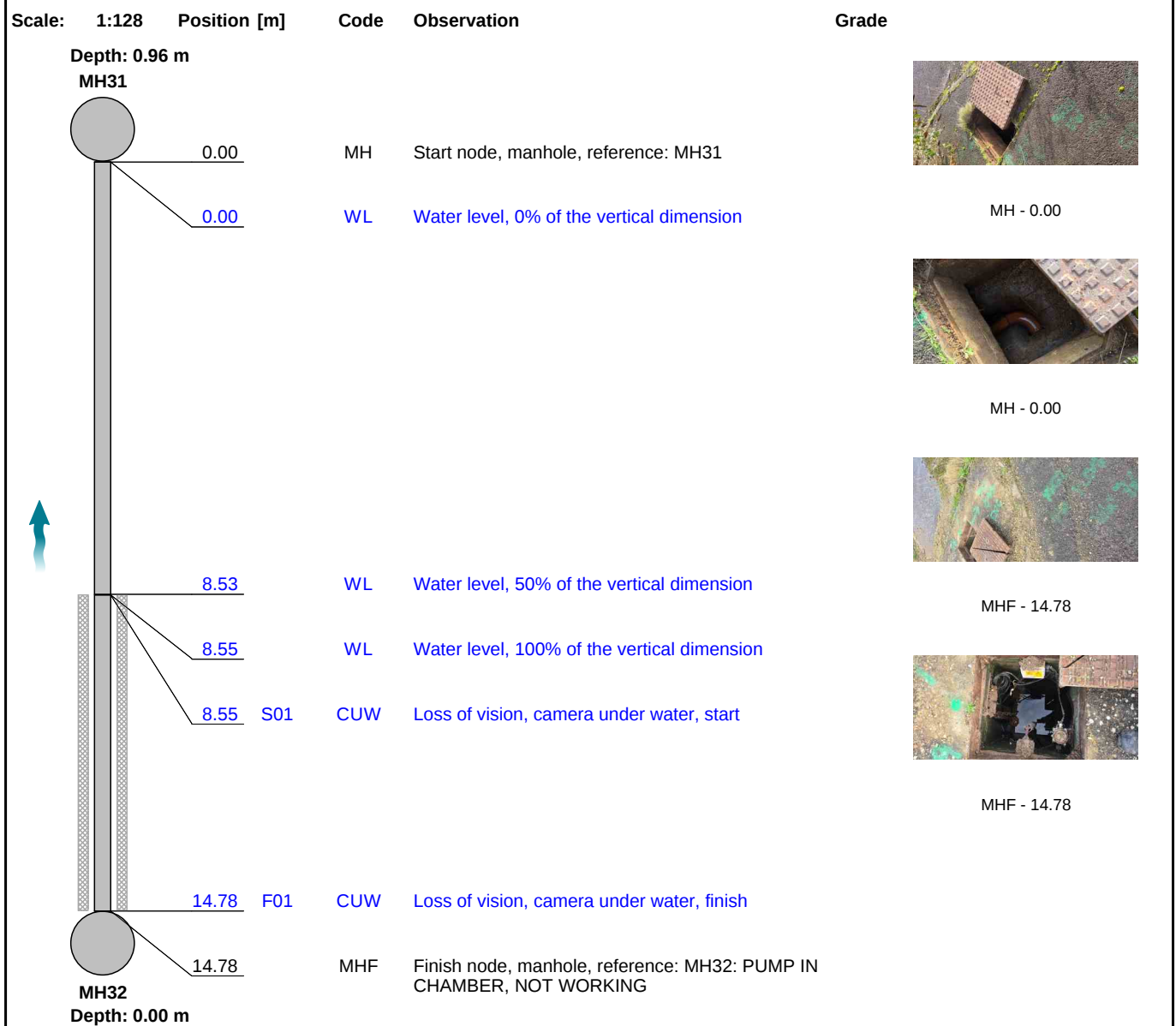


MH31X_a5845c64-2fc7-405d-9f44-63ba8d392b8f_20241125_104917.jpg, 00:01:07, 14.10 m
 Finish node, manhole, reference: MH41

Section Inspection - 25/11/2024 - MH32X

Item No. 6	Insp. No. 1	Date 25/11/24	Time 11:23	Client's Job Ref NOVARTIS SITE	Weather No Rain Or Snow	Pre Cleaned No	PLR MH32X
Operator Simon		Vehicle LL72AXU		Camera Pushrod	Preset Length 0.00 m	Legal Status Private Drain	Alternative ID Not Specified

Town or Village:	Horsham	Inspection Direction:	Upstream	Upstream Node:	MH32
Road:	Wimblehurst Road	Inspected Length:	14.78 m	Upstream Pipe Depth:	0.000 m
Location:	Difficult access	Total Length:	14.78 m	Downstream Node:	MH31
Surface Type:	Concrete Highway	Joint Length:	2.50 m	Downstream Pipe Depth:	0.960 m
Use:	Foul	Pipe Shape:	Circular	Dia/Height:	75 mm
Type of Pipe:	Gravity drain/sewer	Material:	Polyvinyl chloride	Lining Type:	No Lining
Flow Control:	No flow control	Lining Material:	No Lining		
Year Constructed:	1900				
Inspection Purpose:	Sample condition survey				
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 Pictures - 25/11/2024 - MH32X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
6	Upstream	MH32X	NOVARTIS SITE	NOVARTIS SITE



MH32X_84aef4aa-2e4e-4b57-8957-3d9b8e573ac4_20241125_105257.jpg, 00:00:01, 0.00 m
 Start node, manhole, reference: MH31



MH32X_9cfc2b80-a715-4459-88b9-deff1fcf4eab_20241125_105303.jpg, 00:00:01, 0.00 m
 Start node, manhole, reference: MH31



MH32X_7bcfddd9-202f-4e2b-82db-48c6380e95e6_20241125_112750.jpg, 00:00:55, 14.78 m
 Finish node, manhole, reference: MH32, PUMP IN CHAMBER, NOT WORKING

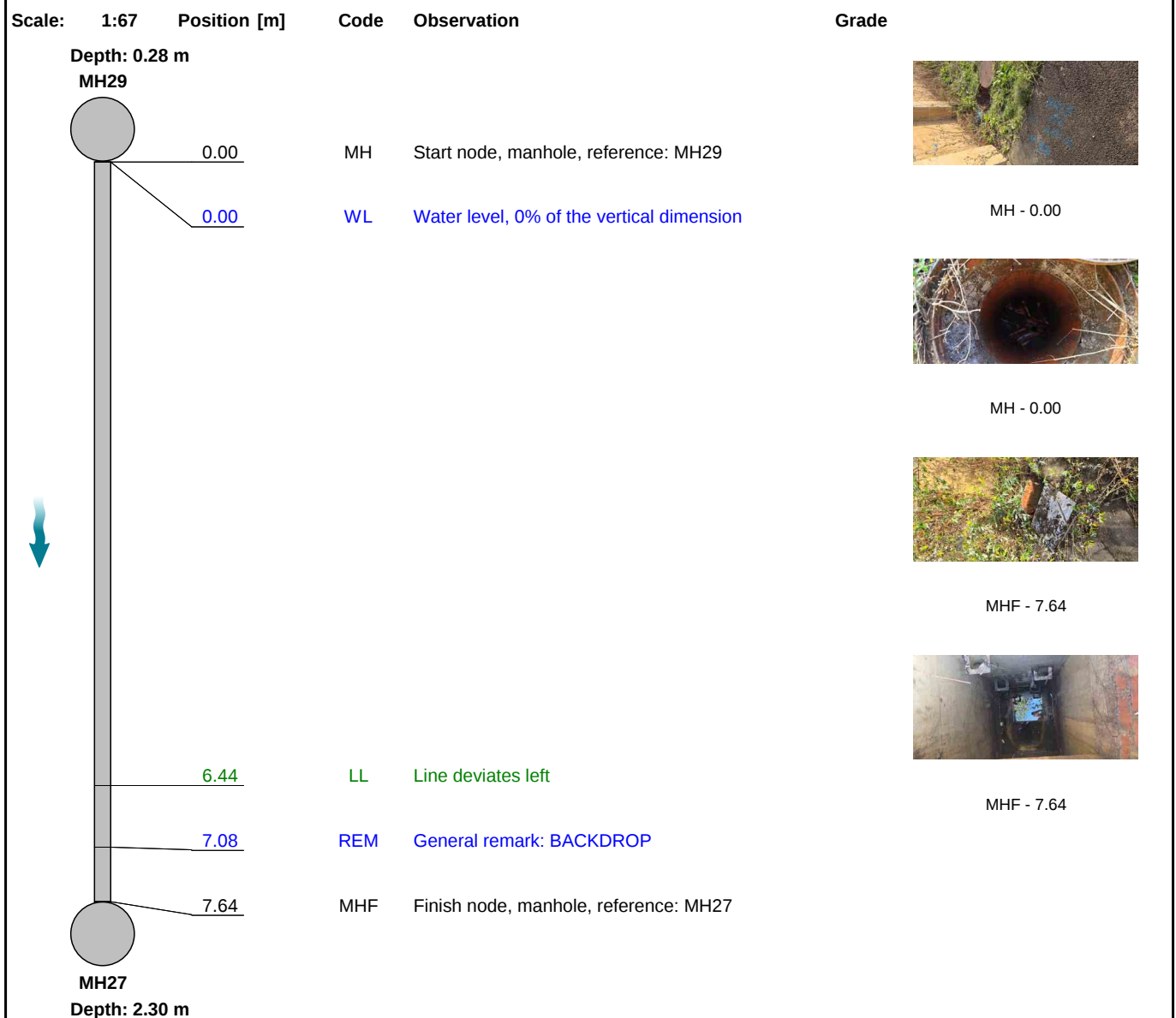


MH32X_6476d4ac-80fb-4081-a5f3-cf29dca6fb3d_20241125_112757.jpg, 00:00:55, 14.78 m
 Finish node, manhole, reference: MH32, PUMP IN CHAMBER, NOT WORKING

Section Inspection - 25/11/2024 - MH29X

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
7	1	25/11/24	11:23	NOVARTIS SITE	No Rain Or Snow	No	MH29X
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Simon		LL72AXU		Pushrod	0.00 m	Private Drain	Not Specified

Town or Village:	Horsham	Inspection Direction:	Downstream	Upstream Node:	MH29
Road:	Wimblehurst Road	Inspected Length:	7.64 m	Upstream Pipe Depth:	0.280 m
Location:	Difficult access	Total Length:	7.64 m	Downstream Node:	MH27
Surface Type:	Grass	Joint Length:	2.50 m	Downstream Pipe Depth:	2.300 m
Use:	Surface water	Pipe Shape: Circular Dia/Height: 100 mm Material: Polyvinyl chloride Lining Type: No Lining Lining Material: No Lining			
Type of Pipe:	Gravity drain/sewer				
Flow Control:	No flow control				
Year Constructed:	1900				
Inspection Purpose:	Sample condition survey				
Comments:	SURVEY COMPLETE				
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 Pictures - 25/11/2024 - MH29X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
7	Downstream	MH29X	NOVARTIS SITE	NOVARTIS SITE



MH29X_175b347a-573a-4b10-8026-45d9110113f6_20241125_113020.jpg, 00:00:01, 0.00 m
 Start node, manhole, reference: MH29



MH29X_900c1148-395f-4970-9e14-bc5ba8ed2804_20241125_113025.jpg, 00:00:01, 0.00 m
 Start node, manhole, reference: MH29



MH29X_70c4b88e-c05f-4202-9809-390d6086d4fd_20241125_113035.jpg, 00:00:47, 7.64 m
 Finish node, manhole, reference: MH27

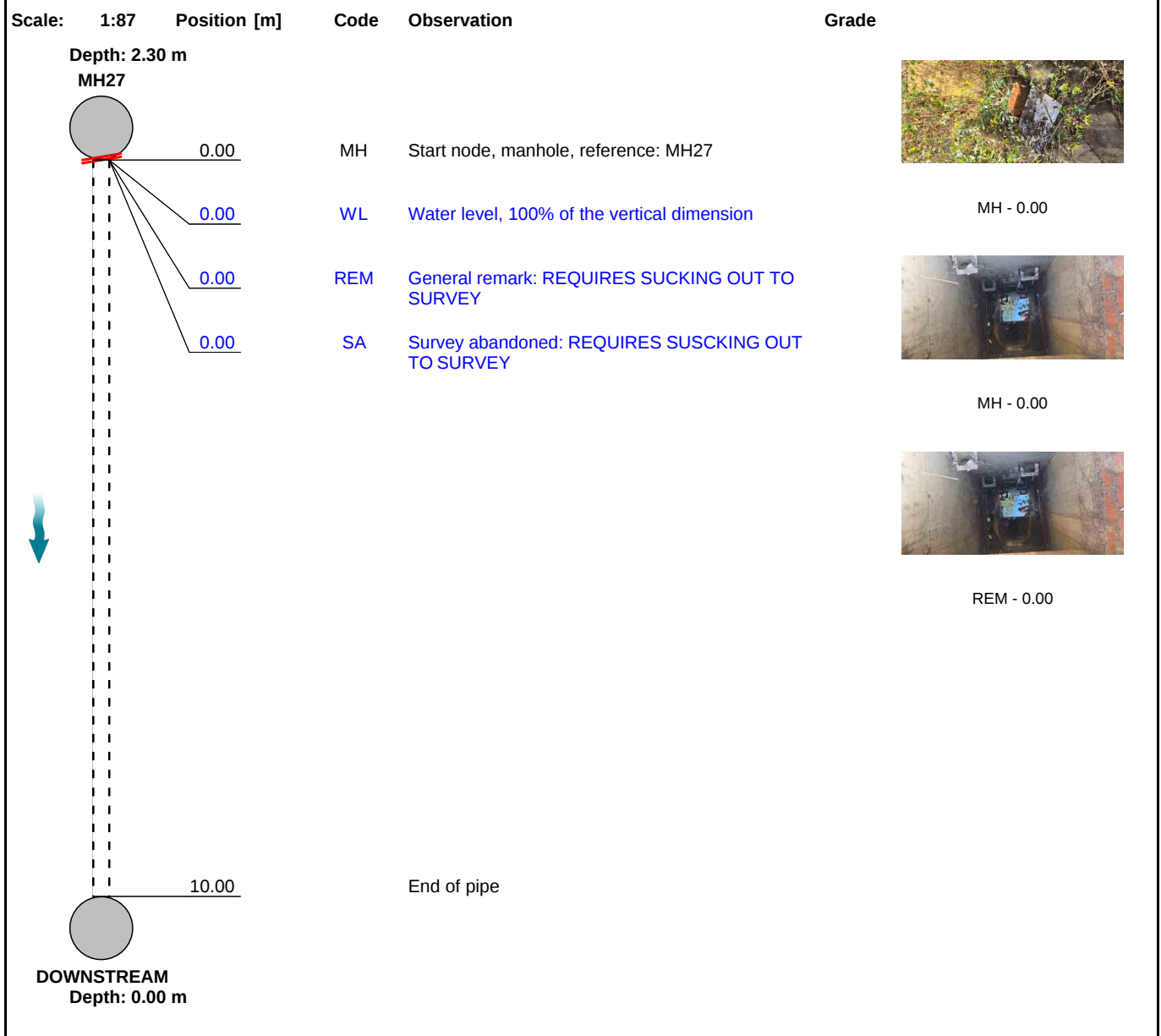


MH29X_d4099cf8-2af2-4cb6-8f57-635ec8cf874a_20241125_113040.jpg, 00:00:47, 7.64 m
 Finish node, manhole, reference: MH27

Section Inspection - 25/11/2024 - MH27X

Item No. 8	Insp. No. 1	Date 25/11/24	Time 11:31	Client's Job Ref NOVARTIS SITE	Weather No Rain Or Snow	Pre Cleaned No	PLR MH27X
Operator Simon		Vehicle LL72AXU		Camera Pushrod	Preset Length 0.00 m	Legal Status Private Drain	Alternative ID Not Specified

Town or Village:	Horsham	Inspection Direction:	Downstream	Upstream Node:	MH27
Road:	Wimblehurst Road	Inspected Length:	0.00 m	Upstream Pipe Depth:	2.300 m
Location:	Difficult access	Total Length:	10.00 m	Downstream Node:	DOWNSTREAM
Surface Type:	Block Paved	Joint Length:	1.00 m	Downstream Pipe Depth:	0.000 m
Use:	Surface water	Pipe Shape: Dia/Height: Material: Lining Type: Lining Material:	Circular Unidentified material No Lining No Lining		
Type of Pipe:	Gravity drain/sewer				
Flow Control:	No flow control				
Year Constructed:	1900				
Inspection Purpose:	Sample condition survey				
Comments:	LINE HOLDING WATER, REQUIRES SUCKING OUT TO SURVEY				
Recommendations:	REQUIRES SUCKING OUT				



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 - 25/11/2024 - MH27X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
8	Downstream	MH27X	NOVARTIS SITE	NOVARTIS SITE



MH27X_576a0bc6-2da8-46f8-a3c9-27a2f49a2934_20241125_113251.jpg, 00:00:01, 0.00 m
 Start node, manhole, reference: MH27



MH27X_fe3962d4-d31e-4d1b-9c03-24360ed70b05_20241125_113255.jpg, 00:00:01, 0.00 m
 Start node, manhole, reference: MH27

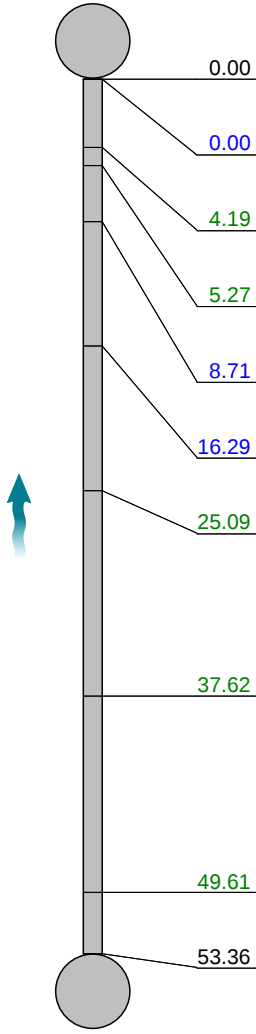


MH27X_752d7050-5c7c-4b6d-8922-7f7d2ea637d2_20241125_113301.jpg, 00:00:03, 0.00 m
 General remark, REQUIRES SUCKING OUT TO SURVEY

Section Inspection - 25/11/2024 - MH44X

Item No. 9	Insp. No. 1	Date 25/11/24	Time 12:01	Client's Job Ref NOVARTIS SITE	Weather No Rain Or Snow	Pre Cleaned No	PLR MH44X
Operator Simon		Vehicle LL72AXU		Camera Crawler	Preset Length 0.00 m	Legal Status Private Drain	Alternative ID Not Specified

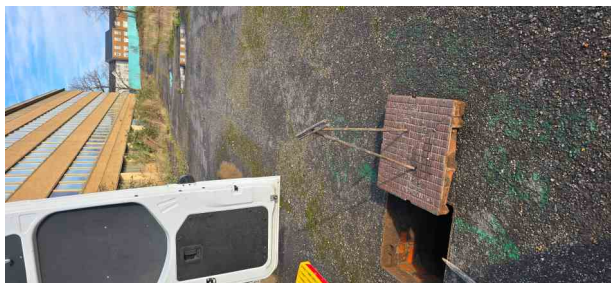
Town or Village:	Horsham	Inspection Direction:	Upstream	Upstream Node:	MH44
Road:	Wimblehurst Road	Inspected Length:	53.36 m	Upstream Pipe Depth:	2.600 m
Location:	Difficult access	Total Length:	53.36 m	Downstream Node:	MH33
Surface Type:	Asphalt Highway	Joint Length:	1.50 m	Downstream Pipe Depth:	1.710 m
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	600 mm		
Flow Control:	No flow control	Material:	Concrete		
Year Constructed:	1900	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		
Comments:	SURVEY COMPLETE				
Recommendations:	None				

Scale: 1:462	Position [m]	Code	Observation	Grade
Depth: 1.71 m MH33				
				
0.00	MH	Start node, manhole, reference: MH33		
0.00	WL	Water level, 5% of the vertical dimension		MH - 0.00
4.19	DEC	Settled deposits, hard or compacted, 5% cross-sectional area loss	3	
5.27	LL	Line deviates left		
8.71	WL	Water level, 10% of the vertical dimension		MH - 0.00
16.29	WL	Water level, 5% of the vertical dimension		
25.09	LL	Line deviates left		
37.62	DEC	Settled deposits, hard or compacted, 5% cross-sectional area loss	3	
49.61	DEC	Settled deposits, hard or compacted, 5% cross-sectional area loss	3	
53.36	MHF	Finish node, manhole, reference: MH44		
MH44 Depth: 2.60 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	3	2.0	0.1	6.0	3.0

Section Pictures - 25/11/2024 - MH44X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
9	Upstream	MH44X	NOVARTIS SITE	NOVARTIS SITE



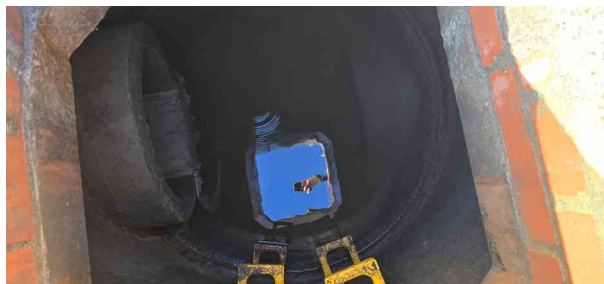
MH52X_b8ac1623-3da2-441b-b635-002b183b4d09_20241125_115548.jpg, 00:00:01, 0.00 m
 Start node, manhole, reference: MH33



MH52X_db8eb618-e844-4224-9c42-6bb9f034aebd_20241125_115553.jpg, 00:00:01, 0.00 m
 Start node, manhole, reference: MH33



MH44X_d64cf025-dbc9-4133-a46d-00c98a737c01_20241125_123359.jpg, 00:05:06, 53.36 m
 Finish node, manhole, reference: MH44



MH44X_be8a8903-f169-4e8b-877d-ae4e4c6f9674_20241125_123410.jpg, 00:05:06, 53.36 m
 Finish node, manhole, reference: MH44

Section Inspection - 25/11/2024 - MH52X

Item No. 10	Insp. No. 2	Date 25/11/24	Time 12:46	Client's Job Ref NOVARTIS SITE	Weather No Rain Or Snow	Pre Cleaned No	PLR MH52X
Operator Simon		Vehicle LL72AXU		Camera Crawler	Preset Length 0.00 m	Legal Status Private Drain	Alternative ID Not Specified

Town or Village:	Horsham	Inspection Direction:	Downstream	Upstream Node:	MH52
Road:	Wimblehurst Road	Inspected Length:	0.10 m	Upstream Pipe Depth:	1.770 m
Location:	Difficult access	Total Length:	20.00 m	Downstream Node:	MH50
Surface Type:	Asphalt Highway	Joint Length:	1.50 m	Downstream Pipe Depth:	2.540 m
Use:	Surface water	Pipe Shape:	Circular	Dia/Height:	600 mm
Type of Pipe:	Gravity drain/sewer	Material:	Concrete	Lining Type:	No Lining
Flow Control:	No flow control	Lining Material:	No Lining		
Year Constructed:	1900				
Inspection Purpose:	Sample condition survey				
Comments:	REQUIRES HEAVY JETTING TO SURVEY				
Recommendations:	REQUIRES HEAVY JETTING				



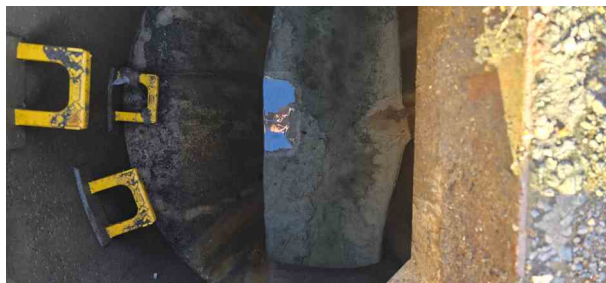
Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	1	5.0	23.8	5.0	5.0

Section Pictures - 25/11/2024 - MH52X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
10	Downstream	MH52X	NOVARTIS SITE	NOVARTIS SITE



MH52X_7571958b-8a3e-4ec2-8951-4559cdfecfbd_20241125_124136.jpg, 00:00:01, 0.00 m
 Start node, manhole, reference: MH52



MH52X_2c7201a1-f51b-4798-85e9-0d0e50f1a274_20241125_124142.jpg, 00:00:01, 0.00 m
 Start node, manhole, reference: MH52

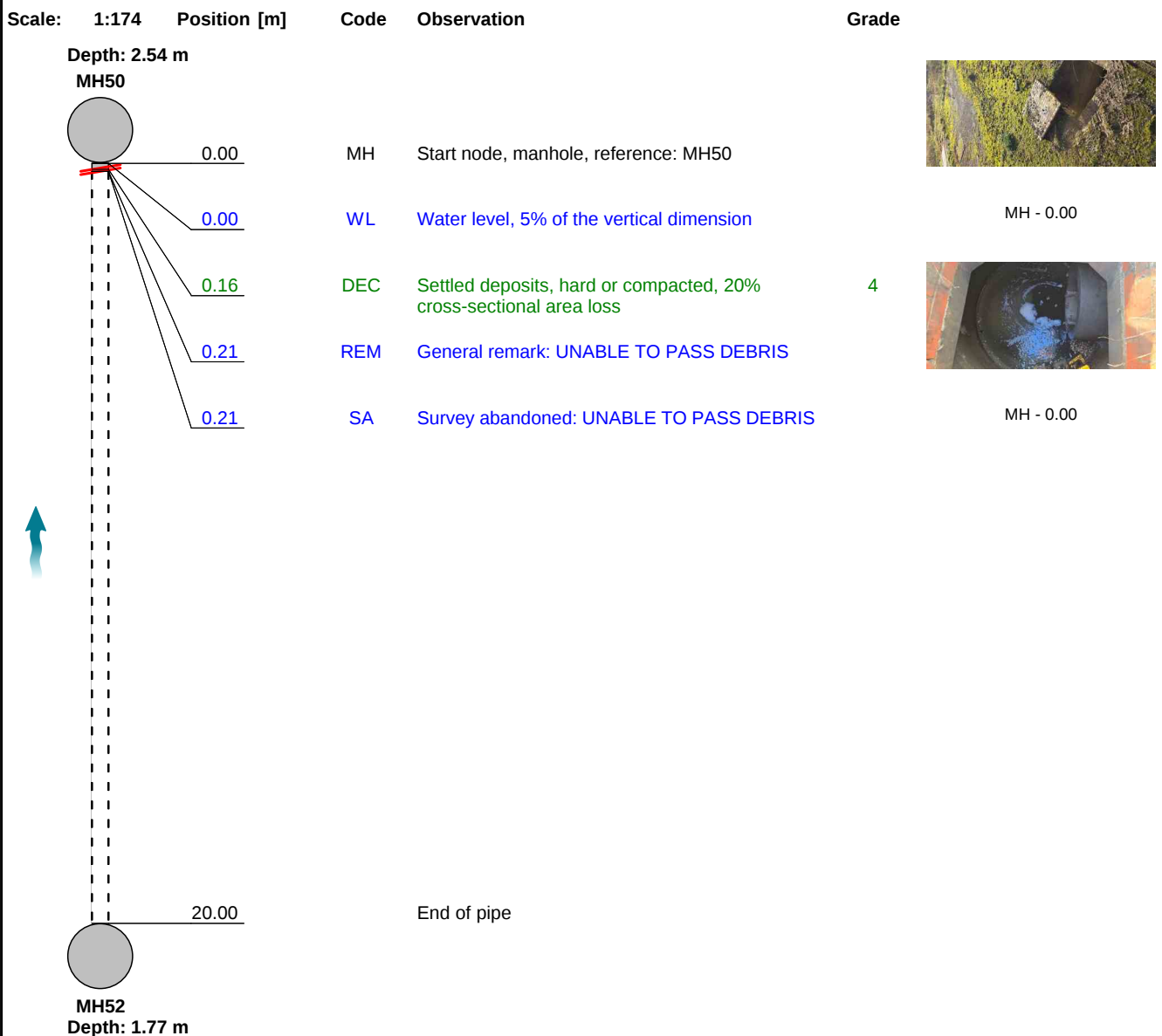
Section Inspection - 25/11/2024 - MH52X

Item No. 10	Insp. No. 1	Date 25/11/24	Time 12:40	Client's Job Ref NOVARTIS SITE	Weather No Rain Or Snow	Pre Cleaned No	PLR MH52X
Operator Simon		Vehicle LL72AXU		Camera Crawler	Preset Length 0.00 m	Legal Status Private Drain	Alternative ID Not Specified

Town or Village:	Horsham	Inspection Direction:	Upstream	Upstream Node:	MH52
Road:	Wimblehurst Road	Inspected Length:	0.21 m	Upstream Pipe Depth:	1.770 m
Location:	Difficult access	Total Length:	20.00 m	Downstream Node:	MH50
Surface Type:	Asphalt Highway	Joint Length:	1.50 m	Downstream Pipe Depth:	2.540 m
Use:	Surface water	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	600 mm		
Flow Control:	No flow control	Material:	Concrete		
Year Constructed:	1900	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

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	5.0	23.8	5.0	5.0

Section Pictures - 25/11/2024 - MH52X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
10	Upstream	MH52X	NOVARTIS SITE	NOVARTIS SITE



MH50X_f7da4275-0fb1-49b8-89da-72c9da125b0b_20241125_123421.jpg, 00:00:01, 0.00 m
 Start node, manhole, reference: MH50

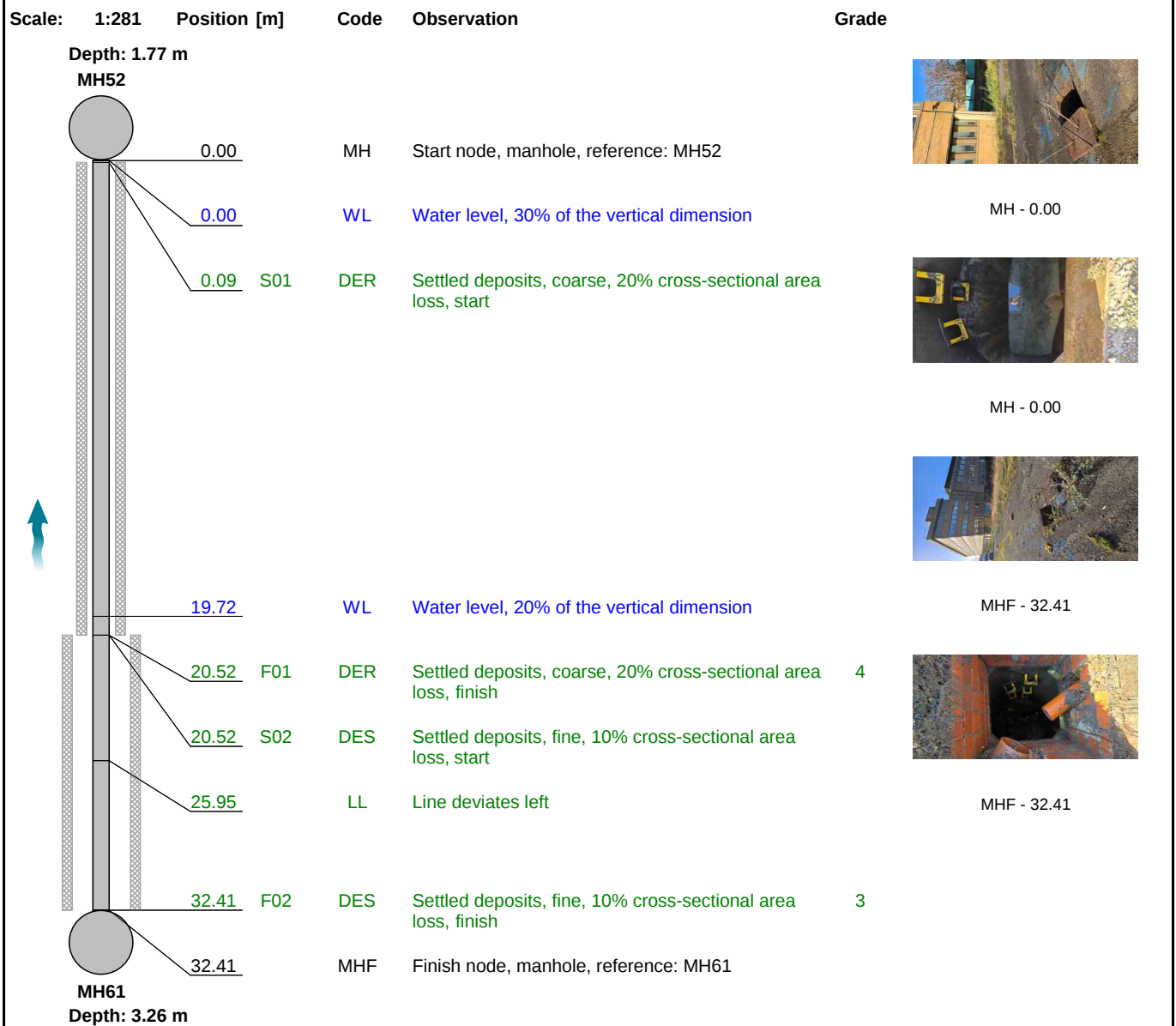


MH50X_3d1301d5-ca3e-409b-a436-1ac2832fe5e6_20241125_123435.jpg, 00:00:01, 0.00 m
 Start node, manhole, reference: MH50

Section Inspection - 25/11/2024 - MH61X

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
11	1	25/11/24	12:54	NOVARTIS SITE	No Rain Or Snow	No	MH61X
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Simon		LL72AXU		Crawler	0.00 m	Private Drain	Not Specified

Town or Village:	Horsham	Inspection Direction:	Upstream	Upstream Node:	MH61
Road:	Wimblehurst Road	Inspected Length:	32.41 m	Upstream Pipe Depth:	3.260 m
Location:	Difficult access	Total Length:	32.42 m	Downstream Node:	MH52
Surface Type:	Asphalt Highway	Joint Length:	1.50 m	Downstream Pipe Depth:	1.770 m
Use:	Surface water	Pipe Shape: Circular Dia/Height: 600 mm Material: Concrete Lining Type: No Lining Lining Material: No Lining			
Type of Pipe:	Gravity drain/sewer				
Flow Control:	No flow control				
Year Constructed:	1900				
Inspection Purpose:	Sample condition survey				
Comments:	SURVEY COMPLETE				
Recommendations:	REQUIRES HEAVY JETTING TO CLEAN				



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	7.0	4.0	129.0	4.0

Section Pictures - 25/11/2024 - MH61X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
11	Upstream	MH61X	NOVARTIS SITE	NOVARTIS SITE



MH61X_e9efd8cd-0511-4080-8fd8-b2573383b329_20241125_135532.jpg, 00:00:01, 0.00 m
 Start node, manhole, reference: MH52



MH61X_449bec40-dc47-42f4-b402-821d3b46e9b5_20241125_135540.jpg, 00:00:01, 0.00 m
 Start node, manhole, reference: MH52



MH61X_272adc5c-e3b7-4cf9-9421-c9fd14ab4772_20241125_135430.jpg, 00:03:38, 32.41 m
 Finish node, manhole, reference: MH61

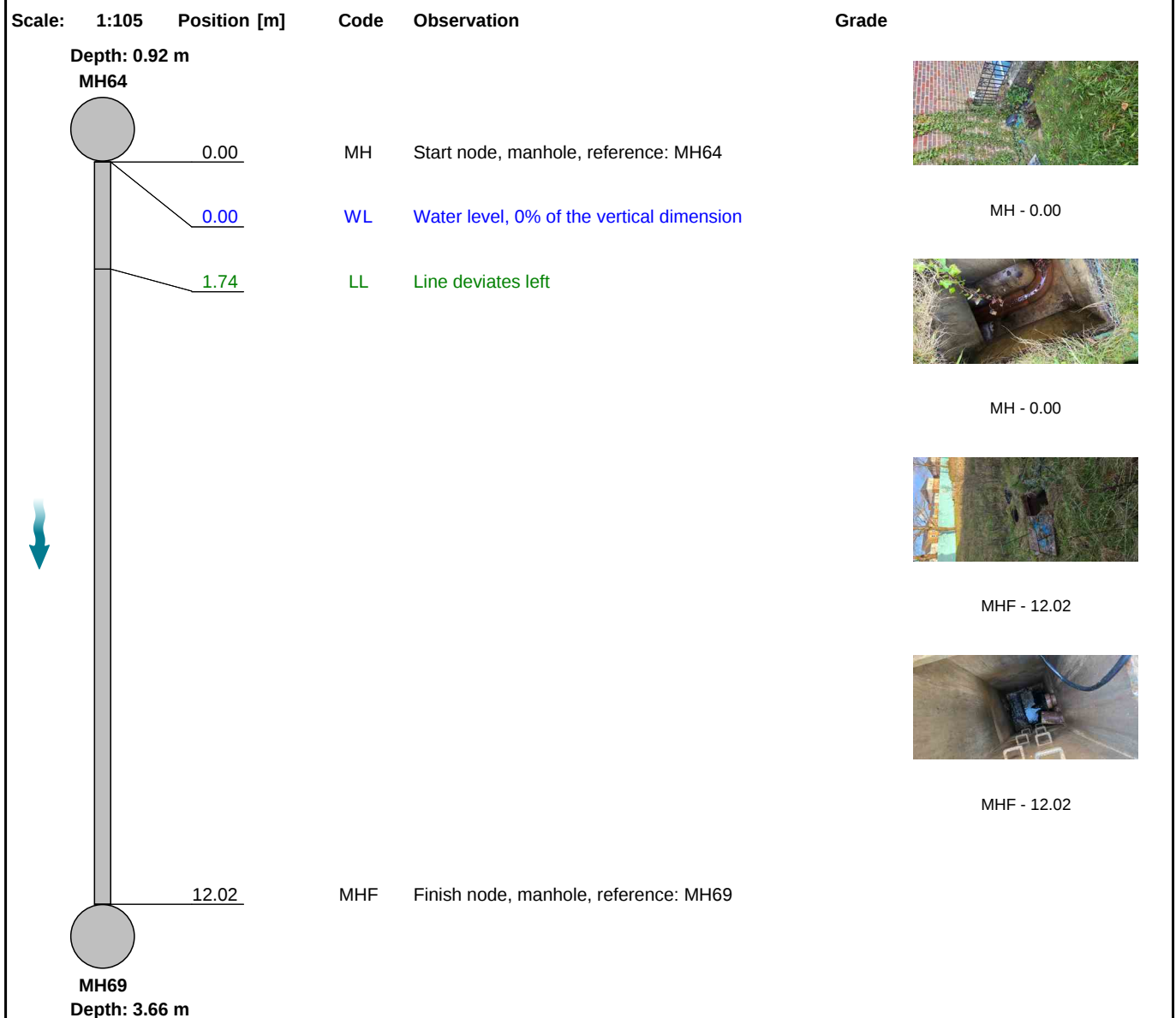


MH61X_95386cbb-045a-4908-ae61-5f8a9d181394_20241125_135443.jpg, 00:03:38, 32.41 m
 Finish node, manhole, reference: MH61

Section Inspection - 25/11/2024 - MH64X

Item No. 12	Insp. No. 1	Date 25/11/24	Time 14:22	Client's Job Ref NOVARTIS SITE	Weather No Rain Or Snow	Pre Cleaned Yes	PLR MH64X
Operator Simon		Vehicle LL72AXU		Camera Pushrod	Preset Length 0.00 m	Legal Status Private Drain	Alternative ID Not Specified

Town or Village:	Horsham	Inspection Direction:	Downstream	Upstream Node:	MH64
Road:	Wimblehurst Road	Inspected Length:	12.02 m	Upstream Pipe Depth:	0.920 m
Location:	Difficult access	Total Length:	12.02 m	Downstream Node:	MH69
Surface Type:	Grass	Joint Length:	1.50 m	Downstream Pipe Depth:	3.660 m
Use:	Foul	Pipe Shape:	Circular	Dia/Height:	150 mm
Type of Pipe:	Gravity drain/sewer	Material:	Cast iron	Lining Type:	No Lining
Flow Control:	No flow control	Lining Material:	No Lining		
Year Constructed:	1900				
Inspection Purpose:	Sample condition survey				
Comments:	SURVEY COMPLETE				
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 Pictures - 25/11/2024 - MH64X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
12	Downstream	MH64X	NOVARTIS SITE	NOVARTIS SITE



MH64X_c13aa89b-c7d0-4460-9c15-158c411df083_20241125_142620.jpg, 00:00:01, 0.00 m
 Start node, manhole, reference: MH64



MH64X_d5373b3c-21a3-474c-b060-ec25bf1d1ca6_20241125_142625.jpg, 00:00:01, 0.00 m
 Start node, manhole, reference: MH64



MH64X_d30f4c3b-6a8c-4047-97a1-0165e4aa9c35_20241125_142601.jpg, 00:00:50, 12.02 m
 Finish node, manhole, reference: MH69

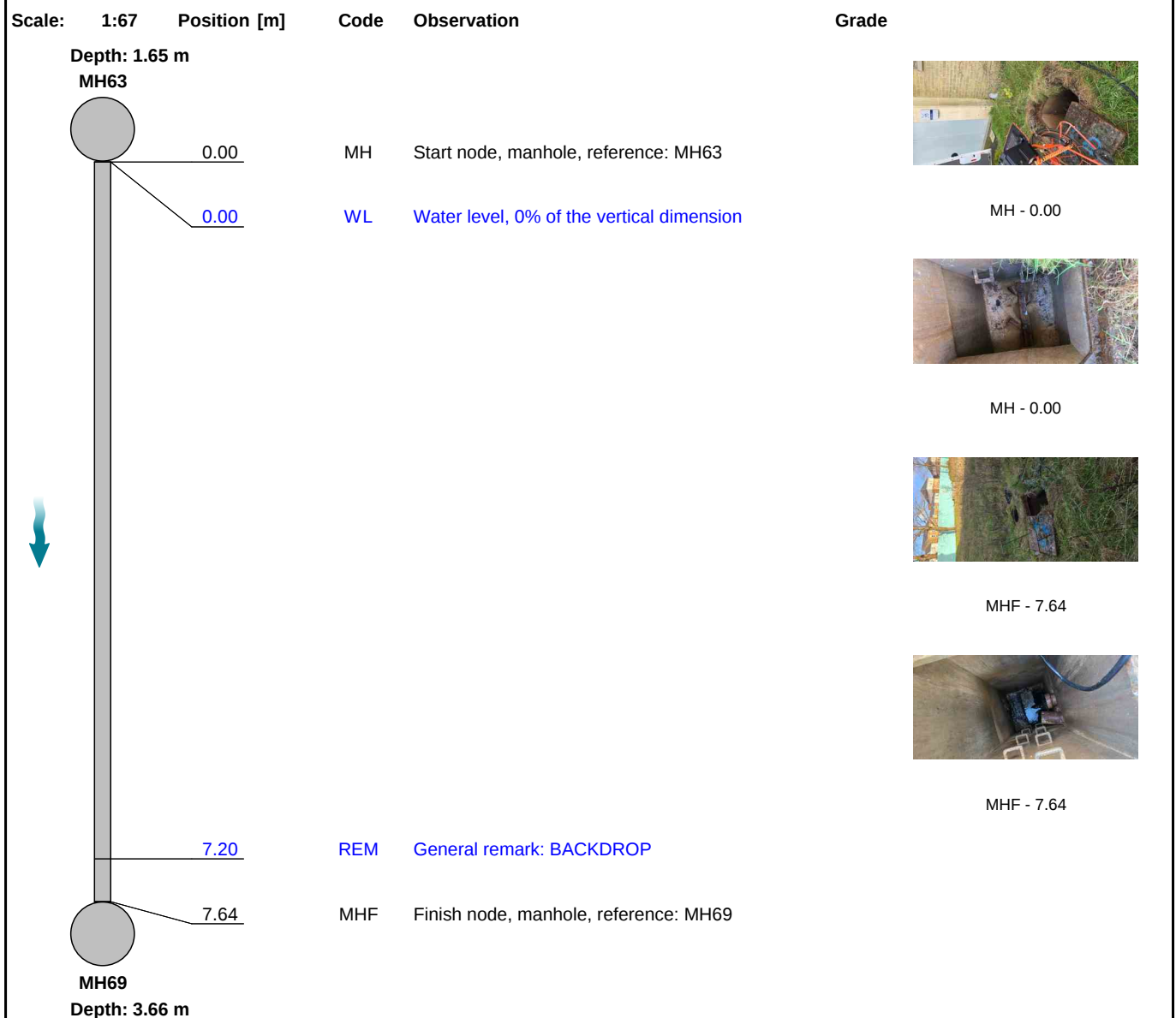


MH64X_b008573f-6747-4f00-aa6c-8ff2cf7564c6_20241125_142612.jpg, 00:00:50, 12.02 m
 Finish node, manhole, reference: MH69

Section Inspection - 25/11/2024 - MH63X

Item No. 13	Insp. No. 1	Date 25/11/24	Time 14:22	Client's Job Ref NOVARTIS SITE	Weather No Rain Or Snow	Pre Cleaned Yes	PLR MH63X
Operator Simon		Vehicle LL72AXU		Camera Pushrod	Preset Length 0.00 m	Legal Status Private Drain	Alternative ID Not Specified

Town or Village:	Horsham	Inspection Direction:	Downstream	Upstream Node:	MH63
Road:	Wimblehurst Road	Inspected Length:	7.64 m	Upstream Pipe Depth:	1.650 m
Location:	Difficult access	Total Length:	7.64 m	Downstream Node:	MH69
Surface Type:	Grass	Joint Length:	1.00 m	Downstream Pipe Depth:	3.660 m
Use:	Foul	Pipe Shape:	Circular	Dia/Height:	150 mm
Type of Pipe:	Gravity drain/sewer	Material:	Vitrified clay	Lining Type:	No Lining
Flow Control:	No flow control	Lining Material:	No Lining		
Year Constructed:	1900				
Inspection Purpose:	Sample condition survey				
Comments:	SURVEY COMPLETE				
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 Pictures - 25/11/2024 - MH63X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
13	Downstream	MH63X	NOVARTIS SITE	NOVARTIS SITE



MH63X_84e43519-7d21-40aa-bcb9-b75b2af84fb4_20241125_142650.jpg, 00:00:01, 0.00 m
 Start node, manhole, reference: MH63



MH63X_f4076f48-0765-4e20-82e3-76d467fc6afd_20241125_142655.jpg, 00:00:01, 0.00 m
 Start node, manhole, reference: MH63



MH63X_d33e356d-36db-4550-8fac-a52281a523c4_20241125_142801.jpg, 00:00:41, 7.64 m
 Finish node, manhole, reference: MH69



MH63X_fc3eee03-1a09-4fa9-a55e-c192e3ece00d_20241125_142804.jpg, 00:00:41, 7.64 m
 Finish node, manhole, reference: MH69

Section Inspection - 25/11/2024 - MH70X

Item No. 14	Insp. No. 1	Date 25/11/24	Time 14:23	Client's Job Ref NOVARTIS SITE	Weather No Rain Or Snow	Pre Cleaned Yes	PLR MH70X
Operator Simon		Vehicle LL72AXU		Camera Pushrod	Preset Length 0.00 m	Legal Status Private Drain	Alternative ID Not Specified

Town or Village:	Horsham	Inspection Direction:	Downstream	Upstream Node:	MH70
Road:	Wimblehurst Road	Inspected Length:	0.50 m	Upstream Pipe Depth:	2.920 m
Location:	Difficult access	Total Length:	0.50 m	Downstream Node:	MH69
Surface Type:	Grass	Joint Length:	1.50 m	Downstream Pipe Depth:	3.660 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Cast iron		
Year Constructed:	1900	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		
Comments:	SURVEY COMPLETE				
Recommendations:	None				

Scale:	1:50	Position [m]	Code	Observation	Grade
Depth: 2.92 m MH70  0.00 0.00 0.50 Depth: 3.66 m MH69 MH Start node, manhole, reference: MH70 WL Water level, 0% of the vertical dimension MHF Finish node, manhole, reference: MH69					
					 MH - 0.00
					 MH - 0.00
					 MHF - 0.50
					 MHF - 0.50

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 - 25/11/2024 - MH70X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
14	Downstream	MH70X	NOVARTIS SITE	NOVARTIS SITE



MH70X_952ce354-e7cf-4cab-a660-69bb7fe629e2_20241125_142811.jpg, 00:00:01, 0.00 m
 Start node, manhole, reference: MH70



MH70X_16ffa554-662e-4a19-806b-834db8797b30_20241125_142815.jpg, 00:00:01, 0.00 m
 Start node, manhole, reference: MH70



MH70X_70be9e61-a083-4eb8-9561-a24162f15128_20241125_142836.jpg, 00:00:26, 0.50 m
 Finish node, manhole, reference: MH69

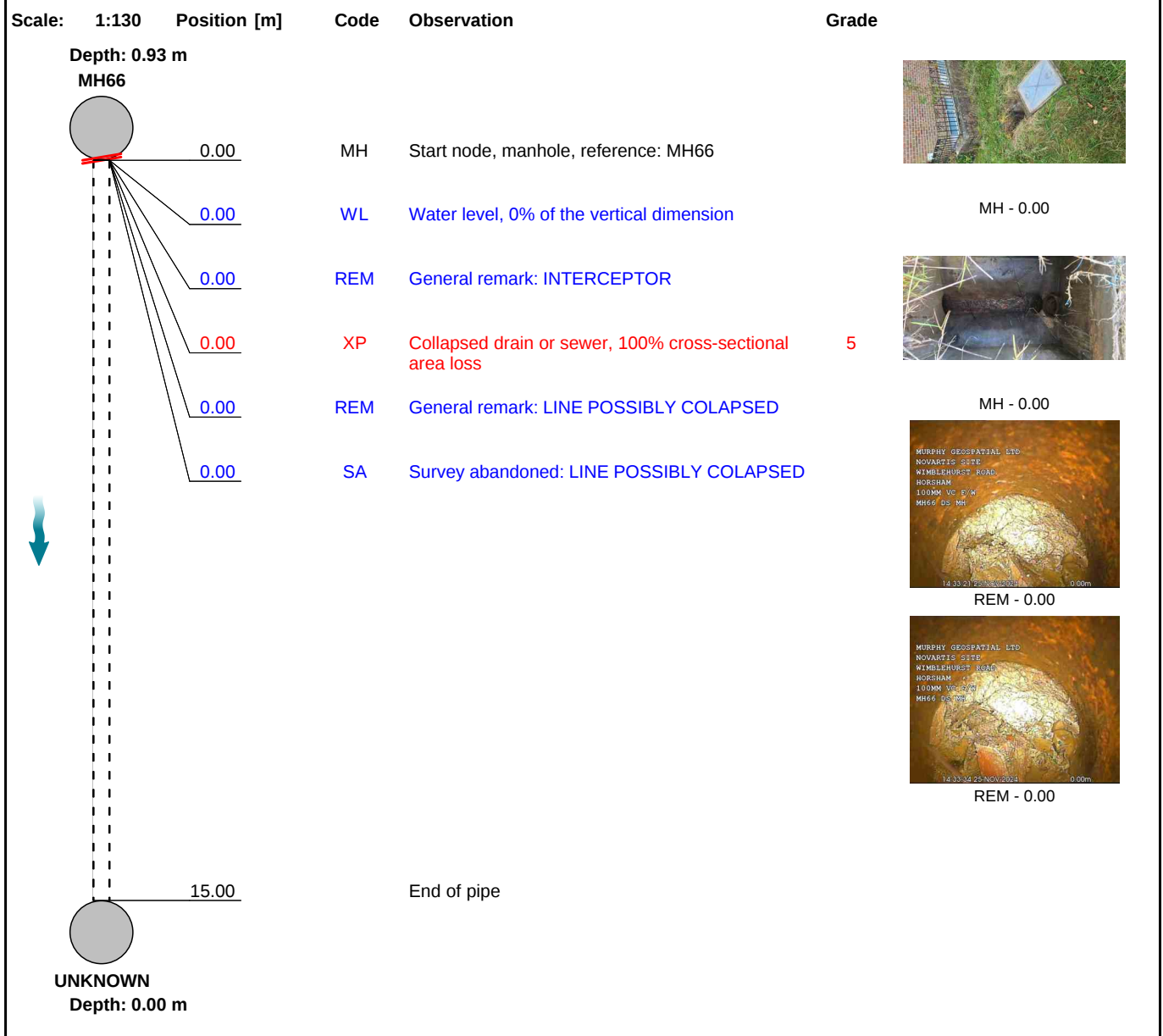


MH70X_482b3a68-3968-4f9b-934f-2755644c4826_20241125_142839.jpg, 00:00:26, 0.50 m
 Finish node, manhole, reference: MH69

Section Inspection - 25/11/2024 - MH66X

Item No.	Insp. No.	Date	Time	Client's Job Ref	Weather	Pre Cleaned	PLR
15	1	25/11/24	14:29	NOVARTIS SITE	No Rain Or Snow	Yes	MH66X
Operator		Vehicle		Camera	Preset Length	Legal Status	Alternative ID
Simon		LL72AXU		Pushrod	0.00 m	Private Drain	Not Specified

Town or Village:	Horsham	Inspection Direction:	Downstream	Upstream Node:	MH66
Road:	Wimblehurst Road	Inspected Length:	0.00 m	Upstream Pipe Depth:	0.930 m
Location:	Difficult access	Total Length:	15.00 m	Downstream Node:	UNKNOWN
Surface Type:	Grass	Joint Length:	1.00 m	Downstream Pipe Depth:	0.000 m
Use:	Foul	Pipe Shape: Circular Dia/Height: 100 mm Material: Vitrified clay Lining Type: No Lining Lining Material: No Lining			
Type of Pipe:	Gravity drain/sewer				
Flow Control:	No flow control				
Year Constructed:	1900				
Inspection Purpose:	Sample condition survey				
Comments:	LINE POSSIBLY COLLAPSED				
Recommendations:	LINE REQUIRES DIG UP TO REPAIR				



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	165.0	11.0	165.0	5.0	0	0.0	0.0	0.0	1.0

Section Pictures - 25/11/2024 - MH66X

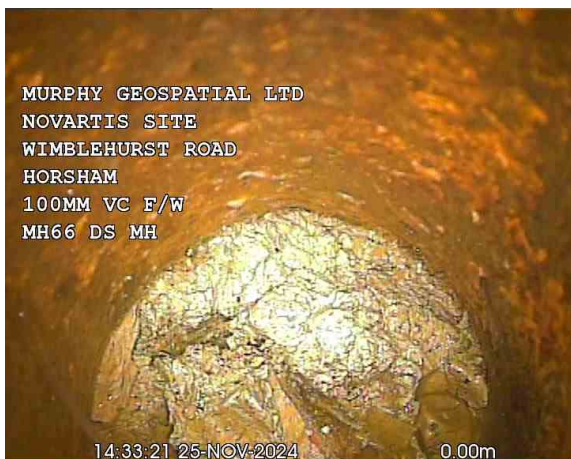
Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
15	Downstream	MH66X	NOVARTIS SITE	NOVARTIS SITE



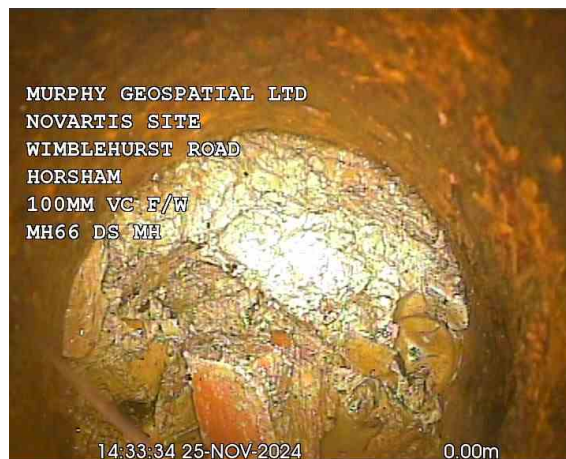
MH66X_af767249-9a80-4ee8-a502-89d04811b755_20241125_143053.jpg, 00:00:01, 0.00 m
 Start node, manhole, reference: MH66



MH66X_2dc65504-d53d-443b-888b-a4185d0b8c0d_20241125_143058.jpg, 00:00:01, 0.00 m
 Start node, manhole, reference: MH66



MH66X_d5676fce-9e23-49c5-bd5e-e499d8c206ac_20241125_143652.jpg, 00:00:04, 0.00 m
 General remark, LINE POSSIBLY COLAPSED

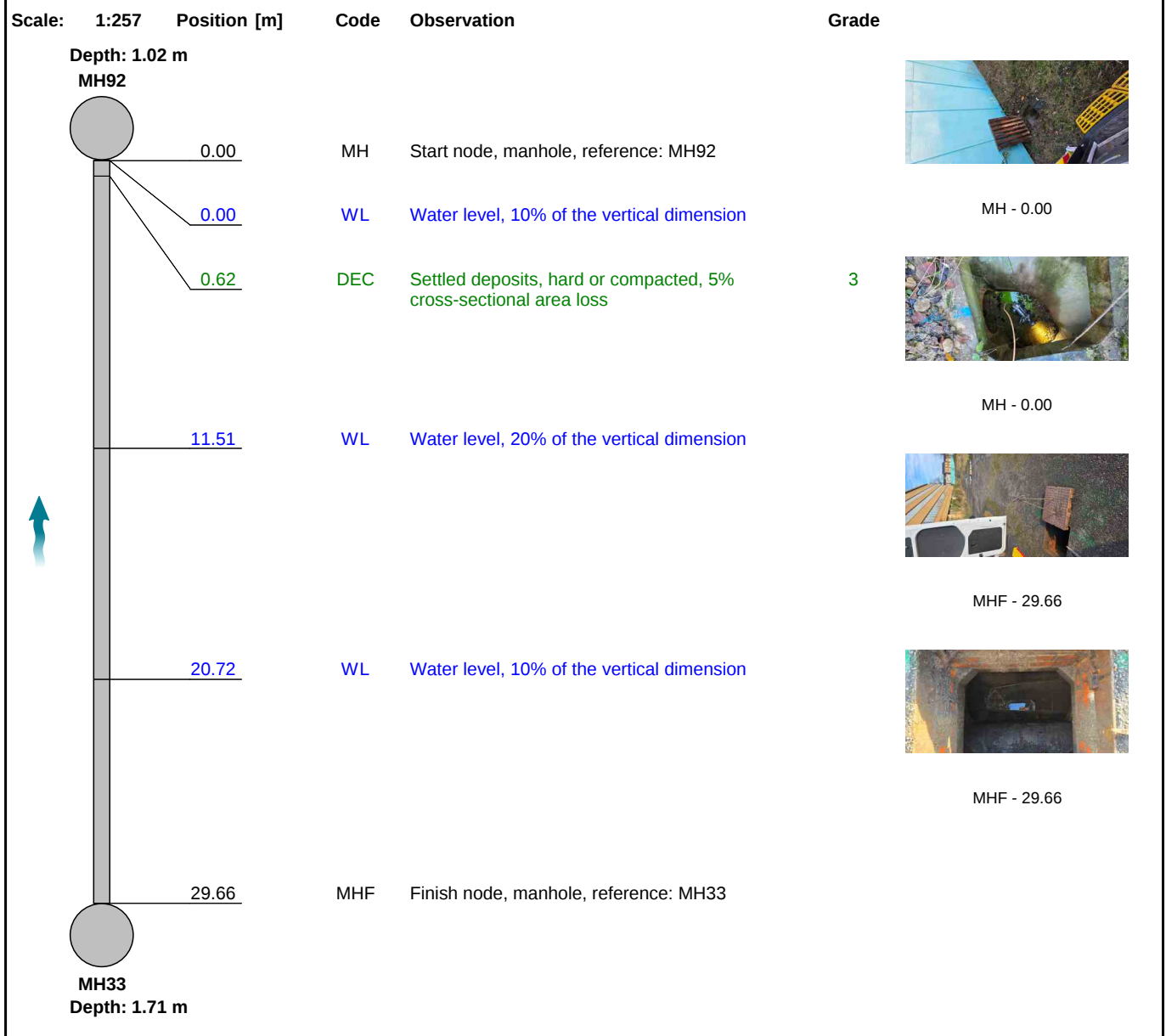


MH66X_4c909935-10b8-4717-9372-7c1483778b32_20241125_143657.jpg, 00:00:04, 0.00 m
 General remark, LINE POSSIBLY COLAPSED

Section Inspection - 25/11/2024 - MH33X

Item No. 16	Insp. No. 1	Date 25/11/24	Time 14:49	Client's Job Ref NOVARTIS SITE	Weather No Rain Or Snow	Pre Cleaned No	PLR MH33X
Operator Simon		Vehicle LL72AXU		Camera Crawler	Preset Length 0.00 m	Legal Status Private Drain	Alternative ID Not Specified

Town or Village:	Horsham	Inspection Direction:	Upstream	Upstream Node:	MH33
Road:	Wimblehurst Road	Inspected Length:	29.66 m	Upstream Pipe Depth:	1.710 m
Location:	Difficult access	Total Length:	29.66 m	Downstream Node:	MH92
Surface Type:	Grass	Joint Length:	1.50 m	Downstream Pipe Depth:	1.020 m
Use:	Surface water		Pipe Shape:	Circular	
Type of Pipe:	Gravity drain/sewer		Dia/Height:	600 mm	
Flow Control:	No flow control		Material:	Concrete	
Year Constructed:	1900		Lining Type:	No Lining	
Inspection Purpose:	Sample condition survey		Lining Material:	No Lining	
Comments:	SURVEY COMPLETE				
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	1	2.0	0.1	2.0	3.0

Section Pictures - 25/11/2024 - MH33X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
16	Upstream	MH33X	NOVARTIS SITE	NOVARTIS SITE



X_2586be45-4d85-47f3-9d48-08431449bb65_20241125_144824.jpg, 00:00:01, 0.00 m
 Start node, manhole, reference: MH92



X_eef80fef-569a-412d-a87a-84c72ef6bb35_20241125_144828.jpg, 00:00:01, 0.00 m
 Start node, manhole, reference: MH92



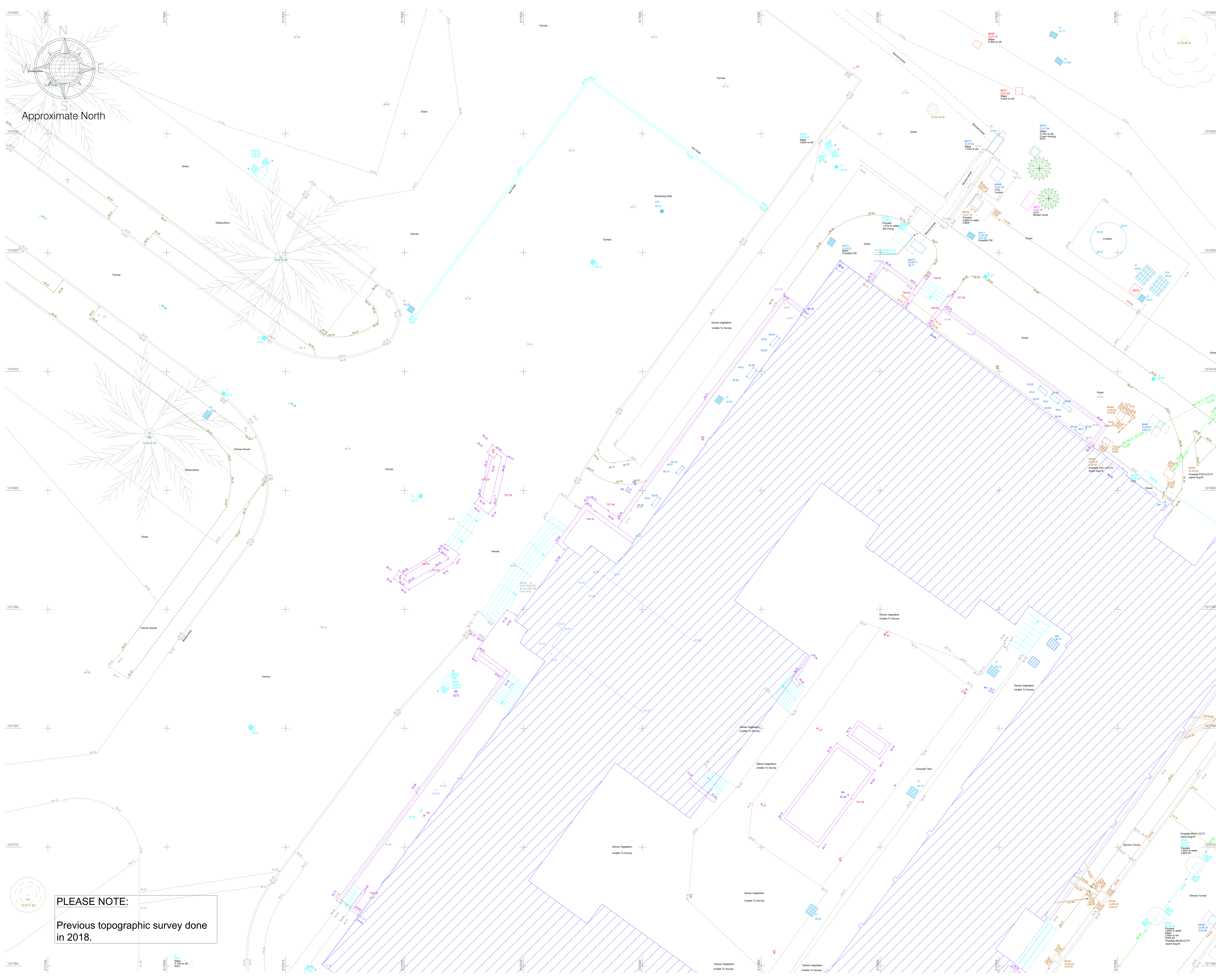
MH33X_2ca10918-82b4-4f2f-bf51-7afa06732a2f_20241125_145333.jpg, 00:03:02, 29.66 m
 Finish node, manhole, reference: MH33



MH33X_115bf01f-265c-4dc9-b4e9-34a2b1cad7e3_20241125_145344.jpg, 00:03:02, 29.66 m
 Finish node, manhole, reference: MH33

Geospatial certainty you can trust murphygs.com

Site Plans



LEGEND

Utility Survey Point Features

AV	Air Valve	IC	IC - Commis	MH	MH - Round
BB	Belisha Beacon	IC	IC - Electric	MH	MH - Surface Water
CP	CCTV Camera Pole	IC	IC - Round	MK	Marker Post
CR	Cable Riser	IC	IC - Telecom	12.24	Pipe Riser
DP	Down Pipe	IC	IC - TCSU/TFL	RE	Recessed Light
DPG	Down Pipe To Ground	IC	IC - CATV	RE	Rodding Eye
EP	Electrical Pole	IC	IC - TCSU/TFL	SC	Stop Cook
ER	Earth Rod	IC	IC - CATV	TL	Traffic Light
FR	Fire Hydrant	IC	IC - CATV	TP	Telegraph Pole
GM	Gas Meter	IC	IC - CATV	V	Valve General
GV	Gas Valve	IC	IC - CATV	WM	Water Meter
G	Gully	IC	IC - CATV	WV	Water Valve

Utility Survey Linework Features

BT	British Telecom	EHV	Electrical - Extra High Voltage
CATV	Cable TV	HV	Electrical - High Voltage
CC	Closed Circuit TV	LV	Electrical - Low Voltage
COMMS	Communications	TFL	Electrical - TFL
FOL	Fibre Optic Line	SL	Street Lighting
FOLC	Fibre Optic Line - Colt	TCSU	Traffic Control System Unit
FOLE	Fibre Optic Line - Energis		
FOLF	Fibre Optic Line - Fibernet		
FOLL	Fibre Optic Line - Level 3		
FOLM	Fibre Optic Line - Mercury		
FOLN	Fibre Optic Line - MFS		
FOLT	Fibre Optic Line - Tanet		
FOLV	Fibre Optic Line - Virgin		
FOLV	Fibre Optic Line - Vodafone		
FOLV	Fibre Optic Line - Verizon		
FOLV	Fibre Optic Line - WCOM		
IS	Telecom Service		

PAS128 Quality Levels
(Consult document PAS128-2014.pdf for full details)

XX - A	Quality Level A	XX - B3	Quality Level B3
XX - B1	Quality Level B1	XX - B3P	Quality Level B3P
XX - B1P	Quality Level B1P	XX - B4	Quality Level B4
XX - B2	Quality Level B2	XX - C	Quality Level C
XX - B2P	Quality Level B2P	XX - D	Quality Level D

Special Survey Features

E-XXXX-XXX	CR-XXXX-XXX
ID A NYYYYYYY Survey Station	ID NYYYYYYY Scan Target
HZZZ ZZZ	HZZZ ZZZ

Utility Survey Abbreviations

AB	Abandoned	CSER	Confined Space Entry Required
AR	Assumed Route	MH	Manhole
BI	Illuminated Bollard	NVO	Not Visible Outlet
BLD	Blocked	OE	Overhead Electric
CPD	Capped	OT	Overhead Telecom
CL	Cover Level	SOF	Soffit Level
CPD	Capped	TFR	Taken From Raucous
CUT	Disconnected Utility	TYM	Ticket Vending Machine
EOCCTV	End of CCTV Survey	UTO	Unable to Open
EOC	End of GPR Signal	UTT	Unable to Trace
EDT	End of Trace	UKN	Unknown
EOS	End of Survey	WL	Water Level
IC	Inspection Cover	XXS	Service Depth
IL	Invert Level		

Utility Material Abbreviations

AC	Asbestos Cement	CO	Concret	SI	Spun Iron
BC	Brick Chamber	DI	Ductile Iro	ST	Steel
CI	Cast Iron	PE	Polyethylene	WTR	Water

Level Measured For

Ducts/Pipes At Pits Is To Top of The Service	Level Measured For Drainage At Pits Is To Invert Level Of The Service
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Location Plan

Revisions

Rev	Description	Surveyed by	Drawn by	Checked by
A	First Issue	DA - 16/11/24	CN - 20/11/24	DS - 20/11/24

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London Manchester Birmingham Glasgow Belfast Cork Kildare

Client
TPS Management

Project
Novartis site Horsham - RDR Survey

Site Address
32 Wimblehurst Rd
Horsham
RH12 2ED

Description
Underground Utility Survey (PAS128)

Survey Grid
Localised OSGB36(15) - Scale Factor 1.0

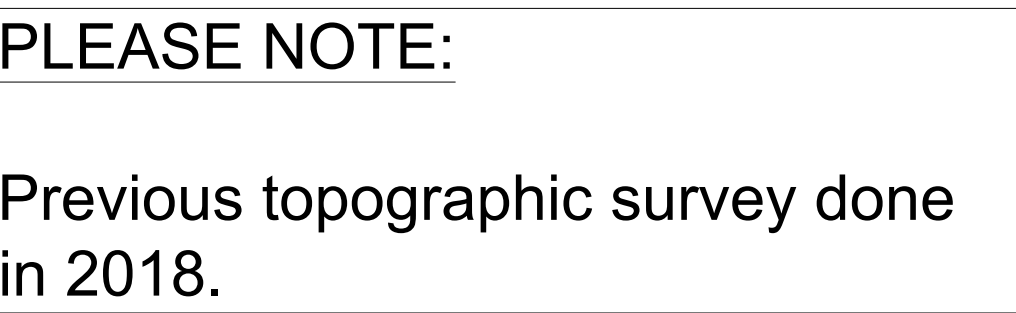
Survey Datum
GNSS - Ordnance Datum Newlyn (ODN)

RICS Band
Band E

Drawing Scale
1:100 @A0

Drawing Number
MGS60622-U-AII-05

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Utility Survey Line Feature Notes			
Communications			
BT	British Telecom	EHV	Electrical - Extra High Voltage
CATV	Cable TV	LV	Electrical - Low Voltage
CCTV	Closed Circuit TV	LV	Electrical - Low Voltage
COM	Communications	TEL	Electrical - TEL
FOL	Fiber Optic Line	SL	Street Lighting
FOL	Fiber Optic Line - Coit	TCSU	Traffic Control System Unk
FOL	Fiber Optic Line - Energy		
FOL	Fiber Optic Line - Fibernet	G	Gas
FOL	Fiber Optic Line - Level 3	G	Gas Measurement
FOL	Fiber Optic Line - Mercury	GP	Gas Intermediate Pressure
FOL	Fiber Optic Line - MSC	GP	Gas Medium Pressure
FOL	Fiber Optic Line - Tanel	GP	Gas Pressure
FOL	Fiber Optic Line - Virgin	GP	Gas + Unknown
FOL	Fiber Optic Line - Vonage	GP	Gas + Unknown
FOL	Fiber Optic Line - Verizon	GP	Gas + Unknown
FOL	Fiber Optic Line - WCOM	U	Unknown Asset
TEL	Telecom Service	UCL	Unknown Cable
Drainage			
CW	Combined Water	UCL	Unknown Cable
FW	Full Water	GP Sld	GP Sld
FW	Full Water	GP Sld	GP Survey Area
FW	Full Water	GP	GP buried structure
R	Rising Main	GP	GP Reinforced Steel
		GP	GP interface structure (change in material)
Water			
FRW	Fire Water	OH	Overhead
WV	Water Main	DH	District Heat
WS	Water Service	FX	Fuel Pipe
		FX	Decommissioned/Abandoned
			Manhole Chamber
Electrical			
E	Electrical Service		Manhole ID
E	Electrical Service		Post End
E	Electrical Pilot Cable		Scope of Works

Special Survey Features			
ID		E=XXXX.XXX N=YYYY.YYY H=ZZZ.ZZZ	Survey Station
ID		E=XXXX.XXX N=YYYY.YYY H=ZZZ.ZZZ	Scan Target

Utility Material Abbreviations					
AC	Asbestos Cement	CO	Concret	SI	Spun Iron
BC	Brick Chamber	DI	Ductile Iro	ST	Steel
CI	Cast Iron	PE	Polyethylene	WTR	Water

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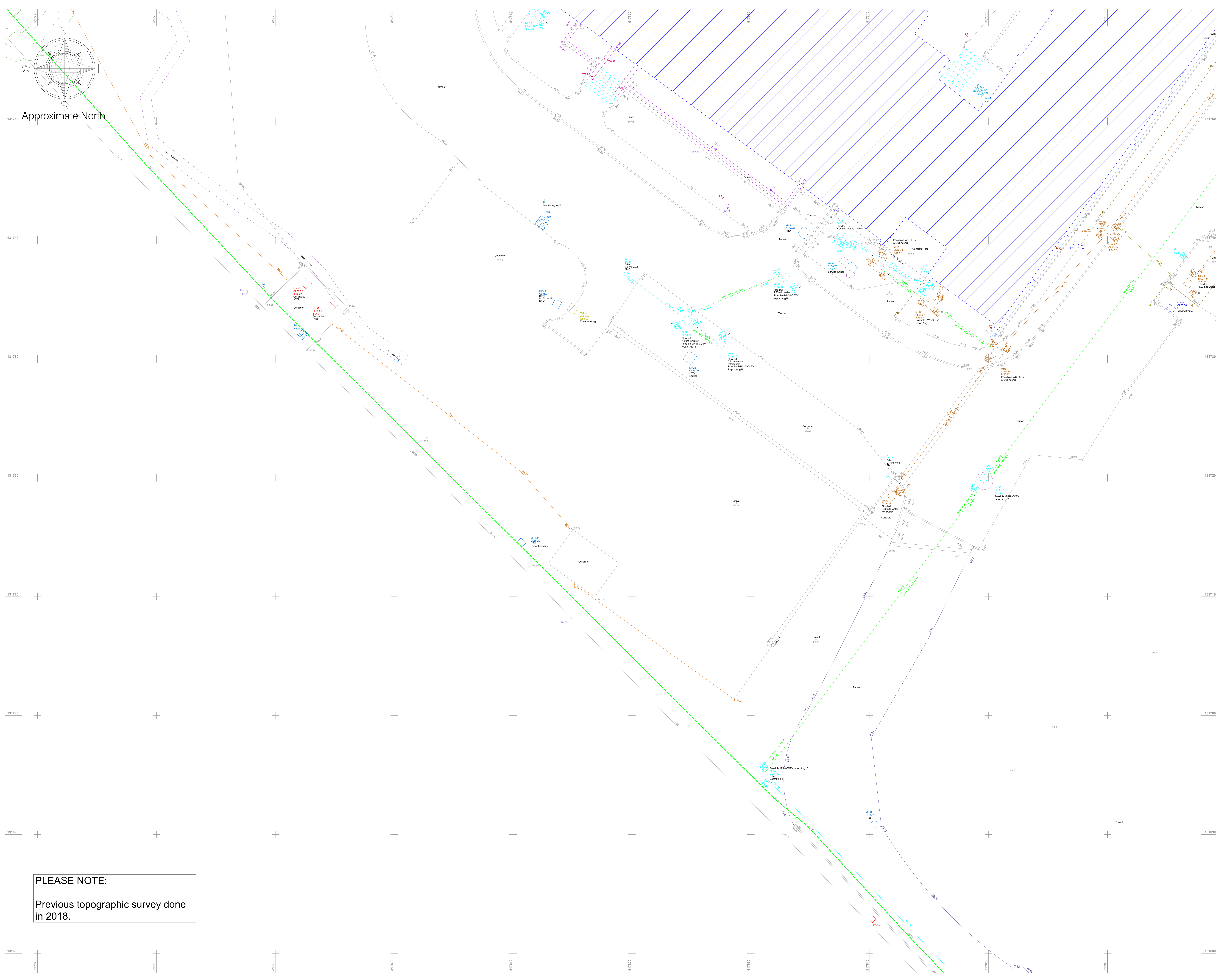
Location Plan

Revisions				
Rev	Description	Surveyed by	Drawn by	Checked by
A	First Issue	DA - 16/11/24	CN - 20/11/24	DS - 20/11/24



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LEGEND		
Utility Survey Point Features		
AV Air Valve	IC Gully Round	MH - Round
BB Belisha Beacon	IC	MH - Surface Water
CP CCTV Camera Pole	IC - Comms	Marker Post
CR Cable Riser	ICE - Electric	Pipe Riser
DP Down Pipe	IC - Round	Recessed Light
DPC Down Pipe To Ground	IC - Telecom	Rodding Eye
EP Electrical Pole	IC - TCSU/TFL	Stop Cook
ER Earth Rod	IC - CATV	Traffic Light
FP Fire Hydrant	LP Lamp Post	Telegraph Pole
GM Gas Meter	MH	Valve General
GV Gas Valve	MH - District Heat	Water Meter
G Gully	MH - Foul	Water Valve

Utility Survey Linework Features		
BT British Telecom	EHV Electrical - Extra High Voltage	
CATV Cable TV	HV Electrical - High Voltage	
CCTV Closed Circuit TV	LV Electrical - Low Voltage	
COMMS Communications	TFL Electrical - TFL	
FOL Fibre Optic Line	SL Street Lighting	
FOLC Fibre Optic Line - Colt	TCSU Traffic Control System Unit	
FOLE Fibre Optic Line - Energis	Gas	
FOLF Fibre Optic Line - Fibernet	G Gas Service	
FOLL Fibre Optic Line - Level 3	GP Gas Low Pressure	
FOLM Fibre Optic Line - Mercury	GIP Gas Intermediate Pressure	
FOLN Fibre Optic Line - MFS	GMP Gas Medium Pressure	
FOLT Fibre Optic Line - Tanet	GHP Gas High Pressure	
FOLV Fibre Optic Line - Virgin	GPR Gas Unknown	
FOLVF Fibre Optic Line - Vodafone	ED Empty Duct	
FOLVN Fibre Optic Line - Verizon	GPR Anomaly	
FOLW Fibre Optic Line - WCOM	UA Unknown Asset	
TS Telecom Service	UA Possible Sweep	
	UCL Unknown Cable	
	GPR Slab	
	GPR Survey Area	
	GPR buried structure	
	GPR Reinforced Slab	
	GPR interface layer (change in material)	
	Other	
	DH District Heat	
	FU Fuel Pipe	
	XX Decommissioned/Abandoned	
	XX Manhole Chamber	
	PEO Manhole ID	
	PEO Pot End	
	PEO Scope of Works	

PAS128 Quality Levels		
(Consult document PAS128-2014.pdf for full details)		
XX - A - Quality Level A	XX - B3 - Quality Level B3	
XX - B1 - Quality Level B1	XX - B3P - Quality Level B3P	
XX - B1P - Quality Level B1P	XX - B4 - Quality Level B4	
XX - B2 - Quality Level B2	XX - C - Quality Level C	
XX - B2P - Quality Level B2P	XX - D - Quality Level D	

Special Survey Features		
E-XXXX-XXX ID A NYYYYYYY Survey Station	ES-XXXX-XXX ID NYYYYYYY Scan Target	
HZZZ ZZZ	HZZZ ZZZ	

Utility Survey Abbreviations		
AB Abandoned	MH Manhole	CSER Confined Space Entry Required
AR Assumed Route	NVO Not Visible Outlet	
BLD Blocked	OE Overhead Electric	
CPD Capped	OT Overhead Telecom	
CL Cover Level	SOF Soffit Level	
CPD Capped	TFR Taken From Racords	
CUT Disconnected Utility	TYM Ticket Vending Machine	
EOCCTV End of CCTV Survey	UTO Unable to Open	
EOC End of GPR Signal	UTT Unable to Trace	
EOT End of Trace	UKN Unknown	
EOS End of Survey	WL Water Level	
IC Inspection Cover	XXS Service Depth	
IL Invert Level		

Utility Material Abbreviations		
AC Asbestos Cement	CO Concrete	SI Spun Iron
BC Brick Chamber	DI Ductile Iro	ST Steel
CI Cast Iron	PE Polyethylene	WTR Water

Level Measured For Ducts/Pipes At Pits Is To Top of The Service	Level Measured For Drainage At Pits Is To Invert Level Of The Service
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Location Plan		

Revisions				
Rev	Description	Surveyed by	Drawn by	Checked by
A	First Issue	DA - 16/11/24	CN - 20/11/24	DS - 20/11/24



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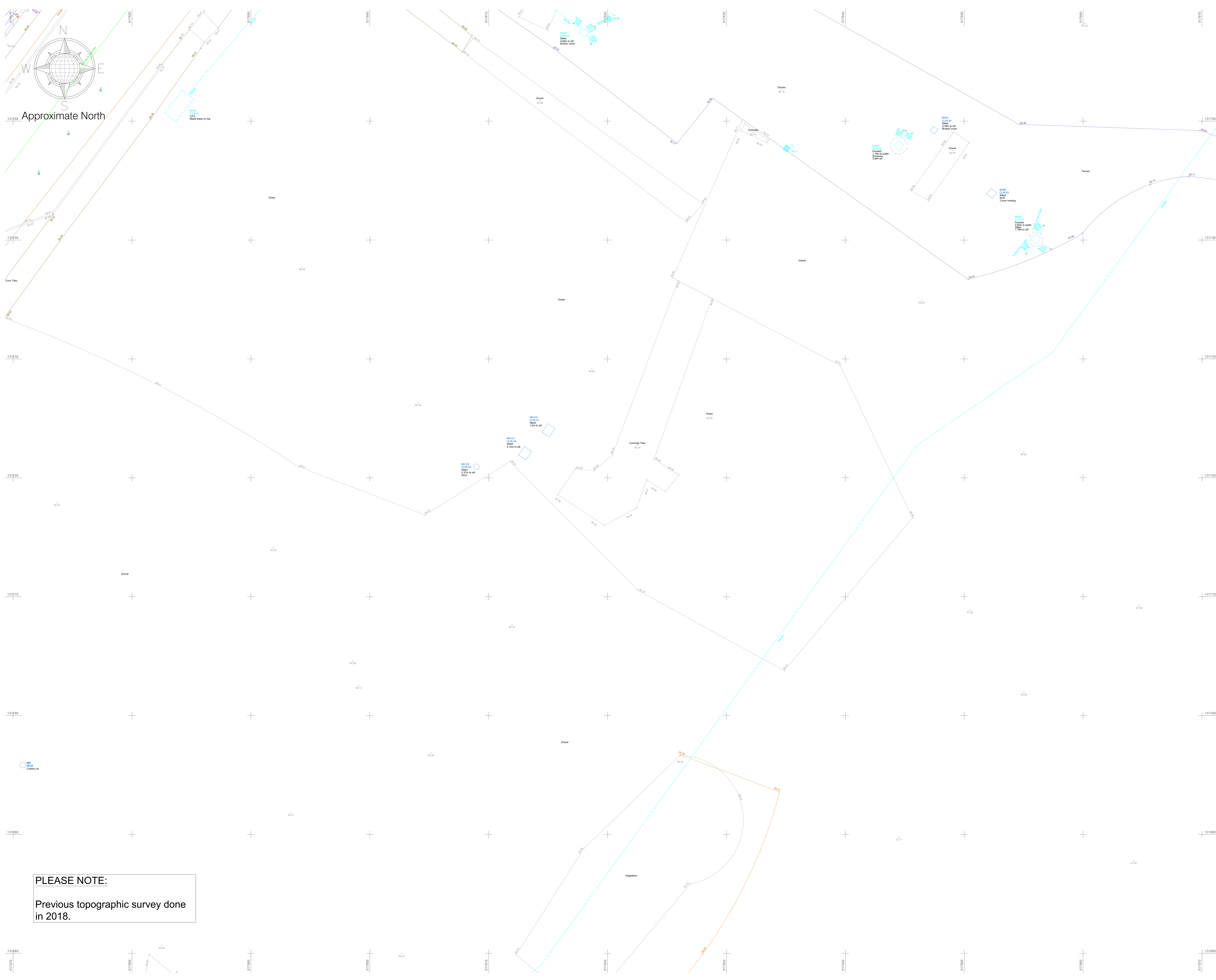
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Email: info@murphygcs.com

London Manchester Birmingham Glasgow Belfast Cork Kildare

Client	TPS Management
Project	Novartis site Horsham - GPR Survey
Site Address	32 Wimblehurst Rd Horsham RH12 2ED
Description	Underground Utility Survey (PAS128)
Survey Grid	Localised OSGB36(15) - Scale Factor 1.0
Survey Datum	GNSS - Ordnance Datum Newlyn (ODN)
RICS Band	Band E
Drawing Scale	1:100 @A0
Drawing Number	MGS60622-U-A11-08

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PLEASE NOTE:
Previous topographic survey done in 2018.



LEGEND		
Utility Survey Point Features		
AV Air Valve	IC Gully Round	MH - Round
BB Belisha Beacon	IC IC	MH - Surface Water
CP CCTV Camera Pole	IC - Comms	Marker Post
CR Cable Riser	IC - Electric	12.24 Pipe Riser
DP Down Pipe	IC - Round	Recessed Light
DPG Down Pipe To Ground	IC - Telecom	RE Rodding Eye
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GV Gas Valve	MH - District Heat	WM Water Meter
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FOLC Fibre Optic Line - Cof	TCSU Traffic Control System Unit	
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Drainage	Unknown Cable	
CW Combined Water	GPR Slab	
FW Foul Water	GPR Survey Area	
SW Surface Water	GPR buried structure	
RM Rising Main	GPR Reinforced Slab	
Water	GPR interface layer (change in material)	
FRW Fire Water	Other	
WM Water Main	DH District Heat	
WS Water Service	FU Fuel Pipe	
Electrical	XX Decommissioned/Abandoned	
E Electrical Service	Manhole ID	
EE Electrical Earth	PEO Pot End	
P Electrical Pilot Cable	Scope of Works	

PAS128 Quality Levels	
(Consult document 'PAS128-2014.pdf' for full details)	
XX - A - Quality Level A	XX - B3 - Quality Level B3
XX - B1 - Quality Level B1	XX - B3P - Quality Level B3P
XX - B1P - Quality Level B1P	XX - B4 - Quality Level B4
XX - B2 - Quality Level B2	XX - C - Quality Level C
XX - B2P - Quality Level B2P	XX - D - Quality Level D

Special Survey Features	
E-XXXX-XXX ID A NYYYYYYY Survey Station HZZZ ZZZ	E-XXXX-XXX ID NYYYYYYY Scan Target HZZZ ZZZ

Utility Survey Abbreviations	
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CPD Capped	OT Overhead Telecom
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Location Plan	

Revisions				
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RICS Band	Band E
Drawing Scale	1:100 @A0
Drawing Number	MCS60622-U-AII-09

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