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Fund Management

# Bridges Healthcare (Richmond) Limited



## RICHMOND INN

Revised Sustainable Drainage Strategy  
Elliott Wood Partnership









elliottwood

**50-56 Sheen Road, Richmond,  
TW9 1UG**

Revised Sustainable Drainage Strategy

engineering a better **society**

		Remarks:	Issued for Planning				
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# One

## Executive Summary

Elliott Wood Partnership Ltd have been appointed to produce a Sustainable Drainage Strategy in support of the proposed redevelopment of the site at 50 - 56 Sheen Road, Richmond, TW9 1UG.

The site is situated to the northeast of the junction between Sheen Road and Church Road, covering the plots occupied by 50 - 56 Sheen Road. The national grid reference for the site is 518335 E, 175018 N.

The existing site is located within a Flood Zone 1 with a low flood risk from surface water runoff to adjacent land areas. As such, a site-specific Flood Risk Assessment is required for the development site, see report 2210561-EWP-ZZ-XX-RP-C-0001.

The existing site comprises the existing Richmond Inn hotel, which is a 44-bed hotel which has been vacant since its closure in March 2020.

The Richmond Inn is located on the corner of Sheen Road and Church Road in Richmond. The site extends to 0.13ha in total and comprises the hotel building (with ancillary meeting rooms and lounges) as well as a central courtyard area and surface car park for customers, which is accessed from Sydney Road. The main visitor entrance is provided at Sheen Road.

The Sheen Road frontage comprises four storeys in total, whilst the Church Road and Sydney Road frontages provide three storeys of accommodation.

Thames Water sewer record mapping indicates the development site is served via a 150mm surface water sewer located in Church Street.

Surface water runoff from the proposed development will be attenuated in blue roof storage structures, geocellular attenuation and permeable paving, ensuring water is dealt with as close to source as possible while also improving the quality of water discharged from site. The sustainable drainage solutions on site will reduce the offsite discharge rate to provide a betterment of over 78% over the existing arrangement for the 1:100yr + 40%CC storm event.

# Two

## Introduction

Elliott Wood Partnership Ltd have been appointed to provide a Sustainable Drainage Strategy to support the full planning application for the proposed redevelopment at 50 - 56 Sheen Road, Richmond, TW9 1UG, located within the London Borough of Richmond upon Thames.

The purpose of this report is to explain the approach taken with regards to the below ground drainage strategy. It evaluates the selection of SuDS devices and highlights how the drainage disposal hierarchy has been followed.

This report has been prepared in accordance with the GOV.UK *Sustainable Drainage Systems: Non-statutory Technical Standards, London Local Plan 2021, London Borough of Richmond upon Thames Local Plan*.

# Three

## Site Context

The site is situated to the northeast of the junction between Sheen Road and Church Road, covering the plots occupied by 50 - 56 Sheen Road. The national grid reference for the site is 518335 E, 175018 N.

The site is located in the London Borough of Richmond upon Thames, situated 300m southeast of Richmond train station. The River Thames runs approximately 750m southwest of the site.

The total site boundary is approximately 0.14ha.



Figure 1: Site Location

A topographic survey of the site was undertaken by Mobile Cad Surveying Ltd in August 2020; this can be found in **Appendix A**.

The topographic survey shows that across the site, the levels along the site frontage on Sheen Road are largely flat and vary between 12.19 and 12.40m AOD. The building is set with an upper and lower ground floor with the primary entrance achieved via a set of steps from the building frontage on Sheen Road. The upper and lower ground levels are broadly 13.00 and 10.40m AOD respectively. A Lightwell is located either side of the primary access with a level of 11.20 to 11.40m AOD. Levels within the rear courtyard are largely flat around the building and fall towards the northern boundary from broadly 10.10m to 9.00m at the vehicular access which is also the low point of the site. The existing site consists of a single four-storey building split over two levels, which serves as a hotel.

The total area of the site is approximately 1,400m<sup>2</sup>, of which 94% is currently considered to be positively drained impermeable area with soft landscaping comprising discreet hedged or tree pit areas only.



# Four

## Underlying Geology

Review of the BGS maps show the site is situated on a bedrock of London Clay Formation with no superficial deposits. The nearest historical borehole is located approximately 270m to the west of the site on the site currently occupied by Waitrose. This borehole indicates 1.70m of made ground from the surface, above a layer of sandy clay, medium dense clayey gravel, dense medium to coarse sand and gravel before reaching stiff silty clay at 5.9mBGL.

Site specific intrusive ground investigation works are programmed to be undertaken to confirm the on-site ground conditions.

An initial borehole was taken on site which confirmed the site to be underlain by clayey sand over silt clay. A falling head test was undertaken at 2.50m BGL however the water level failed to drop within an hour of filling.

The preliminary borehole log can be found in **Appendix B**.

# Five

## Existing Drainage

Public sewer records have been obtained from Thames Water. An extract of the asset plan is shown in **Figure 2** below.

These show that the area is served by a network of foul water sewers within Church and Sydney Road. A surface water sewer is located beyond the northwest corner of the site and continues down Church Road.

There are two adopted foul water manholes located within the boundaries of the site which serve the development site only. These manholes are to be divested are part of the proposed works in agreement with Thames water.

A CCTV survey of the existing private drainage network was undertaken by Clearview Surveys Ltd in April 2022. The survey shows the site to be served by separate foul and surface water drainage networks. The existing foul water network comprises a mixture of 100 and 150mm diameter drains which ultimately discharge to Thames Water Manhole 3003 located into Sydney Road. The existing surface water network is comprised of 100mm diameter drainage and directs surface water runoff towards the north eastern corner of the site where it is understood to discharge to a PC ring soakaway.

The CCTV survey can be found in **Appendix C**.



**Figure 2:** Extract from Thames Water Sewer Records

The surface water runoff rates for the existing site have been calculated using the Modified Rational Method equation (based on CIRIA C697) and are shown in table 1:

**Table 1** Existing Surface Water Run-off rates

Return Period	Rainfall Intensity (mm/hr)	Existing run-off (l/s)
1yr	31.7	12.0
30yr	79.9	30.3
100yr	101.9	38.7

Existing surface water discharge calculations can be found in **Appendix D**.

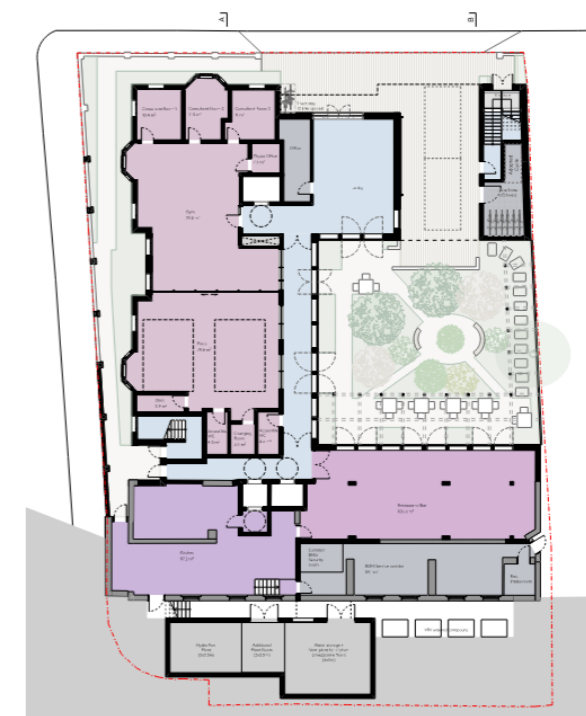
# Six

## Proposed Development

The development proposals seek to convert the existing hotel into an alternative type of visitor accommodation. The proposals will provide all of the facilities associated with a 4-star hotel, including private en-suite rooms, dining facilities, communal lounge and wellness treatments. In addition to this, the proposals will provide bespoke physiotherapy led rehabilitation and recovery centre including hydrotherapy pools and specialist gym equipment.

To facilitate the redevelopment of the site, it is proposed to demolish the extended buildings to the rear of the building which were all constructed since 1996, and retain the existing joined Victorian buildings on the site frontage. It is then proposed to reconstruct the demolished section of the building with a similar size and shape, extending further along the northern boundary and including an undercroft vehicle access. The lower ground floor will be constructed approximately 1m lower than the previous building.

The proposed development plans can be found in **Appendix E**.



**Figure 3:** Proposed Lower Ground Floor Plan

# Seven

## Proposed Drainage

The surface water drainage system has been designed in accordance with the requirements of Planning Practice Guidance (PPG) and the London Borough of Richmond upon Thames SuDS Policy. The following drainage hierarchy has therefore been considered:

- 1) Rainwater use as a resource (for example rainwater harvesting, blue roofs for irrigation)
- 2) Rainwater infiltration to ground at or close to source.
- 3) Rainwater attenuation in green infrastructure features for gradual release (for example blue/green roofs, rain gardens).
- 4) Rainwater discharge direct to a watercourse (unless not appropriate)
- 5) Controlled rainwater discharge to a surface water sewer or drain.
- 6) Controlled rainwater discharge to a combined sewer.

### Appraising the use of Rainwater Harvesting

It is not proposed to use rainwater harvesting techniques for the scheme due to the required space for an appropriately sized tank, and the additional complexity involved with the routing of mains water supply within the proposed building. The demand on the potable water supply will be reduced as much as possible through the use of low flow appliances.

### Appraising the use of Infiltration Techniques

In order to comply with building regulations, infiltration techniques such as soakaways must not be installed within 5m of a building or highway. Due to the density of buildings on the site it is not possible to achieve this 5m offset from buildings.

A falling head infiltration test was undertaken during initial borehole surveys on site. The water level failed to drop from the filled level in the borehole. The underlying geology also comprises clay and silty clay.

Based on the above, infiltration has not been deemed feasible for this site.

### Appraising the use of Open Water Features

As the external areas will be used as pedestrian and vehicular access, the available space for open water features is limited. Open water features are also deemed not to be feasible due to the proposed usage of the site.

### Appraising the use of above and below ground attenuation

The current proposals include the use of blue roofs as indicated on the Proposed Below Ground Drainage Strategy.

A blue roof system restricts surface water at the rainwater outlets and provides temporary attenuation at roof level through the use of a layer of 129mm thick geocellular crate. A blue roof manages surface water closer to

source (in line with CIRIA guidance) and provides attenuation that would otherwise be required below ground. The blue roof will incorporate a living roof finish, achieving the benefits of both a green and blue roof.

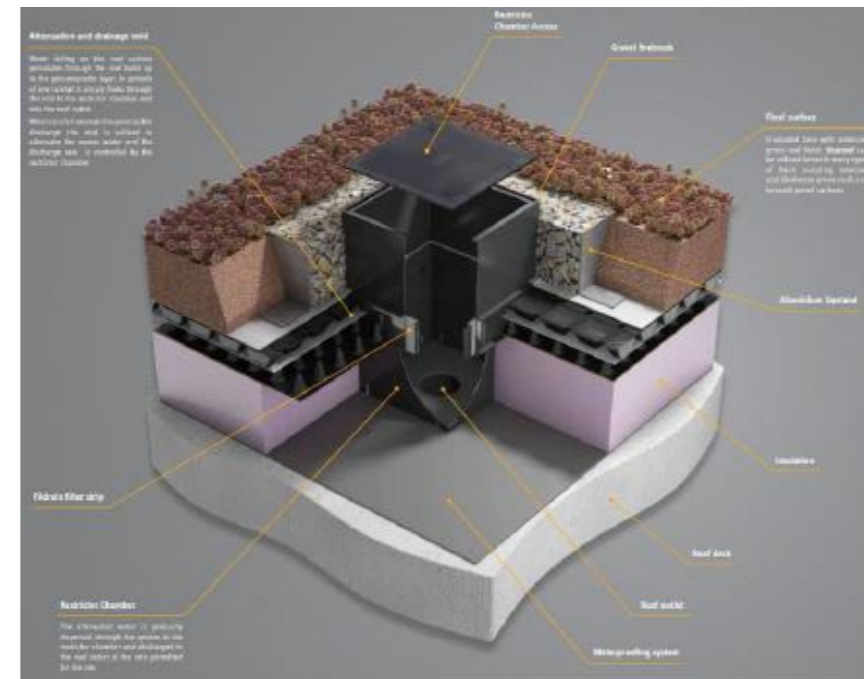


Figure 4: Typical blue roof construction (indicated with a living roof finish) (Source ABG Roofing Ltd)

Surface water will be discharged from the development site at a restricted rate to mimic greenfield runoff rates as close as possible, with attenuation provided by permeable paving, a geocellular attenuation tank and the blue roof system. The existing surface water sewer within Church Street is approximately 1.72m deep and it is therefore proposed to achieve a direct connection to the existing network via a gravity network. The surface water network will be designed to attenuate all modelled storm events, up to and including the 1 in 100-year return + 40% climate change allowance.

### Appraising the use of permeable surfaces

The proposed development includes approximately 161m<sup>2</sup> of external hardstanding area in the central courtyard and to the rear of the site fronting Sydney Road. Permeable paving will be utilised in this area to provide attenuation storage for run-off from paved areas and roof areas not discharging to the blue roof. The introduction of permeable paving will help control surface water runoff at source, providing attenuation and filtration of runoff on these areas. In addition, there are areas of proposed loose gravel finish which will infiltrate to the underlying soil.

The evaluation of SuDS is demonstrated in Table 2 below.

Table 2 Evaluation of SuDS techniques

SuDS Technique	Y/N	Comment
Rainwater reuse	N	Rainwater reuse is not proposed for the scheme as it is proposed to reduce water usage rather than recycle rainwater. Rainwater will naturally be reused for irrigation purposes through the use of blue and green roofs.
Open Water features	N	The confined nature of the development makes open water features unfeasible.
Infiltration devices (i.e. Soakaways)	N	Soakaways are not deemed feasible for this site due to restricted space on site not allowing a minimum of 5m from buildings or roads. The underlying ground conditions are also not conducive to infiltration
Blue Roofs	Y	Blue roofs are proposed for the flat roof areas of the new building. This will allow surface water from the building to be restricted significantly without the need for below ground attenuation tanks.
Green Roofs	Y	Green roofs are to be provided as the finish over the blue roofs for the flat roof areas
Permeable Surfaces	Y	The proposed development will introduce new areas of permeable paving to a site which is currently almost completely impermeable. This will help improve the quality of surface water runoff drained via these areas and reduce the total volume of water discharged from site
Tanked systems	Y	Surface water attenuation in the form of geocellular crates are proposed to locally attenuate runoff from discreet roof and hard standing areas.

The London Borough of Richmond upon Thames and London Plan guidance states that developments should aim to achieve greenfield runoff rates wherever possible. The greenfield runoff for the site has been calculated using Micro Drainage and are shown in Table 3.

Table 3 Greenfield Runoff Rates (from MicroDrainage)

Return Period	Greenfield Runoff Rate (l/s)
1 in 1 year	0.18
1 in 30 years	0.49
1 in 100 years	0.68

It is proposed to utilise orifice plate flow controls, which will restrict surface water from the attenuation tank and permeable paved areas of the development site. Runoff entering the attenuation tank will be restricted to a peak discharge of 2.0 l/s for all storms up to and including the 1 in 100 year return + 40% climate change allowance. Similarly, the permeable paved areas will also be restricted to a peak discharge rate of 0.5 l/s and 1.5l/s respectively. Surface water runoff from the blue roofs will be restricted via



outlet restrictions and will give a peak discharge rate for the whole blue roof of 0.7/s. While the GFRs are lower for the 1 in 1, 1 in 30 and 1 in 100-year return periods, the increased restriction of the flow control devices would increase the risk of blockage and subsequent flooding.

Surface water runoff from the roof area fronting Sheen Road, the lightwells and hard landscaping at ground level are to discharge to a packaged pumping station which will be located in the proposed plant room to the front of the site. The pump will discharge at a peak rate of 4.6l/s to the proposed gravity surface water on site and will feature emergency power back-up to ensure it remains operational during power outages.

The development will also utilise a blue roof system to reduce the runoff rate from the proposed building. This in turn reduces the need for attenuation below ground by dealing with rainwater closer to the source and slowing down the rate at which surface water from the building reaches the below ground network. ABG Ltd have provided calculations for the proposed blue roof system to be located at each of the roof and terrace levels. The ABG Ltd calculations have been included with **Appendix F**.

It is proposed for the hardstanding area comprising the central courtyard to be constructed utilising permeable surfaces. This will not only increase the time of entry into the accepting sewer network, but will also provide treatment of surface water runoff at source, improving the quality of water on site. The permeable pavement will be wrapped in a geotextile, allowing for a reduction in the offsite discharge volume through secondary losses and providing irrigation to the adjacent soft landscaped areas.

The proposed below ground surface water drainage network has been modelled using MicroDrainage software. The MicroDrainage network calculations have been included in **Appendix G**.

The post-development runoff improvement against the existing runoff has been provided in **Table 4**.

**Table 4** Post Development Runoff Improvement

Return Period	Existing Runoff Rate (l/s)	Proposed Runoff Rate (l/s)	Percentage Betterment
1 in 1 year	12.0	6.0	50.0%
1 in 30 years	30.3	7.5	75.2%
1 in 100 years	38.7	8.2	78.8%
1 in 100 years + 40% Climate Change	N/A	9.0	>78.8%

As can be seen in the table above, although it is not possible to achieve greenfield runoff rates from the post-development site, a significant betterment can be achieved over the existing runoff rates. The proposed SuDS strategy reduces surface water runoff by over 78% in the 1 in 100 year return, with similar reductions in smaller storm events. The London Plan stipulates that for all new developments, offsite discharge rates should aim to be reduced to greenfield runoff rates as close as possible. The proposed SuDS strategy also draws on the CIRIA Four Pillars of SuDS by enhancing the amenity space available on site, and improving water quality through the water filtration benefits provided by the permeable paving.

The London Borough of Richmond upon Thames Surface Water Drainage Pro-forma for new developments has been completed and included within **Appendix H**.

The proposed below ground drainage layout has been included within **Appendix I**.

A Pre-planning enquiry was submitted to Thames Water to confirm the capacity of the downstream surface sewer network within Church Street. Thames Water have confirmed they are satisfied with the design proposals where there is a betterment of at least 50% for all storm events.

## Eight Foul Water Drainage

It is proposed to for the foul water network to drain via a gravity network, and discharge to the existing foul water manhole located towards the northern boundary of the site. A pre-development enquiry has been submitted to Thames Water who have confirmed there is sufficient capacity in the existing foul water network to accommodate the development flows. Refer to **Appendix J** for confirmation of sewer capacity.

For the kitchen and food preparation areas where high grease and fat content is anticipated, a grease trap shall be provided upstream of the wider network.

# Nine

## Maintenance Requirements

All SuDS will be maintained by the building management company for the lifetime of the development in accordance with the SuDS Manual as summarised below. Maintenance requirements for the blue roof will be supplied by the specialist designer.

### Modular System / Blue Roofs

Maintenance Schedule	Required Action	Recommended Frequency
Regular	Inspect and identify any areas that are not operating correctly. If required, take remedial action.	Monthly for 3 months, then six monthly
	Debris removal from catchment surface (where may cause risks to performance)	Monthly
	Remove sediment from pre-treatment structures	Annually, or as required
Remedial actions	Repair/rehabilitation of inlets, outlets, overflows and vents	As required
Monitoring	Inspect/check all inlets, outlets, vents and overflows to ensure that they are in good condition and operating as designed	Annually and after large storms

### Gullies / Linear channels

Inspection and removal of debris from silt trap once a year; preferably after leaf fall in the autumn.

### Drainage pipes, manholes and silt traps

Inspect manholes & silt traps for build-up of silt and general debris once a year; preferably after leaf fall in the autumn. If silt/debris is building up, then clean with jetting lorry / gully sucker and inspect pipe – repeat cleaning if required. If the pipes to be jetted are plastic then a high flow, low pressure setting should be used so that the pipes are not damaged.

### Unusual / unresolved problems

If the drainage system is still holding water following cleaning with a jetter, or the jetting of the system removes excessive amounts of debris this may indicate greater issues within the system. A CCTV survey is likely to be required and further advice should be sought from a drainage engineer.

NOTE: Manhole covers can be heavy and suitable lifting equipment / procedures should be used. Where possible, personnel should not enter manholes to carry out maintenance.

### Permeable Paving

Regular inspection and maintenance are important for the effective operation of pervious pavements. Maintenance responsibility for a pervious pavement

and its surrounding area should be placed with an appropriate responsible organisation. The facility should be inspected regularly, preferably during and after heavy rainfall to check effective operation and to identify any areas of ponding.

Pervious surfaces need to be regularly cleaned of silt and other sediments to preserve their infiltration capability. Experience in the UK is limited, but advice issued with permeable precast concrete paving has suggested a minimum of three surface sweepings per year. Manufacturers' recommendations should always be followed.

A brush and suction cleaner, which can be a lorry-mounted device or a smaller precinct sweeper, should be used and the sweeping regime should be as follows:

- End of winter (April) – to collect winter debris.
- Mid-summer (July/August) – to collect dust, flower and grass-type deposits.
- After autumn leaf fall (November).

Care should be taken in adjusting vacuuming equipment to avoid removal of jointing material. Any lost material should be replaced.

Operation and maintenance requirements for permeable paving are described below.

#

Maintenance Schedule	Required Action	Frequency
Regular Maintenance	Brushing and vacuuming.	Three times/year at end of winter, mid-summer, after autumn leaf fall, or as required based on site-specific observations of clogging or manufacturers' recommendations.
	Stabilise and mow contributing and adjacent areas.	As required.
Occasional maintenance	Removal of weed.	As required.
	Remediate any landscaping which, through vegetation maintenance or soil slip, has been raised to within 50 mm of the level of the paving.	As required.
Remedial actions	Remedial work to any depressions, rutting and cracked or broken blocks considered detrimental to the structural performance or a hazard to users.	As required.
	Rehabilitation of surface and upper sub-structure.	As required (if infiltration performance is reduced as a result of significant clogging).
	Initial inspection.	Monthly for three months after installation
Monitoring	Inspect for evidence of poor operation and/or weed growth. If required take remedial action.	3-monthly, 48 h after large storms.
	Inspect silt accumulation rates and establish appropriate brushing frequencies.	Annually.
	Monitor inspection chambers.	Annually.

# Ten

## Conclusion

In summary, following the advice and guidance provided by the London Borough of Richmond upon Thames, a SuDS strategy has been produced for the planning application associated with Richmond Inn, 50 – 56 Sheen Lane, Richmond.

The SuDS Hierarchy has been followed in order to employ the most suitable and practicable SuDS techniques to improve surface water run off rates from the site. The proposed development will restrict surface water run off to the public sewer to a peak discharge of 9.0l/s for the red line boundary. This provides a betterment on existing of over 78% for the 1 in 100-year event + 40% climate change event.

A blue roof system over the flat roof will reduce the peak runoff from the building and include a sedum finish, improving biodiversity and reducing the urban heat effect.

Permeable paving is provided for the central external hardstanding area and will reduce the peak runoff as well as improving the quality of surface water runoff.

Through the use of SuDS techniques, the surface water management of the proposed site will see a significant betterment from the existing case.





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## **Appendices**

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## A Topographic Survey





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**LEVEL DATUM & ORIENTATION**

LEVELS & DRAWING ORIENTATION CO-ORDINATED TO WORLD CO-ORDINATES USING GPS EQUIPMENT (SPECTRA SP60). PERMANENT STATIONS LOCATED IN POSITIONS INDICATED ON PLAN AS FOLLOWS:-

STN 01	E-518329.393	N-175048.217	HT - 8.892M
STN 02	E-518327.4526	N-175039.2538	HT - 9.108M
STN 03	E-518337.735	N-175044.904L	HT - 8.908M
STN 04	E-518305.6671	N-175017.4208	HT - 10.174M
STN 05	E-518317.6783	N-175016.7135	HT - 10.832M
STN 06	E-518314.9712	N-175000.6864	HT - 11.367M
STN 07	E-518341.5629	N-174993.3624	HT - 12.394M
STN 08	E-518352.5672	N-174990.4566	HT - 12.526M
STN 09	E-518353.8725	N-174999.0596	HT - 12.373M

**ABBREVIATIONS & LEGEND:**

<b>LEVELS &amp; HEIGHTS</b>	<b>SERVICES</b>
CL - COVER LEVEL	BT - BRITISH TELECOMS
L - INVERT LEVEL	CATV - CABLE TELEVISION
EL - LEVEL	ER - EARTHING ROD
HT - HEIGHT	ES - ELECTRICAL SUPPLY
STN - SURVEY STATION	EH - FIRE HYDRANT
BM - BENCH	GS - GAS SUPPLY
CE - CEILING	PO - POST OFFICE TELEPHONE
CO - COSTS	SV - STOP VALVE
RA - RAFTERS	TSSU - TRAFFIC LIGHT SIGNALS
E - EAVES	
FR - FLAT ROOF	<b>DRAINAGE</b>
PM - PARAPET	DC - DRAINAGE CHANNEL
F - FENCE	G - GULLY
US - UNDERSIDE OF	I/C - INSPECTION CHAMBER
R - ROOF	MH - MANHOLE
SL - SLAB	RE - ROODING EYE
SF - SOFFIT	RWP - RAIN WATER PIPE
T - TREE	UTL - UNABLE TO LIFT
THR - THRESHOLD	SVP - SOIL & VENT PIPE
To - TOP OF	ST - STOP TAP
W - WALL	WH - WATER METER
HH - HEAD HEIGHT	
OH - OPENING HEIGHT	<b>TYPICAL DRAWING SYMBOLS</b>
SH - SILL HEIGHT	SPOT LEVEL X 96.256
	SPOT HEIGHT X 99.034
	SURVEY STATION X STN 01 332763.931 HT: 95.162
	MANHOLE / INSPECTION CHAMBER X I/C CL-94.254 EL-94.824
	SURVEY HEIGHT X 92.716
	WINDOW TAG X 92.716
	DOOR TAG X 92.716
	RADIATOR TAG X 92.716
	<b>TOPOGRAPHICAL SYMBOLS</b>
	OVERHEAD ELECTRICAL - ELEC -
	OVERHEAD TELEPHONE - TELE -
	FENCE LINE -
	VEGETATION OUTLINE -
	SINGLE GATE -
	DOUBLE GATE -
	TREE -
	CONTOURS - 0.2.000M -

LOWER GROUND FLOOR PLAN  
1:100 SCALE

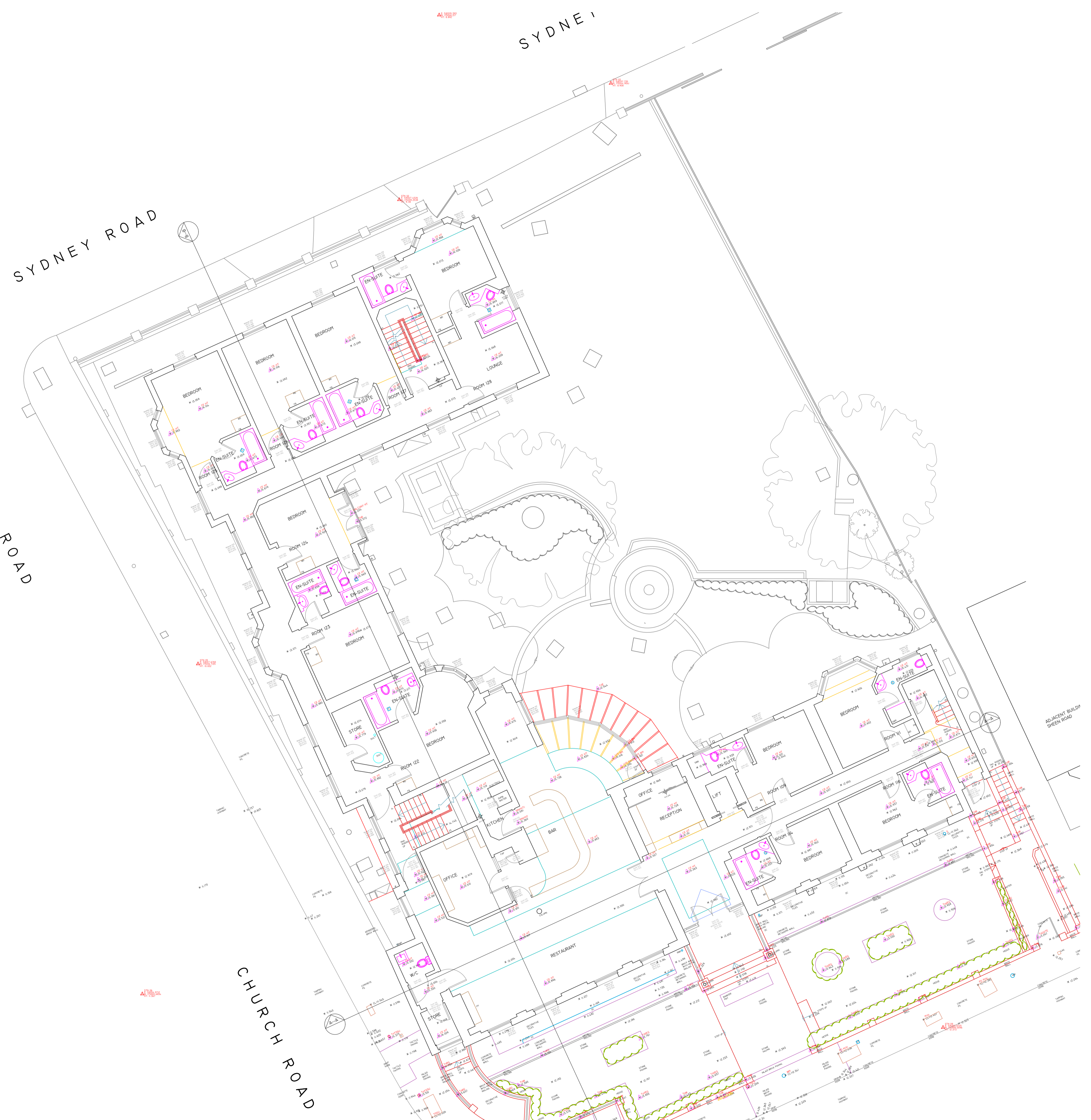
REV	DATE	AMENDMENTS

**Mobile CAD Surveying** office & on site

PROJECT: MEASURED BUILDING SURVEY  
ADDRESS: RICHMOND INN HOTEL, 50-56 SHEEN ROAD, RICHMOND, TW9 1UG.

DWG NO.: 2844 - 02  
DWG TITLE: LOWER GROUND FLOOR PLAN  
DWG DATE: AUGUST 2020  
DWG SIZE: SCALE AS SHOWN @ A1  
DRAWN: MW | CHECKED: JW | ISSUE: 1





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E - EAVES	
FR - FLAT ROOF	<b>DRAINAGE</b>
DC - DRAINAGE CHANNEL	G - GULLY
F - FENCE	I/C - INSPECTION CHAMBER
US - UNDERSIDE OF	MH - MANHOLE
R - ROOF	RE - ROOFING EYE
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SF - SOFFIT	UTL - UNABLE TO LIFT
T - TREE	SWP - SOIL & VENT PIPE
THR - THRESHOLD	ST - STOP TAP
To - TOP OF	WM - WATER METER
W - WALL	
HH - HEAD HEIGHT	<b>TYPICAL DRAWING SYMBOLS</b>
OH - OPENING HEIGHT	SPOT LEVEL X 96.256
SH - SILL HEIGHT	SPOT HEIGHT X 99.034
<b>GENERAL NOTES</b>	<b>SURVEY STATION</b>
AB - ADVERTISING BOARD	MANHOLE / INSPECTION CHAMBER X CL=96.256
AC - AIR CONDITIONING UNIT	INSPECTION CHAMBER X CL=96.256
AHU - AIR HANDLING UNIT	INSPECTION CHAMBER X CL=96.256
AP - INTRUDER ALARM PANEL	INSPECTION CHAMBER X CL=96.256
B - BOLLARD	INSPECTION CHAMBER X CL=96.256
BA - BARRIER	INSPECTION CHAMBER X CL=96.256
BE - BENCH	INSPECTION CHAMBER X CL=96.256
BS - BUS STOP	INSPECTION CHAMBER X CL=96.256
BU - BUS STOP	INSPECTION CHAMBER X CL=96.256
BXD - BOXING OUT	INSPECTION CHAMBER X CL=96.256
CAH - CEILING ACCESS HATCH	INSPECTION CHAMBER X CL=96.256
CHT - CHIMNEY	INSPECTION CHAMBER X CL=96.256
CHD - CHIMNEY	INSPECTION CHAMBER X CL=96.256
CG - CURB	INSPECTION CHAMBER X CL=96.256
DB - DOG WASTE BIN	INSPECTION CHAMBER X CL=96.256
DW - DWARF WALL	INSPECTION CHAMBER X CL=96.256
DK - DROP KERB	INSPECTION CHAMBER X CL=96.256
EDB - ELECTRICAL DISTRIBUTION BOARD	INSPECTION CHAMBER X CL=96.256
EG - EXTRACT GRILLE	INSPECTION CHAMBER X CL=96.256
EM - ELECTRIC METER	INSPECTION CHAMBER X CL=96.256
FB - FUSE BOX	INSPECTION CHAMBER X CL=96.256
FP - FIREPLACE	INSPECTION CHAMBER X CL=96.256
FU - FUSE	INSPECTION CHAMBER X CL=96.256
FAP - FIRE ALARM PANEL	INSPECTION CHAMBER X CL=96.256
GR - GRASS	INSPECTION CHAMBER X CL=96.256
GU - GUARDING	INSPECTION CHAMBER X CL=96.256
GM - GAS METER	INSPECTION CHAMBER X CL=96.256
HWC - HOT WATER CYLINDER	INSPECTION CHAMBER X CL=96.256
LAM - LOFT ACCESS HATCH	INSPECTION CHAMBER X CL=96.256
LB - LITTER BIN	INSPECTION CHAMBER X CL=96.256
LP - LAMP POST	INSPECTION CHAMBER X CL=96.256
PC - PELICAN CROSSING	INSPECTION CHAMBER X CL=96.256
PS - PAVING SLABS	INSPECTION CHAMBER X CL=96.256
PL - PAVEMENT LIGHT	INSPECTION CHAMBER X CL=96.256
PLT - PLANTING	INSPECTION CHAMBER X CL=96.256
PB - POST BOX	INSPECTION CHAMBER X CL=96.256
RS - ROAD SIGN	INSPECTION CHAMBER X CL=96.256
RS - ROAD SIGN	INSPECTION CHAMBER X CL=96.256
SB - SPEED BUMP	INSPECTION CHAMBER X CL=96.256
SG - SIGNAGE	INSPECTION CHAMBER X CL=96.256
SN - STREET NAME SIGN	INSPECTION CHAMBER X CL=96.256
SW - SHOWER	INSPECTION CHAMBER X CL=96.256
SHV - SHELVING	INSPECTION CHAMBER X CL=96.256
TR - TELEPHONE BOX	INSPECTION CHAMBER X CL=96.256
TL - TRAFFIC LIGHT	INSPECTION CHAMBER X CL=96.256
TM - TICKET MACHINE	INSPECTION CHAMBER X CL=96.256
TP - TELEGRAPH POLE	INSPECTION CHAMBER X CL=96.256
VE - VEGETATION	INSPECTION CHAMBER X CL=96.256
W - WATER	INSPECTION CHAMBER X CL=96.256
WD - WARDROBE	INSPECTION CHAMBER X CL=96.256
WH - WATER HEATER	INSPECTION CHAMBER X CL=96.256
ZC - ZEBRA CROSSING	INSPECTION CHAMBER X CL=96.256

GROUND FLOOR PLAN  
1:100 SCALE

REV	DATE	AMENDMENTS

**Mobile CAD Surveying** office & on site

PROJECT: MEASURED BUILDING SURVEY  
ADDRESS: RICHMOND INN HOTEL, 50-56 SHEEN ROAD, RICHMOND, TNS VIC 3121

DWG NO.: 2844 - 03  
DWG TITLE: GROUND FLOOR PLAN  
DWG DATE: AUGUST 2020  
DWG SIZE: SCALE AS SHOWN @ A1  
DRAWN: MW | CHECKED: JW | ISSUE: 1

B Preliminary Borehole Log





Project Richmond Inn Hotel, 50-56 Sheen Road, Richmond TW9 1UG				BOREHOLE No <b>BH1</b>	
Job No J22097	Date 05-04-22 05-04-22	Ground Level (m OD) 9.73	Co-Ordinates ( )		
Client Bridges Property Alternatives Fund V LP		Engineer Elliott Wood		Sheet 1 of 2	

SAMPLES & TESTS			STRATA				Instrument / Backfill
Depth	Type No	Test Result	Reduced Level	Legend	Depth (Thickness)	DESCRIPTION	
0.20	D1		9.68	[Cross-hatched pattern]	0.05	Block paving	[Black vertical bar]
0.50	D3		9.58		0.15	MADE GROUND (brown sand)	
0.80	D2		9.33		0.40	MADE GROUND (brown mottled reddish brown gravelly sand with brick and concrete fragments and coal)	
1.20	B4	2,2/2,1,2,2 N60 = 7	8.83		0.90	MADE GROUND (greyish brown clayey sandy silt with rare coal, roots and rootlets)	
2.00	B5	3,5/6,7,5,4 N60 = 23			(0.50)	Loose brown very clayey SAND / very sandy clay with pockets of gravel	[Patterned area]
3.00-3.45	U6						
3.50	D7				(5.50)		
4.00	D8	1,1/1,1,2,1 N60 = 5					
5.00-5.45	U9						
5.50	D10						
6.00	D11	2,4/2,1,2,2 N60 = 7					
6.80	D12		3.33		6.40		
7.00	D13		3.13		6.60	Brown silty CLAY	
7.50-7.95	U14					Stiff fissured grey silty CLAY with a claystone at 6.60 m to 6.80 m	
8.00	D15						
9.00	D16	3,4/4,4,5,6 N60 = 20					

Report ID: CABLE PERCUSSION || Project: J22097 - RICHMOND INN HOTEL.GPJ || Library: GEA LIBRARY.GLB || Date: 6 April, 2022

Boring Progress and Water Observations						GENERAL REMARKS
Depth	Date	Time	Casing Depth	Casing Dia. mm	Water Depth	
						Services inspection pit excavated to 1.20 m for 1 hour 15 minutes. 1 hour spent conducting falling head test at 2.50 m - water level did not drop. 30 minutes spent chiselling from 6.60 m to 6.80 m. 1 hour spent tidying up site and bagging excess spoil.

All dimensions in metres Scale 1:62.5	Method/ Plant Used Cable Percussion Rig	Logged By Preliminary
--	---	--------------------------





Project Richmond Inn Hotel, 50-56 Sheen Road, Richmond TW9 1UG				BOREHOLE No <b>BH1</b>	
Job No J22097	Date 05-04-22 05-04-22	Ground Level (m OD) 9.73	Co-Ordinates ( )		
Client Bridges Property Alternatives Fund V LP		Engineer Elliott Wood		Sheet 2 of 2	

SAMPLES & TESTS			STRATA				Instrument / Backfill				
Depth	Type No	Test Result	Water	Reduced Level	Legend	Depth (Thickness)		DESCRIPTION			
10.50-10.95	U17					(8.40)	Stiff fissured grey silty CLAY with a claystone at 6.60 m to 6.80 m(continued)				
11.00	D18										
12.00	D19	4,4/5,6,7,7 N60 = 27									
13.50-13.95	U20										
14.00	D21										
14.50	D22	5,6/7,7,8,8 N60 = 32									
				-5.27					15.00		

Report ID: CABLE PERCUSSION || Project: J22097 - RICHMOND INN HOTEL.GPJ || Library: GEA LIBRARY.GLB || Date: 6 April 2022

Boring Progress and Water Observations						GENERAL REMARKS
Depth	Date	Time	Casing Depth	Casing Dia. mm	Water Depth	
						Services inspection pit excavated to 1.20 m for 1 hour 15 minutes. 1 hour spent conducting falling head test at 2.50 m - water level did not drop. 30 minutes spent chiselling from 6.60 m to 6.80 m. 1 hour spent tidying up site and bagging excess spoil.

All dimensions in metres Scale 1:62.5	Method/ Plant Used Cable Percussion Rig	Logged By Preliminary
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C CCTV Drainage Survey



**Project**

**Project Name:** 13621 50-56 SHEEN ROAD RICHMOND

**Project Date:** 04/04/2022

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







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## Project Information

Project Name	Project Number	Project Date
13621 50-56 SHEEN ROAD RICHMOND		04/04/2022

### Client

**Company:** ELLIOT WOOD ENGINEERING  
**Contact:** HARRY HUNTER  
**Street:** 55 WHITEFIELD STREET  
**County:** LONDON  
**Post Code:** W1T 4AH  
**Phone:** 02039 342 575  
**Email:** h.hunter@elliottwood.co.uk

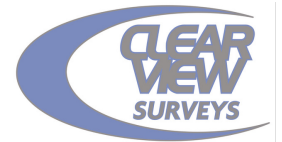


### Site

**Street:** 50 - 56 SHEEN ROAD  
**Town or City:** RICHMOND  
**Post Code:** TW9 1UG

### Contractor

**Company:** CLEARVIEW SURVEYS LIMITED  
**Contact:** ANDY GUARE  
**Street:** UNIT 301 OLD BARN FARM ROAD  
**Town or City:** WIMBORNE  
**County:** DORSET  
**Post Code:** BH21 6SP  
**Phone:** 01202 828 281  
**Email:** andyg@clearviewsurveys.co.uk





## Project Pictures

Project Name	Project Number	Project Date
13621 50-56 SHEEN ROAD RICHMOND		04/04/2022



CHAMBER BURIED HERE



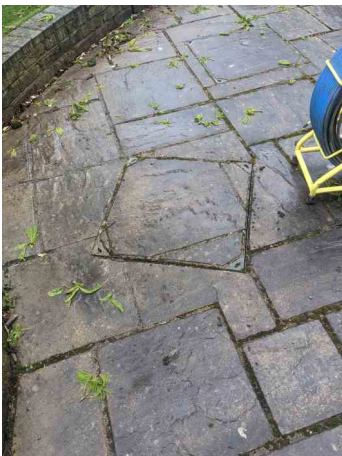
MH.1 POST SURVEY



MH.1 PRE SURVEY



MH.2 POST SURVEY



MH.2 PRE SURVEY



MH.3 POST SURVEY

## Project Pictures

**Project Name**  
13621 50-56 SHEEN ROAD RICHMOND

**Project Number**

**Project Date**  
04/04/2022



MH.3 PRE SURVEY



MH.4 POST SURVEY



MH.4 PRE SURVEY



MH.5 POST SURVEY



MH.5 PRE SURVEY



MH.6 U.T.R AIR CON UNIT PRECARIOUS ON TOP

## Project Pictures

Project Name	Project Number	Project Date
13621 50-56 SHEEN ROAD RICHMOND		04/04/2022



MH.7 POST SURVEY



MH.7 PRE SURVEY



MH.8 POST SURVEY



MH.8 PRE SURVEY



MH.9 POST SURVEY



MH.9 PRE SURVEY



## Project Pictures

Project Name	Project Number	Project Date
13621 50-56 SHEEN ROAD RICHMOND		04/04/2022



MH.10 POST SURVEY



MH.10 PRE SURVEY



MH.11 POST SURVEY



MH.11 PRE SURVEY



MH.12 POST SURVEY



MH.12 PRE SURVEY



## Project Pictures

Project Name	Project Number	Project Date
13621 50-56 SHEEN ROAD RICHMOND		04/04/2022



MH.13 POST SURVEY



MH.13 PRE SURVEY



MH.14 U.T.R OBSCURED BY SKIP



MH.15 POST SURVEY



MH.15 PRE SURVEY



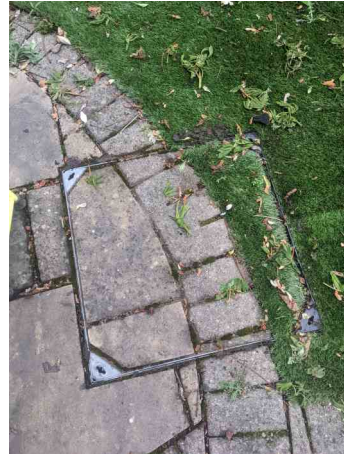
MH.16 POST SURVEY

## Project Pictures

Project Name	Project Number	Project Date
13621 50-56 SHEEN ROAD RICHMOND		04/04/2022



MH.16 PRE SURVEY



MH.17 POST SURVEY



MH.17 PRE SURVEY



MH.18 PRE SURVEY



MH.18 U.T.R SEIZED



MH.19 POST SURVEY



## Project Pictures

Project Name	Project Number	Project Date
13621 50-56 SHEEN ROAD RICHMOND		04/04/2022



MH.19 PRE SURVEY



MH.20 POST SURVEY



MH.20 PRE SURVEY



MH.21 POST SURVEY



MH.21 PRE SURVEY



MH.23 POST SURVEY

## Project Pictures

Project Name	Project Number	Project Date
13621 50-56 SHEEN ROAD RICHMOND		04/04/2022



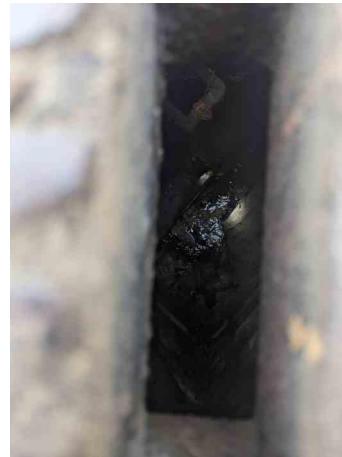
MH.23 PRE SURVEY



MH.24 POST SURVEY



MH.24 PRE SURVEY



MH.25 FLEXI IN BRANCH



MH.26 POST SURVEY



MH.26 PRE SURVEY



## Project Pictures

Project Name	Project Number	Project Date
13621 50-56 SHEEN ROAD RICHMOND		04/04/2022



MH.27 POST SURVEY



MH.27 PRE SURVEY



RODDING EYE TOP OF RUN





## Section Profile

<b>Project Name</b> 13621 50-56 SHEEN ROAD RICHMOND	<b>Project Number</b>	<b>Project Date</b> 04/04/2022
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### Circular, 100 mm

Item No.	Upstream Node	Downstream Node	Date	Road	Material	Total Length	Inspected Length
1	BRANCH 1	MH.1	04/04/2022	50-56 SHEEN ROAD	Vitrified clay	3.91 m	3.91 m
2	BRANCH 2	MH.1	04/04/2022	50-56 SHEEN ROAD	Vitrified clay	1.28 m	1.28 m
3	BRANCH 3	MH.1	04/04/2022	50-56 SHEEN ROAD	Vitrified clay	2.60 m	2.60 m
4	BRANCH 4	MH.1	04/04/2022	50-56 SHEEN ROAD	Vitrified clay	2.27 m	2.27 m
5	MH.1	MH.2	04/04/2022	50-56 SHEEN ROAD	Vitrified clay	14.68 m	14.68 m
6	MAINRUN	MH.3	04/04/2022	50-56 SHEEN ROAD	Vitrified clay	2.82 m	2.82 m
7	BRANCH 1	MH.3	04/04/2022	50-56 SHEEN ROAD	Vitrified clay	2.49 m	2.49 m
8	BRANCH 2	MH.3	04/04/2022	50-56 SHEEN ROAD	Vitrified clay	1.83 m	1.83 m
9	BRANCH 3	MH.3	04/04/2022	50-56 SHEEN ROAD	Vitrified clay	0.73 m	0.73 m
10	MH.3	MH.4	04/04/2022	50-56 SHEEN ROAD	Vitrified clay	4.79 m	4.79 m
11	MH.4	MH.5	04/04/2022	50-56 SHEEN ROAD	Vitrified clay	4.47 m	4.47 m
12	BRANCH 1	MH.4	04/04/2022	50-56 SHEEN ROAD	Vitrified clay	1.72 m	1.72 m
13	BRANCH 2	MH.4	04/04/2022	50-56 SHEEN ROAD	Vitrified clay	1.61 m	1.61 m
14	BRANCH 3	MH.4	04/04/2022	50-56 SHEEN ROAD	Vitrified clay	2.16 m	2.16 m
15	BRANCH 1	MH.5	04/04/2022	50-56 SHEEN ROAD	Vitrified clay	0.95 m	0.95 m
16	BRANCH 2	MH.5	04/04/2022	50-56 SHEEN ROAD	Vitrified clay	0.73 m	0.73 m
24	MH.11	MH.10	04/04/2022	50-56 SHEEN ROAD	Vitrified clay	12.70 m	12.70 m
25	BRANCH 1	MH.10	04/04/2022	50-56 SHEEN ROAD	Vitrified clay	1.83 m	1.83 m
26	BRANCH 2	MH.10	04/04/2022	50-56 SHEEN ROAD	Vitrified clay	1.39 m	1.39 m
27	MH.12	MH.11	04/04/2022	50-56 SHEEN ROAD	Vitrified clay	4.90 m	4.90 m
28	MH.13	MH.12	04/04/2022	50-56 SHEEN ROAD	Vitrified clay	1.39 m	1.39 m
29	MAINRUN	MH.13	04/04/2022	50-56 SHEEN ROAD	Vitrified clay	3.00 m	<b>1.72 m</b>
30	BRANCH 1	MH.11	04/04/2022	50-56 SHEEN ROAD	Vitrified clay	1.00 m	<b>0.62 m</b>
31	BRANCH 1	MH.12	04/04/2022	50-56 SHEEN ROAD	Vitrified clay	2.71 m	2.71 m
32	BRANCH 1	MH.13	04/04/2022	50-56 SHEEN ROAD	Vitrified clay	6.88 m	6.88 m
33	BRANCH 2	MH.13	04/04/2022	50-56 SHEEN ROAD	Vitrified clay	3.80 m	3.80 m
34	MH.15	MH.16	05/04/2022	50-56 SHEEN ROAD	Vitrified clay	3.25 m	3.25 m
35	MH.16	MH.17	05/04/2022	50-56 SHEEN ROAD	Vitrified clay	0.40 m	0.40 m
36	BRANCH 1	MH.16	05/04/2022	50-56 SHEEN ROAD	Vitrified clay	1.50 m	<b>1.28 m</b>



## Section Profile

<b>Project Name</b> 13621 50-56 SHEEN ROAD RICHMOND	<b>Project Number</b>	<b>Project Date</b> 04/04/2022
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37	BRANCH 1	MH.17	05/04/2022	50-56 SHEEN ROAD	Vitrified clay	0.62 m	0.62 m
38	MH.17	MH.18	05/04/2022	50-56 SHEEN ROAD	Vitrified clay	2.38 m	2.38 m
39	BRANCH 1	MH.8	05/04/2022	50-56 SHEEN ROAD	Vitrified clay	3.47 m	3.47 m
40	MAINRUN	MH.9	05/04/2022	50-56 SHEEN ROAD	Vitrified clay	4.24 m	4.24 m
41	BRANCH 1	MH.9	05/04/2022	50-56 SHEEN ROAD	Vitrified clay	2.37 m	2.37 m
43	MH.18	MH.19	05/04/2022	50-56 SHEEN ROAD	Vitrified clay	6.77 m	6.77 m
44	MH.19	MH.21	05/04/2022	50-56 SHEEN ROAD	Vitrified clay	10.73 m	10.73 m
45	BRANCH 1	MH.21	05/04/2022	50-56 SHEEN ROAD	Vitrified clay	0.73 m	0.73 m
46	MH.23	MH.21	05/04/2022	50-56 SHEEN ROAD	Vitrified clay	11.83 m	11.83 m
47	MH.21	MH.22	05/04/2022	50-56 SHEEN ROAD	Vitrified clay	3.25 m	3.25 m
49	BRANCH 1	MH.24	05/04/2022	50-56 SHEEN ROAD	Vitrified clay	3.03 m	3.03 m
50	BRANCH 2	MH.24	05/04/2022	50-56 SHEEN ROAD	Vitrified clay	7.76 m	7.76 m
52	BRANCH 1	MH.23	05/04/2022	50-56 SHEEN ROAD	Vitrified clay	2.05 m	2.05 m
53	BRANCH 2	MH.23	05/04/2022	50-56 SHEEN ROAD	Vitrified clay	1.17 m	1.17 m
54	MH.26	MH.23	05/04/2022	50-56 SHEEN ROAD	Vitrified clay	8.53 m	8.53 m
55	MH.27	MH.26	05/04/2022	50-56 SHEEN ROAD	Vitrified clay	13.09 m	13.09 m
56	RODDING EY	MH.27	05/04/2022	50-56 SHEEN ROAD	Vitrified clay	14.60 m	14.60 m
57	BRANCH 1	MH.27	05/04/2022	50-56 SHEEN ROAD	Vitrified clay	1.28 m	1.28 m

**Total: 47 Inspections x Circular 100 mm = 191.69 m Total Length and 189.81 m Inspected Length**

### Circular, 150 mm

Item No.	Upstream Node	Downstream Node	Date	Road	Material	Total Length	Inspected Length
17	MH.5	MH.7	04/04/2022	50-56 SHEEN ROAD	Vitrified clay	7.87 m	7.87 m
18	MH.2	MH.7	04/04/2022	50-56 SHEEN ROAD	Vitrified clay	6.77 m	6.77 m
19	BRANCH 1	MH.7	04/04/2022	50-56 SHEEN ROAD	Vitrified clay	4.90 m	4.90 m
20	BRANCH 2	MH.7	04/04/2022	50-56 SHEEN ROAD	Vitrified clay	4.91 m	4.91 m
21	MH.7	MH.8	04/04/2022	50-56 SHEEN ROAD	Vitrified clay	2.71 m	2.71 m
22	MH.8	MH.9	04/04/2022	50-56 SHEEN ROAD	Vitrified clay	5.12 m	5.12 m
23	MH.10	MH.2	04/04/2022	50-56 SHEEN ROAD	Vitrified clay	8.53 m	8.53 m
42	MH.9	MH.20	05/04/2022	50-56 SHEEN ROAD	Vitrified clay	14.11 m	14.11 m
48	MH.20	MH.24	05/04/2022	50-56 SHEEN ROAD	Vitrified clay	7.43 m	7.43 m
51	MH.24	MH.25	05/04/2022	50-56 SHEEN ROAD	Vitrified clay	23.50 m	23.50 m

**Total: 10 Inspections x Circular 150 mm = 85.85 m Total Length and 85.85 m Inspected Length**



## Section Profile

Project Name	Project Number	Project Date
13621 50-56 SHEEN ROAD RICHMOND		04/04/2022

**Total: 57 Inspections = 277.54 m Total Length and 275.66 m Inspected Length**





## Section Summary

<b>Project Name</b> 13621 50-56 SHEEN ROAD RICHMOND	<b>Project Number</b>	<b>Project Date</b> 04/04/2022
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Number of sections	57
Total length of sections	277.54 m
Total length of inspected sections	275.66 m
Total length of abandoned inspections	0.60 m
Number of abandoned inspections	8
Number of section inspection photos	85
Number of section inspection videos	57
Number of section inspection scans	0
Number of section inclination measurements	0

<b>PLR:</b>	BRANCH 1X	<b>Upstream Node:</b>	BRANCH 1
<b>Inspection Direction:</b>	2	<b>Downstream Node:</b>	MH.1
<b>Inspected Length:</b>	3.91 m	<b>Dia/Height:</b>	100 mm
<b>Total Length:</b>	3.91 m	<b>Material:</b>	Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.1
2	0.00	WL	Water level, 5% of the vertical dimension
3	1.50	JDM	Joint displaced, medium
4	1.50	JN	Junction at 3 o'clock, 100mm dia
5	1.94	JN	Junction at 9 o'clock, 100mm dia
6	3.91	BRF	Finish node, major connection without manhole, reference: BRANCH 1

<b>PLR:</b>	BRANCH 2X	<b>Upstream Node:</b>	BRANCH 2
<b>Inspection Direction:</b>	2	<b>Downstream Node:</b>	MH.1
<b>Inspected Length:</b>	1.28 m	<b>Dia/Height:</b>	100 mm
<b>Total Length:</b>	1.28 m	<b>Material:</b>	Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.1
2	0.00	WL	Water level, 5% of the vertical dimension
3	0.40	JDM	Joint displaced, medium
4	1.28	BRF	Finish node, major connection without manhole, reference: BRANCH 2

<b>PLR:</b>	BRANCH 3X	<b>Upstream Node:</b>	BRANCH 3
<b>Inspection Direction:</b>	2	<b>Downstream Node:</b>	MH.1
<b>Inspected Length:</b>	2.60 m	<b>Dia/Height:</b>	100 mm
<b>Total Length:</b>	2.60 m	<b>Material:</b>	Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.1



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No.	m+	Code	Observation
2	0.00	WL	Water level, 5% of the vertical dimension
3	2.16	JDM	Joint displaced, medium
4	2.27	LL	Line deviates left
5	2.60	BRF	Finish node, major connection without manhole, reference: BRANCH 3

<b>PLR:</b> BRANCH 4X	<b>Upstream Node:</b> BRANCH 4
<b>Inspection Direction:</b> 2	<b>Downstream Node:</b> MH.1
<b>Inspected Length:</b> 2.27 m	<b>Dia/Height:</b> 100 mm
<b>Total Length:</b> 2.27 m	<b>Material:</b> Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.1
2	0.00	WL	Water level, 5% of the vertical dimension
3	2.27	BRF	Finish node, major connection without manhole, reference: BRANCH 4

<b>PLR:</b> MH.1X	<b>Upstream Node:</b> MH.1
<b>Inspection Direction:</b> 1	<b>Downstream Node:</b> MH.2
<b>Inspected Length:</b> 14.68 m	<b>Dia/Height:</b> 100 mm
<b>Total Length:</b> 14.68 m	<b>Material:</b> Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.1
2	0.00	WL	Water level, 5% of the vertical dimension
3	6.11	JN	Junction at 9 o'clock, 100mm dia
4	12.27	LR	Line deviates right
5	13.58	LR	Line deviates right
6	14.68	MHF	Finish node, manhole, reference: MH.2

<b>PLR:</b> MAINRUNX	<b>Upstream Node:</b> MAINRUN
<b>Inspection Direction:</b> 2	<b>Downstream Node:</b> MH.3
<b>Inspected Length:</b> 2.82 m	<b>Dia/Height:</b> 100 mm
<b>Total Length:</b> 2.82 m	<b>Material:</b> Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.3
2	0.00	WL	Water level, 5% of the vertical dimension
3	2.82	BRF	Finish node, major connection without manhole, reference: MAINRUN

<b>PLR:</b> BRANCH 1X	<b>Upstream Node:</b> BRANCH 1
<b>Inspection Direction:</b> 2	<b>Downstream Node:</b> MH.3
<b>Inspected Length:</b> 2.49 m	<b>Dia/Height:</b> 100 mm
<b>Total Length:</b> 2.49 m	<b>Material:</b> Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.3
2	0.00	WL	Water level, 0% of the vertical dimension
3	2.49	BRF	Finish node, major connection without manhole, reference: BRANCH 1



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<b>PLR:</b> BRANCH 2X	<b>Upstream Node:</b> BRANCH 2
<b>Inspection Direction:</b> 2	<b>Downstream Node:</b> MH.3
<b>Inspected Length:</b> 1.83 m	<b>Dia/Height:</b> 100 mm
<b>Total Length:</b> 1.83 m	<b>Material:</b> Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.3
2	0.00	WL	Water level, 0% of the vertical dimension
3	1.83	BRF	Finish node, major connection without manhole, reference: BRANCH 2

<b>PLR:</b> BRANCH 3X	<b>Upstream Node:</b> BRANCH 3
<b>Inspection Direction:</b> 2	<b>Downstream Node:</b> MH.3
<b>Inspected Length:</b> 0.73 m	<b>Dia/Height:</b> 100 mm
<b>Total Length:</b> 0.73 m	<b>Material:</b> Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.3
2	0.00	WL	Water level, 5% of the vertical dimension
3	0.73	BRF	Finish node, major connection without manhole, reference: BRANCH 3

<b>PLR:</b> MH.3X	<b>Upstream Node:</b> MH.3
<b>Inspection Direction:</b> 1	<b>Downstream Node:</b> MH.4
<b>Inspected Length:</b> 4.79 m	<b>Dia/Height:</b> 100 mm
<b>Total Length:</b> 4.79 m	<b>Material:</b> Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.3
2	0.00	WL	Water level, 5% of the vertical dimension
3	4.79	MHF	Finish node, manhole, reference: MH.4

<b>PLR:</b> MH.4X	<b>Upstream Node:</b> MH.4
<b>Inspection Direction:</b> 1	<b>Downstream Node:</b> MH.5
<b>Inspected Length:</b> 4.47 m	<b>Dia/Height:</b> 100 mm
<b>Total Length:</b> 4.47 m	<b>Material:</b> Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.4
2	0.00	WL	Water level, 0% of the vertical dimension
3	1.06	LR	Line deviates right
4	2.49	JDM	Joint displaced, medium
5	2.71	LL	Line deviates left
6	3.92	LL	Line deviates left
7	4.47	MHF	Finish node, manhole, reference: MH.5

<b>PLR:</b> BRANCH 1X	<b>Upstream Node:</b> BRANCH 1
<b>Inspection Direction:</b> 2	<b>Downstream Node:</b> MH.4
<b>Inspected Length:</b> 1.72 m	<b>Dia/Height:</b> 100 mm
<b>Total Length:</b> 1.72 m	<b>Material:</b> Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.4
2	0.00	WL	Water level, 0% of the vertical dimension





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No.	m+	Code	Observation
3	0.51	JN	Junction at 3 o'clock, 100mm dia
4	0.62	LL	Line deviates left
5	1.72	BRF	Finish node, major connection without manhole, reference: BRANCH 1

<b>PLR:</b>	BRANCH 2X	<b>Upstream Node:</b>	BRANCH 2
<b>Inspection Direction:</b>	2	<b>Downstream Node:</b>	MH.4
<b>Inspected Length:</b>	1.61 m	<b>Dia/Height:</b>	100 mm
<b>Total Length:</b>	1.61 m	<b>Material:</b>	Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.4
2	0.00	WL	Water level, 0% of the vertical dimension
3	0.40	LR	Line deviates right
4	1.61	BRF	Finish node, major connection without manhole, reference: BRANCH 2

<b>PLR:</b>	BRANCH 3X	<b>Upstream Node:</b>	BRANCH 3
<b>Inspection Direction:</b>	2	<b>Downstream Node:</b>	MH.4
<b>Inspected Length:</b>	2.16 m	<b>Dia/Height:</b>	100 mm
<b>Total Length:</b>	2.16 m	<b>Material:</b>	Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.4
2	0.00	WL	Water level, 5% of the vertical dimension
3	0.73	JN	Junction at 12 o'clock, 100mm dia
4	2.16	BRF	Finish node, major connection without manhole, reference: BRANCH 3

<b>PLR:</b>	BRANCH 1X	<b>Upstream Node:</b>	BRANCH 1
<b>Inspection Direction:</b>	2	<b>Downstream Node:</b>	MH.5
<b>Inspected Length:</b>	0.95 m	<b>Dia/Height:</b>	100 mm
<b>Total Length:</b>	0.95 m	<b>Material:</b>	Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.5
2	0.00	WL	Water level, 0% of the vertical dimension
3	0.95	BRF	Finish node, major connection without manhole, reference: BRANCH 1

<b>PLR:</b>	BRANCH 2X	<b>Upstream Node:</b>	BRANCH 2
<b>Inspection Direction:</b>	2	<b>Downstream Node:</b>	MH.5
<b>Inspected Length:</b>	0.73 m	<b>Dia/Height:</b>	100 mm
<b>Total Length:</b>	0.73 m	<b>Material:</b>	Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.5
2	0.00	WL	Water level, 0% of the vertical dimension
3	0.40	DER	Settled deposits, coarse, 20% cross-sectional area loss
4	0.73	DER	Settled deposits, coarse, 40% cross-sectional area loss
5	0.73	SA	Survey abandoned



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<b>PLR:</b> MH.5X	<b>Upstream Node:</b> MH.5
<b>Inspection Direction:</b> 1	<b>Downstream Node:</b> MH.7
<b>Inspected Length:</b> 7.87 m	<b>Dia/Height:</b> 150 mm
<b>Total Length:</b> 7.87 m	<b>Material:</b> Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.5
2	0.00	WL	Water level, 0% of the vertical dimension
3	0.40	DER	Settled deposits, coarse, 10% cross-sectional area loss
4	7.22	LR	Line deviates right
5	7.54	LD	Line deviates down
6	7.87	MHF	Finish node, manhole, reference: MH.7

<b>PLR:</b> MH.2X	<b>Upstream Node:</b> MH.2
<b>Inspection Direction:</b> 2	<b>Downstream Node:</b> MH.7
<b>Inspected Length:</b> 6.77 m	<b>Dia/Height:</b> 150 mm
<b>Total Length:</b> 6.77 m	<b>Material:</b> Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.7
2	0.00	WL	Water level, 0% of the vertical dimension
3	1.28	LR	Line deviates right
4	6.77	MHF	Finish node, manhole, reference: MH.2

<b>PLR:</b> BRANCH 1X	<b>Upstream Node:</b> BRANCH 1
<b>Inspection Direction:</b> 2	<b>Downstream Node:</b> MH.7
<b>Inspected Length:</b> 4.90 m	<b>Dia/Height:</b> 150 mm
<b>Total Length:</b> 4.90 m	<b>Material:</b> Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.7
2	0.00	WL	Water level, 5% of the vertical dimension
3	0.95	DES	Settled deposits, fine, 10% cross-sectional area loss
4	1.50	LU	Line deviates up
5	4.90	BRF	Finish node, major connection without manhole, reference: BRANCH 1

<b>PLR:</b> BRANCH 2X	<b>Upstream Node:</b> BRANCH 2
<b>Inspection Direction:</b> 2	<b>Downstream Node:</b> MH.7
<b>Inspected Length:</b> 4.91 m	<b>Dia/Height:</b> 150 mm
<b>Total Length:</b> 4.91 m	<b>Material:</b> Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.7
2	0.00	WL	Water level, 10% of the vertical dimension
3	0.95	LR	Line deviates right
4	3.81	LL	Line deviates left
5	4.91	LL	Line deviates left
6	4.91	SA	Survey abandoned



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<b>PLR:</b> MH.7X	<b>Upstream Node:</b> MH.7
<b>Inspection Direction:</b> 1	<b>Downstream Node:</b> MH.8
<b>Inspected Length:</b> 2.71 m	<b>Dia/Height:</b> 150 mm
<b>Total Length:</b> 2.71 m	<b>Material:</b> Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.7
2	0.00	WL	Water level, 5% of the vertical dimension
3	2.71	MHF	Finish node, manhole, reference: MH.8

<b>PLR:</b> MH.8X	<b>Upstream Node:</b> MH.8
<b>Inspection Direction:</b> 1	<b>Downstream Node:</b> MH.9
<b>Inspected Length:</b> 5.12 m	<b>Dia/Height:</b> 150 mm
<b>Total Length:</b> 5.12 m	<b>Material:</b> Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.8
2	0.00	WL	Water level, 10% of the vertical dimension
3	0.51	DES	Settled deposits, fine, 10% cross-sectional area loss
4	5.12	MHF	Finish node, manhole, reference: MH.9

<b>PLR:</b> MH.10X	<b>Upstream Node:</b> MH.10
<b>Inspection Direction:</b> 2	<b>Downstream Node:</b> MH.2
<b>Inspected Length:</b> 8.53 m	<b>Dia/Height:</b> 150 mm
<b>Total Length:</b> 8.53 m	<b>Material:</b> Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.2
2	0.00	WL	Water level, 5% of the vertical dimension
3	1.06	LL	Line deviates left
4	2.70	LR	Line deviates right
5	7.76	LR	Line deviates right
6	8.53	MHF	Finish node, manhole, reference: MH.10

<b>PLR:</b> MH.11X	<b>Upstream Node:</b> MH.11
<b>Inspection Direction:</b> 2	<b>Downstream Node:</b> MH.10
<b>Inspected Length:</b> 12.70 m	<b>Dia/Height:</b> 100 mm
<b>Total Length:</b> 12.70 m	<b>Material:</b> Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.10
2	0.00	WL	Water level, 10% of the vertical dimension
3	0.95	DES	Settled deposits, fine, 5% cross-sectional area loss
4	9.41	JN	Junction at 3 o'clock, 100mm dia
5	12.37	LR	Line deviates right
6	12.70	MHF	Finish node, manhole, reference: MH.11

<b>PLR:</b> BRANCH 1X	<b>Upstream Node:</b> BRANCH 1
<b>Inspection Direction:</b> 2	<b>Downstream Node:</b> MH.10
<b>Inspected Length:</b> 1.83 m	<b>Dia/Height:</b> 100 mm
<b>Total Length:</b> 1.83 m	<b>Material:</b> Vitrified clay





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No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.10
2	0.00	WL	Water level, 0% of the vertical dimension
3	1.39	JDM	Joint displaced, medium
4	1.83	BRF	Finish node, major connection without manhole, reference: BRANCH 1

<b>PLR:</b> BRANCH 2X	<b>Upstream Node:</b> BRANCH 2
<b>Inspection Direction:</b> 2	<b>Downstream Node:</b> MH.10
<b>Inspected Length:</b> 1.39 m	<b>Dia/Height:</b> 100 mm
<b>Total Length:</b> 1.39 m	<b>Material:</b> Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.10
2	0.00	WL	Water level, 5% of the vertical dimension
3	0.62	LL	Line deviates left
4	1.39	BRF	Finish node, major connection without manhole, reference: BRANCH 2

<b>PLR:</b> MH.12X	<b>Upstream Node:</b> MH.12
<b>Inspection Direction:</b> 2	<b>Downstream Node:</b> MH.11
<b>Inspected Length:</b> 4.90 m	<b>Dia/Height:</b> 100 mm
<b>Total Length:</b> 4.90 m	<b>Material:</b> Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.11
2	0.00	WL	Water level, 5% of the vertical dimension
3	0.40	LR	Line deviates right
4	4.90	MHF	Finish node, manhole, reference: MH.12

<b>PLR:</b> MH.13X	<b>Upstream Node:</b> MH.13
<b>Inspection Direction:</b> 2	<b>Downstream Node:</b> MH.12
<b>Inspected Length:</b> 1.39 m	<b>Dia/Height:</b> 100 mm
<b>Total Length:</b> 1.39 m	<b>Material:</b> Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.12
2	0.00	WL	Water level, 5% of the vertical dimension
3	1.39	MHF	Finish node, manhole, reference: MH.13

<b>PLR:</b> MAINRUNX	<b>Upstream Node:</b> MAINRUN
<b>Inspection Direction:</b> 2	<b>Downstream Node:</b> MH.13
<b>Inspected Length:</b> 1.72 m	<b>Dia/Height:</b> 100 mm
<b>Total Length:</b> 3.00 m	<b>Material:</b> Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.13
2	0.00	WL	Water level, 5% of the vertical dimension
3	1.72	GYF	Finish node, gully, reference: MAINRUN

<b>PLR:</b> BRANCH 1X	<b>Upstream Node:</b> BRANCH 1
<b>Inspection Direction:</b> 2	<b>Downstream Node:</b> MH.11
<b>Inspected Length:</b> 0.62 m	<b>Dia/Height:</b> 100 mm
<b>Total Length:</b> 1.00 m	<b>Material:</b> Vitrified clay



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No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.11
2	0.00	WL	Water level, 0% of the vertical dimension
3	0.40	LR	Line deviates right
4	0.62	SA	Survey abandoned

<b>PLR:</b> BRANCH 1X	<b>Upstream Node:</b> BRANCH 1
<b>Inspection Direction:</b> 2	<b>Downstream Node:</b> MH.12
<b>Inspected Length:</b> 2.71 m	<b>Dia/Height:</b> 100 mm
<b>Total Length:</b> 2.71 m	<b>Material:</b> Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.12
2	0.00	WL	Water level, 5% of the vertical dimension
3	0.40	LR	Line deviates right
4	2.71	BRF	Finish node, major connection without manhole, reference: BRANCH 1

<b>PLR:</b> BRANCH 1X	<b>Upstream Node:</b> BRANCH 1
<b>Inspection Direction:</b> 2	<b>Downstream Node:</b> MH.13
<b>Inspected Length:</b> 6.88 m	<b>Dia/Height:</b> 100 mm
<b>Total Length:</b> 6.88 m	<b>Material:</b> Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.13
2	0.00	WL	Water level, 0% of the vertical dimension
3	4.46	LR	Line deviates right
4	6.88	BRF	Finish node, major connection without manhole, reference: BRANCH 1

<b>PLR:</b> BRANCH 2X	<b>Upstream Node:</b> BRANCH 2
<b>Inspection Direction:</b> 2	<b>Downstream Node:</b> MH.13
<b>Inspected Length:</b> 3.80 m	<b>Dia/Height:</b> 100 mm
<b>Total Length:</b> 3.80 m	<b>Material:</b> Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.13
2	0.00	WL	Water level, 0% of the vertical dimension
3	0.40	LL	Line deviates left
4	2.49	LL	Line deviates left
5	2.49	JDM	Joint displaced, medium
6	3.36	LL	Line deviates left
7	3.80	BRF	Finish node, major connection without manhole, reference: BRANCH 2

<b>PLR:</b> MH.15X	<b>Upstream Node:</b> MH.15
<b>Inspection Direction:</b> 1	<b>Downstream Node:</b> MH.16
<b>Inspected Length:</b> 3.25 m	<b>Dia/Height:</b> 100 mm
<b>Total Length:</b> 3.25 m	<b>Material:</b> Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.15
2	0.00	WL	Water level, 0% of the vertical dimension
3	2.16	DES	Settled deposits, fine, 15% cross-sectional area loss



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No.	m+	Code	Observation
4	2.71	DES	Settled deposits, fine, 30% cross-sectional area loss
5	3.25	MHF	Finish node, manhole, reference: MH.16

<b>PLR:</b>	MH.16X	<b>Upstream Node:</b>	MH.16
<b>Inspection Direction:</b>	1	<b>Downstream Node:</b>	MH.17
<b>Inspected Length:</b>	0.40 m	<b>Dia/Height:</b>	100 mm
<b>Total Length:</b>	0.40 m	<b>Material:</b>	Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.16
2	0.00	WL	Water level, 0% of the vertical dimension
3	0.40	DES	Settled deposits, fine, 50% cross-sectional area loss
4	0.40	SA	Survey abandoned

<b>PLR:</b>	BRANCH 1X	<b>Upstream Node:</b>	BRANCH 1
<b>Inspection Direction:</b>	2	<b>Downstream Node:</b>	MH.16
<b>Inspected Length:</b>	1.28 m	<b>Dia/Height:</b>	100 mm
<b>Total Length:</b>	1.50 m	<b>Material:</b>	Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.16
2	0.00	WL	Water level, 0% of the vertical dimension
3	0.84	LR	Line deviates right
4	1.28	SA	Survey abandoned

<b>PLR:</b>	BRANCH 1X	<b>Upstream Node:</b>	BRANCH 1
<b>Inspection Direction:</b>	2	<b>Downstream Node:</b>	MH.17
<b>Inspected Length:</b>	0.62 m	<b>Dia/Height:</b>	100 mm
<b>Total Length:</b>	0.62 m	<b>Material:</b>	Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.17
2	0.00	WL	Water level, 0% of the vertical dimension
3	0.62	DES	Settled deposits, fine, 60% cross-sectional area loss
4	0.62	SA	Survey abandoned

<b>PLR:</b>	MH.17X	<b>Upstream Node:</b>	MH.17
<b>Inspection Direction:</b>	1	<b>Downstream Node:</b>	MH.18
<b>Inspected Length:</b>	2.38 m	<b>Dia/Height:</b>	100 mm
<b>Total Length:</b>	2.38 m	<b>Material:</b>	Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.17
2	0.00	WL	Water level, 0% of the vertical dimension
3	0.40	DES	Settled deposits, fine, 10% cross-sectional area loss, start
4	1.17	DES	Settled deposits, fine, 20% cross-sectional area loss
5	2.38	DES	Settled deposits, fine, 10% cross-sectional area loss, finish
6	2.38	MHF	Finish node, manhole, reference: MH.18





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<b>PLR:</b> BRANCH 1X	<b>Upstream Node:</b> BRANCH 1
<b>Inspection Direction:</b> 2	<b>Downstream Node:</b> MH.8
<b>Inspected Length:</b> 3.47 m	<b>Dia/Height:</b> 100 mm
<b>Total Length:</b> 3.47 m	<b>Material:</b> Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.8
2	0.00	WL	Water level, 0% of the vertical dimension
3	3.47	BRF	Finish node, major connection without manhole, reference: BRANCH 1

<b>PLR:</b> MAINRUNX	<b>Upstream Node:</b> MAINRUN
<b>Inspection Direction:</b> 2	<b>Downstream Node:</b> MH.9
<b>Inspected Length:</b> 4.24 m	<b>Dia/Height:</b> 100 mm
<b>Total Length:</b> 4.24 m	<b>Material:</b> Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.9
2	0.00	WL	Water level, 0% of the vertical dimension
3	0.73	DES	Settled deposits, fine, 10% cross-sectional area loss
4	0.73	LR	Line deviates right
5	4.24	BRF	Finish node, major connection without manhole, reference: MAINRUN

<b>PLR:</b> BRANCH 1X	<b>Upstream Node:</b> BRANCH 1
<b>Inspection Direction:</b> 2	<b>Downstream Node:</b> MH.9
<b>Inspected Length:</b> 2.37 m	<b>Dia/Height:</b> 100 mm
<b>Total Length:</b> 2.37 m	<b>Material:</b> Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.9
2	0.00	WL	Water level, 0% of the vertical dimension
3	0.84	LR	Line deviates right
4	2.37	BRF	Finish node, major connection without manhole, reference: BRANCH 1

<b>PLR:</b> MH.9X	<b>Upstream Node:</b> MH.9
<b>Inspection Direction:</b> 1	<b>Downstream Node:</b> MH.20
<b>Inspected Length:</b> 14.11 m	<b>Dia/Height:</b> 150 mm
<b>Total Length:</b> 14.11 m	<b>Material:</b> Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.9
2	0.00	WL	Water level, 5% of the vertical dimension
3	13.65	LL	Line deviates left
4	14.11	MHF	Finish node, manhole, reference: MH.20

<b>PLR:</b> MH.18X	<b>Upstream Node:</b> MH.18
<b>Inspection Direction:</b> 2	<b>Downstream Node:</b> MH.19
<b>Inspected Length:</b> 6.77 m	<b>Dia/Height:</b> 100 mm
<b>Total Length:</b> 6.77 m	<b>Material:</b> Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.19
2	0.00	WL	Water level, 5% of the vertical dimension



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No.	m+	Code	Observation
3	1.94	DES	Settled deposits, fine, 20% cross-sectional area loss
4	2.48	JN	Junction at 3 o'clock, 100mm dia
5	3.69	DES	Settled deposits, fine, 20% cross-sectional area loss
6	6.77	MHF	Finish node, manhole, reference: MH.18

<b>PLR:</b>	MH.19X	<b>Upstream Node:</b>	MH.19
<b>Inspection Direction:</b>	1	<b>Downstream Node:</b>	MH.21
<b>Inspected Length:</b>	10.73 m	<b>Dia/Height:</b>	100 mm
<b>Total Length:</b>	10.73 m	<b>Material:</b>	Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.19
2	0.00	WL	Water level, 5% of the vertical dimension
3	1.72	JN	Junction at 3 o'clock, 100mm dia
4	4.46	JN	Junction at 10 o'clock, 100mm dia
5	8.97	WL	Water level, 10% of the vertical dimension
6	8.97	DES	Settled deposits, fine, 10% cross-sectional area loss
7	10.73	MHF	Finish node, manhole, reference: MH.21

<b>PLR:</b>	BRANCH 1X	<b>Upstream Node:</b>	BRANCH 1
<b>Inspection Direction:</b>	2	<b>Downstream Node:</b>	MH.21
<b>Inspected Length:</b>	0.73 m	<b>Dia/Height:</b>	100 mm
<b>Total Length:</b>	0.73 m	<b>Material:</b>	Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.21
2	0.00	WL	Water level, 0% of the vertical dimension
3	0.40	LR	Line deviates right
4	0.73	SA	Survey abandoned

<b>PLR:</b>	MH.23X	<b>Upstream Node:</b>	MH.23
<b>Inspection Direction:</b>	2	<b>Downstream Node:</b>	MH.21
<b>Inspected Length:</b>	11.83 m	<b>Dia/Height:</b>	100 mm
<b>Total Length:</b>	11.83 m	<b>Material:</b>	Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.21
2	0.00	WL	Water level, 5% of the vertical dimension
3	10.95	LL	Line deviates left
4	11.50	LL	Line deviates left
5	11.83	MHF	Finish node, manhole, reference: MH.23

<b>PLR:</b>	MH.21X	<b>Upstream Node:</b>	MH.21
<b>Inspection Direction:</b>	1	<b>Downstream Node:</b>	MH.22
<b>Inspected Length:</b>	3.25 m	<b>Dia/Height:</b>	100 mm
<b>Total Length:</b>	3.25 m	<b>Material:</b>	Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.21
2	0.00	WL	Water level, 5% of the vertical dimension



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No.	m+	Code	Observation
3	0.73	JN	Junction at 3 o'clock, 100mm dia
4	3.25	MHF	Finish node, manhole, reference: MH.22

<b>PLR:</b>	MH.20X	<b>Upstream Node:</b>	MH.20
<b>Inspection Direction:</b>	1	<b>Downstream Node:</b>	MH.24
<b>Inspected Length:</b>	7.43 m	<b>Dia/Height:</b>	150 mm
<b>Total Length:</b>	7.43 m	<b>Material:</b>	Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.20
2	0.00	WL	Water level, 5% of the vertical dimension
3	0.40	LL	Line deviates left
4	6.11	LR	Line deviates right
5	7.43	MHF	Finish node, manhole, reference: MH.24

<b>PLR:</b>	BRANCH 1X	<b>Upstream Node:</b>	BRANCH 1
<b>Inspection Direction:</b>	2	<b>Downstream Node:</b>	MH.24
<b>Inspected Length:</b>	3.03 m	<b>Dia/Height:</b>	100 mm
<b>Total Length:</b>	3.03 m	<b>Material:</b>	Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.24
2	0.00	WL	Water level, 0% of the vertical dimension
3	3.03	BRF	Finish node, major connection without manhole, reference: BRANCH 1

<b>PLR:</b>	BRANCH 2X	<b>Upstream Node:</b>	BRANCH 2
<b>Inspection Direction:</b>	2	<b>Downstream Node:</b>	MH.24
<b>Inspected Length:</b>	7.76 m	<b>Dia/Height:</b>	100 mm
<b>Total Length:</b>	7.76 m	<b>Material:</b>	Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.24
2	0.00	WL	Water level, 0% of the vertical dimension
3	0.95	LL	Line deviates left
4	1.50	LR	Line deviates right
5	6.99	JN	Junction at 2 o'clock, 100mm dia
6	7.76	LR	Line deviates right
7	7.76	SA	Survey abandoned

<b>PLR:</b>	MH.24X	<b>Upstream Node:</b>	MH.24
<b>Inspection Direction:</b>	1	<b>Downstream Node:</b>	MH.25
<b>Inspected Length:</b>	23.50 m	<b>Dia/Height:</b>	150 mm
<b>Total Length:</b>	23.50 m	<b>Material:</b>	Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.24
2	0.00	WL	Water level, 5% of the vertical dimension
3	6.66	LR	Line deviates right
4	10.95	WL	Water level, 10% of the vertical dimension
5	23.15	LL	Line deviates left





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No.	m+	Code	Observation
6	23.50	MHF	Finish node, manhole, reference: MH.25

<b>PLR:</b>	BRANCH 1X	<b>Upstream Node:</b>	BRANCH 1
<b>Inspection Direction:</b>	2	<b>Downstream Node:</b>	MH.23
<b>Inspected Length:</b>	2.05 m	<b>Dia/Height:</b>	100 mm
<b>Total Length:</b>	2.05 m	<b>Material:</b>	Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.23
2	0.00	WL	Water level, 0% of the vertical dimension
3	0.73	LL	Line deviates left
4	1.61	LL	Line deviates left
5	2.05	BRF	Finish node, major connection without manhole, reference: BRANCH 1

<b>PLR:</b>	BRANCH 2X	<b>Upstream Node:</b>	BRANCH 2
<b>Inspection Direction:</b>	2	<b>Downstream Node:</b>	MH.23
<b>Inspected Length:</b>	1.17 m	<b>Dia/Height:</b>	100 mm
<b>Total Length:</b>	1.17 m	<b>Material:</b>	Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.23
2	0.00	WL	Water level, 0% of the vertical dimension
3	1.17	GYF	Finish node, gully, reference: BRANCH 2

<b>PLR:</b>	MH.26X	<b>Upstream Node:</b>	MH.26
<b>Inspection Direction:</b>	2	<b>Downstream Node:</b>	MH.23
<b>Inspected Length:</b>	8.53 m	<b>Dia/Height:</b>	100 mm
<b>Total Length:</b>	8.53 m	<b>Material:</b>	Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.23
2	0.00	WL	Water level, 5% of the vertical dimension
3	0.40	LL	Line deviates left
4	7.98	JN	Junction at 10 o'clock, 100mm dia
5	8.53	MHF	Finish node, manhole, reference: MH.26

<b>PLR:</b>	MH.27X	<b>Upstream Node:</b>	MH.27
<b>Inspection Direction:</b>	2	<b>Downstream Node:</b>	MH.26
<b>Inspected Length:</b>	13.09 m	<b>Dia/Height:</b>	100 mm
<b>Total Length:</b>	13.09 m	<b>Material:</b>	Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.26
2	0.00	WL	Water level, 5% of the vertical dimension
3	10.11	JN	Junction at 10 o'clock, 100mm dia
4	11.37	DES	Settled deposits, fine, 10% cross-sectional area loss
5	11.37	WL	Water level, 10% of the vertical dimension
6	13.09	MHF	Finish node, manhole, reference: MH.27



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<b>PLR:</b> RODDING EYX	<b>Upstream Node:</b> RODDING EY
<b>Inspection Direction:</b> 2	<b>Downstream Node:</b> MH.27
<b>Inspected Length:</b> 14.60 m	<b>Dia/Height:</b> 100 mm
<b>Total Length:</b> 14.60 m	<b>Material:</b> Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.27
2	0.00	WL	Water level, 5% of the vertical dimension
3	5.40	JN	Junction at 10 o'clock, 100mm dia
4	7.26	JNC	Junction, closed at 9 o'clock, 100mm dia
5	12.27	REM	General remark
6	12.54	JN	Junction at 10 o'clock, 100mm dia
7	13.34	LU	Line deviates up
8	14.60	REF	Finish node, rodding eye, reference: RODDING EY

<b>PLR:</b> BRANCH 1X	<b>Upstream Node:</b> BRANCH 1
<b>Inspection Direction:</b> 2	<b>Downstream Node:</b> MH.27
<b>Inspected Length:</b> 1.28 m	<b>Dia/Height:</b> 100 mm
<b>Total Length:</b> 1.28 m	<b>Material:</b> Vitrified clay

No.	m+	Code	Observation
1	0.00	MH	Start node, manhole, reference: MH.27
2	0.00	WL	Water level, 5% of the vertical dimension
3	0.73	LL	Line deviates left
4	0.73	DES	Settled deposits, fine, 5% cross-sectional area loss
5	1.28	BRF	Finish node, major connection without manhole, reference: BRANCH 1



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## Pipe Summary

No.	Type	PLR	Upstream Node	Downstream Node	Road	Town	Use	Mat.	Profile	Length
1	SEC	BRANCH 1X	BRANCH 1	MH.1	50-56 Sheen Road	Richmond	F	VC	Circular 100mm	3.91 m
2	SEC	BRANCH 2X	BRANCH 2	MH.1	50-56 Sheen Road	Richmond	F	VC	Circular 100mm	1.28 m
3	SEC	BRANCH 3X	BRANCH 3	MH.1	50-56 Sheen Road	Richmond	F	VC	Circular 100mm	2.60 m
4	SEC	BRANCH 4X	BRANCH 4	MH.1	50-56 Sheen Road	Richmond	F	VC	Circular 100mm	2.27 m
5	SEC	MH.1X	MH.1	MH.2	50-56 Sheen Road	Richmond	F	VC	Circular 100mm	14.68 m
6	SEC	MAINRUNX	MAINRUN	MH.3	50-56 Sheen Road	Richmond	F	VC	Circular 100mm	2.82 m
7	SEC	BRANCH 1X	BRANCH 1	MH.3	50-56 Sheen Road	Richmond	F	VC	Circular 100mm	2.49 m
8	SEC	BRANCH 2X	BRANCH 2	MH.3	50-56 Sheen Road	Richmond	F	VC	Circular 100mm	1.83 m
9	SEC	BRANCH 3X	BRANCH 3	MH.3	50-56 Sheen Road	Richmond	F	VC	Circular 100mm	0.73 m
10	SEC	MH.3X	MH.3	MH.4	50-56 Sheen Road	Richmond	F	VC	Circular 100mm	4.79 m
11	SEC	MH.4X	MH.4	MH.5	50-56 Sheen Road	Richmond	F	VC	Circular 100mm	4.47 m
12	SEC	BRANCH 1X	BRANCH 1	MH.4	50-56 Sheen Road	Richmond	F	VC	Circular 100mm	1.72 m
13	SEC	BRANCH 2X	BRANCH 2	MH.4	50-56 Sheen Road	Richmond	F	VC	Circular 100mm	1.61 m
14	SEC	BRANCH 3X	BRANCH 3	MH.4	50-56 Sheen Road	Richmond	F	VC	Circular 100mm	2.16 m
15	SEC	BRANCH 1X	BRANCH 1	MH.5	50-56 Sheen Road	Richmond	F	VC	Circular 100mm	0.95 m
16	SEC	BRANCH 2X	BRANCH 2	MH.5	50-56 Sheen Road	Richmond	F	VC	Circular 100mm	0.73 m
17	SEC	MH.5X	MH.5	MH.7	50-56 Sheen Road	Richmond	F	VC	Circular 150mm	7.87 m
18	SEC	MH.2X	MH.2	MH.7	50-56 Sheen Road	Richmond	F	VC	Circular 150mm	6.77 m
19	SEC	BRANCH 1X	BRANCH 1	MH.7	50-56 Sheen Road	Richmond	F	VC	Circular 150mm	4.90 m
20	SEC	BRANCH 2X	BRANCH 2	MH.7	50-56 Sheen Road	Richmond	F	VC	Circular 150mm	4.91 m
21	SEC	MH.7X	MH.7	MH.8	50-56 Sheen Road	Richmond	F	VC	Circular 150mm	2.71 m
22	SEC	MH.8X	MH.8	MH.9	50-56 Sheen Road	Richmond	F	VC	Circular 150mm	5.12 m
23	SEC	MH.10X	MH.10	MH.2	50-56 Sheen Road	Richmond	F	VC	Circular 150mm	8.53 m
24	SEC	MH.11X	MH.11	MH.10	50-56 Sheen Road	Richmond	F	VC	Circular 100mm	12.70 m
25	SEC	BRANCH 1X	BRANCH 1	MH.10	50-56 Sheen Road	Richmond	F	VC	Circular 100mm	1.83 m
26	SEC	BRANCH 2X	BRANCH 2	MH.10	50-56 Sheen Road	Richmond	F	VC	Circular 100mm	1.39 m
27	SEC	MH.12X	MH.12	MH.11	50-56 Sheen Road	Richmond	F	VC	Circular 100mm	4.90 m
28	SEC	MH.13X	MH.13	MH.12	50-56 Sheen Road	Richmond	F	VC	Circular 100mm	1.39 m
29	SEC	MAINRUNX	MAINRUN	MH.13	50-56 Sheen Road	Richmond	F	VC	Circular 100mm	3.00 m
30	SEC	BRANCH 1X	BRANCH 1	MH.11	50-56 Sheen Road	Richmond	F	VC	Circular 100mm	1.00 m



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No.	Type	PLR	Upstream Node	Downstream Node	Road	Town	Use	Mat.	Profile	Length
31	SEC	BRANCH 1X	BRANCH 1	MH.12	50-56 Sheen Road	Richmond	F	VC	Circular 100mm	2.71 m
32	SEC	BRANCH 1X	BRANCH 1	MH.13	50-56 Sheen Road	Richmond	F	VC	Circular 100mm	6.88 m
33	SEC	BRANCH 2X	BRANCH 2	MH.13	50-56 Sheen Road	Richmond	F	VC	Circular 100mm	3.80 m
34	SEC	MH.15X	MH.15	MH.16	50-56 Sheen Road	Richmond	S	VC	Circular 100mm	3.25 m
35	SEC	MH.16X	MH.16	MH.17	50-56 Sheen Road	Richmond	S	VC	Circular 100mm	0.40 m
36	SEC	BRANCH 1X	BRANCH 1	MH.16	50-56 Sheen Road	Richmond	S	VC	Circular 100mm	1.50 m
37	SEC	BRANCH 1X	BRANCH 1	MH.17	50-56 Sheen Road	Richmond	S	VC	Circular 100mm	0.62 m
38	SEC	MH.17X	MH.17	MH.18	50-56 Sheen Road	Richmond	S	VC	Circular 100mm	2.38 m
39	SEC	BRANCH 1X	BRANCH 1	MH.8	50-56 Sheen Road	Richmond	F	VC	Circular 100mm	3.47 m
40	SEC	MAINRUNX	MAINRUN	MH.9	50-56 Sheen Road	Richmond	F	VC	Circular 100mm	4.24 m
41	SEC	BRANCH 1X	BRANCH 1	MH.9	50-56 Sheen Road	Richmond	F	VC	Circular 100mm	2.37 m
42	SEC	MH.9X	MH.9	MH.20	50-56 Sheen Road	Richmond	F	VC	Circular 150mm	14.11 m
43	SEC	MH.18X	MH.18	MH.19	50-56 Sheen Road	Richmond	S	VC	Circular 100mm	6.77 m
44	SEC	MH.19X	MH.19	MH.21	50-56 Sheen Road	Richmond	S	VC	Circular 100mm	10.73 m
45	SEC	BRANCH 1X	BRANCH 1	MH.21	50-56 Sheen Road	Richmond	S	VC	Circular 100mm	0.73 m
46	SEC	MH.23X	MH.23	MH.21	50-56 Sheen Road	Richmond	S	VC	Circular 100mm	11.83 m
47	SEC	MH.21X	MH.21	MH.22	50-56 Sheen Road	Richmond	S	VC	Circular 100mm	3.25 m
48	SEC	MH.20X	MH.20	MH.24	50-56 Sheen Road	Richmond	F	VC	Circular 150mm	7.43 m
49	SEC	BRANCH 1X	BRANCH 1	MH.24	50-56 Sheen Road	Richmond	F	VC	Circular 100mm	3.03 m
50	SEC	BRANCH 2X	BRANCH 2	MH.24	50-56 Sheen Road	Richmond	F	VC	Circular 100mm	7.76 m
51	SEC	MH.24X	MH.24	MH.25	50-56 Sheen Road	Richmond	F	VC	Circular 150mm	23.50 m
52	SEC	BRANCH 1X	BRANCH 1	MH.23	50-56 Sheen Road	Richmond	S	VC	Circular 100mm	2.05 m
53	SEC	BRANCH 2X	BRANCH 2	MH.23	50-56 Sheen Road	Richmond	S	VC	Circular 100mm	1.17 m
54	SEC	MH.26X	MH.26	MH.23	50-56 Sheen Road	Richmond	S	VC	Circular 100mm	8.53 m
55	SEC	MH.27X	MH.27	MH.26	50-56 Sheen Road	Richmond	S	VC	Circular 100mm	13.09 m
56	SEC	RODDING EYX	RODDING EY	MH.27	50-56 Sheen Road	Richmond	S	VC	Circular 100mm	14.60 m
57	SEC	BRANCH 1X	BRANCH 1	MH.27	50-56 Sheen Road	Richmond	S	VC	Circular 100mm	1.28 m
<b>Total:</b>										<b>277.54 m</b>





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### Pipe Levels

No.	PLR	Upstream Node	Upstream C.L.	Upstream I.L.	Upstream I.D.	Downstream Node	Downstream C.L.	Downstream I.L.	Downstream I.D.
1	BRANCH 1X	BRANCH 1			0.000 m	MH.1			0.460 m
2	BRANCH 2X	BRANCH 2			0.000 m	MH.1			0.460 m
3	BRANCH 3X	BRANCH 3			0.000 m	MH.1			0.460 m
4	BRANCH 4X	BRANCH 4			0.000 m	MH.1			0.460 m
5	MH.1X	MH.1			0.460 m	MH.2			0.990 m
6	MAINRUNX	MAINRUN			0.000 m	MH.3			0.520 m
7	BRANCH 1X	BRANCH 1			0.000 m	MH.3			0.520 m
8	BRANCH 2X	BRANCH 2			0.000 m	MH.3			0.520 m
9	BRANCH 3X	BRANCH 3			0.000 m	MH.3			0.520 m
10	MH.3X	MH.3			0.520 m	MH.4			0.920 m
11	MH.4X	MH.4			0.920 m	MH.5			1.280 m
12	BRANCH 1X	BRANCH 1			0.000 m	MH.4			0.920 m
13	BRANCH 2X	BRANCH 2			0.000 m	MH.4			0.920 m
14	BRANCH 3X	BRANCH 3			0.000 m	MH.4			0.920 m
15	BRANCH 1X	BRANCH 1			0.000 m	MH.5			1.280 m
16	BRANCH 2X	BRANCH 2			0.000 m	MH.5			1.280 m
17	MH.5X	MH.5			1.280 m	MH.7			1.420 m
18	MH.2X	MH.2			0.990 m	MH.7			1.420 m
19	BRANCH 1X	BRANCH 1			0.000 m	MH.7			1.420 m
20	BRANCH 2X	BRANCH 2			0.000 m	MH.7			1.420 m
21	MH.7X	MH.7			1.420 m	MH.8			0.000 m
22	MH.8X	MH.8			0.000 m	MH.9			0.000 m
23	MH.10X	MH.10			0.640 m	MH.2			0.990 m
24	MH.11X	MH.11			0.530 m	MH.10			0.640 m
25	BRANCH 1X	BRANCH 1			0.000 m	MH.10			0.640 m
26	BRANCH 2X	BRANCH 2			0.000 m	MH.10			0.640 m
27	MH.12X	MH.12			0.480 m	MH.11			0.530 m
28	MH.13X	MH.13			0.470 m	MH.12			0.480 m
29	MAINRUNX	MAINRUN			0.000 m	MH.13			0.470 m
30	BRANCH 1X	BRANCH 1			0.000 m	MH.11			0.530 m



## Project Summary

<b>Project Name</b> 13621 50-56 SHEEN ROAD RICHMOND	<b>Project Number</b>	<b>Project Date</b> 04/04/2022
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No.	PLR	Upstream Node	Upstream C.L.	Upstream I.L.	Upstream I.D.	Downstream Node	Downstream C.L.	Downstream I.L.	Downstream I.D.
31	BRANCH 1X	BRANCH 1			0.000 m	MH.12			0.480 m
32	BRANCH 1X	BRANCH 1			0.000 m	MH.13			0.470 m
33	BRANCH 2X	BRANCH 2			0.000 m	MH.13			0.470 m
34	MH.15X	MH.15			0.580 m	MH.16			0.610 m
35	MH.16X	MH.16			0.610 m	MH.17			0.980 m
36	BRANCH 1X	BRANCH 1			0.000 m	MH.16			0.610 m
37	BRANCH 1X	BRANCH 1			0.000 m	MH.17			0.980 m
38	MH.17X	MH.17			0.980 m	MH.18			0.000 m
39	BRANCH 1X	BRANCH 1			0.000 m	MH.8			1.590 m
40	MAINRUNX	MAINRUN			0.000 m	MH.9			1.650 m
41	BRANCH 1X	BRANCH 1			0.000 m	MH.9			1.650 m
42	MH.9X	MH.9			1.650 m	MH.20			1.340 m
43	MH.18X	MH.18			0.000 m	MH.19			1.320 m
44	MH.19X	MH.19			1.320 m	MH.21			1.190 m
45	BRANCH 1X	BRANCH 1			0.000 m	MH.21			1.190 m
46	MH.23X	MH.23			0.620 m	MH.21			1.190 m
47	MH.21X	MH.21			1.190 m	MH.22			0.000 m
48	MH.20X	MH.20			1.340 m	MH.24			1.410 m
49	BRANCH 1X	BRANCH 1			0.000 m	MH.24			1.410 m
50	BRANCH 2X	BRANCH 2			0.000 m	MH.24			1.410 m
51	MH.24X	MH.24			1.410 m	MH.25			1.960 m
52	BRANCH 1X	BRANCH 1			0.000 m	MH.23			0.620 m
53	BRANCH 2X	BRANCH 2			0.000 m	MH.23			0.620 m
54	MH.26X	MH.26			0.590 m	MH.23			0.620 m
55	MH.27X	MH.27			0.620 m	MH.26			0.590 m
56	RODDING EYX	RODDING EY			0.000 m	MH.27			0.620 m
57	BRANCH 1X	BRANCH 1			0.000 m	MH.27			0.620 m



## Project Summary

<b>Project Name</b> 13621 50-56 SHEEN ROAD RICHMOND	<b>Project Number</b>	<b>Project Date</b> 04/04/2022
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### Pipe Summary by Profile

Profile	Total Length	No. Pipes
Circular 100mm	3.91 m	
Circular 100mm	1.28 m	
Circular 100mm	2.60 m	
Circular 100mm	2.27 m	
Circular 100mm	14.68 m	
Circular 100mm	2.82 m	
Circular 100mm	2.49 m	
Circular 100mm	1.83 m	
Circular 100mm	0.73 m	
Circular 100mm	4.79 m	
Circular 100mm	4.47 m	
Circular 100mm	1.72 m	
Circular 100mm	1.61 m	
Circular 100mm	2.16 m	
Circular 100mm	0.95 m	
Circular 100mm	0.73 m	
Circular 100mm	12.70 m	
Circular 100mm	1.83 m	
Circular 100mm	1.39 m	
Circular 100mm	4.90 m	
Circular 100mm	1.39 m	
Circular 100mm	3.00 m	
Circular 100mm	1.00 m	
Circular 100mm	2.71 m	
Circular 100mm	6.88 m	
Circular 100mm	3.80 m	
Circular 100mm	3.25 m	
Circular 100mm	0.40 m	
Circular 100mm	1.50 m	
Circular 100mm	0.62 m	
Circular 100mm	2.38 m	
Circular 100mm	3.47 m	
Circular 100mm	4.24 m	
Circular 100mm	2.37 m	
Circular 100mm	6.77 m	
Circular 100mm	10.73 m	
Circular 100mm	0.73 m	
Circular 100mm	11.83 m	
Circular 100mm	3.25 m	
Circular 100mm	3.03 m	
Circular 100mm	7.76 m	



## Project Summary

<b>Project Name</b> 13621 50-56 SHEEN ROAD RICHMOND	<b>Project Number</b>	<b>Project Date</b> 04/04/2022
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Profile		Total Length	No. Pipes
Circular 100mm		2.05 m	
Circular 100mm		1.17 m	
Circular 100mm		8.53 m	
Circular 100mm		13.09 m	
Circular 100mm		14.60 m	
Circular 100mm		1.28 m	
<b>Circular 100mm</b>	<b>=</b>	<b>191.69 m</b>	<b>47</b>
Circular 150mm		7.87 m	
Circular 150mm		6.77 m	
Circular 150mm		4.90 m	
Circular 150mm		4.91 m	
Circular 150mm		2.71 m	
Circular 150mm		5.12 m	
Circular 150mm		8.53 m	
Circular 150mm		14.11 m	
Circular 150mm		7.43 m	
Circular 150mm		23.50 m	
<b>Circular 150mm</b>	<b>=</b>	<b>85.85 m</b>	<b>10</b>
<b>Total</b>	<b>=</b>	<b>277.54 m</b>	<b>57</b>

## Inspection Summary

Pipe No.	Insp. No.	Upstream Node	Downstream Node	Dir.	Operator	Insp. Date	Insp. Time	Str	Ser	Final Observation	Length
1	1	BRANCH 1	MH.1	US	Jm10	04/04/2022	8:41	1	3	BRF, BASE OF STACK	3.91 m
2	1	BRANCH 2	MH.1	US	Jm10	04/04/2022	8:42	1	5	BRF, BASE OF STACK	1.28 m
3	1	BRANCH 3	MH.1	US	Jm10	04/04/2022	8:43	1	3	BRF, BASE OF STACK	2.60 m
4	1	BRANCH 4	MH.1	US	Jm10	04/04/2022	8:43	1	1	BRF, BASE OF STACK	2.27 m
5	1	MH.1	MH.2	DS	Jm10	04/04/2022	8:45	1	1	MHF	14.68 m
6	1	MAINRUN	MH.3	US	Jm10	04/04/2022	9:07	1	1	BRF, BASE OF STACK	2.82 m
7	1	BRANCH 1	MH.3	US	Jm10	04/04/2022	9:08	1	1	BRF, BASE OF STACK	2.49 m
8	1	BRANCH 2	MH.3	US	Jm10	04/04/2022	9:09	1	1	BRF, BASE OF STACK	1.83 m
9	1	BRANCH 3	MH.3	US	Jm10	04/04/2022	9:09	1	1	BRF, BASE OF STACK	0.73 m
10	1	MH.3	MH.4	DS	Jm10	04/04/2022	9:10	1	1	MHF	4.79 m
11	1	MH.4	MH.5	DS	Jm10	04/04/2022	9:11	1	3	MHF, DEBRIS IN CHAMBER	4.47 m
12	1	BRANCH 1	MH.4	US	Jm10	04/04/2022	9:20	1	1	BRF, BASE OF STACK	1.72 m





## Project Summary

<b>Project Name</b> 13621 50-56 SHEEN ROAD RICHMOND	<b>Project Number</b>	<b>Project Date</b> 04/04/2022
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Pipe No.	Insp. No.	Upstream Node	Downstream Node	Dir.	Operator	Insp. Date	Insp. Time	Str	Ser	Final Observation	Length
13	1	BRANCH 2	MH.4	US	Jm10	04/04/2022	9:20	1	1	BRF, BASE OF STACK	1.61 m
14	1	BRANCH 3	MH.4	US	Jm10	04/04/2022	9:21	1	1	BRF, BASE OF STACK	2.16 m
15	1	BRANCH 1	MH.5	US	Jm10	04/04/2022	9:32	1	1	BRF, BASE OF GULLY STACK	0.95 m
<b>16</b>	<b>1</b>	<b>BRANCH 2</b>	<b>MH.5</b>	<b>US</b>	<b>Jm10</b>	<b>04/04/2022</b>	<b>9:33</b>	<b>1</b>	<b>5</b>	<b>SA, DUE TO DEBRIS</b>	<b>0.73 m</b>
17	1	MH.5	MH.7	DS	Jm10	04/04/2022	9:58	1	3	MHF	7.87 m
18	1	MH.2	MH.7	US	Jm10	04/04/2022	10:16	1	1	MHF	6.77 m
19	1	BRANCH 1	MH.7	US	Jm10	04/04/2022	10:21	1	3	BRF, BASE OF STACK	4.90 m
<b>20</b>	<b>1</b>	<b>BRANCH 2</b>	<b>MH.7</b>	<b>US</b>	<b>Jm10</b>	<b>04/04/2022</b>	<b>10:23</b>	<b>1</b>	<b>1</b>	<b>SA, DUE TO SHARP BEND</b>	<b>4.91 m</b>
21	1	MH.7	MH.8	DS	Jm10	04/04/2022	10:24	1	1	MHF	2.71 m
22	1	MH.8	MH.9	DS	Jm10	04/04/2022	10:25	1	3	MHF	5.12 m
23	1	MH.10	MH.2	US	Jm10	04/04/2022	10:46	1	1	MHF	8.53 m
24	1	MH.11	MH.10	US	Jm10	04/04/2022	11:08	1	3	MHF	12.70 m
25	1	BRANCH 1	MH.10	US	Jm10	04/04/2022	11:10	1	3	BRF, BASE OF STACK	1.83 m
26	1	BRANCH 2	MH.10	US	Jm10	04/04/2022	11:11	1	1	BRF, BASE OF GULLY	1.39 m
27	1	MH.12	MH.11	US	Jm10	04/04/2022	11:20	1	1	MHF	4.90 m
28	1	MH.13	MH.12	US	Jm10	04/04/2022	11:21	1	1	MHF	1.39 m
29	1	MAINRUN	MH.13	US	Jm10	04/04/2022	11:21	1	1	GYF, BASE OF GULLY	1.72 m
<b>30</b>	<b>1</b>	<b>BRANCH 1</b>	<b>MH.11</b>	<b>US</b>	<b>Jm10</b>	<b>04/04/2022</b>	<b>11:22</b>	<b>1</b>	<b>1</b>	<b>SA, DUE TO SHARP BEND</b>	<b>0.62 m</b>
31	1	BRANCH 1	MH.12	US	Jm10	04/04/2022	11:27	1	1	BRF, BASE OF STACK	2.71 m
32	1	BRANCH 1	MH.13	US	Jm10	04/04/2022	11:28	1	1	BRF, BASE OF STACK	6.88 m
33	1	BRANCH 2	MH.13	US	Jm10	04/04/2022	11:29	1	3	BRF, BASE OF STACK	3.80 m
34	1	MH.15	MH.16	DS	Jm10	05/04/2022	7:32	1	4	MHF, CHAMBER SILTED	3.25 m
<b>35</b>	<b>1</b>	<b>MH.16</b>	<b>MH.17</b>	<b>DS</b>	<b>Jm10</b>	<b>05/04/2022</b>	<b>7:33</b>	<b>1</b>	<b>5</b>	<b>SA, DUE TO HEAVY SILTS</b>	<b>0.40 m</b>
<b>36</b>	<b>1</b>	<b>BRANCH 1</b>	<b>MH.16</b>	<b>US</b>	<b>Jm10</b>	<b>05/04/2022</b>	<b>7:35</b>	<b>1</b>	<b>1</b>	<b>SA, DUE TO SHARP BEND</b>	<b>1.28 m</b>
<b>37</b>	<b>1</b>	<b>BRANCH 1</b>	<b>MH.17</b>	<b>US</b>	<b>Jm10</b>	<b>05/04/2022</b>	<b>7:41</b>	<b>1</b>	<b>5</b>	<b>SA, DUE TO HEAVY SILTS</b>	<b>0.62 m</b>
38	1	MH.17	MH.18	DS	Jm10	05/04/2022	7:42	1	4	MHF, U.T.R SEIZED	2.38 m
39	1	BRANCH 1	MH.8	US	Jm10	05/04/2022	8:00	1	1	BRF, BASE OF STACK	3.47 m
40	1	MAINRUN	MH.9	US	Jm10	05/04/2022	8:12	1	3	BRF, BASE OF STACK	4.24 m
41	1	BRANCH 1	MH.9	US	Jm10	05/04/2022	8:13	1	1	BRF, BASE OF STACK	2.37 m
42	1	MH.9	MH.20	DS	Jm10	05/04/2022	8:19	1	1	MHF	14.11 m
43	1	MH.18	MH.19	US	Jm10	05/04/2022	8:24	1	4	MHF, U.T.R SEIZED	6.77 m
44	1	MH.19	MH.21	DS	Jm10	05/04/2022	8:36	1	3	MHF	10.73 m



## Project Summary

<b>Project Name</b> 13621 50-56 SHEEN ROAD RICHMOND	<b>Project Number</b>	<b>Project Date</b> 04/04/2022
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Pipe No.	Insp. No.	Upstream Node	Downstream Node	Dir.	Operator	Insp. Date	Insp. Time	Str	Ser	Final Observation	Length
45	1	BRANCH 1	MH.21	US	Jm10	05/04/2022	8:54	1	1	SA, DUE TO SHARP BEND	0.73 m
46	1	MH.23	MH.21	US	Jm10	05/04/2022	8:55	1	1	MHF	11.83 m
47	1	MH.21	MH.22	DS	Jm10	05/04/2022	8:57	1	1	MHF, ASSUMED SOAKAWAY BURIED NO COVER	3.25 m
48	1	MH.20	MH.24	DS	Jm10	05/04/2022	9:05	1	1	MHF	7.43 m
49	1	BRANCH 1	MH.24	US	Jm10	05/04/2022	9:16	1	1	BRF, BASE OF STACK	3.03 m
50	1	BRANCH 2	MH.24	US	Jm10	05/04/2022	9:17	1	1	SA, DUE TO SHARP BEND	7.76 m
51	1	MH.24	MH.25	DS	Jm10	05/04/2022	9:20	1	1	MHF, MAIN SEWER U.T.R	23.50 m
52	1	BRANCH 1	MH.23	US	Jm10	05/04/2022	9:35	1	1	BRF, BASE OF ACO	2.05 m
53	1	BRANCH 2	MH.23	US	Jm10	05/04/2022	9:36	1	1	GYF, BASE OF RWP	1.17 m
54	1	MH.26	MH.23	US	Jm10	05/04/2022	9:37	1	1	MHF	8.53 m
55	1	MH.27	MH.26	US	Jm10	05/04/2022	9:39	1	3	MHF, SILT IN CHAMBER	13.09 m
56	1	RODDING EY	MH.27	US	Jm10	05/04/2022	10:08	1	1	REF	14.60 m
57	1	BRANCH 1	MH.27	US	Jm10	05/04/2022	10:12	1	3	BRF, BASE OF ACO	1.28 m
<b>Total:</b>											<b>275.66 m</b>

### Inspection Summary by Profile

Profile	Total Length	No. Inspections
Circular 100mm	3.91 m	
Circular 100mm	1.28 m	
Circular 100mm	2.60 m	
Circular 100mm	2.27 m	
Circular 100mm	14.68 m	
Circular 100mm	2.82 m	
Circular 100mm	2.49 m	
Circular 100mm	1.83 m	
Circular 100mm	0.73 m	
Circular 100mm	4.79 m	
Circular 100mm	4.47 m	
Circular 100mm	1.72 m	
Circular 100mm	1.61 m	
Circular 100mm	2.16 m	
Circular 100mm	0.95 m	
Circular 100mm	0.73 m	
Circular 100mm	12.70 m	
Circular 100mm	1.83 m	
Circular 100mm	1.39 m	



## Project Summary

<b>Project Name</b> 13621 50-56 SHEEN ROAD RICHMOND	<b>Project Number</b>	<b>Project Date</b> 04/04/2022
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Profile	Total Length	No. Inspections
Circular 100mm	4.90 m	
Circular 100mm	1.39 m	
Circular 100mm	1.72 m	
Circular 100mm	0.62 m	
Circular 100mm	2.71 m	
Circular 100mm	6.88 m	
Circular 100mm	3.80 m	
Circular 100mm	3.25 m	
Circular 100mm	0.40 m	
Circular 100mm	1.28 m	
Circular 100mm	0.62 m	
Circular 100mm	2.38 m	
Circular 100mm	3.47 m	
Circular 100mm	4.24 m	
Circular 100mm	2.37 m	
Circular 100mm	6.77 m	
Circular 100mm	10.73 m	
Circular 100mm	0.73 m	
Circular 100mm	11.83 m	
Circular 100mm	3.25 m	
Circular 100mm	3.03 m	
Circular 100mm	7.76 m	
Circular 100mm	2.05 m	
Circular 100mm	1.17 m	
Circular 100mm	8.53 m	
Circular 100mm	13.09 m	
Circular 100mm	14.60 m	
Circular 100mm	1.28 m	
<b>Circular 100mm</b> =	<b>189.81 m</b>	<b>47</b>
Circular 150mm	7.87 m	
Circular 150mm	6.77 m	
Circular 150mm	4.90 m	
Circular 150mm	4.91 m	
Circular 150mm	2.71 m	
Circular 150mm	5.12 m	
Circular 150mm	8.53 m	
Circular 150mm	14.11 m	
Circular 150mm	7.43 m	
Circular 150mm	23.50 m	
<b>Circular 150mm</b> =	<b>85.85 m</b>	<b>10</b>
<b>Total</b> =	<b>275.66 m</b>	<b>57</b>



## Project Summary

<b>Project Name</b> 13621 50-56 SHEEN ROAD RICHMOND	<b>Project Number</b>	<b>Project Date</b> 04/04/2022
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Defect Summary				CCTV Drainage Survey Observation Count																				
				General				Structural Condition								Service Condition								
Sect. No.	Insp. No.	Upstream Node	Downstream Node	Insp. Length (m)	No. Grade 4/5 Obs.	Survey Abandoned	Camera Under Water	Cracks	Fractures	Broken	Deformed	Collapsed	Holes	Surface Damage	Displaced Joints	Open Joints	Roots	Infiltration	Encrustation	Silt	Grease	Obstruction	Water Level	Line Deviates
1	1	BRANCH 1	MH.1	3.9											1								1	
2	1	BRANCH 2	MH.1	1.3											1								1	
3	1	BRANCH 3	MH.1	2.6											1								1	1
4	1	BRANCH 4	MH.1	2.3																			1	
5	1	MH.1	MH.2	14.7																			1	2
6	1	MAINRUN	MH.3	2.8																			1	
7	1	BRANCH 1	MH.3	2.5																			1	
8	1	BRANCH 2	MH.3	1.8																			1	
9	1	BRANCH 3	MH.3	0.7																			1	
10	1	MH.3	MH.4	4.8																			1	
11	1	MH.4	MH.5	4.5											1								1	3
12	1	BRANCH 1	MH.4	1.7																			1	1
13	1	BRANCH 2	MH.4	1.6																			1	1
14	1	BRANCH 3	MH.4	2.2																			1	
15	1	BRANCH 1	MH.5	0.9																			1	
<b>16</b>	<b>1</b>	<b>BRANCH 2</b>	<b>MH.5</b>	<b>0.7</b>		<b>1</b>																	<b>1</b>	
17	1	MH.5	MH.7	7.9																			1	2
18	1	MH.2	MH.7	6.8																			1	1
19	1	BRANCH 1	MH.7	4.9																1			1	1
<b>20</b>	<b>1</b>	<b>BRANCH 2</b>	<b>MH.7</b>	<b>4.9</b>		<b>1</b>																	<b>1</b>	<b>3</b>
21	1	MH.7	MH.8	2.7																			1	
22	1	MH.8	MH.9	5.1																1			1	
23	1	MH.10	MH.2	8.5																			1	3
24	1	MH.11	MH.10	12.7																1			1	1
25	1	BRANCH 1	MH.10	1.8											1								1	
26	1	BRANCH 2	MH.10	1.4																			1	1
27	1	MH.12	MH.11	4.9																			1	1





## Project Summary

<b>Project Name</b> 13621 50-56 SHEEN ROAD RICHMOND	<b>Project Number</b>	<b>Project Date</b> 04/04/2022
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Sect. No.	Insp. No.	Upstream Node	Downstream Node	Insp. Length (m)	No. Grade 4/5 Obs.	Survey Abandoned	Camera Under Water	Cracks	Fractures	Broken	Deformed	Collapsed	Holes	Surface Damage	Displaced Joints	Open Joints	Roots	Infiltration	Encrustation	Silt	Grease	Obstruction	Water Level	Line Deviates
28	1	MH.13	MH.12	1.4																			1	
29	1	MAINRUN	MH.13	1.7																			1	
<b>30</b>	<b>1</b>	<b>BRANCH 1</b>	<b>MH.11</b>	<b>0.6</b>		<b>1</b>																	<b>1</b>	<b>1</b>
31	1	BRANCH 1	MH.12	2.7																			1	1
32	1	BRANCH 1	MH.13	6.9																			1	1
33	1	BRANCH 2	MH.13	3.8											1								1	3
34	1	MH.15	MH.16	3.3	1															2			1	
<b>35</b>	<b>1</b>	<b>MH.16</b>	<b>MH.17</b>	<b>0.4</b>	<b>1</b>	<b>1</b>														<b>1</b>			<b>1</b>	
<b>36</b>	<b>1</b>	<b>BRANCH 1</b>	<b>MH.16</b>	<b>1.3</b>		<b>1</b>																	<b>1</b>	<b>1</b>
<b>37</b>	<b>1</b>	<b>BRANCH 1</b>	<b>MH.17</b>	<b>0.6</b>	<b>1</b>	<b>1</b>														<b>1</b>			<b>1</b>	
38	1	MH.17	MH.18	2.4	1															3			1	
39	1	BRANCH 1	MH.8	3.5																			1	
40	1	MAINRUN	MH.9	4.2																1			1	1
41	1	BRANCH 1	MH.9	2.4																			1	1
42	1	MH.9	MH.20	14.1																			1	1
43	1	MH.18	MH.19	6.8	2															2			1	
44	1	MH.19	MH.21	10.7																1			2	
<b>45</b>	<b>1</b>	<b>BRANCH 1</b>	<b>MH.21</b>	<b>0.7</b>		<b>1</b>																	<b>1</b>	<b>1</b>
46	1	MH.23	MH.21	11.8																			1	2
47	1	MH.21	MH.22	3.3																			1	
48	1	MH.20	MH.24	7.4																			1	2
49	1	BRANCH 1	MH.24	3.0																			1	
<b>50</b>	<b>1</b>	<b>BRANCH 2</b>	<b>MH.24</b>	<b>7.8</b>		<b>1</b>																	<b>1</b>	<b>3</b>
51	1	MH.24	MH.25	23.5																			2	2
52	1	BRANCH 1	MH.23	2.0																			1	2
53	1	BRANCH 2	MH.23	1.2																			1	
54	1	MH.26	MH.23	8.5																			1	1
55	1	MH.27	MH.26	13.1																1			2	
56	1	RODDING EY	MH.27	14.6																			1	1



## Project Summary

<b>Project Name</b> 13621 50-56 SHEEN ROAD RICHMOND	<b>Project Number</b>	<b>Project Date</b> 04/04/2022
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Sect. No.	Insp. No.	Upstream Node	Downstream Node	Insp. Length (m)	No. Grade 4/5 Obs.	Survey Abandoned	Camera Under Water	Cracks	Fractures	Broken	Deformed	Collapsed	Holes	Surface Damage	Displaced Joints	Open Joints	Roots	Infiltration	Encrustation	Silt	Grease	Obstruction	Water Level	Line Deviates
57	1	BRANCH 1	MH.27	1.3																1			1	1
<b>Total:</b>				<b>275.7</b>	<b>6</b>	<b>8</b>														<b>16</b>			<b>60</b>	<b>46</b>

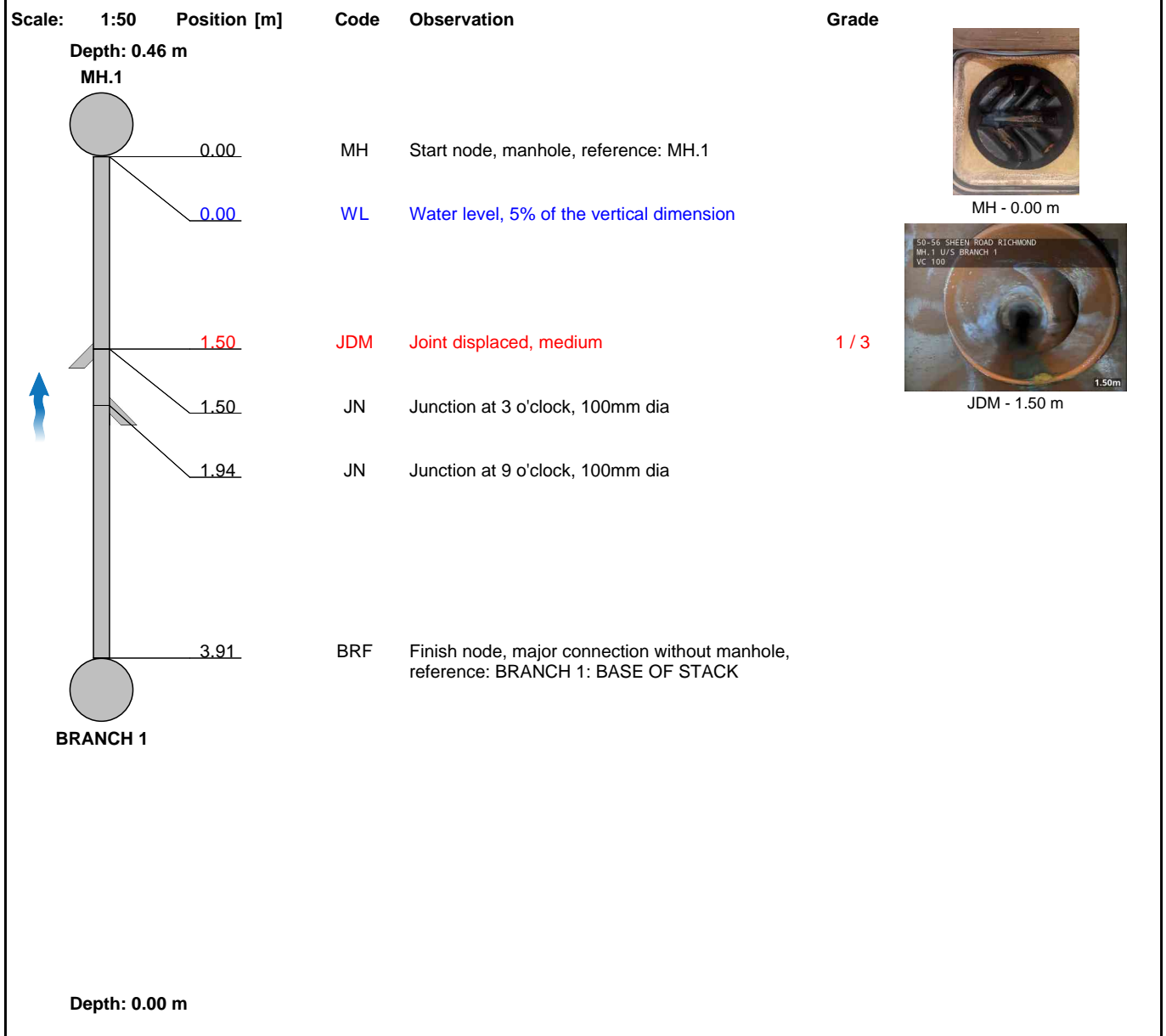


## Section Inspection - 04/04/2022 - BRANCH 1X

Item No. 1	Insp. No. 1	Date 04/04/22	Time 8:41	Client's Job Ref 13621	Weather No Rain Or Snow	Pre Cleaned No	PLR BRANCH 1X
Operator JM10		Vehicle P30 CVS		Camera Flexirpobe	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Richmond	Inspection Direction:	2	Upstream Node:	BRANCH 1
Road:	50-56 Sheen Road	Inspected Length:	3.91 m	Upstream Pipe Depth:	0.000 m
Location:	Property or buildings	Total Length:	3.91 m	Downstream Node:	MH.1
Surface Type:	Concrete Footway	Joint Length:	0.90 m	Downstream Pipe Depth:	0.460 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	1960	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

**Comments:**  
**Recommendations:** PATCH REPAIR REQUIRED



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	0.7	1.0	1.0	1	2.0	1.3	2.0	3.0

**Section Pictures - 04/04/2022 - BRANCH 1X**

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
1	2	BRANCH 1X	13621	13621



\_50-56 SHEEN ROAD\_RICHMOND\_1\_001.jpg, 00:00:00,  
 0.00 m  
 Start node, manhole, reference: MH.1



50-56 SHEEN ROAD RICHMOND  
 MH.1 U/S BRANCH 1  
 VC 100  
 1.50m  
 \_50-56 SHEEN ROAD\_RICHMOND\_1\_002.jpg, 00:00:09,  
 1.50 m  
 Joint displaced, medium

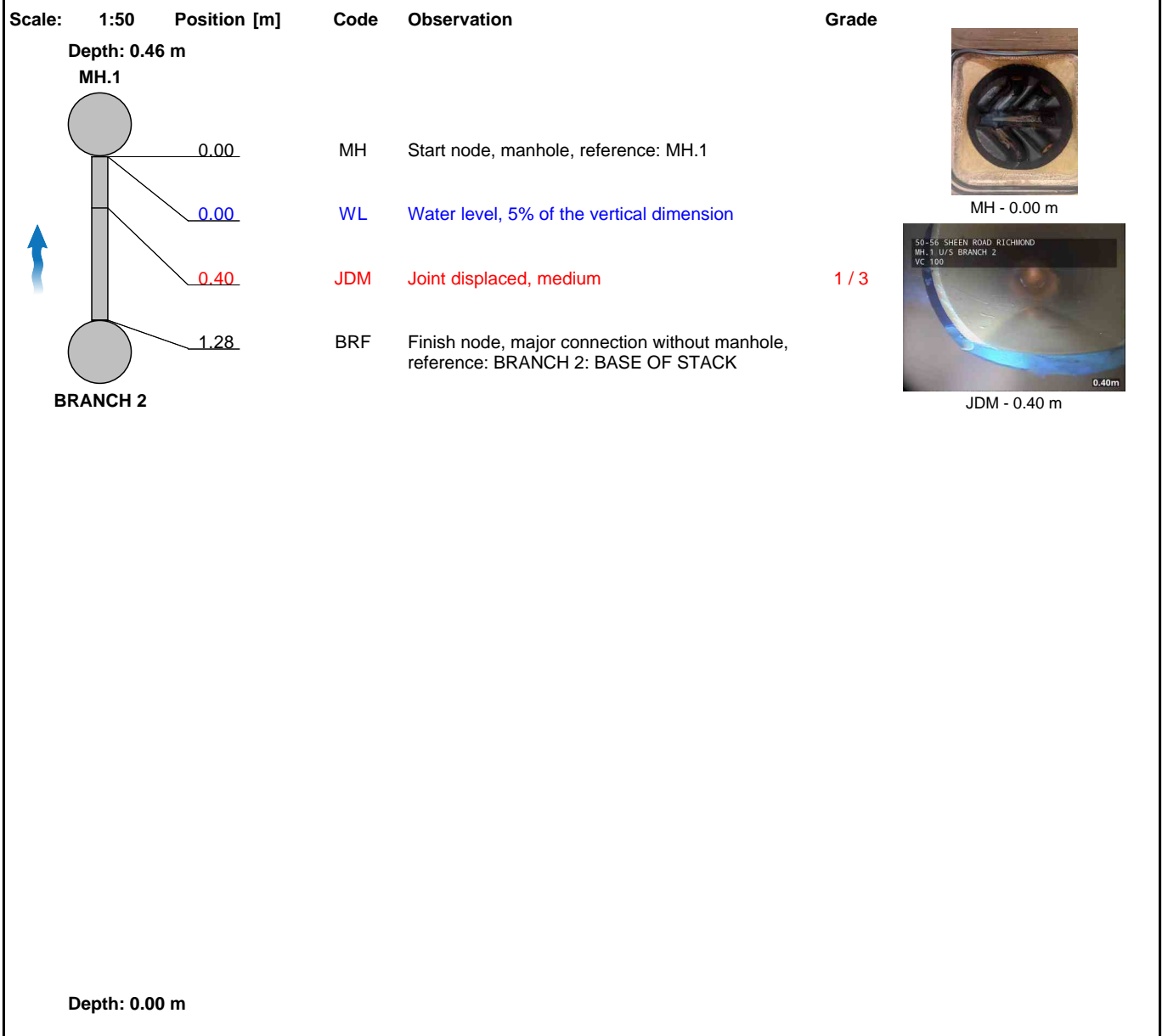


## Section Inspection - 04/04/2022 - BRANCH 2X

Item No. 2	Insp. No. 1	Date 04/04/22	Time 8:42	Client's Job Ref 13621	Weather No Rain Or Snow	Pre Cleaned No	PLR BRANCH 2X
Operator JM10		Vehicle P30 CVS		Camera Flexirpobe	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Richmond	Inspection Direction:	2	Upstream Node:	BRANCH 2
Road:	50-56 Sheen Road	Inspected Length:	1.28 m	Upstream Pipe Depth:	0.000 m
Location:	Property or buildings	Total Length:	1.28 m	Downstream Node:	MH.1
Surface Type:	Concrete Footway	Joint Length:	0.90 m	Downstream Pipe Depth:	0.460 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	1960	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

**Comments:**  
**Recommendations:** NO FURTHER WORKS REQUIRED



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	2.5	1.0	1.0	1	2.0	5.0	2.0	5.0

**Section Pictures - 04/04/2022 - BRANCH 2X**

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
2	2	BRANCH 2X	13621	13621



\_50-56 SHEEN ROAD\_RICHMOND\_2\_003.jpg, 00:00:00,  
 0.00 m  
 Start node, manhole, reference: MH.1



\_50-56 SHEEN ROAD\_RICHMOND\_2\_004.jpg, 00:00:00,  
 0.40 m  
 Joint displaced, medium

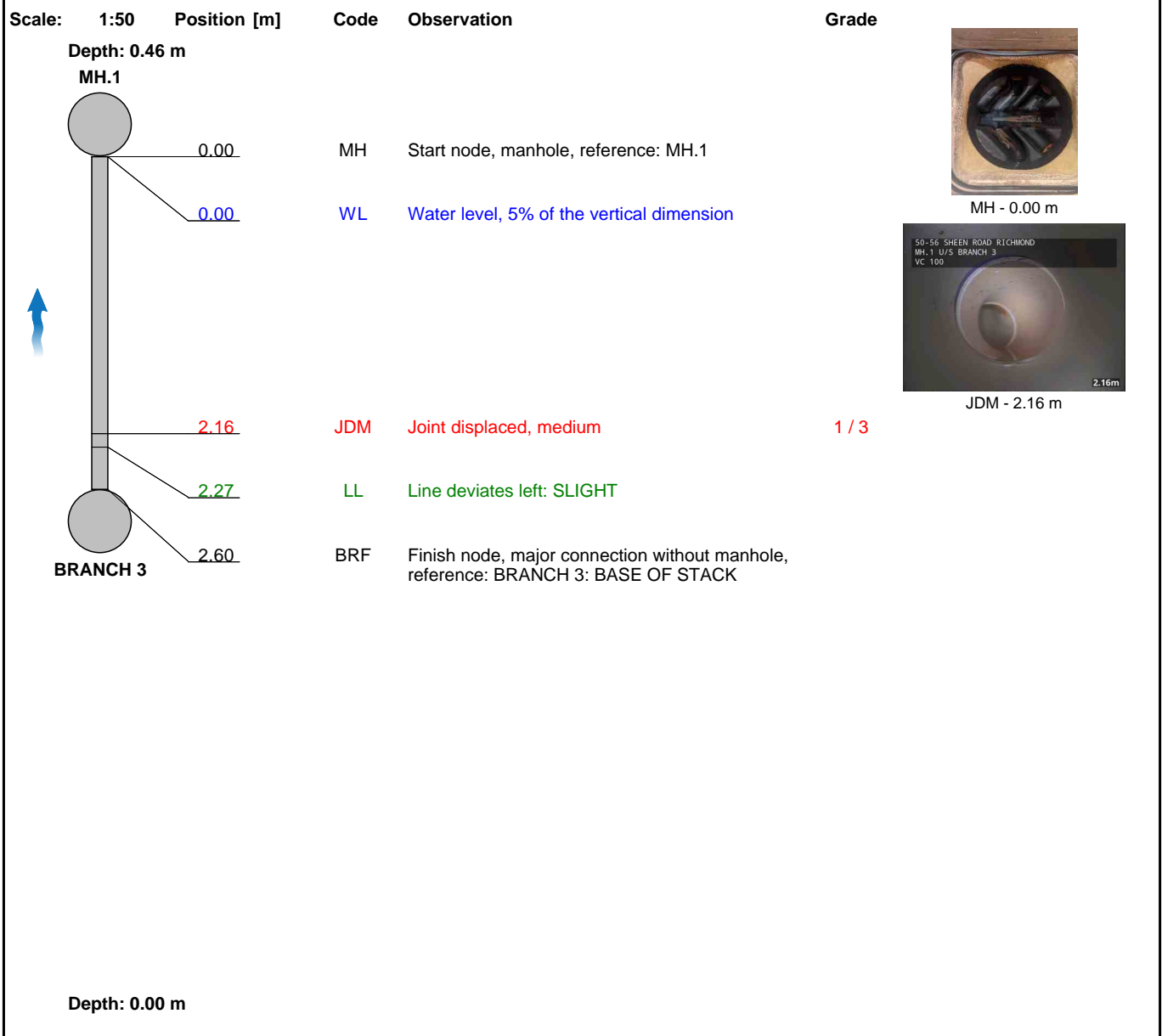


## Section Inspection - 04/04/2022 - BRANCH 3X

Item No. 3	Insp. No. 1	Date 04/04/22	Time 8:43	Client's Job Ref 13621	Weather No Rain Or Snow	Pre Cleaned No	PLR BRANCH 3X
Operator JM10		Vehicle P30 CVS		Camera Flexirpobe	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Richmond	Inspection Direction:	2	Upstream Node:	BRANCH 3
Road:	50-56 Sheen Road	Inspected Length:	2.60 m	Upstream Pipe Depth:	0.000 m
Location:	Property or buildings	Total Length:	2.60 m	Downstream Node:	MH.1
Surface Type:	Concrete Footway	Joint Length:	0.90 m	Downstream Pipe Depth:	0.460 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	1960	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

**Comments:**  
**Recommendations:** JETTING AND RESURVEY REQUIRED



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	0.5	1.0	1.0	1	2.0	0.9	2.0	3.0

**Section Pictures - 04/04/2022 - BRANCH 3X**

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
3	2	BRANCH 3X	13621	13621



\_50-56 SHEEN ROAD\_RICHMOND\_3\_005.jpg, 00:00:00,  
 0.00 m  
 Start node, manhole, reference: MH.1



\_50-56 SHEEN ROAD\_RICHMOND\_3\_006.jpg, 00:00:11,  
 2.16 m  
 Joint displaced, medium

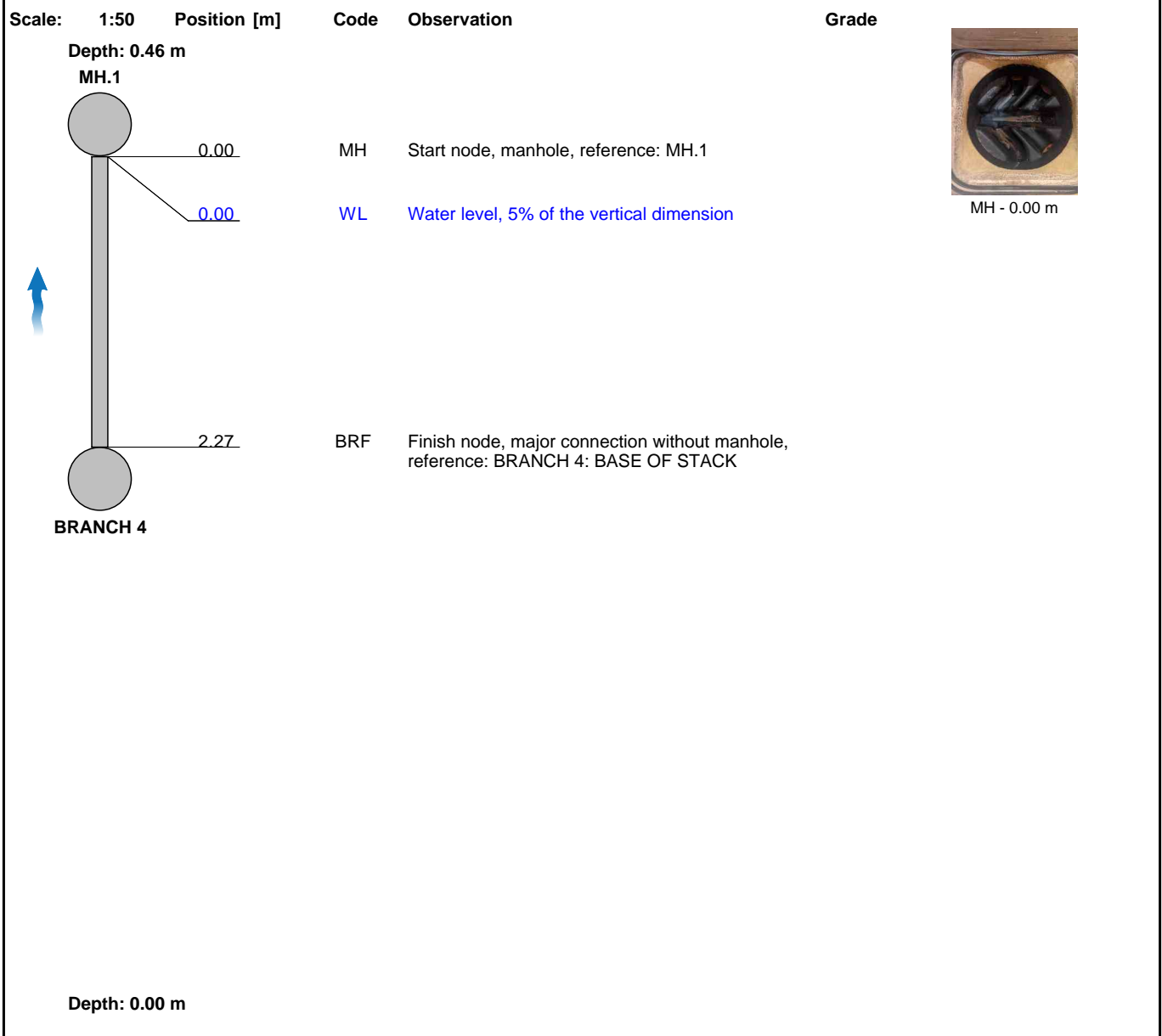


## Section Inspection - 04/04/2022 - BRANCH 4X

Item No. 4	Insp. No. 1	Date 04/04/22	Time 8:43	Client's Job Ref 13621	Weather No Rain Or Snow	Pre Cleaned No	PLR BRANCH 4X
Operator JM10		Vehicle P30 CVS		Camera Flexirpobe	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Richmond	Inspection Direction:	2	Upstream Node:	BRANCH 4
Road:	50-56 Sheen Road	Inspected Length:	2.27 m	Upstream Pipe Depth:	0.000 m
Location:	Property or buildings	Total Length:	2.27 m	Downstream Node:	MH.1
Surface Type:	Concrete Footway	Joint Length:	0.90 m	Downstream Pipe Depth:	0.460 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	1960	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

**Comments:**  
**Recommendations:** NO FURTHER WORKS REQUIRED



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 - 04/04/2022 - BRANCH 4X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
4	2	BRANCH 4X	13621	13621



\_50-56 SHEEN ROAD\_RICHMOND\_4\_007.jpg, 00:00:00,  
0.00 m  
Start node, manhole, reference: MH.1

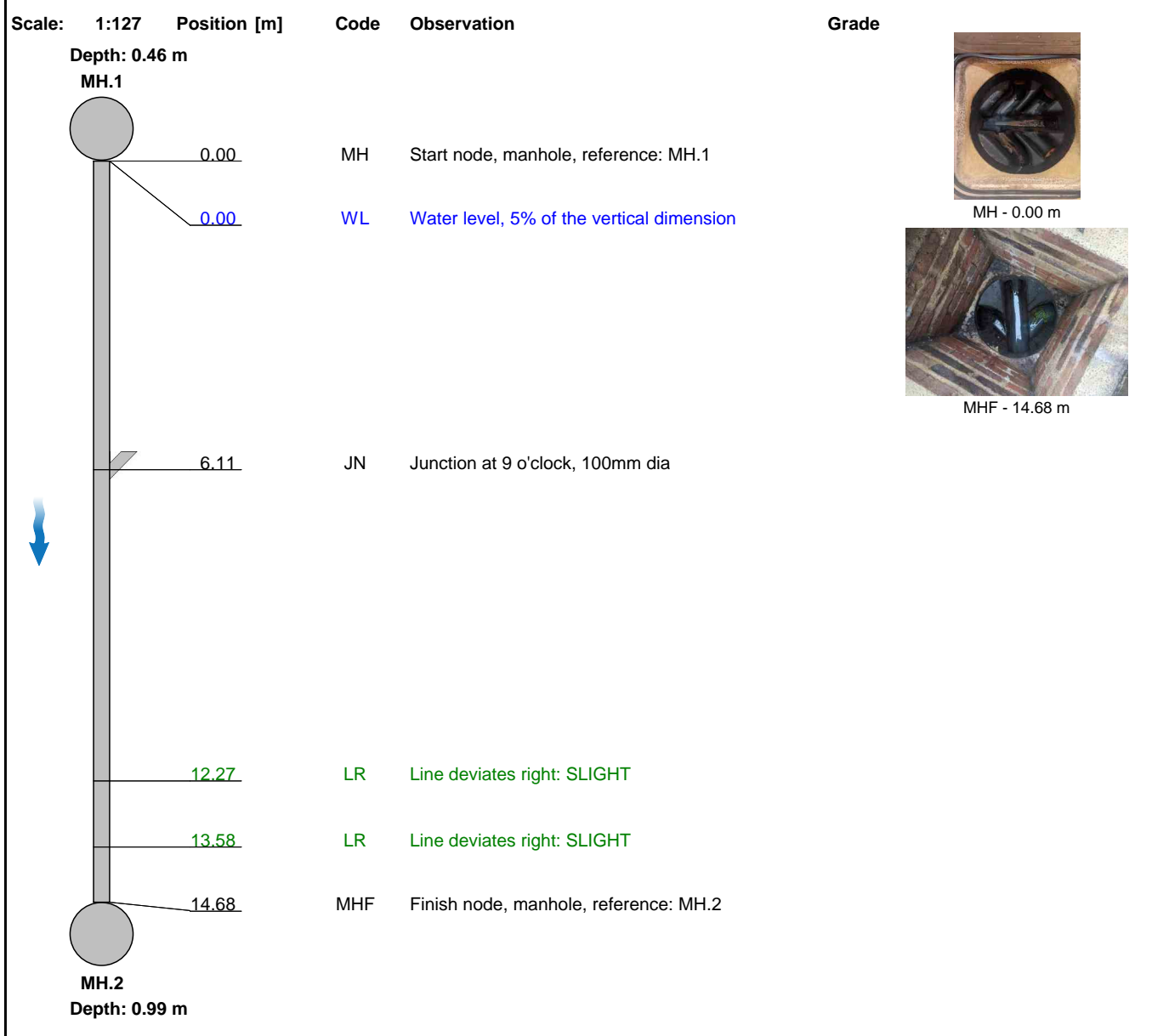


## Section Inspection - 04/04/2022 - MH.1X

Item No. 5	Insp. No. 1	Date 04/04/22	Time 8:45	Client's Job Ref 13621	Weather No Rain Or Snow	Pre Cleaned No	PLR MH.1X
Operator JM10		Vehicle P30 CVS		Camera Flexirpobe	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Richmond	Inspection Direction:	1	Upstream Node:	MH.1
Road:	50-56 Sheen Road	Inspected Length:	14.68 m	Upstream Pipe Depth:	0.460 m
Location:	Property or buildings	Total Length:	14.68 m	Downstream Node:	MH.2
Surface Type:	Concrete Footway	Joint Length:	0.90 m	Downstream Pipe Depth:	0.990 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	1960	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

**Comments:**  
**Recommendations:** NO FURTHER WORKS REQUIRED



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 - 04/04/2022 - MH.1X**

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
5	1	MH.1X	13621	13621



\_50-56 SHEEN ROAD\_RICHMOND\_5\_008.jpg, 00:00:00,  
 0.00 m  
 Start node, manhole, reference: MH.1



\_50-56 SHEEN ROAD\_RICHMOND\_5\_009.jpg, 00:01:17,  
 14.68 m  
 Finish node, manhole, reference: MH.2

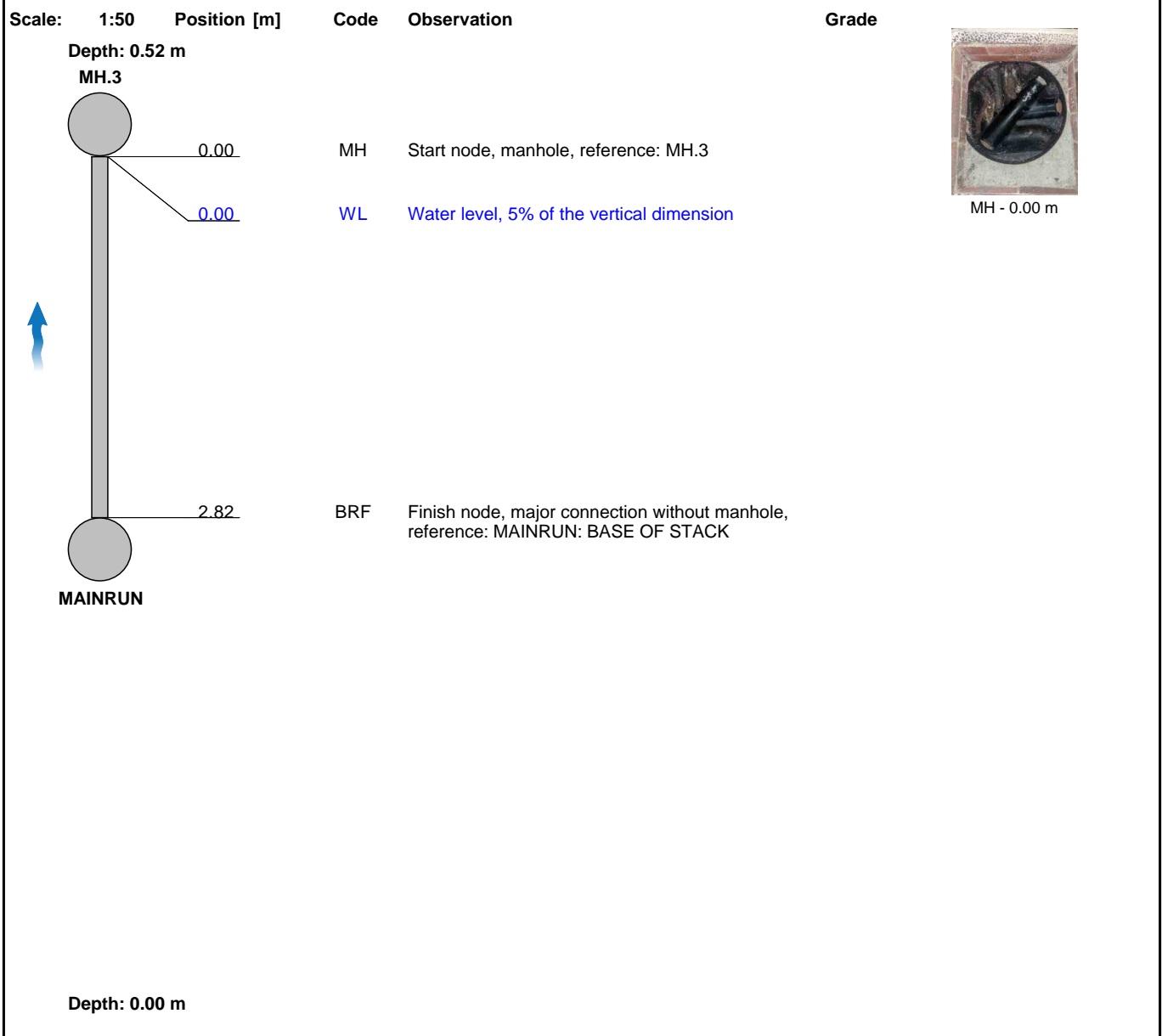


## Section Inspection - 04/04/2022 - MAINRUNX

Item No. 6	Insp. No. 1	Date 04/04/22	Time 9:07	Client's Job Ref 13621	Weather No Rain Or Snow	Pre Cleaned No	PLR MAINRUNX
Operator JM10		Vehicle P30 CVS		Camera Flexirpobe	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Richmond	Inspection Direction:	2	Upstream Node:	MAINRUN
Road:	50-56 Sheen Road	Inspected Length:	2.82 m	Upstream Pipe Depth:	0.000 m
Location:	Property or buildings	Total Length:	2.82 m	Downstream Node:	MH.3
Surface Type:	Concrete Footway	Joint Length:	0.90 m	Downstream Pipe Depth:	0.520 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	1960	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

**Comments:**  
**Recommendations:** NO FURTHER WORKS REQUIRED



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 - 04/04/2022 - MAINRUNX

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
6	2	MAINRUNX	13621	13621



\_50-56 SHEEN ROAD\_RICHMOND\_6\_010.jpg, 00:00:00,  
0.00 m  
Start node, manhole, reference: MH.3



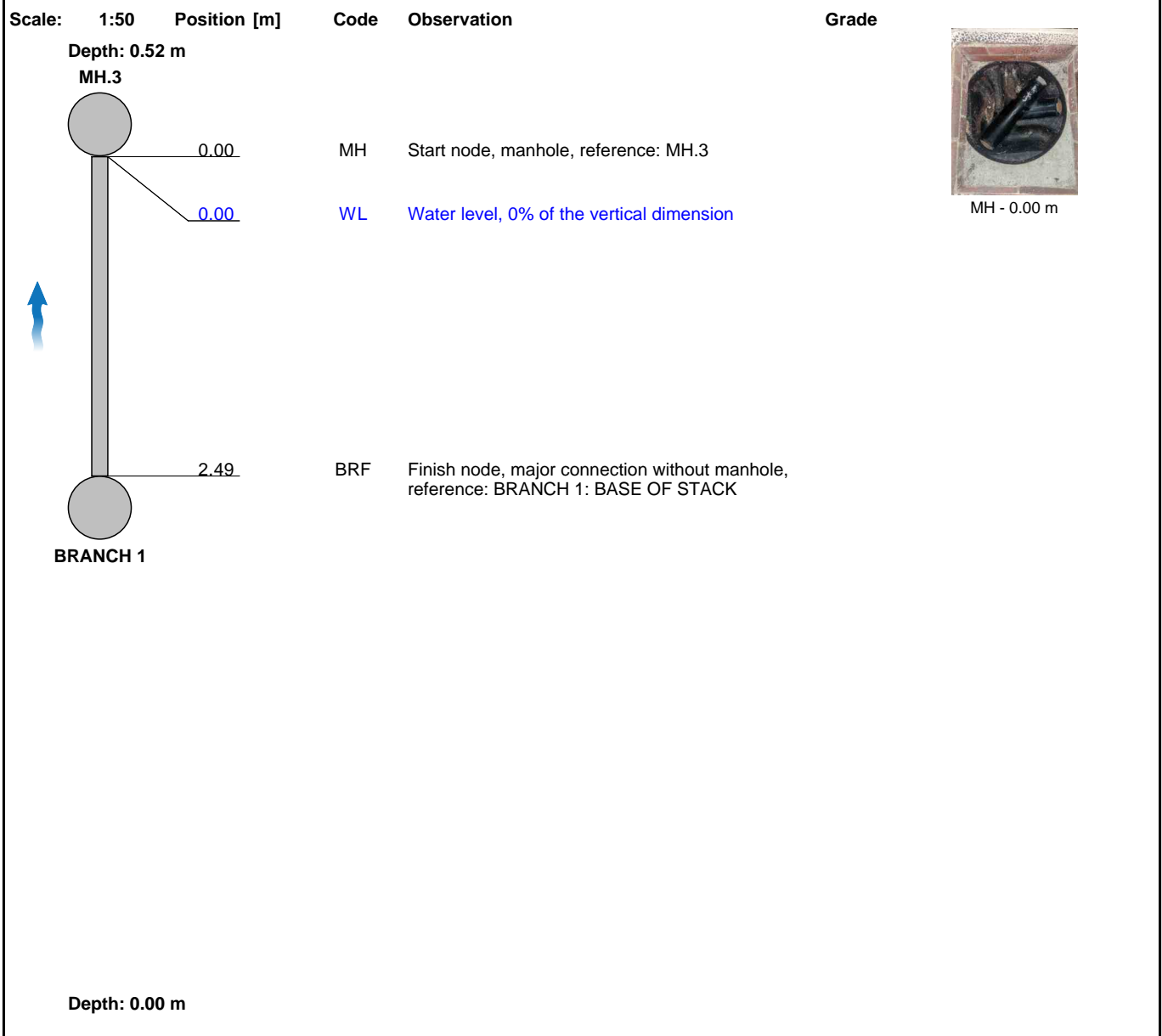


## Section Inspection - 04/04/2022 - BRANCH 1X

Item No. 7	Insp. No. 1	Date 04/04/22	Time 9:08	Client's Job Ref 13621	Weather No Rain Or Snow	Pre Cleaned No	PLR BRANCH 1X
Operator JM10		Vehicle P30 CVS		Camera Flexirpobe	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Richmond	Inspection Direction:	2	Upstream Node:	BRANCH 1
Road:	50-56 Sheen Road	Inspected Length:	2.49 m	Upstream Pipe Depth:	0.000 m
Location:	Property or buildings	Total Length:	2.49 m	Downstream Node:	MH.3
Surface Type:	Concrete Footway	Joint Length:	0.90 m	Downstream Pipe Depth:	0.520 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	1960	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

**Comments:**  
**Recommendations:** NO FURTHER WORKS REQUIRED



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 - 04/04/2022 - BRANCH 1X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
7	2	BRANCH 1X	13621	13621



\_50-56 SHEEN ROAD\_RICHMOND\_7\_011.jpg, 00:00:00,  
0.00 m  
Start node, manhole, reference: MH.3

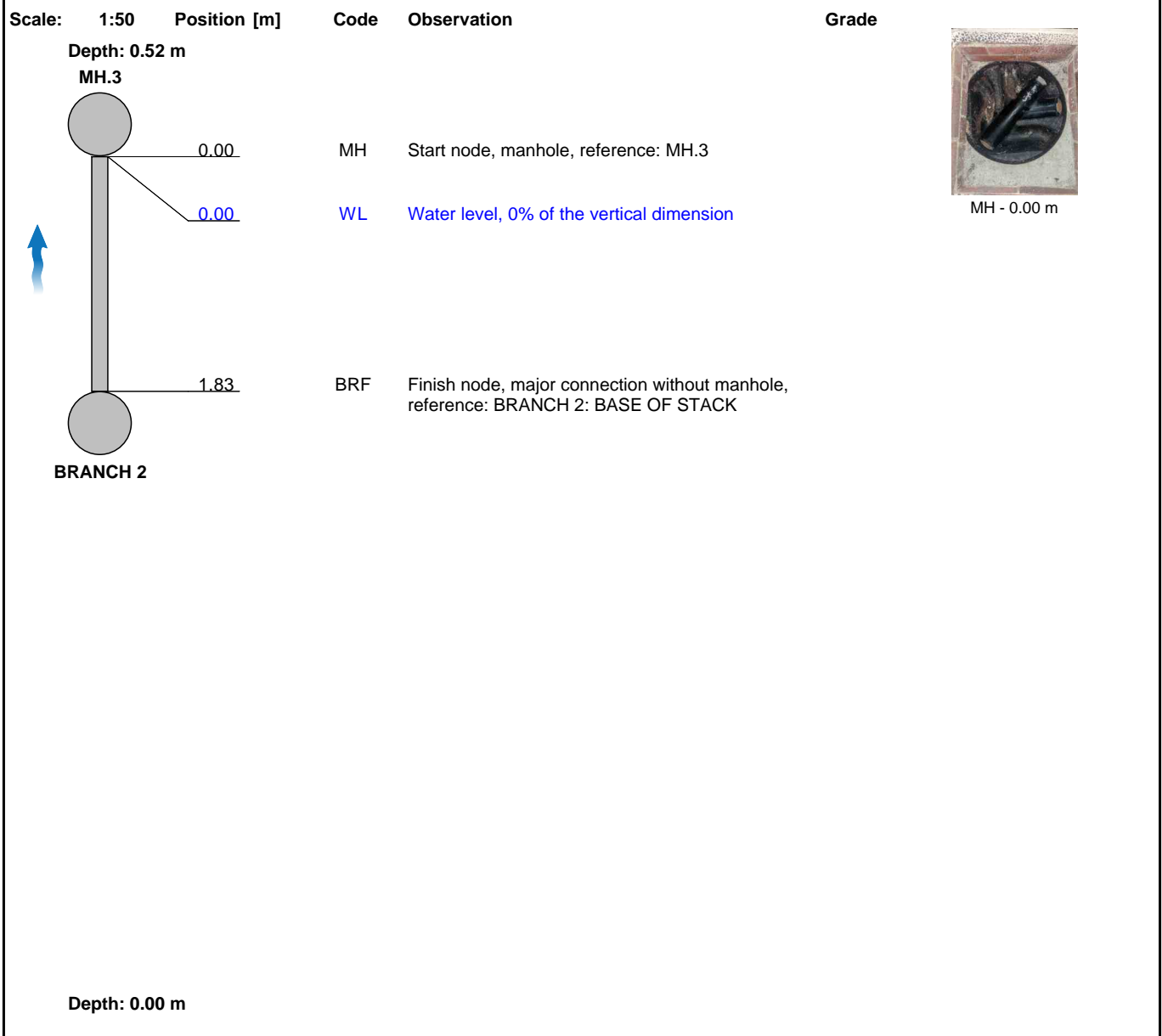


## Section Inspection - 04/04/2022 - BRANCH 2X

Item No. 8	Insp. No. 1	Date 04/04/22	Time 9:09	Client's Job Ref 13621	Weather No Rain Or Snow	Pre Cleaned No	PLR BRANCH 2X
Operator JM10		Vehicle P30 CVS		Camera Flexirpobe	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Richmond	Inspection Direction:	2	Upstream Node:	BRANCH 2
Road:	50-56 Sheen Road	Inspected Length:	1.83 m	Upstream Pipe Depth:	0.000 m
Location:	Property or buildings	Total Length:	1.83 m	Downstream Node:	MH.3
Surface Type:	Concrete Footway	Joint Length:	0.90 m	Downstream Pipe Depth:	0.520 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	1960	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

**Comments:**  
**Recommendations:** NO FURTHER WORKS REQUIRED



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 - 04/04/2022 - BRANCH 2X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
8	2	BRANCH 2X	13621	13621



\_50-56 SHEEN ROAD\_RICHMOND\_8\_012.jpg, 00:00:00,  
0.00 m  
Start node, manhole, reference: MH.3

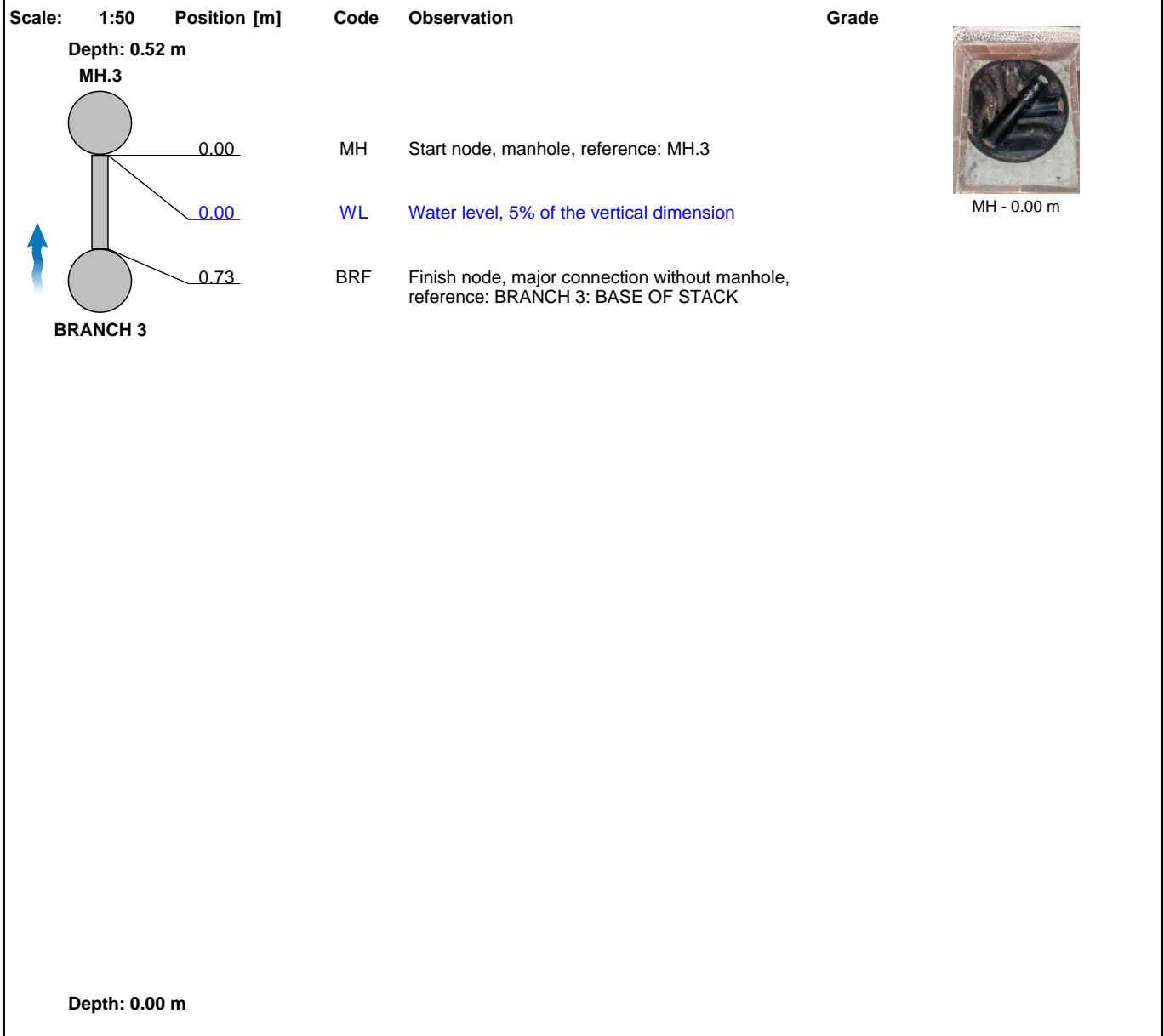


## Section Inspection - 04/04/2022 - BRANCH 3X

Item No. 9	Insp. No. 1	Date 04/04/22	Time 9:09	Client's Job Ref 13621	Weather No Rain Or Snow	Pre Cleaned No	PLR BRANCH 3X
Operator JM10		Vehicle P30 CVS		Camera Flexirpobe	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Richmond	Inspection Direction:	2	Upstream Node:	BRANCH 3
Road:	50-56 Sheen Road	Inspected Length:	0.73 m	Upstream Pipe Depth:	0.000 m
Location:	Property or buildings	Total Length:	0.73 m	Downstream Node:	MH.3
Surface Type:	Concrete Footway	Joint Length:	0.90 m	Downstream Pipe Depth:	0.520 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	1960	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

**Comments:**  
**Recommendations:** NO FURTHER WORKS REQUIRED



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 - 04/04/2022 - BRANCH 3X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
9	2	BRANCH 3X	13621	13621



\_50-56 SHEEN ROAD\_RICHMOND\_9\_013.jpg, 00:00:00,  
0.00 m  
Start node, manhole, reference: MH.3

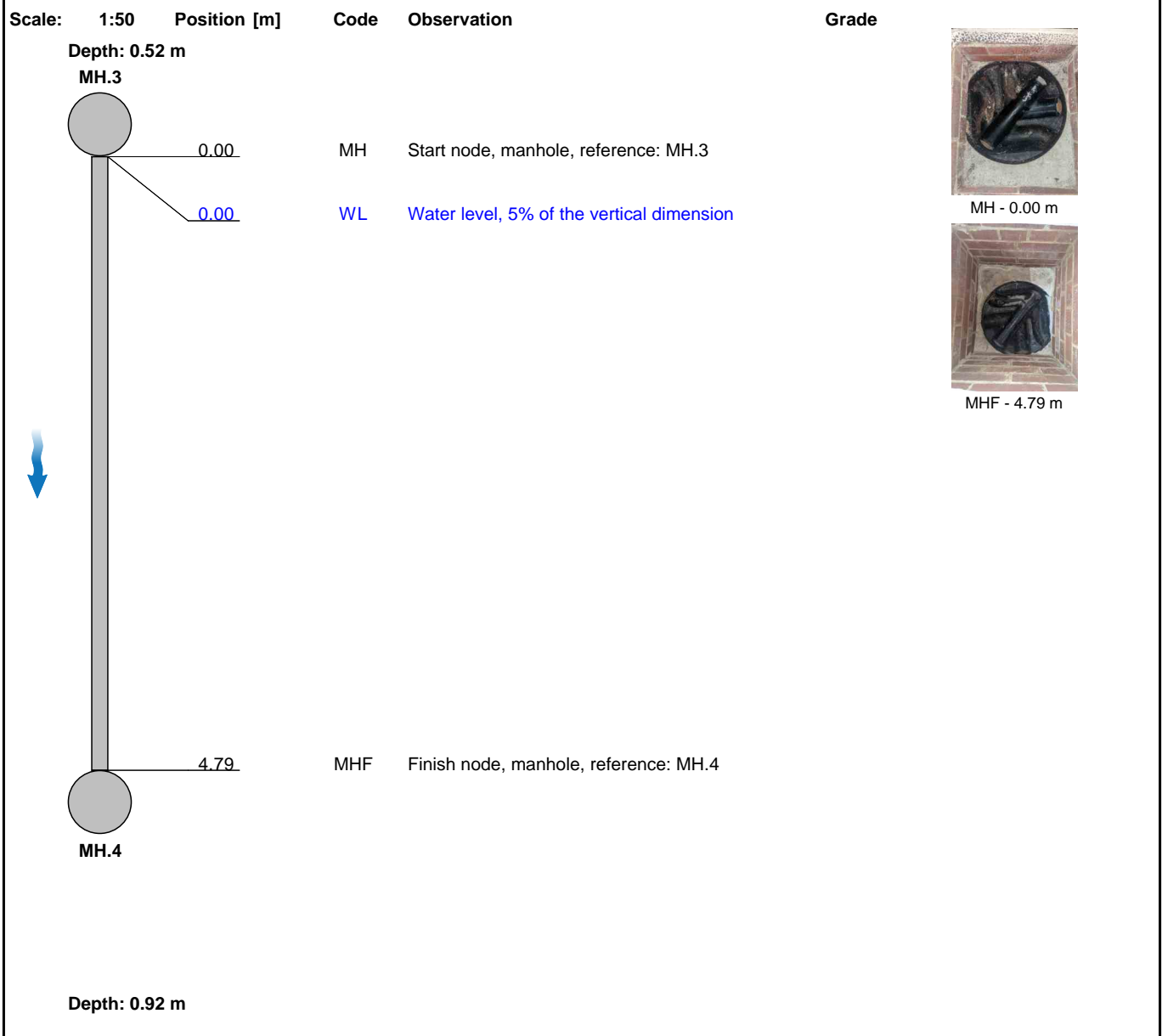


## Section Inspection - 04/04/2022 - MH.3X

Item No. 10	Insp. No. 1	Date 04/04/22	Time 9:10	Client's Job Ref 13621	Weather No Rain Or Snow	Pre Cleaned No	PLR MH.3X
Operator JM10		Vehicle P30 CVS		Camera Flexirpobe	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Richmond	Inspection Direction:	1	Upstream Node:	MH.3
Road:	50-56 Sheen Road	Inspected Length:	4.79 m	Upstream Pipe Depth:	0.520 m
Location:	Property or buildings	Total Length:	4.79 m	Downstream Node:	MH.4
Surface Type:	Concrete Footway	Joint Length:	0.90 m	Downstream Pipe Depth:	0.920 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	1960	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

**Comments:**  
**Recommendations:** NO FURTHER WORKS REQUIRED



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 - 04/04/2022 - MH.3X**

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
10	1	MH.3X	13621	13621



\_50-56 SHEEN ROAD\_RICHMOND\_10\_014.jpg, 00:00:00,  
 0.00 m  
 Start node, manhole, reference: MH.3



\_50-56 SHEEN ROAD\_RICHMOND\_10\_015.jpg, 00:00:20,  
 4.79 m  
 Finish node, manhole, reference: MH.4

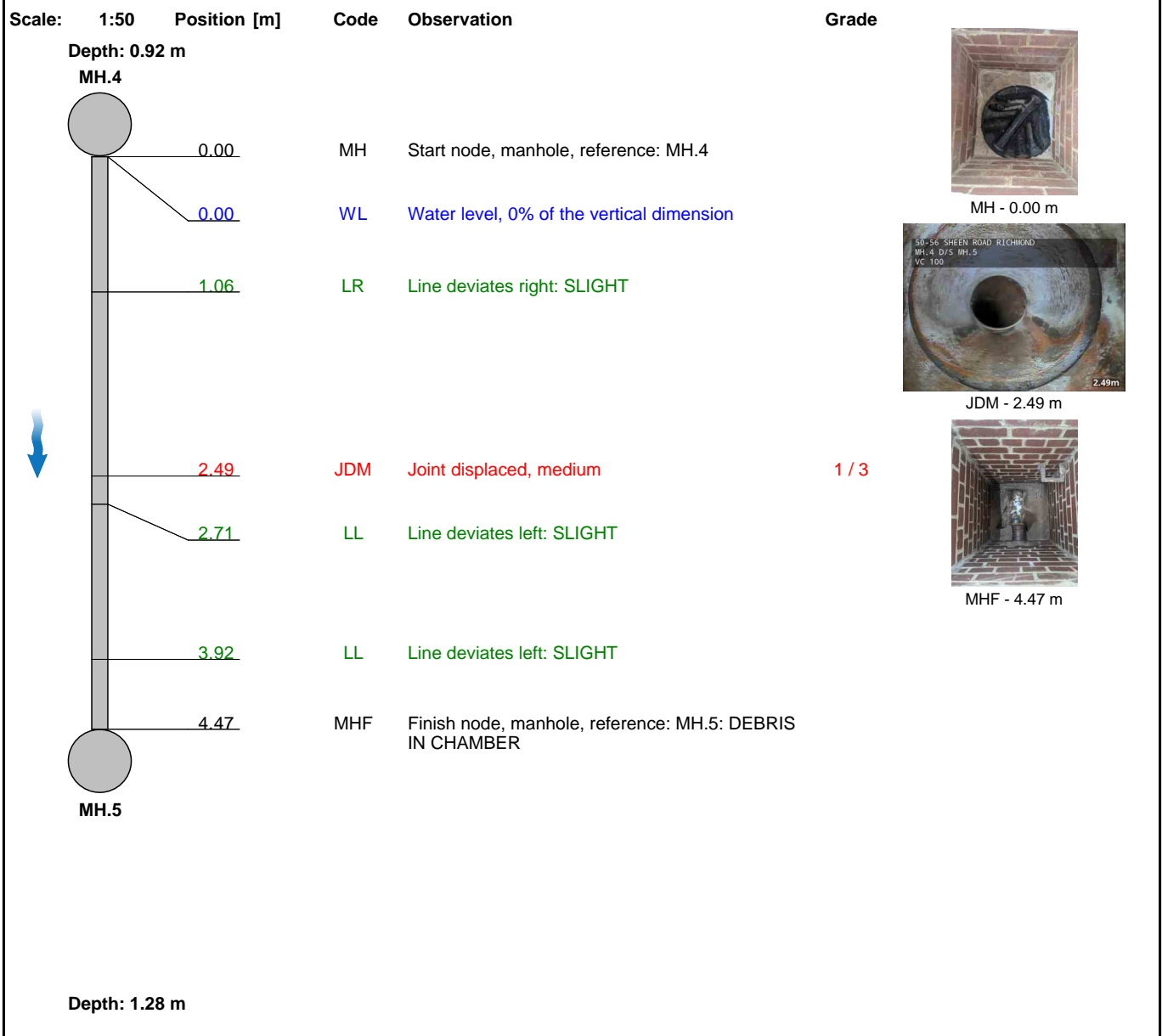


## Section Inspection - 04/04/2022 - MH.4X

Item No. 11	Insp. No. 1	Date 04/04/22	Time 9:11	Client's Job Ref 13621	Weather No Rain Or Snow	Pre Cleaned No	PLR MH.4X
Operator JM10		Vehicle P30 CVS		Camera Flexirpobe	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Richmond	Inspection Direction:	1	Upstream Node:	MH.4
Road:	50-56 Sheen Road	Inspected Length:	4.47 m	Upstream Pipe Depth:	0.920 m
Location:	Property or buildings	Total Length:	4.47 m	Downstream Node:	MH.5
Surface Type:	Concrete Footway	Joint Length:	0.90 m	Downstream Pipe Depth:	1.280 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	1960	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

**Comments:**  
**Recommendations:** REMEDIAL WORKS REQUIRED



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	0.4	1.0	1.0	1	2.0	0.8	2.0	3.0

## Section Pictures - 04/04/2022 - MH.4X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
11	1	MH.4X	13621	13621



\_50-56 SHEEN ROAD\_RICHMOND\_11\_016.jpg, 00:00:00,  
 0.00 m  
 Start node, manhole, reference: MH.4



50-56 SHEEN ROAD\_RICHMOND  
 MH.4 D/S MH.5  
 VC 100  
 2.49m  
 \_50-56 SHEEN ROAD\_RICHMOND\_11\_017.jpg, 00:00:11,  
 2.49 m  
 Joint displaced, medium



\_50-56 SHEEN ROAD\_RICHMOND\_11\_018.jpg, 00:00:22,  
 4.47 m  
 Finish node, manhole, reference: MH.5, DEBRIS IN



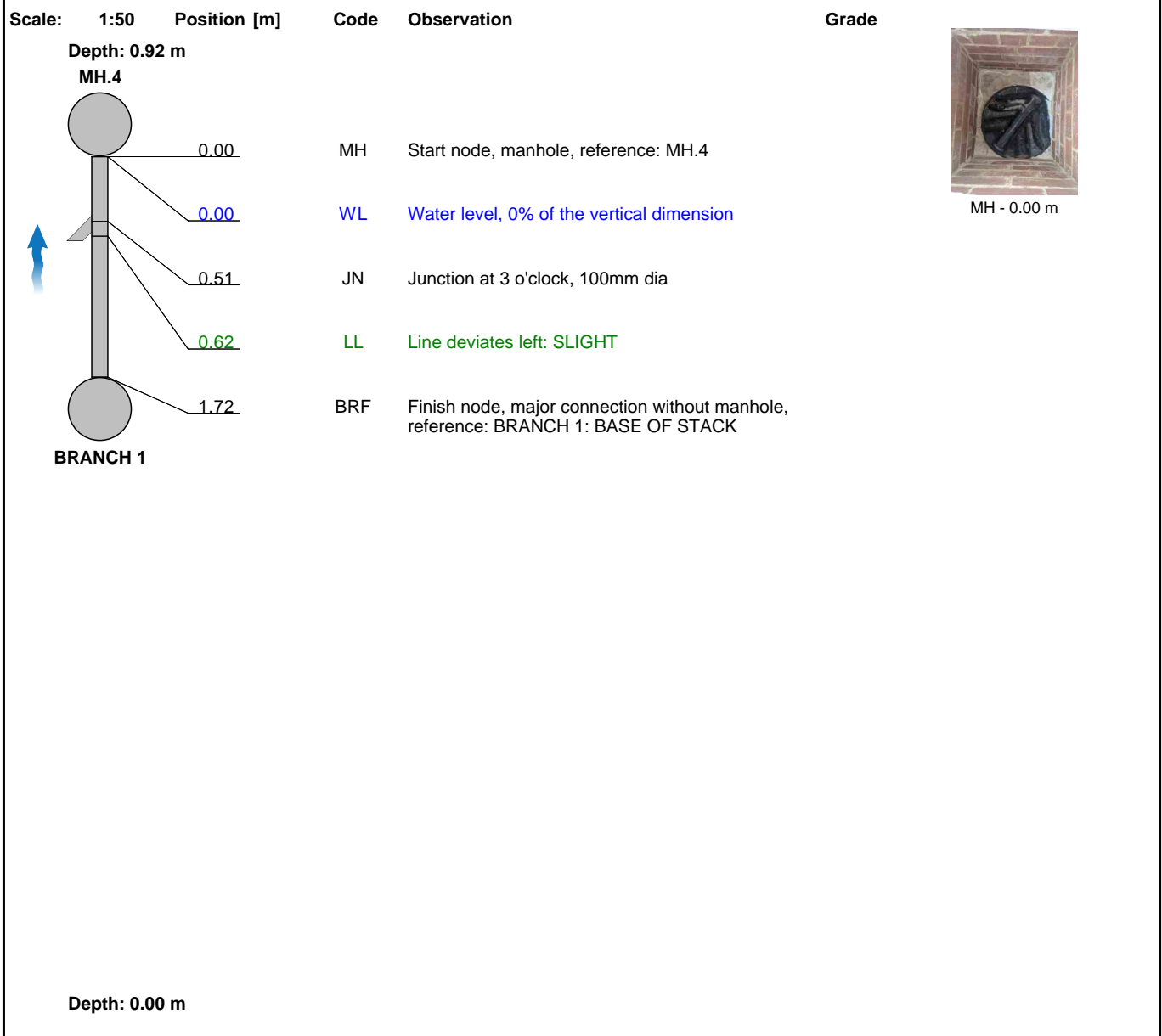


## Section Inspection - 04/04/2022 - BRANCH 1X

Item No. 12	Insp. No. 1	Date 04/04/22	Time 9:20	Client's Job Ref 13621	Weather No Rain Or Snow	Pre Cleaned No	PLR BRANCH 1X
Operator JM10		Vehicle P30 CVS		Camera Flexirpobe	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Richmond	Inspection Direction:	2	Upstream Node:	BRANCH 1
Road:	50-56 Sheen Road	Inspected Length:	1.72 m	Upstream Pipe Depth:	0.000 m
Location:	Property or buildings	Total Length:	1.72 m	Downstream Node:	MH.4
Surface Type:	Concrete Footway	Joint Length:	0.90 m	Downstream Pipe Depth:	0.920 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	1960	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

**Comments:**  
**Recommendations:** NO FURTHER WORKS REQUIRED



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 - 04/04/2022 - BRANCH 1X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
12	2	BRANCH 1X	13621	13621



\_50-56 SHEEN ROAD\_RICHMOND\_12\_019.jpg, 00:00:00,  
0.00 m  
Start node, manhole, reference: MH.4

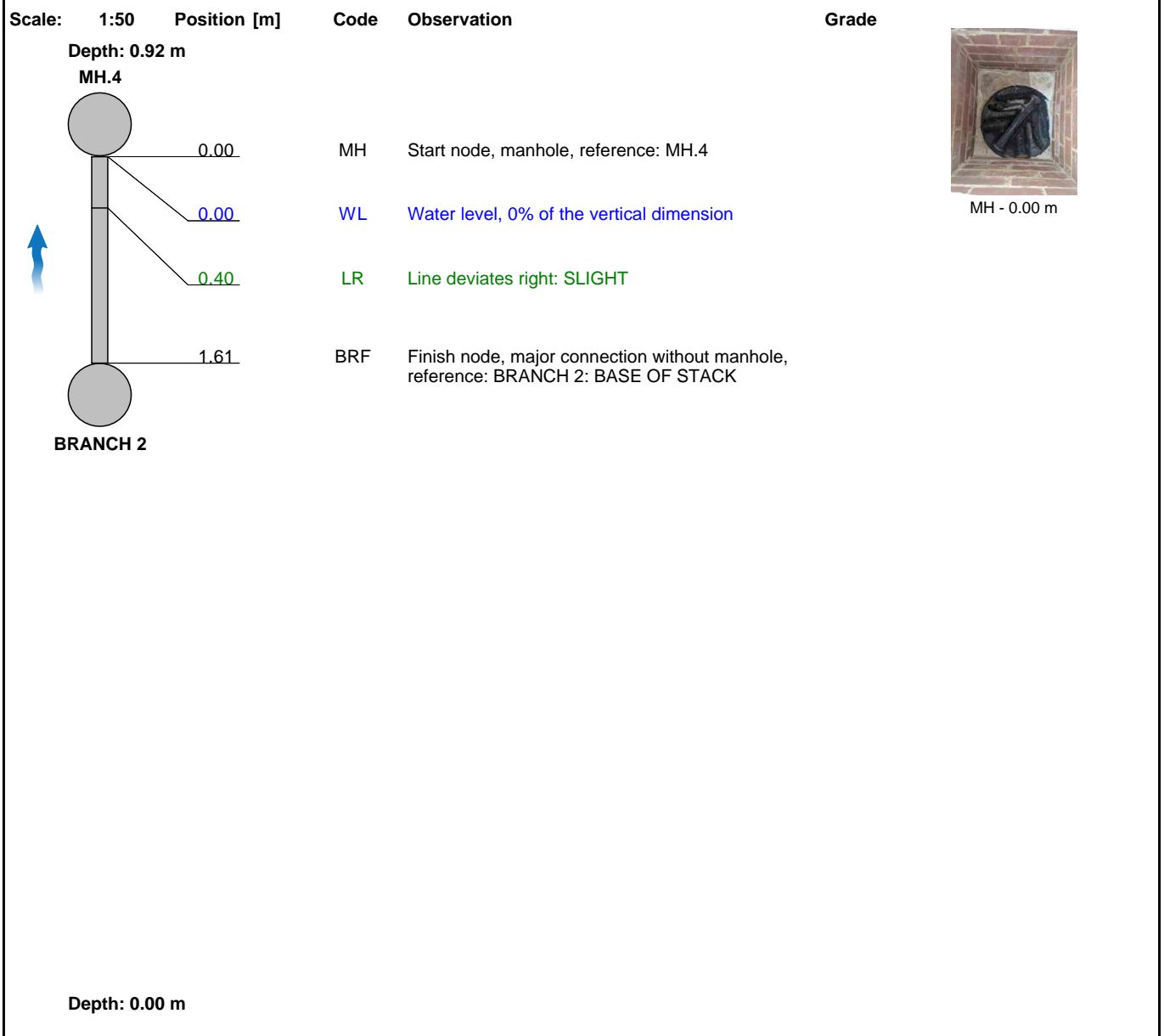


## Section Inspection - 04/04/2022 - BRANCH 2X

Item No. 13	Insp. No. 1	Date 04/04/22	Time 9:20	Client's Job Ref 13621	Weather No Rain Or Snow	Pre Cleaned No	PLR BRANCH 2X
Operator JM10		Vehicle P30 CVS		Camera Flexirpobe	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Richmond	Inspection Direction:	2	Upstream Node:	BRANCH 2
Road:	50-56 Sheen Road	Inspected Length:	1.61 m	Upstream Pipe Depth:	0.000 m
Location:	Property or buildings	Total Length:	1.61 m	Downstream Node:	MH.4
Surface Type:	Concrete Footway	Joint Length:	0.90 m	Downstream Pipe Depth:	0.920 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	1960	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

**Comments:**  
**Recommendations:** NO FURTHER WORKS REQUIRED



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 - 04/04/2022 - BRANCH 2X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
13	2	BRANCH 2X	13621	13621



\_50-56 SHEEN ROAD\_RICHMOND\_13\_020.jpg, 00:00:00,  
0.00 m  
Start node, manhole, reference: MH.4

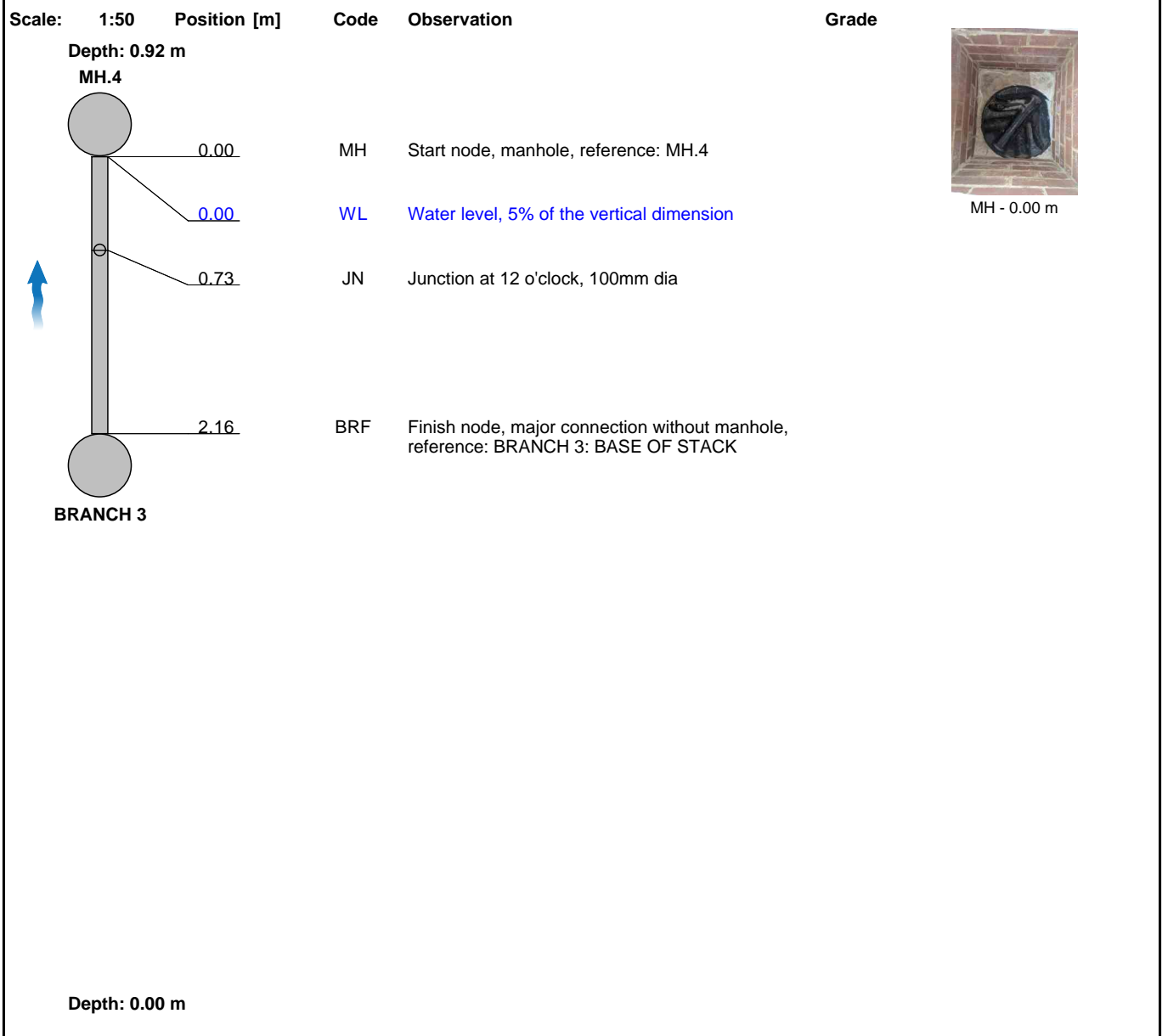


## Section Inspection - 04/04/2022 - BRANCH 3X

Item No. 14	Insp. No. 1	Date 04/04/22	Time 9:21	Client's Job Ref 13621	Weather No Rain Or Snow	Pre Cleaned No	PLR BRANCH 3X
Operator JM10		Vehicle P30 CVS		Camera Flexirpobe	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Richmond	Inspection Direction:	2	Upstream Node:	BRANCH 3
Road:	50-56 Sheen Road	Inspected Length:	2.16 m	Upstream Pipe Depth:	0.000 m
Location:	Property or buildings	Total Length:	2.16 m	Downstream Node:	MH.4
Surface Type:	Concrete Footway	Joint Length:	0.90 m	Downstream Pipe Depth:	0.920 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	1960	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

**Comments:**  
**Recommendations:** NO FURTHER WORKS REQUIRED



Construction Features Structural Defects					Miscellaneous Features 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 - 04/04/2022 - BRANCH 3X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
14	2	BRANCH 3X	13621	13621



\_50-56 SHEEN ROAD\_RICHMOND\_14\_021.jpg, 00:00:00,  
0.00 m  
Start node, manhole, reference: MH.4

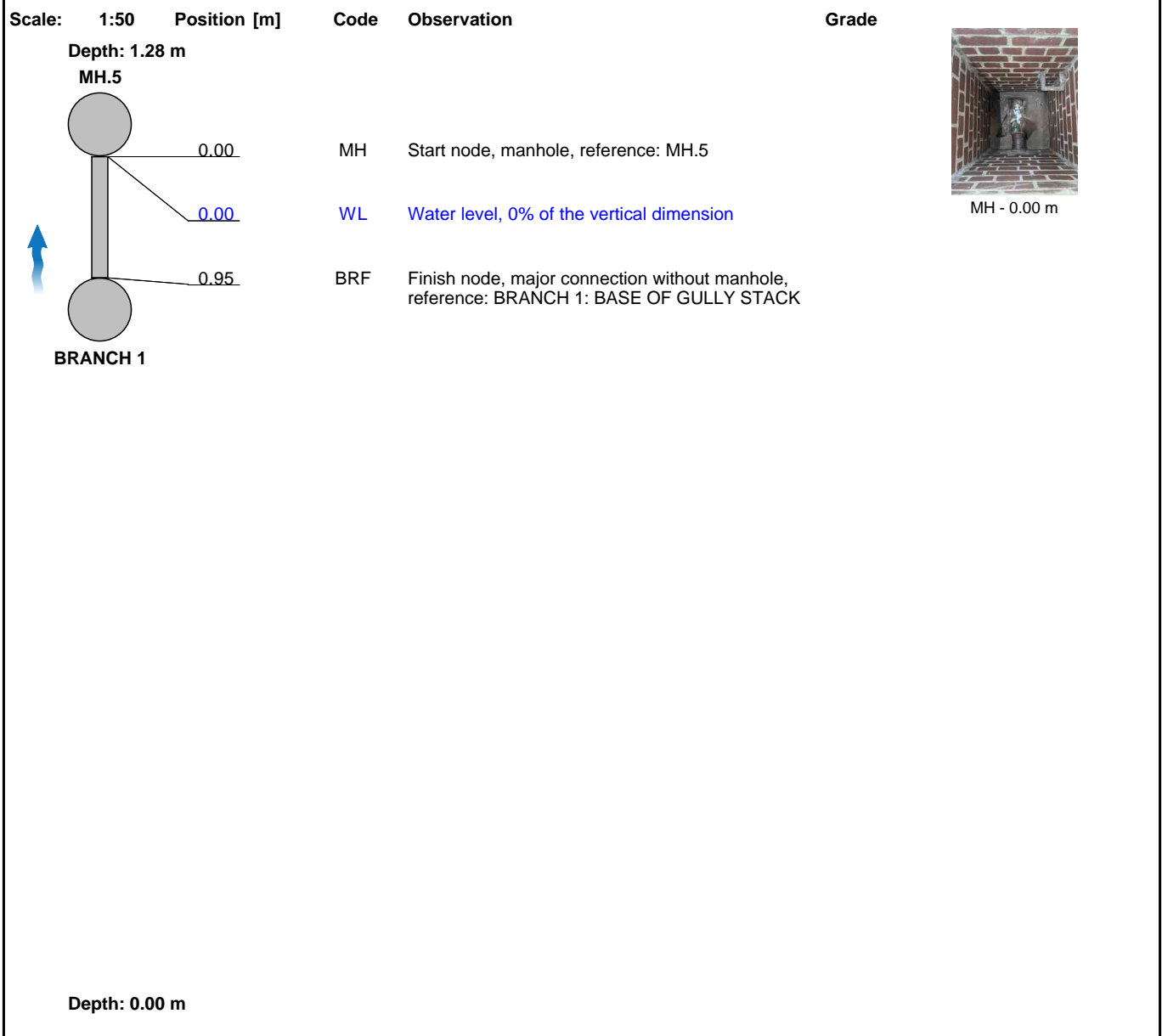


## Section Inspection - 04/04/2022 - BRANCH 1X

Item No. 15	Insp. No. 1	Date 04/04/22	Time 9:32	Client's Job Ref 13621	Weather No Rain Or Snow	Pre Cleaned No	PLR BRANCH 1X
Operator JM10		Vehicle P30 CVS		Camera Flexirpobe	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Richmond	Inspection Direction:	2	Upstream Node:	BRANCH 1
Road:	50-56 Sheen Road	Inspected Length:	0.95 m	Upstream Pipe Depth:	0.000 m
Location:	Property or buildings	Total Length:	0.95 m	Downstream Node:	MH.5
Surface Type:	Concrete Footway	Joint Length:	0.90 m	Downstream Pipe Depth:	1.280 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	1960	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

**Comments:**  
**Recommendations:** NO FURTHER WORKS REQUIRED



Construction Features Structural Defects					Miscellaneous Features 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 - 04/04/2022 - BRANCH 1X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
15	2	BRANCH 1X	13621	13621



\_50-56 SHEEN ROAD\_RICHMOND\_15\_022.jpg, 00:00:00,  
0.00 m  
Start node, manhole, reference: MH.5

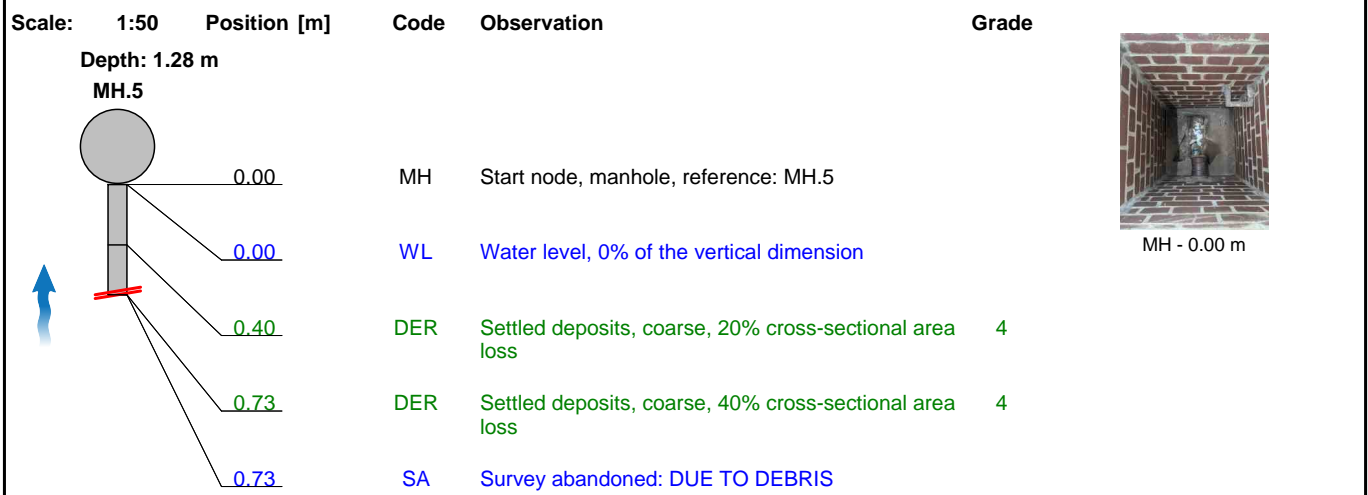


## Section Inspection - 04/04/2022 - BRANCH 2X

Item No. 16	Insp. No. 1	Date 04/04/22	Time 9:33	Client's Job Ref 13621	Weather No Rain Or Snow	Pre Cleaned No	PLR BRANCH 2X
Operator JM10		Vehicle P30 CVS		Camera Flexirpobe	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Richmond	Inspection Direction:	2	Upstream Node:	BRANCH 2
Road:	50-56 Sheen Road	Inspected Length:	0.73 m	Upstream Pipe Depth:	0.000 m
Location:	Property or buildings	Total Length:	0.73 m	Downstream Node:	MH.5
Surface Type:	Concrete Footway	Joint Length:	0.90 m	Downstream Pipe Depth:	1.280 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	1960	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

**Comments:**  
**Recommendations:** JETTING AND RESURVEY REQUIRED



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	5.0	13.7	10.0	5.0

## Section Pictures - 04/04/2022 - BRANCH 2X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
16	2	BRANCH 2X	13621	13621



\_50-56 SHEEN ROAD\_RICHMOND\_16\_023.jpg, 00:00:00,  
0.00 m  
Start node, manhole, reference: MH.5



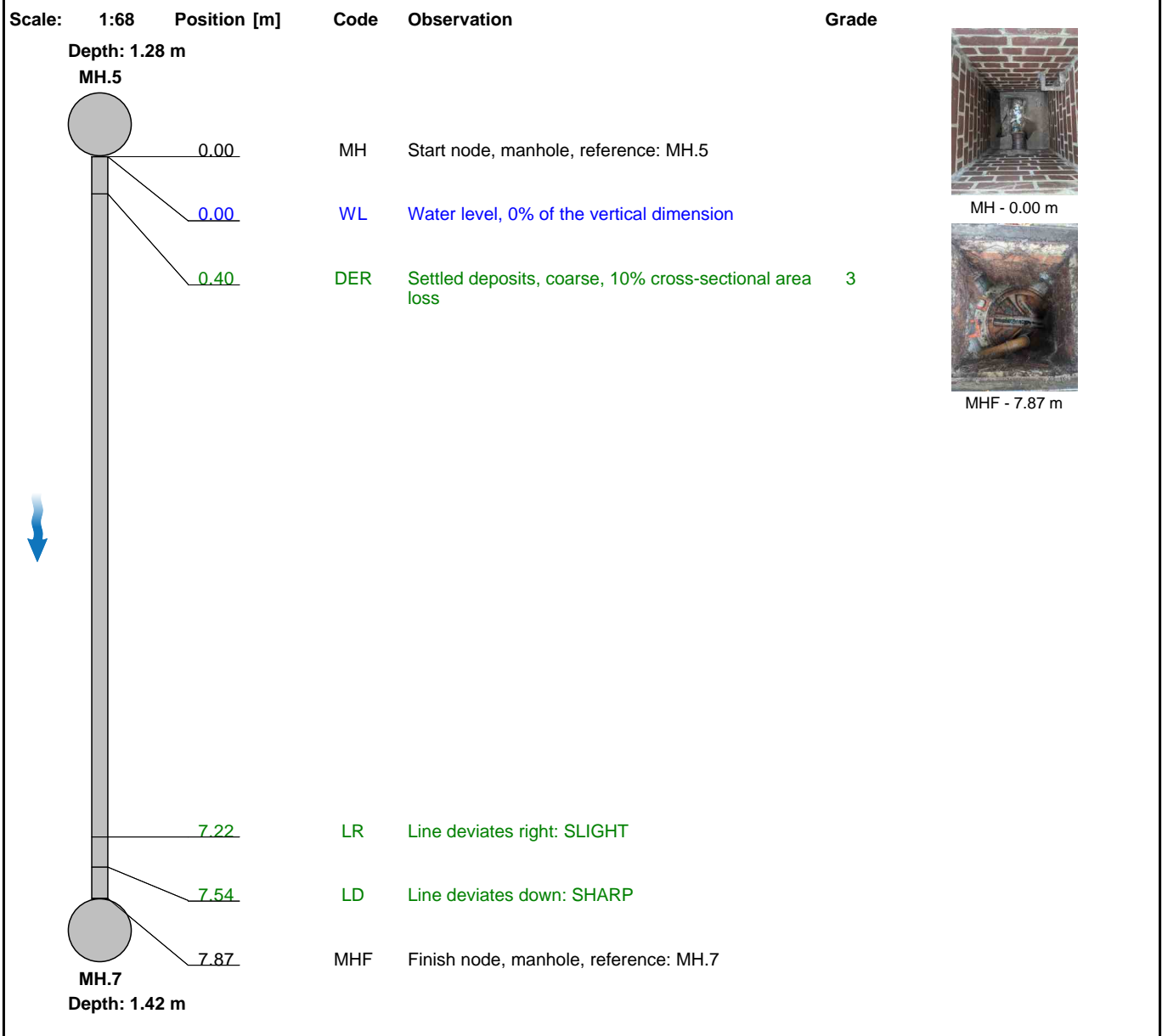


## Section Inspection - 04/04/2022 - MH.5X

Item No. 17	Insp. No. 1	Date 04/04/22	Time 9:58	Client's Job Ref 13621	Weather No Rain Or Snow	Pre Cleaned No	PLR MH.5X
Operator JM10		Vehicle P30 CVS		Camera Flexirpobe	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Richmond	Inspection Direction:	1	Upstream Node:	MH.5
Road:	50-56 Sheen Road	Inspected Length:	7.87 m	Upstream Pipe Depth:	1.280 m
Location:	Property or buildings	Total Length:	7.87 m	Downstream Node:	MH.7
Surface Type:	Concrete Footway	Joint Length:	0.90 m	Downstream Pipe Depth:	1.420 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:	1960	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

**Comments:**  
**Recommendations:** JETTING AND RESURVEY REQUIRED



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 Pictures - 04/04/2022 - MH.5X**

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
17	1	MH.5X	13621	13621



\_50-56 SHEEN ROAD\_RICHMOND\_17\_024.jpg, 00:00:00,  
 0.00 m  
 Start node, manhole, reference: MH.5



\_50-56 SHEEN ROAD\_RICHMOND\_17\_025.jpg, 00:00:36,  
 7.87 m  
 Finish node, manhole, reference: MH.7

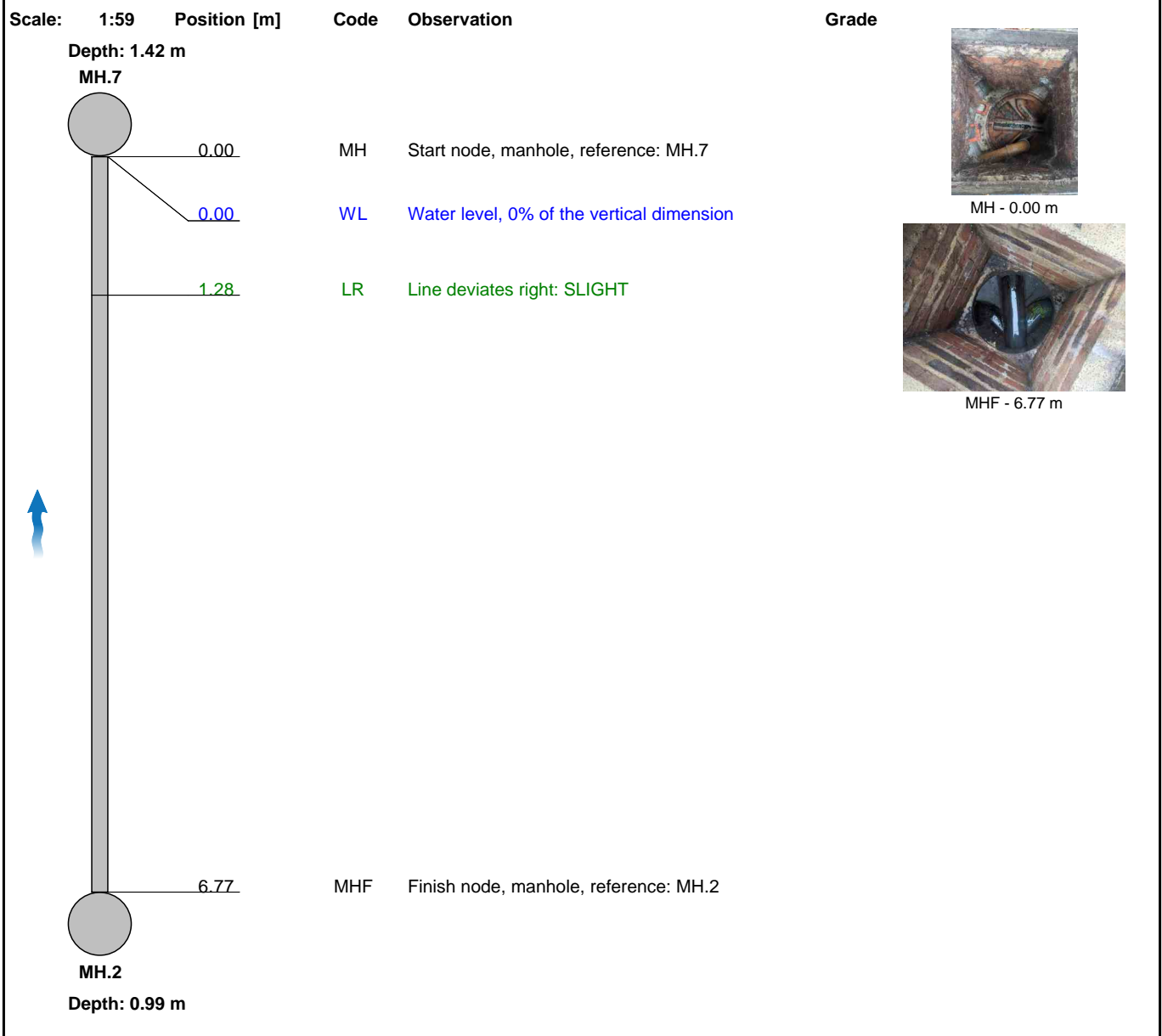


## Section Inspection - 04/04/2022 - MH.2X

Item No. 18	Insp. No. 1	Date 04/04/22	Time 10:16	Client's Job Ref 13621	Weather No Rain Or Snow	Pre Cleaned No	PLR MH.2X
Operator JM10		Vehicle P30 CVS		Camera Flexirpobe	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Richmond	Inspection Direction:	2	Upstream Node:	MH.2
Road:	50-56 Sheen Road	Inspected Length:	6.77 m	Upstream Pipe Depth:	0.990 m
Location:	Property or buildings	Total Length:	6.77 m	Downstream Node:	MH.7
Surface Type:	Concrete Footway	Joint Length:	0.90 m	Downstream Pipe Depth:	1.420 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:	1960	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

**Comments:**  
**Recommendations:** NO FURTHER WORKS REQUIRED



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 - 04/04/2022 - MH.2X**

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
18	2	MH.2X	13621	13621



\_50-56 SHEEN ROAD\_RICHMOND\_18\_026.jpg, 00:00:00,  
 0.00 m  
 Start node, manhole, reference: MH.7



\_50-56 SHEEN ROAD\_RICHMOND\_18\_027.jpg, 00:00:30,  
 6.77 m  
 Finish node, manhole, reference: MH.2

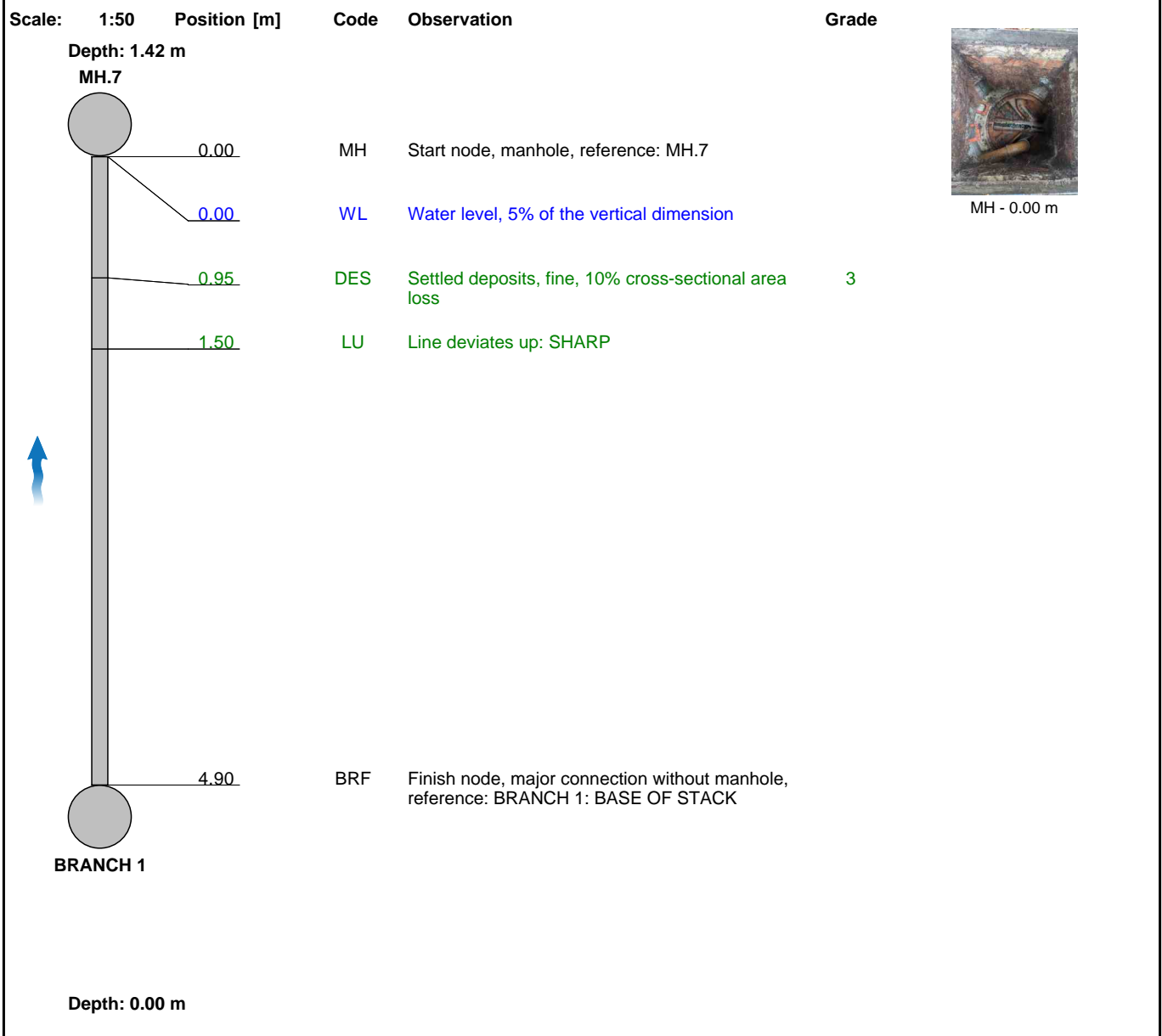


## Section Inspection - 04/04/2022 - BRANCH 1X

Item No. 19	Insp. No. 1	Date 04/04/22	Time 10:21	Client's Job Ref 13621	Weather No Rain Or Snow	Pre Cleaned No	PLR BRANCH 1X
Operator JM10		Vehicle P30 CVS		Camera Flexirpobe	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Richmond	Inspection Direction:	2	Upstream Node:	BRANCH 1
Road:	50-56 Sheen Road	Inspected Length:	4.90 m	Upstream Pipe Depth:	0.000 m
Location:	Property or buildings	Total Length:	4.90 m	Downstream Node:	MH.7
Surface Type:	Concrete Footway	Joint Length:	0.90 m	Downstream Pipe Depth:	1.420 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:	1960	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

**Comments:**  
**Recommendations:** JETTING AND RESURVEY REQUIRED



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	0.4	2.0	3.0

## Section Pictures - 04/04/2022 - BRANCH 1X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
19	2	BRANCH 1X	13621	13621



\_50-56 SHEEN ROAD\_RICHMOND\_19\_028.jpg, 00:00:00,  
0.00 m  
Start node, manhole, reference: MH.7



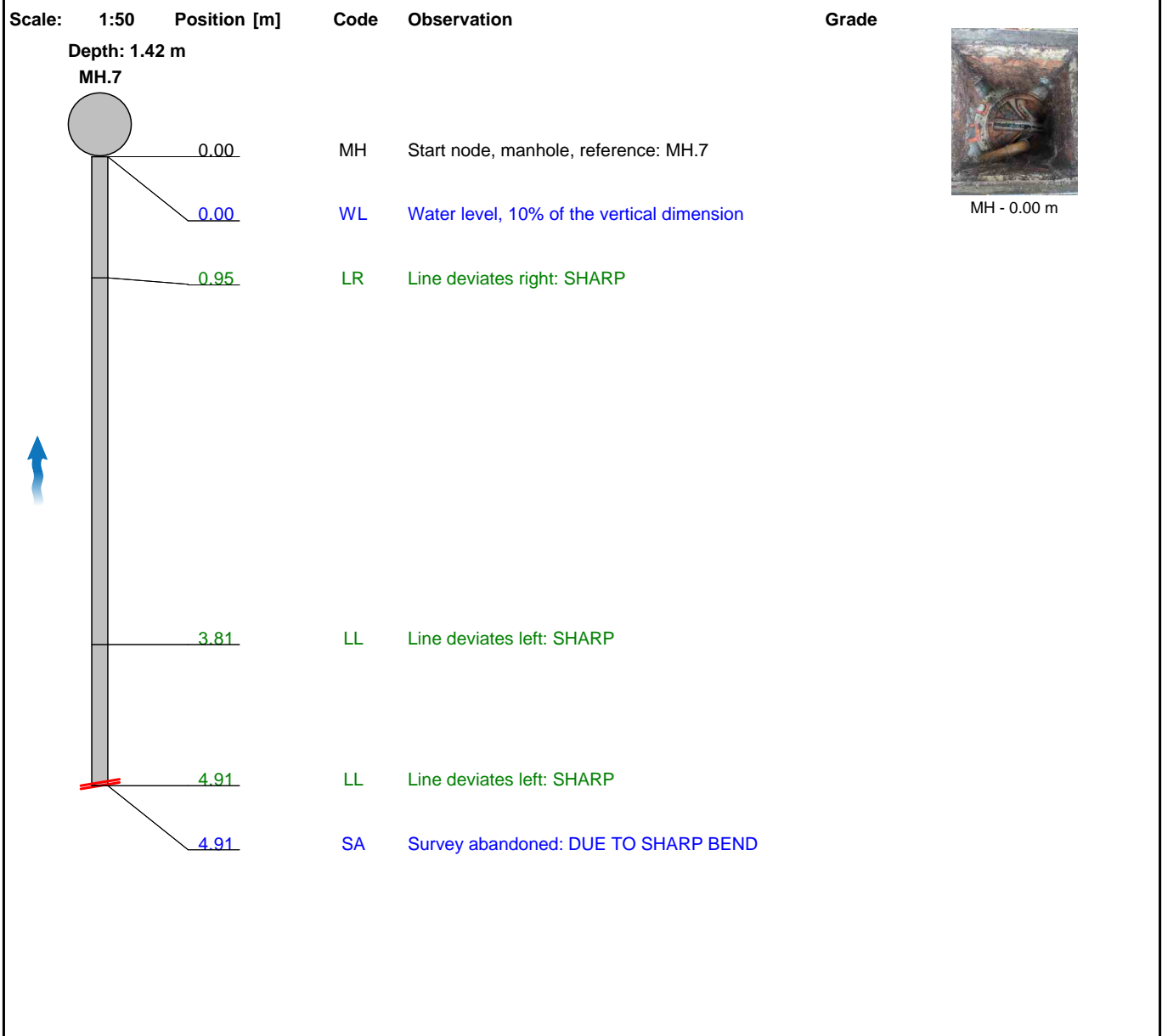


## Section Inspection - 04/04/2022 - BRANCH 2X

Item No. 20	Insp. No. 1	Date 04/04/22	Time 10:23	Client's Job Ref 13621	Weather No Rain Or Snow	Pre Cleaned No	PLR BRANCH 2X
Operator JM10		Vehicle P30 CVS		Camera Flexirpobe	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Richmond	Inspection Direction:	2	Upstream Node:	BRANCH 2
Road:	50-56 Sheen Road	Inspected Length:	4.91 m	Upstream Pipe Depth:	0.000 m
Location:	Property or buildings	Total Length:	4.91 m	Downstream Node:	MH.7
Surface Type:	Concrete Footway	Joint Length:	0.90 m	Downstream Pipe Depth:	1.420 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:	1960	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

**Comments:**  
**Recommendations:** NO FURTHER WORKS REQUIRED



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 - 04/04/2022 - BRANCH 2X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
20	2	BRANCH 2X	13621	13621



\_50-56 SHEEN ROAD\_RICHMOND\_20\_029.jpg, 00:00:00,  
0.00 m  
Start node, manhole, reference: MH.7

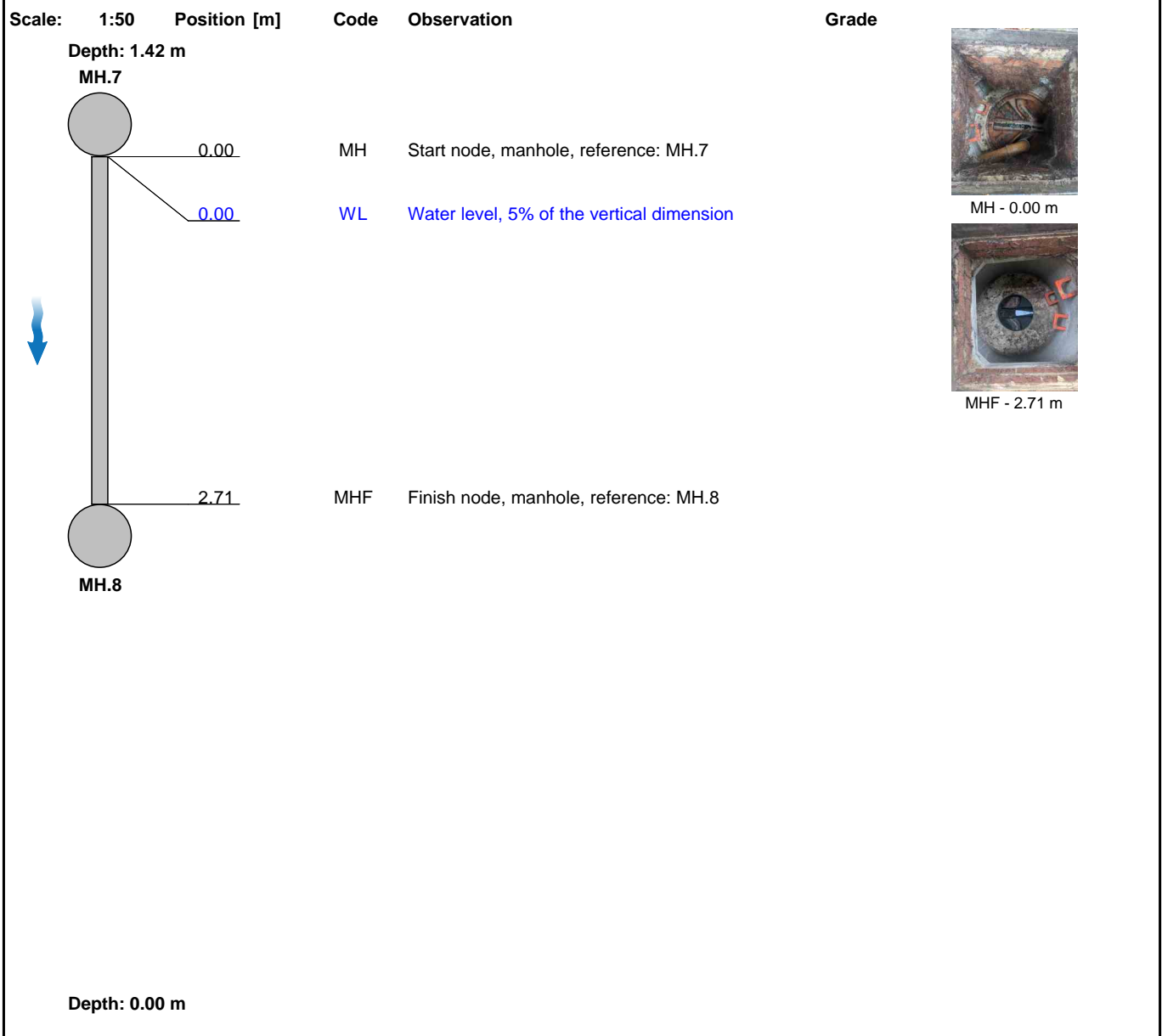


## Section Inspection - 04/04/2022 - MH.7X

Item No. 21	Insp. No. 1	Date 04/04/22	Time 10:24	Client's Job Ref 13621	Weather No Rain Or Snow	Pre Cleaned No	PLR MH.7X
Operator JM10		Vehicle P30 CVS		Camera Flexirpobe	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Richmond	Inspection Direction:	1	Upstream Node:	MH.7
Road:	50-56 Sheen Road	Inspected Length:	2.71 m	Upstream Pipe Depth:	1.420 m
Location:	Property or buildings	Total Length:	2.71 m	Downstream Node:	MH.8
Surface Type:	Concrete Footway	Joint Length:	0.90 m	Downstream Pipe Depth:	0.000 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:	1960	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

**Comments:**  
**Recommendations:** NO FURTHER WORKS REQUIRED



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 - 04/04/2022 - MH.7X**

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
21	1	MH.7X	13621	13621



\_50-56 SHEEN ROAD\_RICHMOND\_21\_030.jpg, 00:00:00,  
 0.00 m  
 Start node, manhole, reference: MH.7



\_50-56 SHEEN ROAD\_RICHMOND\_21\_087.jpg, 00:00:14,  
 2.71 m  
 Finish node, manhole, reference: MH.8

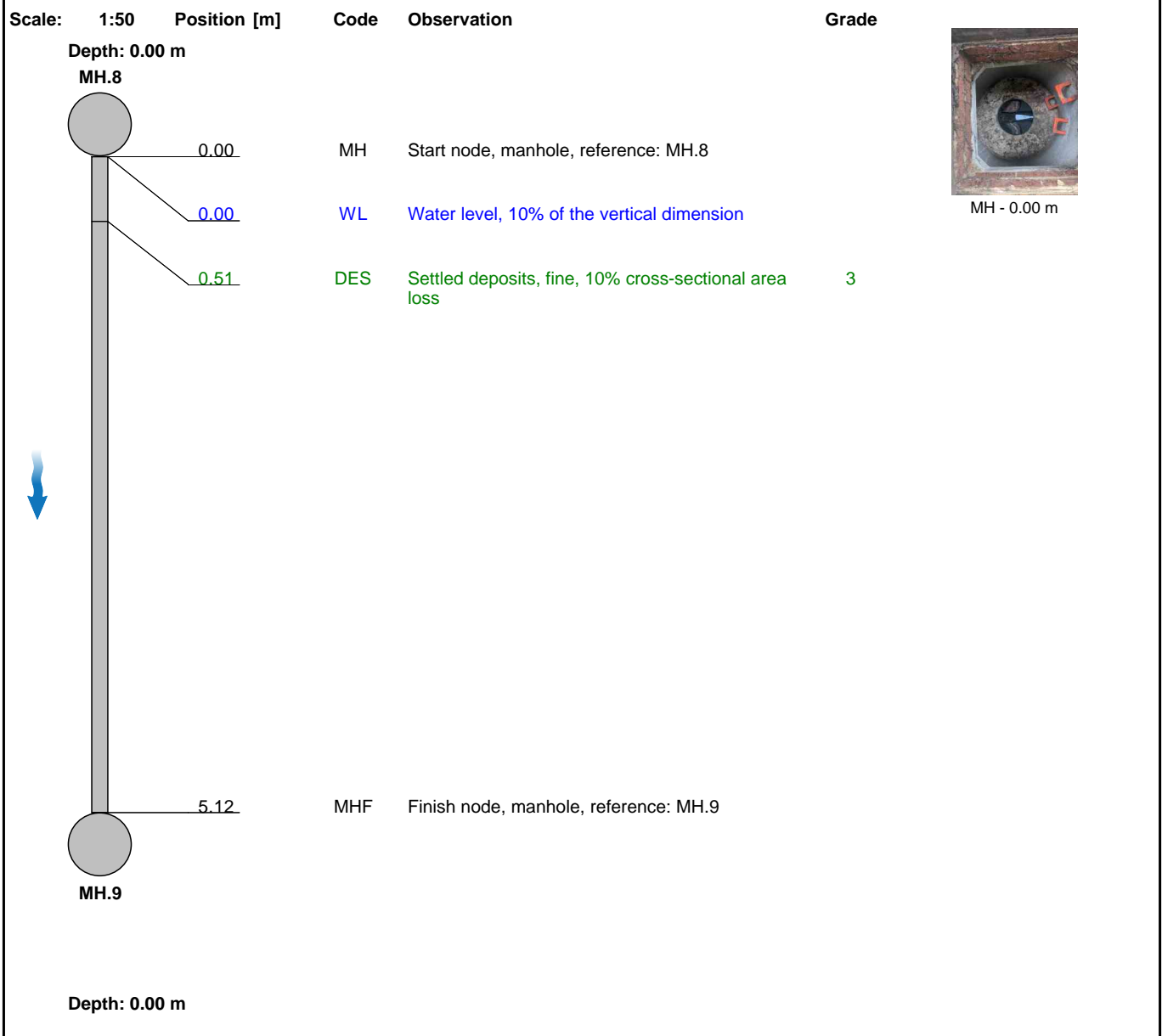


## Section Inspection - 04/04/2022 - MH.8X

Item No. 22	Insp. No. 1	Date 04/04/22	Time 10:25	Client's Job Ref 13621	Weather No Rain Or Snow	Pre Cleaned No	PLR MH.8X
Operator JM10		Vehicle P30 CVS		Camera Flexirpobe	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Richmond	Inspection Direction:	1	Upstream Node:	MH.8
Road:	50-56 Sheen Road	Inspected Length:	5.12 m	Upstream Pipe Depth:	0.000 m
Location:	Property or buildings	Total Length:	5.12 m	Downstream Node:	MH.9
Surface Type:	Concrete Footway	Joint Length:	0.90 m	Downstream Pipe Depth:	0.000 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:	1960	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

**Comments:**  
**Recommendations:** JETTING AND RESURVEY REQUIRED



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	0.4	2.0	3.0

### Section Pictures - 04/04/2022 - MH.8X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
22	1	MH.8X	13621	13621



\_50-56 SHEEN ROAD\_RICHMOND\_22\_086.jpg, 00:00:00,  
0.00 m  
Start node, manhole, reference: MH.8



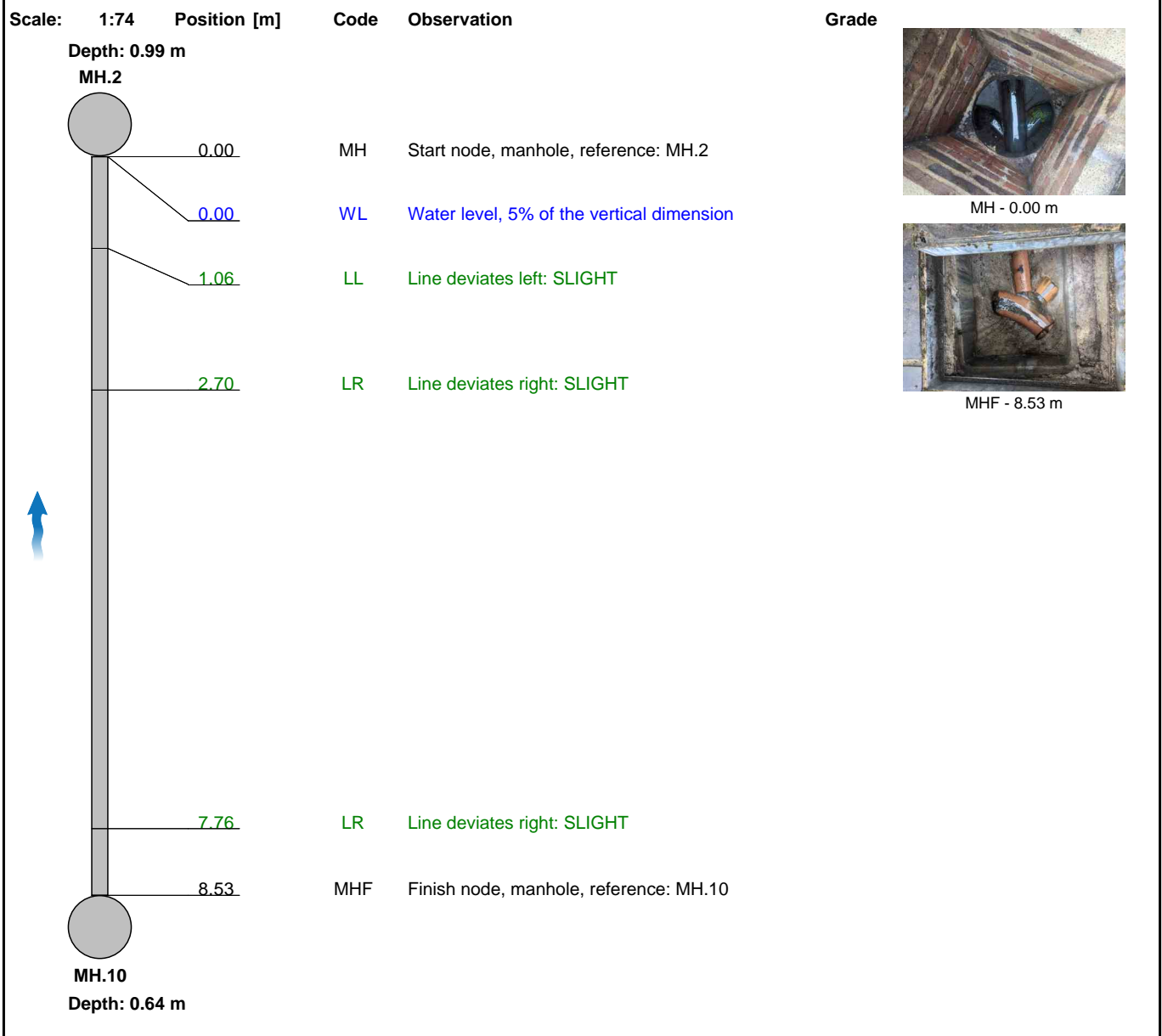


## Section Inspection - 04/04/2022 - MH.10X

Item No. 23	Insp. No. 1	Date 04/04/22	Time 10:46	Client's Job Ref 13621	Weather No Rain Or Snow	Pre Cleaned No	PLR MH.10X
Operator JM10		Vehicle P30 CVS		Camera Flexirpobe	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Richmond	Inspection Direction:	2	Upstream Node:	MH.10
Road:	50-56 Sheen Road	Inspected Length:	8.53 m	Upstream Pipe Depth:	0.640 m
Location:	Property or buildings	Total Length:	8.53 m	Downstream Node:	MH.2
Surface Type:	Concrete Footway	Joint Length:	0.90 m	Downstream Pipe Depth:	0.990 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:	1960	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

**Comments:**  
**Recommendations:** NO FURTHER WORKS REQUIRED



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 - 04/04/2022 - MH.10X

<b>Item No.</b> 23	<b>Inspection Direction</b> 2	<b>PLR</b> MH.10X	<b>Client's Job Ref</b> 13621	<b>Contractor's Job Ref</b> 13621
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\_50-56 SHEEN ROAD\_RICHMOND\_23\_031.jpg, 00:00:00,  
 0.00 m  
 Start node, manhole, reference: MH.2



\_50-56 SHEEN ROAD\_RICHMOND\_23\_032.jpg, 00:00:57,  
 8.53 m  
 Finish node, manhole, reference: MH.10

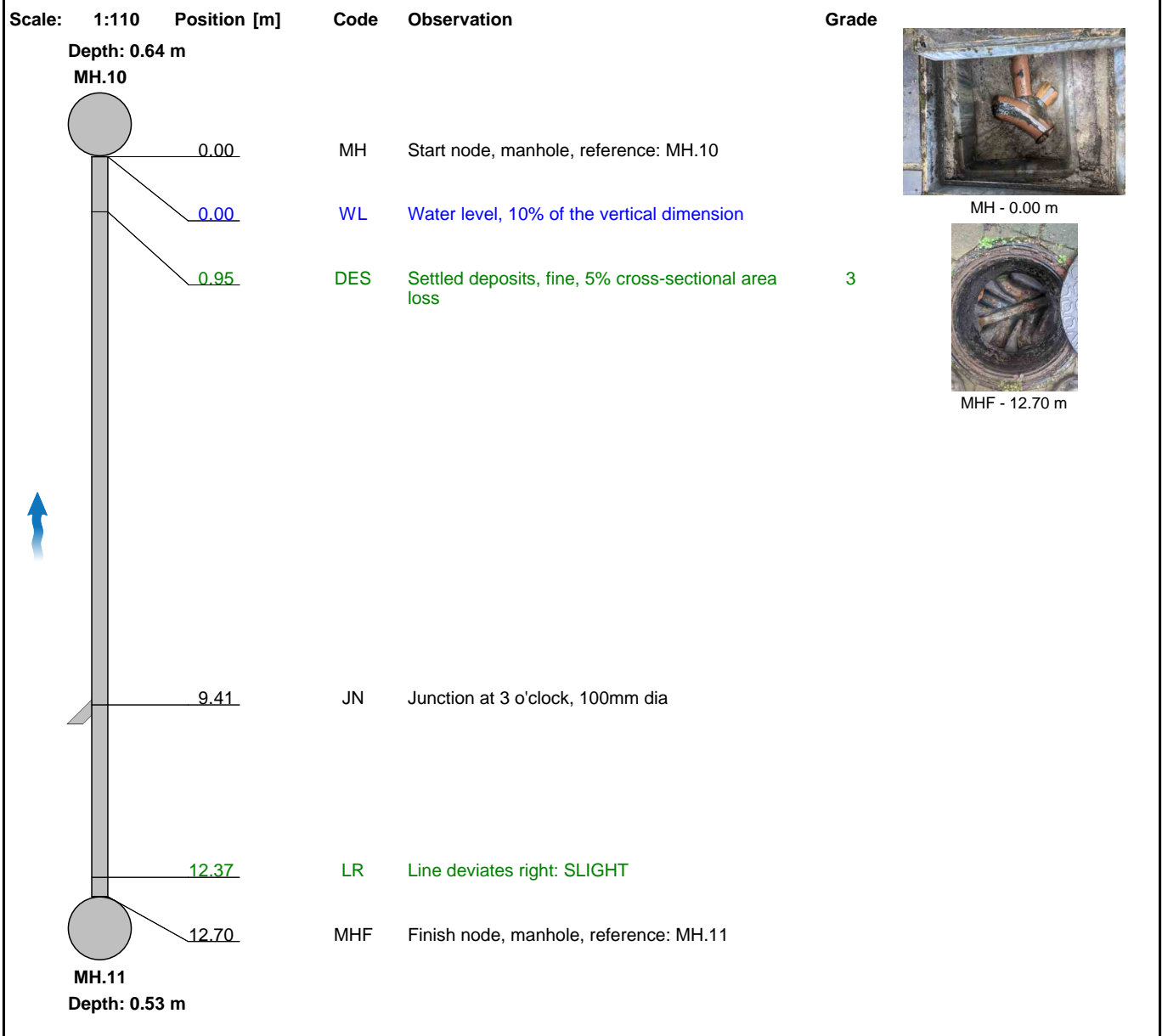


## Section Inspection - 04/04/2022 - MH.11X

Item No. 24	Insp. No. 1	Date 04/04/22	Time 11:08	Client's Job Ref 13621	Weather No Rain Or Snow	Pre Cleaned No	PLR MH.11X
Operator JM10		Vehicle P30 CVS		Camera Flexirpobe	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Richmond	Inspection Direction:	2	Upstream Node:	MH.11
Road:	50-56 Sheen Road	Inspected Length:	12.70 m	Upstream Pipe Depth:	0.530 m
Location:	Property or buildings	Total Length:	12.70 m	Downstream Node:	MH.10
Surface Type:	Concrete Footway	Joint Length:	0.90 m	Downstream Pipe Depth:	0.640 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	1960	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

**Comments:**  
**Recommendations:** JETTING AND RESURVEY REQUIRED



Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	1	2.0	0.2	2.0	3.0

**Section Pictures - 04/04/2022 - MH.11X**

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
24	2	MH.11X	13621	13621



\_50-56 SHEEN ROAD\_RICHMOND\_24\_033.jpg, 00:00:00,  
 0.00 m  
 Start node, manhole, reference: MH.10



\_50-56 SHEEN ROAD\_RICHMOND\_24\_034.jpg, 00:00:48,  
 12.70 m  
 Finish node, manhole, reference: MH.11





**Section Pictures - 04/04/2022 - BRANCH 1X**

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
25	2	BRANCH 1X	13621	13621



\_50-56 SHEEN ROAD\_RICHMOND\_25\_035.jpg, 00:00:00,  
 0.00 m  
 Start node, manhole, reference: MH.10



50-56 SHEEN ROAD RICHMOND  
 MH.10 U/S BRANCH 1  
 VC 100  
 1.39m  
 \_50-56 SHEEN ROAD\_RICHMOND\_25\_036.jpg, 00:00:08,  
 1.39 m  
 Joint displaced, medium



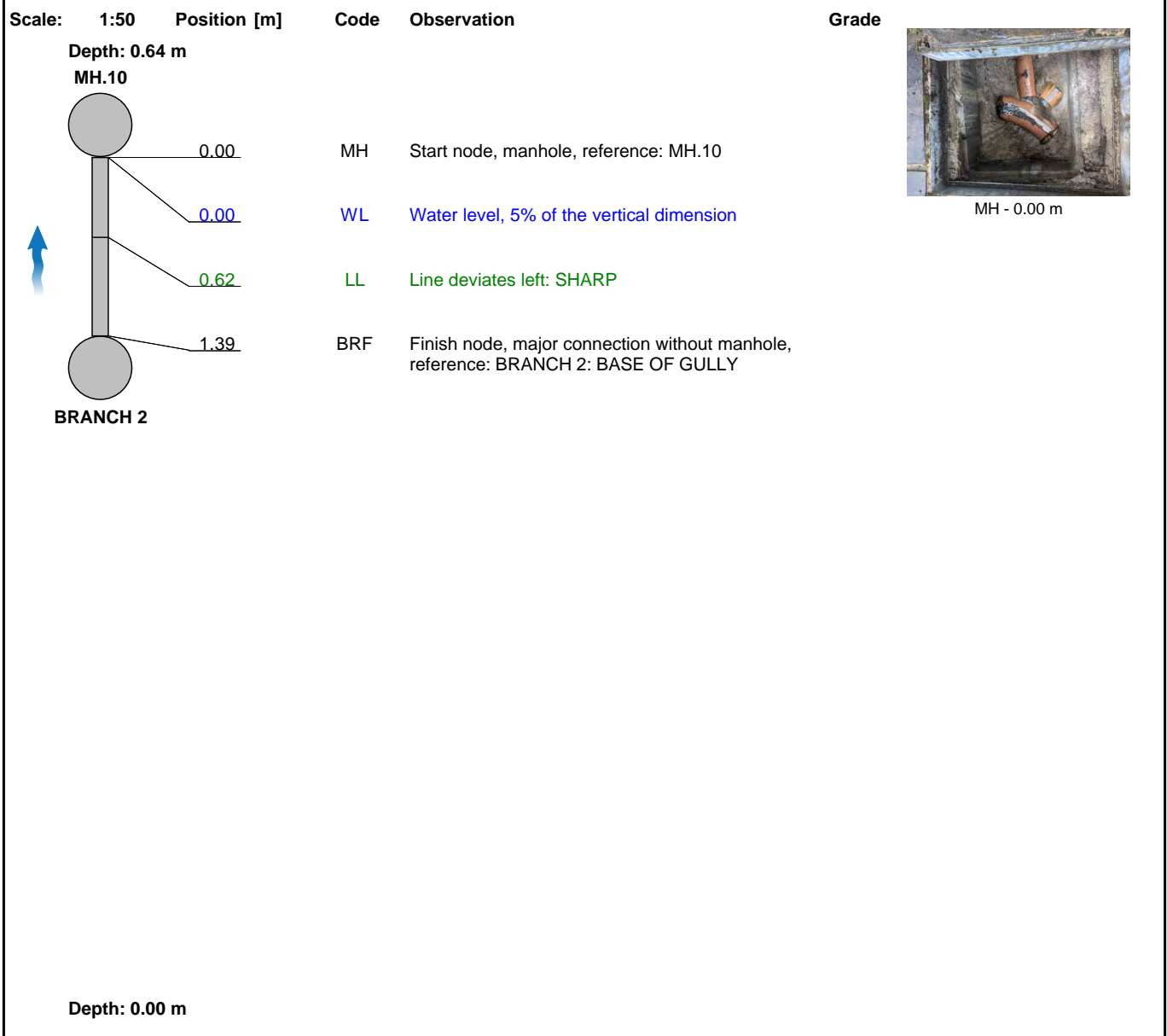


## Section Inspection - 04/04/2022 - BRANCH 2X

Item No. 26	Insp. No. 1	Date 04/04/22	Time 11:11	Client's Job Ref 13621	Weather No Rain Or Snow	Pre Cleaned No	PLR BRANCH 2X
Operator JM10		Vehicle P30 CVS		Camera Flexirpobe	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Richmond	Inspection Direction:	2	Upstream Node:	BRANCH 2
Road:	50-56 Sheen Road	Inspected Length:	1.39 m	Upstream Pipe Depth:	0.000 m
Location:	Property or buildings	Total Length:	1.39 m	Downstream Node:	MH.10
Surface Type:	Concrete Footway	Joint Length:	0.90 m	Downstream Pipe Depth:	0.640 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	1960	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

**Comments:**  
**Recommendations:** NO FURTHER WORKS REQUIRED



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 - 04/04/2022 - BRANCH 2X

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
26	2	BRANCH 2X	13621	13621



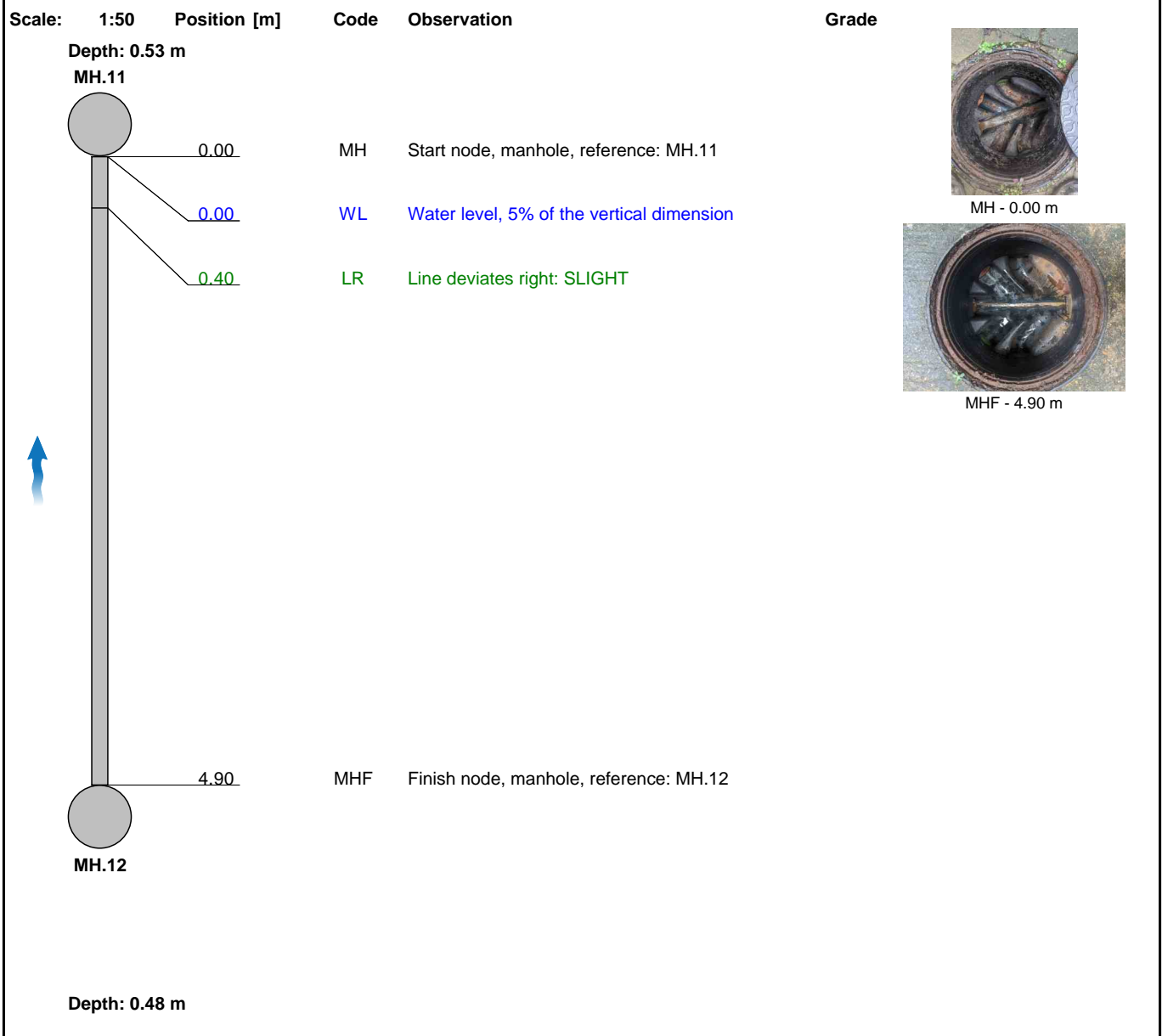
\_50-56 SHEEN ROAD\_RICHMOND\_26\_037.jpg, 00:00:00,  
0.00 m  
Start node, manhole, reference: MH.10

## Section Inspection - 04/04/2022 - MH.12X

Item No. 27	Insp. No. 1	Date 04/04/22	Time 11:20	Client's Job Ref 13621	Weather No Rain Or Snow	Pre Cleaned No	PLR MH.12X
Operator JM10		Vehicle P30 CVS		Camera Flexirpobe	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Richmond	Inspection Direction:	2	Upstream Node:	MH.12
Road:	50-56 Sheen Road	Inspected Length:	4.90 m	Upstream Pipe Depth:	0.480 m
Location:	Property or buildings	Total Length:	4.90 m	Downstream Node:	MH.11
Surface Type:	Concrete Footway	Joint Length:	0.90 m	Downstream Pipe Depth:	0.530 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	1960	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

**Comments:**  
**Recommendations:** NO FURTHER WORKS REQUIRED



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 - 04/04/2022 - MH.12X**

Item No.	Inspection Direction	PLR	Client's Job Ref	Contractor's Job Ref
27	2	MH.12X	13621	13621



\_50-56 SHEEN ROAD\_RICHMOND\_27\_038.jpg, 00:00:00,  
 0.00 m  
 Start node, manhole, reference: MH.11



\_50-56 SHEEN ROAD\_RICHMOND\_27\_039.jpg, 00:00:18,  
 4.90 m  
 Finish node, manhole, reference: MH.12

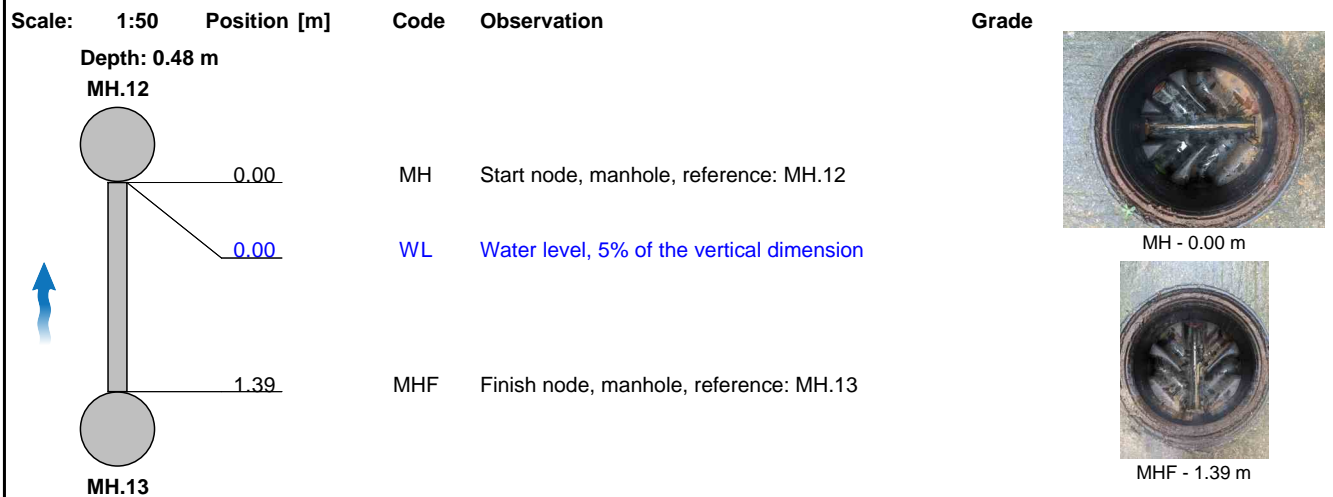


## Section Inspection - 04/04/2022 - MH.13X

Item No. 28	Insp. No. 1	Date 04/04/22	Time 11:21	Client's Job Ref 13621	Weather No Rain Or Snow	Pre Cleaned No	PLR MH.13X
Operator JM10		Vehicle P30 CVS		Camera Flexirpobe	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Richmond	Inspection Direction:	2	Upstream Node:	MH.13
Road:	50-56 Sheen Road	Inspected Length:	1.39 m	Upstream Pipe Depth:	0.470 m
Location:	Property or buildings	Total Length:	1.39 m	Downstream Node:	MH.12
Surface Type:	Concrete Footway	Joint Length:	0.90 m	Downstream Pipe Depth:	0.480 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	1960	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

**Comments:**  
**Recommendations:** NO FURTHER WORKS REQUIRED



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 - 04/04/2022 - MH.13X**

<b>Item No.</b> 28	<b>Inspection Direction</b> 2	<b>PLR</b> MH.13X	<b>Client's Job Ref</b> 13621	<b>Contractor's Job Ref</b> 13621
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\_50-56 SHEEN ROAD\_RICHMOND\_28\_040.jpg, 00:00:00,  
 0.00 m  
 Start node, manhole, reference: MH.12



\_50-56 SHEEN ROAD\_RICHMOND\_28\_041.jpg, 00:00:07,  
 1.39 m  
 Finish node, manhole, reference: MH.13



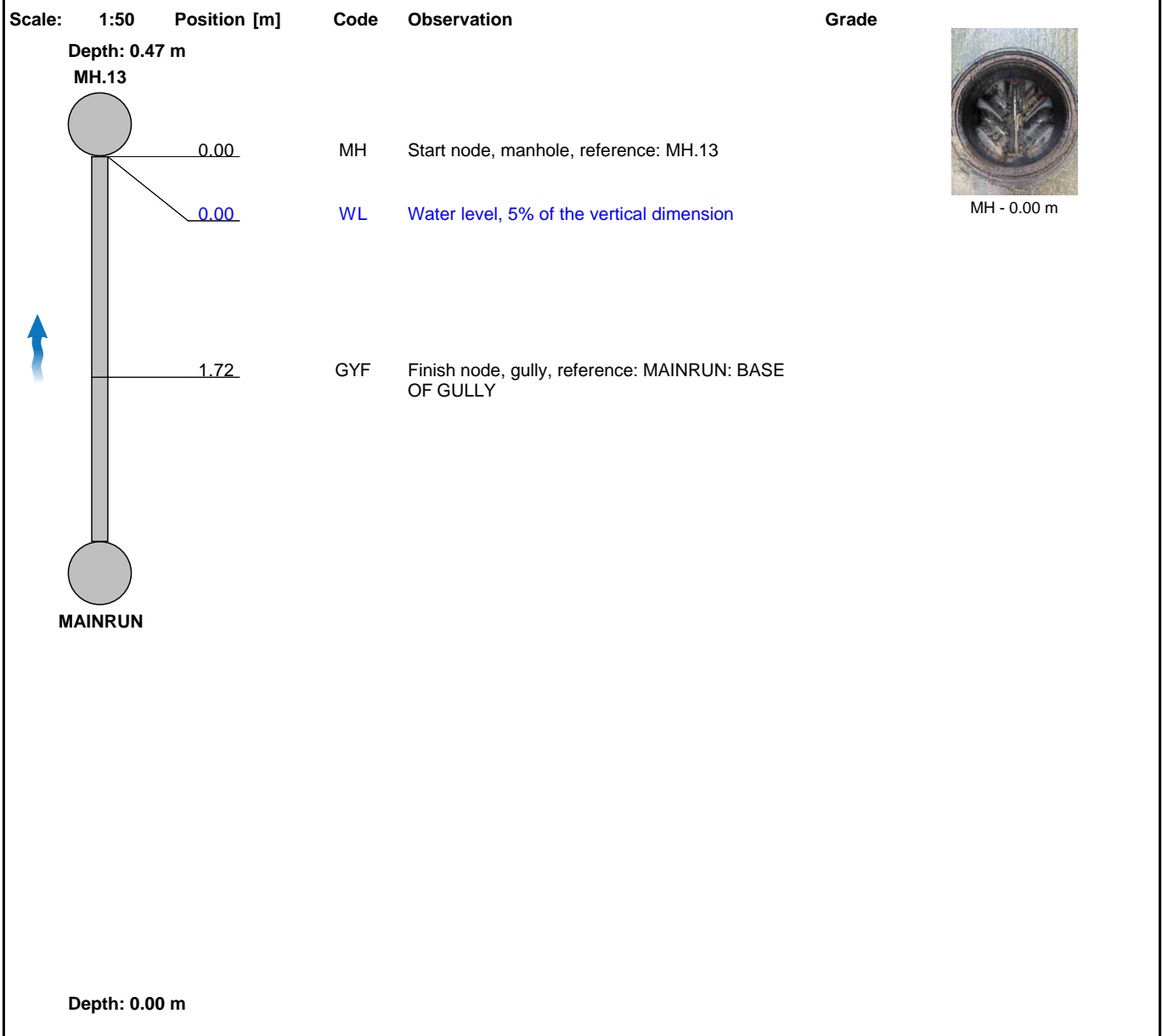


## Section Inspection - 04/04/2022 - MAINRUNX

Item No. 29	Insp. No. 1	Date 04/04/22	Time 11:21	Client's Job Ref 13621	Weather No Rain Or Snow	Pre Cleaned No	PLR MAINRUNX
Operator JM10		Vehicle P30 CVS		Camera Flexirpobe	Preset Length 0.40 m	Legal Status Private Sewer	Alternative ID Not Specified

Town or Village:	Richmond	Inspection Direction:	2	Upstream Node:	MAINRUN
Road:	50-56 Sheen Road	Inspected Length:	1.72 m	Upstream Pipe Depth:	0.000 m
Location:	Property or buildings	Total Length:	3.00 m	Downstream Node:	MH.13
Surface Type:	Concrete Footway	Joint Length:	0.90 m	Downstream Pipe Depth:	0.470 m
Use:	Foul	Pipe Shape:	Circular		
Type of Pipe:	Gravity drain/sewer	Dia/Height:	100 mm		
Flow Control:	No flow control	Material:	Vitrified clay		
Year Constructed:	1960	Lining Type:	No Lining		
Inspection Purpose:	Sample condition survey	Lining Material:	No Lining		

**Comments:**  
**Recommendations:** NO FURTHER WORKS REQUIRED



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 - 04/04/2022 - MAINRUNX

<b>Item No.</b> 29	<b>Inspection Direction</b> 2	<b>PLR</b> MAINRUNX	<b>Client's Job Ref</b> 13621	<b>Contractor's Job Ref</b> 13621
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\_50-56 SHEEN ROAD\_RICHMOND\_29\_042.jpg, 00:00:00,  
0.00 m  
Start node, manhole, reference: MH.13