



Flood Risk Assessment in Accordance with NPPF & Drainage Strategy

Client: Harbourside Investments Ltd and
WM Morrison Supermarkets PLC

Project : Proposed Mixed Use Retail and
Residential Development
Morrisons, 43-67 High St,
Yiewsley, UB7 7QQ

Job No. : 10/4897

Revision : A

Date : July 2018

Engineer : Daniel Mutepfa

WARD ■■ COLE
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SCHEDULE OF REVISIONS

REVISION	ISSUE DATE	DESCRIPTION
A	24.07.2018	Revised in line with the Planners' comments.

1. Introduction

- 1.1 Background
- 1.2 Location
- 1.3 Site Description & Current Usage
- 1.4 Site Proposals
- 1.5 The Sequential Test

2. Potential Sources of Flooding

- 2.1 Fluvial Flooding
- 2.2 Surface Water Flooding
- 2.3 Flooding due to Existing Sewers
- 2.4 Groundwater Flooding
- 2.5 Flooding from Artificial Sources
- 2.6 Historic Flooding

3. Proposed Development

- 3.1 Proposed Development
- 3.2 Flood Mitigation Measures

4. Pre-Planning Consultation

- 4.1 Environment Agency
- 4.2 Thames Water
- 4.3 Canal & River Trust

5. Drainage Strategy

- 5.1 Existing Drainage
- 5.2 Proposed Foul Water Drainage Solution
- 5.3 Sustainable Drainage Systems
- 5.4 Proposed SUDS Solution

6. Conclusion**Appendices**

- A – Site Location Plan
- B – Topographical Survey Plan
- C – CCTV Drainage Survey Report
- D – Thames Water Sewer Record Map
- E – Proposed Drainage Strategy Plan
- F – Typical Blue Green Roof System Details
- G – Illustrative Micro Drainage Source Control Simulations
- H – Consultation Responses
- I – SUDS Maintenance Plan

1 Introduction

1.1 Background

Ward Cole Consulting Engineers were commissioned to prepare a flood risk assessment and drainage strategy report for proposed redevelopment of the Morrisons site in Yiewsley, West Drayton. This report accompanies the planning application for the demolition of the existing buildings and the redevelopment of the site to provide a retail and residential mixed use scheme. The site will be developed to provide a replacement Morrisons foodstore, with 144 residential units provided above.

In terms of the Town and Country Planning (Development Management Procedure) (England) Order 2015, the Local Planning Authority must consult the Lead Local Flood Authority (LLFA) with regard to surface water drainage on all planning applications for major development. It is noted that the National Planning Policy Framework only requires site-specific FRAs for development sites in Flood Zone 1 that are 1 ha or more, or that are less than 1 ha but have critical drainage problems, neither of which is the case for this site.

1.2 Location

The project site is located on the High Street in Yiewsley in the London Borough of Hillingdon. It is bounded by High Street to the east, St Matthews Primary School to the northwest and St Stephen's Road to the west and south. Grand Union Canal flows parallel to and just beyond St Stephen's Road (see *Appendix A*).

The National Grid Reference of the approximate centre of the site is 506047, 180347.

1.3 Site Description & Current Usage

The proposed development site is irregular shaped, approximately 0.48 ha in extent. The existing Morrisons supermarket building occupies approximately 2630m² of the site area with the rest comprising car parking and a service yard with some trees and planting around the fringes. More than 98% of the site area is hardstanding or buildings, with green areas less than 80m². The building includes basement car parking.

The supermarket fronts onto High Street with the customer entrance on the north-east corner, whilst the car park and service yard are accessed from St Stephen's Road.

A topographical survey plan (see *Appendix B*) produced in February 2018 indicates that floor levels in the supermarket and basement car park are 31.20m and 28.12m AOD respectively. Ground levels around the site are approximately 29.70 – 30.40m along north-east edge, 30.00m outside the south-east corner and 29.20 – 29.50m AOD along the northwest boundary.

The BGS website describes the geology of the area as the Langley Silt Member – Clay and Silt, underlain by the London Clay Formation – Clay, Silt and Sand. Site soils are described on the LandIS Soilscales website as “freely draining, slightly acid loamy”.

1.4 Site Proposals

It is proposed to demolish the existing building and construct in its place a multi-storey structure comprising:-

- 1643m² of Class A1 floor space on the ground floor;
- 141 housing units on upper floors and 3 units fronting St Stephen's Road;
- undercroft service yard and staff parking, accessed from St Stephen's Road ;
- customer and residents' car park on two levels in the basement, also accessed from St Stephen's Road.

1.5 The Sequential Test

This risk-based test has the aim of steering new development to areas at the lowest probability of flooding (Flood Zone 1) in accordance with the National Planning Policy Framework (NPPF).

According to the online Environment Agency flood map, the proposed development is situated within Flood Zone 1, having a less than 1 in 1000 chance of river or tidal flooding (<0.1%), or **low** probability. In terms of Table D3 in the NPPF, all land uses are considered to be appropriate within Flood Zone 1 areas, therefore the Sequential Test need not be applied.

2 Potential Sources of Flooding

2.1 Flood Zone

The proposed development is located within Flood Zone 1, land assessed as having a low annual probability of flooding from rivers or the sea.

2.2 Fluvial Flooding

Designated main rivers closest to the site are Fray's River approximately 340m to the west and the River Colne a little further west. These rivers are considered too remote to pose fluvial flood risk to the project site. Closer to the site is the Grand Union Canal and this too is not a source of flood risk as it is constrained within its banks. This can be seen in the EA flood map below.



Fig. 1 : EA Flood Map – River and Tidal Flooding

2.3 Surface Water Flooding

Pluvial or surface water flooding arises out of the inability of surface water runoff to infiltrate into the ground during intense or prolonged rainfall. Urban development adds to the problem by replacing natural open spaces with hard paved impermeable surfaces. Surface water flooding is exacerbated when natural drainage channels or artificial drainage systems have insufficient capacity to absorb the additional runoff. The EA's online flood risk map indicates that the risk of flooding from surface water runoff on the site is very low (see Fig. 2 below).

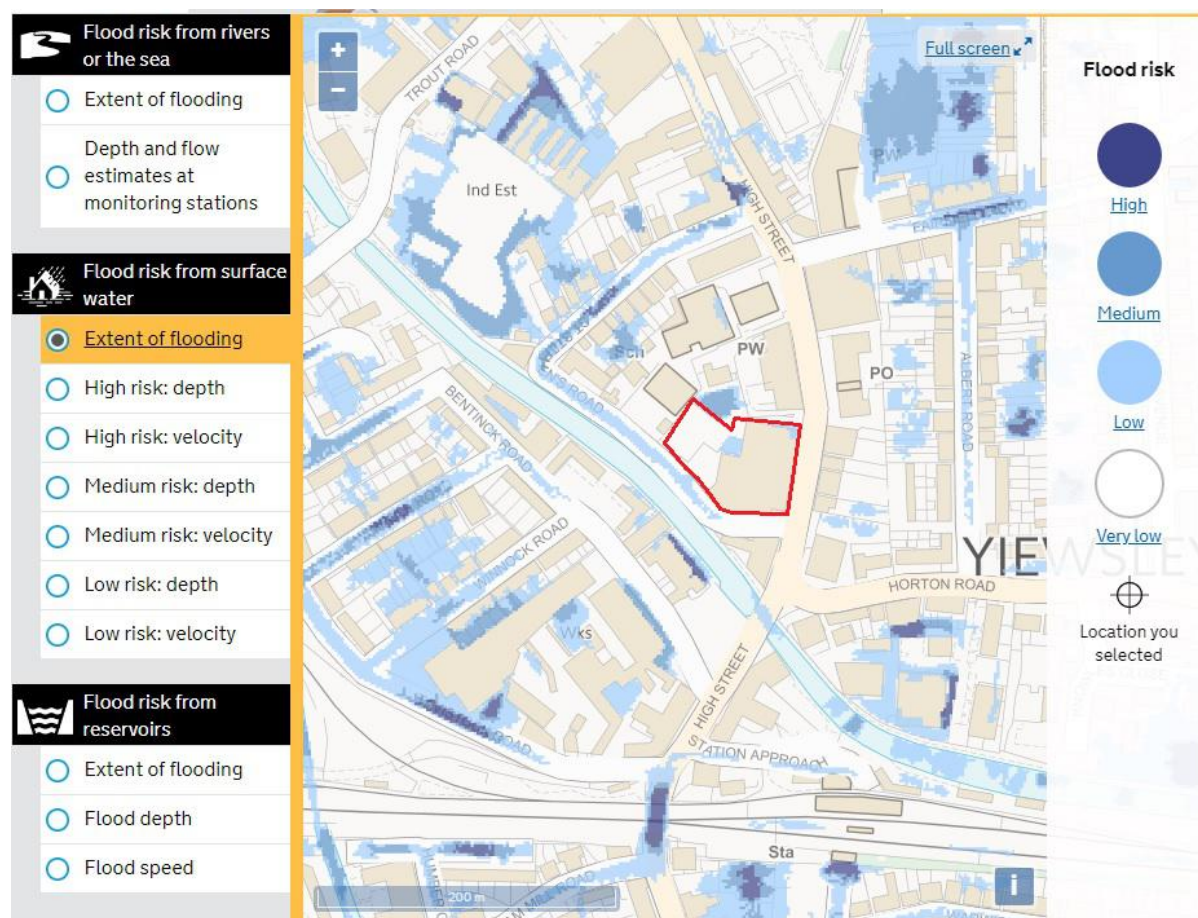


Fig. 2: EA Flood Map – Surface Water Flooding

2.3 Flooding due to Existing Sewers

Sewer flooding may result from blockage, structural failure, or overloading of sewers during intense or prolonged rainfall. High water levels in the receiving watercourses may result in outfall sewers being unable to discharge into rivers in times of flood, resulting in overflowing upstream of sewers, e.g. at manholes and gullies. Public foul sewers are present along High Street and St Stephen's Road. In the event of either of these sewers overflowing, flood flows would follow the road slope and not affect the proposed development due to the higher site levels.

2.4 Groundwater Flooding

Groundwater flooding occurs when water levels in the ground rise above the surface, e.g. from the underlying aquifer. This tends to occur after long periods of sustained rainfall, with the highest risk being usually in low-lying areas where the water table is likely to be at shallow depth. According to the Hillingdon Surface Water Management Plan (January 2013), the project site is not in an area where there is an increased potential for groundwater to rise sufficiently to interact with the ground surface or be within 2m of the ground surface. However, it is considered that where necessary, appropriate engineering design will take into account the presence of any groundwater in accordance with standard practice.

2.5 Flooding from Artificial Sources

There is no reservoir close enough to the site to pose flood risk. The Grand Union Canal is not considered to be a flood risk as flood flows will largely be constrained within the waterway banks.

2.6 Historic Flooding

There is no record of historic flood events on or close to the project site.

3 Proposed Development

3.1 Proposed Development

The proposed development comprises 1643m² of Class A1 floor space plus service yard and staff parking at ground floor level, 141 residential units on upper floors and 3 units fronting St Stephen's Road, landscaped amenity decks and basement car parking. The proposed development is indicated on planning drawings submitted separately with the planning application.

Ground floor levels will be set at least 150mm above adjacent finished site levels.

3.2 Flood Mitigation Measures

As the proposed development is in Flood Zone 1 with a low risk of flooding, specific flood mitigation measures for the development will not be required. However, it is worth noting that green landscaping will increase from approximately 1.5% to 15% of the site area.

4 Pre-Planning Consultation

4.1 Environment Agency

Because of the proximity of Grand Union Canal to the site, a preliminary opinion on the development proposals was sought from the Environment Agency. The EA advised that it would likely not object to the proposed development.

4.2 Thames Water

Thames Water, the local Water Authority, advised that it would only consider runoff disposal into its surface water sewer network if it was not possible to dispose of it by means of infiltration into the ground or by restricted discharge into the Grand Union Canal. The water company confirmed that there is enough capacity in the public foul sewer system to accept the increased sewage flows from the proposed re-development.

4.3 Canal & River Trust

On being consulted, the Canal and River Trust offered detailed advice on the process of applying for its consent to connect and discharge runoff into the Canal.

The consultation responses may be seen in Appendix H.

5 Drainage Strategy

5.1 Existing Drainage

The available information indicates that the existing development is served by a 300mm diameter public foul sewer along St Stephen's Road. Foul flow calculations based on the existing gross floor area indicate that the site is currently discharging 0.101 l/s of foul wastewater (Dry Weather Flow), the peak flow being 0.606 l/s.

There are no public surface water sewers in the vicinity. Topographical and CCTV drainage surveys have indicated that runoff is currently disposed of through 2 soakaways on the site.

The CCTV drainage survey report and Thames Water sewer record map may be seen in Appendices C and D.

5.2 Proposed Foul Water Drainage Solution

After re-development of the site, foul flows have been estimated to increase to 1.12 l/s (DWF). Thames Water has indicated that there is sufficient capacity in its foul sewer network to accommodate the additional flow (*see Appendix H*). The proposed foul drainage will be designed and constructed in accordance with the Building Regulations and current standards. Existing foul connections from the site into the public foul sewer system will be used wherever possible.

5.3 Sustainable Drainage Systems

Sustainable urban drainage systems (SUDS) involve managing surface water runoff as close to its source as possible, and mimicking pre-development drainage patterns. The London Borough Council of Hillingdon requires that any new development should utilise SUDS. It is noted that some SUDS options may not be feasible on a particular development site due to space or geological constraints. In this instance, the proposed building coverage on the site renders the use of features such as swales, basins and ponds unfeasible.

5.4 Proposed SUDS Solution

The proposed drainage strategy plan may be seen in Appendices E and F. The proposed SUDS scheme will comprise:-

- Up to 1000m² of blue green roofs to be installed on the first floor amenity decks. The blue roof system will be overlaid mostly by green roof surfacing. It is to be designed, supplied and installed by a specialist.
- Attenuation within the blue green roof system of runoff generated by storms up to the 1% Annual Exceedance Probability event plus a 40% allowance for climate change.
- Runoff discharge from the roof to be restricted to 5 l/s, the accepted practical minimum flow rate to prevent blockages in flow control devices (in this case the outflow will be split among

several outlets). Based on this rate, the required attenuation volume will be approximately 348m³ (see Micro Drainage simulation results in Appendix G). However, the actual required capacity in the blue roof Geocells will be adjusted to take into account evapotranspiration.

- Green landscaping, increased by approximately 13% of the site area compared to the pre-development extent, excluding greening on the amenity decks.
- Any surface water in the service yard will pass through an appropriately sized fuel interceptor that will be incorporated in the drainage system to prevent pollutants contaminating groundwater or canal waters.

The runoff will then be disposed of either

- a) By means of a soakaway that will receive the roof runoff and dispose of it through infiltration into adjacent ground, or
- b) Through an outfall pipe to the Grand Union Canal after the relevant permissions have been granted.

The method of surface water disposal selected will depend on the findings of a geotechnical investigation, including soakaway testing in accordance with BRE Digest 365. Any proposed infiltration device will be located at least 5m from the building in accordance with Building Regulation H3.25. The installation of a soakaway is the preferred solution as the existing situation implies that this is feasible.

Exceedance flood flows arising during abnormal storms beyond the 1% AEP event plus 40% climate change allowance will be routed to adjacent highways through the green landscaping to the north and west.

6 **Conclusion**

The proposed development lies within Flood Zone 1 where the risk of annual flooding from any source is considered to be low.

Foul water from the development will drain into the public foul sewer network in which sufficient capacity has been confirmed by Thames Water.

A blue green roof system to be designed by a specialist will be installed. This will provide roof water attenuation for rainfall events up to the 1 in 100 year storm plus a 40% allowance for climate change. The outflow of stored runoff will be restricted to a maximum flow rate of 5 l/s spread across several roof outlets. The modelled required attenuation capacity of approximately 350m³ will be adjusted to take into account evapotranspiration.

A fuel interceptor will be installed to remove pollutants from any surface water in the proposed service yard.

The preferred means of disposal of the runoff will be through soakaway infiltration, and the feasibility of this will be confirmed by appropriate testing. The alternative method would be the construction of an outfall to the Grand Union Canal subject to consent of the Canal and River Trust. Runoff flows into the canal from all rainfall events would be restricted to a maximum rate of 5 l/s, the accepted practical minimum outflow from flow control devices for preventing blockages. If infiltration is used, the detrimental effects of a soakaway located close to the building will be minimised by the use of piled foundations and robust waterproofing of exposed basement walls.

Exceedance flood flows generated during abnormal rainfall events will be routed to adjacent highways through the open space to the north and west.

It is considered that flood risk on the site and adjacent land will be reduced as a result of the increased green landscaping on the site and the SUDS measures that will be implemented.

Appendix A

Site Location Plan



St Matthews C Of
E Primary School

Nationwide

Iceland Foods

KFC

Morrisons

St Stephen's Rd

Yiewsley Health Centre

Horton Rd

Horton

COMAG

Google

Imagery ©2018 Google, Map data ©2018 Google United Kingdom Terms Send feedback 20 m

Appendix B

Topographical Survey Plan



Station	Easting (m)	Northing (m)	Level (m)
GH1	506058.2450	180250.5100	33.1120
GH2	506084.4635	180296.1606	30.4700
GH3	506096.0492	180374.6065	30.5710
GH4	506026.6352	180305.1676	29.4220
GH5	506053.8865	180366.9810	29.8330
GH6	506008.8040	180363.6658	29.3650
GH7	505983.8639	180349.3886	29.1380
GH8	505912.1897	180401.2709	29.0330

OS Note:
Some services may have been omitted due to parked vehicles.
The Ordnance Survey tile is to be used as a guide only.

OS Buildings Surveyed Buildings

This survey has been orientated to the Ordnance Survey (O.S.) National Grid OSGB36(15) via Global Navigational Satellite Systems (GNSS) and the O.S. Active Network (OS Net).
A true OSGB36 coordinate has been established near to the site centre via a transformation using the OSTN15GB & OSGM15GB transformation models.

The survey has been correlated to this point and a further one or more OSGB36 (15) points established to create a true O.S. bearing for angle orientation.

No scale factor has been applied to the survey therefore the coordinates shown are arbitrary & not true O.S. Coordinates which have a scale factor applied.

Please refer to Survey Station Table to enable establishment of the on-site grid and datum.

Legend:

	Cards/Cricket Cards	CC	Impression Cards	CC	Impression Cards
	Comics/Comic Books	CB	Play Cards	CP	Play Cards
	Kids Toys	KT	Gift Cards	GC	Gift Cards
	Baseball Cards	BC	Baseballs	BB	Baseballs
	Low Value Items	LV	Baseball gloves	BG	Baseball gloves
	Baseball Bats	BBat	Baseball Bats	BBat	Baseball Bats
	Baseball Bats	BBat	Baseball Bats	BBat	Baseball Bats
	Baseball Bats	BBat	Baseball Bats	BBat	Baseball Bats
	Baseball Bats	BBat	Baseball Bats	BBat	Baseball Bats
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	Baseball Bats	BBat	Baseball Bats	BBat	Baseball Bats

Rev	Date	Description	Drawn	Q. Re
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CLIENT

**Hester
Architect**

**High Street
Yiewsley**

**Topographical
Survey**

SCALE A0@ 1: 200	DATE Feb 2018
DRAWN LP	QUALITY REF GH2494

Level datum	See note
Grid orientation	See note

Drawing No.	Rev.
29475_T	0

Comments
This plan should only be used for its original purpose. Greenhatch Group accepts no responsibility for this plan if supplied to any party other than the original client.

Drainage information (where applicable) has been visually inspected from the surface and therefore should be treated as approximate only.

Appendix C

CCTV Drainage Survey Report



Table of Contents

Project Name	Project Number:	Date:
29.05.18 Morrisons, High Street, Yiewsley		04/06/2018

Project Information	P-1
Section: 1; MH3 - MH1	1
Section: 2; MH1 - MH4	3
Section: 3; U/S MH2 - MH2	5
Section: 4; MH2 - INT1	7
Section: 5; INT1 - D/S INT1	8
Section: 6; A/INT1 - INT1	9
Section: 7; GY1 - MH4	11
Section: 8; GY2 - MH7	13
Section: 9; GY3 - MH6	15
Section: 10; MH4 - MH5	18
Section: 11; MH7 - MH6	20
Section: 12; MH8 - MH6	21
Section: 13; A/MH10 - MH10	23
Section: 14; B/MH10 - MH10	24
Section: 15; C/MH10 - MH10	26
Section: 16; D/MH10 - MH10	28
Section: 17; MH10 - MH11	29
Section: 18; MH11 - MH13	30
Section: 19; A/MH11 - MH11	32
Section: 20; B/MH11 - MH11	33
Section: 21; C/MH11 - MH11	35
Section: 22; D/MH11 - MH11	37
Section: 23; GY4 - D/S GY4	39
Section: 24; U/S MH12 - MH12	41
Section: 25; MH12 - MH13	43
Section: 26; MH13 - INT2	44
Section: 27; GY6 - D/S GY6	46



Table of Contents

Project Name	Project Number:	Date:
29.05.18 Morrisons, High Street, Yiewsley		04/06/2018

Section: 28; U/S MH3 - MH3	48
Section: 29; A/MH14 - MH14	50
Section: 30; B/MH14 - MH14	52
Section: 31; C/MH14 - MH14	54
Section: 32; D/MH14 - MH14	56
Section: 33; MH14 - D/S MH14	58

**Project Information**

Project Name: 29.05.18 Morrisons, High Street, Yiewsley	Client's Ref:		Project Date: 04/06/2018
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Client

Company: Ward Cole
Street: Unit 16 Byron Business Centre, Duke Street
Town or City: Hucknall, Notts, NG15 7HP

Site

Company: Morrisons
Street: High Street
Town or City: Yiewsley, UB7 7QQ

Contractor

Company: Aqua-Jet Specialist Drainage Contractors Ltd
Contact: Rob Wilkinson
Street: Yard 21, Hilton Ind Est, Sutton Lane
Town or City: Hilton, Derbyshire, DE65 5FE
Phone: 01283 730333
Fax: 01283 730444
Email: aquajetltd@aol.com

**Section Inspection - 29/05/2018 - MH3X**

Section: 1	Inspection: 1	Date: 29/05/18	Time:	Client's Ref:	Weather: No Rain Or Snow	Pre Cleaned: No	PLR: MH3X
Operator: Cb/Dh		Vehicle: FJ17 ZDS		Camera: Flexi	Preset Length:	Criticality Grade:	Alternative ID:

Town or Village: YIEWSLEY	Insp Dir: MH1 << MH3	US MH: MH3
Road: High Street	Inspected Length: 15.60 m	US Depth:
Location:	Total Length: 15.60 m	DS MH: MH1
Surface Cover:	Pipe Length: 0.00 m	DS Depth:

Use: Surface water	Pipe Shape: Circular
Type of Pipe: Gravity drain/sewer	Height / Width: 150 mm
Year Constructed:	Pipe Material: Vitrified clay pipe (i.e. all clayware)
Inspection Purpose:	Lining Type: None
Flow Control: No flow control	Lining Material: None

Comment:
Recommendation:

1:142	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: MH1						
	0.00	MH	Start node type, manhole, reference number: MH1	00:00:00		
	0.00	WL	Water level, 5% of the vertical dimension	00:00:01		
	0.70	JN	Junction at 10 o'clock, diameter: 150mm	00:00:08		
	8.10	JDM	Joint displaced, medium	00:00:36		1
	11.60	JDM	Joint displaced, medium	00:00:48		1
	13.10	JN	Junction at 9 o'clock, diameter: 100mm	00:00:57		
	15.60	MHF	Finish node type, manhole, reference number: MH3	00:01:04		
MH3 Depth:						

Structural Defects**Constructional Features****Service and Maintenance Defects****Miscellaneous Features**

Note: In line with the WRc SRM, plastic pipes are not scored against structural defects.

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
2	1.0	0.1	0.1	1.0	0	0.0	0.0	0.0	1.0

Section Pictures - 29/05/2018 - MH3X

Section Number: 1	Inspection Direction: MH1 << MH3	PLR: MH3X	Client's Ref:	Contractor's Ref:
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MH3X_a3ddf67a-6157-40fe-801c-e0e08bedef87_20180604_105126_505.jpg, 00:00:36, 8.10m
Joint displaced, medium



MH3X_d36944c7-39db-467e-8472-70c44a59c664_20180604_105151_525.jpg, 00:00:48, 11.60m
Joint displaced, medium

Section Inspection - 29/05/2018 - MH1X

Section: 2	Inspection: 2	Date: 29/05/18	Time:	Client's Ref:	Weather: No Rain Or Snow	Pre Cleaned: No	PLR: MH1X
Operator: Cb/Dh	Vehicle: FJ17 ZDS	Camera: Flexi	Preset Length:	Criticality Grade:	Alternative ID:		

Town or Village: YIEWSLEY	Insp Dir: MH1 >> MH4	US MH: MH1
Road: High Street	Inspected Length: 22.60 m	US Depth:
Location:	Total Length: 22.60 m	DS MH: MH4
Surface Cover:	Pipe Length: 0.00 m	DS Depth:

Use: Surface water	Pipe Shape: Circular
Type of Pipe: Gravity drain/sewer	Height / Width: 150 mm
Year Constructed:	Pipe Material: Vitrified clay pipe (i.e. all clayware)
Inspection Purpose:	Lining Type: None
Flow Control: No flow control	Lining Material: None

Comment:
 Recommendation:

1:205	Position [m]	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number: MH1	00:00:00		
Depth: MH1	0.00	WL	Water level, 5% of the vertical dimension	00:00:01		
	2.00	WL	Water level, 10% of the vertical dimension	00:00:11		
	3.00	WL	Water level, 20% of the vertical dimension	00:00:14		
	4.10	WL	Water level, 40% of the vertical dimension	00:00:18		
	4.60	S01	CUW Loss of vision, camera under water, start	00:00:20		
	11.60	F01	CUW Loss of vision, camera under water, finish	00:00:45		
	11.60	WL	Water level, 30% of the vertical dimension	00:00:45		
	12.50	WL	Water level, 10% of the vertical dimension	00:00:48		
	14.60	JN	Junction at 9 o'clock, diameter: 150mm	00:00:56		
	15.80	WL	Water level, 5% of the vertical dimension	00:01:02		
	17.10	WL	Water level, 30% of the vertical dimension	00:01:07		
	17.50	S02	CUW Loss of vision, camera under water, start	00:01:09		
	22.60	F02	CUW Loss of vision, camera under water, finish	00:01:40		
Depth: MH4	22.60	SA	Survey abandoned: DUE TO WATER LEVEL / POSSIBLE MANHOLE	00:01:40		

Structural Defects					Constructional Features				
Service and Maintenance Defects					Miscellaneous Features				
Note: In line with the WRc SRM, plastic pipes are not scored against structural defects.									
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

Section Pictures - 29/05/2018 - MH1X

Section Number: 2	Inspection Direction: MH1 >> MH4	PLR: MH1X	Client's Ref:	Contractor's Ref:
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MH1X_4239433d-b5af-4ddc-a80a-48b68d4cb309_20180604_1
 05613_527.jpg, 00:00:18, 4.10m
 Water level, 40% of the vertical dimension



MH1X_df6d95d8-c6d1-46e8-9f07-eb4d7e02ebd3_20180604_1
 10121_139.jpg, 00:01:07, 17.10m
 Water level, 30% of the vertical dimension

**Section Inspection - 29/05/2018 - U/S MH2X**

Section: 3	Inspection: 3	Date: 29/05/18	Time:	Client's Ref:	Weather: No Rain Or Snow	Pre Cleaned: No	PLR: U/S MH2X
Operator: Cb/Dh		Vehicle: FJ17 ZDS		Camera: Flexi	Preset Length:	Criticality Grade:	Alternative ID:

Town or Village: YIEWSLEY	Insp Dir: MH2 << U/S MH2	US MH: U/S MH2
Road: High Street	Inspected Length: 3.70 m	US Depth:
Location:	Total Length: 3.70 m	DS MH: MH2
Surface Cover:	Pipe Length: 0.00 m	DS Depth:

Use: Surface water	Pipe Shape: Circular
Type of Pipe: Gravity drain/sewer	Height / Width: 150 mm
Year Constructed:	Pipe Material: Vitrified clay pipe (i.e. all clayware)
Inspection Purpose:	Lining Type: None
Flow Control: No flow control	Lining Material: None

Comment:
Recommendation:

1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number: MH2	00:00:00		
	0.00	WL	Water level, 5% of the vertical dimension	00:00:01		
	0.50	LL	Line deviates left	00:00:07		
	2.00	LR	Line deviates right	00:00:13		
	3.30	DES	Settled deposits, fine, 5% cross-sectional area loss	00:00:45		2
	3.70	GYF	Finish node type, gully, reference number: U/S MH2: ACO CHANNEL GULLY	00:00:51		

Structural Defects**Constructional Features****Service and Maintenance Defects****Miscellaneous Features**

Note: In line with the WRc SRM, plastic pipes are not scored against structural defects.

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	1.0	0.3	1.0	2.0

Section Pictures - 29/05/2018 - U/S MH2X

Section Number: 3	Inspection Direction: MH2 << U/S MH2	PLR: U/S MH2X	Client's Ref:	Contractor's Ref:
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U_S

MH2X_11a977aa-52f8-4ecc-9658-b7c98e4b651a_20180604_1

10848_924.jpg, 00:00:45, 3.30m

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



Section Inspection - 29/05/2018 - MH2X

Section: 4	Inspection: 4	Date: 29/05/18	Time:	Client's Ref:	Weather: No Rain Or Snow	Pre Cleaned: No	PLR: MH2X
Operator: Cb/Dh	Vehicle: FJ17 ZDS	Camera: Flexi	Preset Length:	Criticality Grade:	Alternative ID:		

Town or Village: YIEWSLEY	Insp Dir: MH2 >> INT1	US MH: MH2
Road: High Street	Inspected Length: 0.90 m	US Depth:
Location:	Total Length: 0.90 m	DS MH: INT1
Surface Cover:	Pipe Length: 0.00 m	DS Depth:

Use: Surface water	Pipe Shape: Circular
Type of Pipe: Gravity drain/sewer	Height / Width: 150 mm
Year Constructed:	Pipe Material: Vitrified clay pipe (i.e. all clayware)
Inspection Purpose:	Lining Type: None
Flow Control: No flow control	Lining Material: None

Comment:
Recommendation:

1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number: MH2	00:00:00		
	0.00	WL	Water level, 5% of the vertical dimension	00:00:01		
	0.90	OCF	Finish node type, other special chamber, reference number: INT1: INTERCEPTOR	00:00:12		

Structural Defects

Constructional Features

Service and Maintenance Defects

Miscellaneous Features

Note: In line with the WRc SRM, plastic pipes are not scored against structural defects.

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0



Section Inspection - 29/05/2018 - INT1X

Section: 5	Inspection: 5	Date: 29/05/18	Time:	Client's Ref:	Weather: No Rain Or Snow	Pre Cleaned: No	PLR: INT1X
Operator: Cb/Dh	Vehicle: FJ17 ZDS	Camera: Flexi	Preset Length:	Criticality Grade:	Alternative ID:		

Town or Village: YIEWSLEY	Insp Dir: INT1 >> D/S INT1	US MH: INT1
Road: High Street	Inspected Length: 2.40 m	US Depth:
Location:	Total Length: 2.40 m	DS MH: D/S INT1
Surface Cover:	Pipe Length: 0.00 m	DS Depth:
Use: Surface water	Pipe Shape: Circular	
Type of Pipe: Gravity drain/sewer	Height / Width: 150 mm	
Year Constructed:	Pipe Material: Vitrified clay pipe (i.e. all clayware)	
Inspection Purpose:	Lining Type: None	
Flow Control: No flow control	Lining Material: None	
Comment:		
Recommendation:		

1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
	0.00	OC	Start node type, other special chamber, reference number: INT1: INTERCEPTOR	00:00:00		
	0.00	WL	Water level, 10% of the vertical dimension	00:00:00		
	0.90	LL	Line deviates left	00:00:14		
	2.40	SA	Survey abandoned: JOINS ANOTHER RUN BLIND	00:00:33		

Structural Defects					Constructional Features				
Service and Maintenance Defects					Miscellaneous Features				
Note: In line with the WRc SRM, plastic pipes are not scored against structural defects.									
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0



Section Inspection - 29/05/2018 - A/INT1X

Section: 6	Inspection: 6	Date: 29/05/18	Time:	Client's Ref:	Weather: No Rain Or Snow	Pre Cleaned: No	PLR: A/INT1X
Operator: Cb/Dh	Vehicle: FJ17 ZDS	Camera: Flexi	Preset Length:	Criticality Grade:	Alternative ID:		

Town or Village: YIEWSLEY	Insp Dir: INT1 << A/INT1	US MH: A/INT1
Road: High Street	Inspected Length: 2.70 m	US Depth:
Location:	Total Length: 2.70 m	DS MH: INT1
Surface Cover:	Pipe Length: 0.00 m	DS Depth:
Use: Surface water	Pipe Shape: Circular	
Type of Pipe: Gravity drain/sewer	Height / Width: 100 mm	
Year Constructed:	Pipe Material: Polyvinyl chloride	
Inspection Purpose:	Lining Type: None	
Flow Control: No flow control	Lining Material: None	
Comment:		
Recommendation:		

1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: INT1 <						

Section Pictures - 29/05/2018 - A/INT1X

Section Number: 6	Inspection Direction: INT1 << A/INT1	PLR: A/INT1X	Client's Ref:	Contractor's Ref:
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A_INT1X_d93bc85b-68b5-4cbd-a036-2f44e01cce6d_20180604_112539_134.jpg, 00:00:08, 0.30m

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



A_INT1X_e7e7eead-7a53-40b7-88a5-a5bca6dd5703_20180604_112635_734.jpg, 00:00:23, 2.50m

Settled deposits, fine, 40% cross-sectional area loss

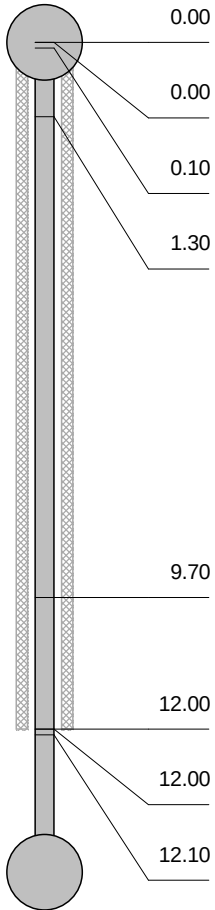
Section Inspection - 29/05/2018 - GY1X

Section: 7	Inspection: 7	Date: 29/05/18	Time:	Client's Ref:	Weather: No Rain Or Snow	Pre Cleaned: No	PLR: GY1X
Operator: Cb/Dh	Vehicle: FJ17 ZDS	Camera: Flexi	Preset Length:	Criticality Grade:	Alternative ID:		

Town or Village: YIEWSLEY	Insp Dir: GY1 >> MH4	US MH: GY1
Road: High Street	Inspected Length: 12.10 m	US Depth:
Location:	Total Length: 14.50 m	DS MH: MH4
Surface Cover:	Pipe Length: 0.00 m	DS Depth:

Use: Surface water	Pipe Shape: Circular
Type of Pipe: Gravity drain/sewer	Height / Width: 100 mm
Year Constructed:	Pipe Material: Vitrified clay pipe (i.e. all clayware)
Inspection Purpose:	Lining Type: None
Flow Control: No flow control	Lining Material: None

Comment:
Recommendation:

1:132	Position [m]	Code	Observation	MPEG	Photo	Grade
	0.00	GY	Start node type, gully, reference number: GY1	00:00:00		
	0.00	WL	Water level, 5% of the vertical dimension	00:00:01		
	0.10	S01	DES Settled deposits, fine, 5% cross-sectional area loss, start: HANGING DEBRIS	00:00:06		
	1.30	REM	General remark: RESTRICTED VIEW DUE TO DEBRIS	00:00:14		
	9.70	WL	Water level, 10% of the vertical dimension	00:00:44		
	12.00	CUW	Loss of vision, camera under water	00:00:53		
	12.00	F01	DES Settled deposits, fine, 5% cross-sectional area loss, finish: HANGING DEBRIS	00:00:53		2
	12.10	CPF	Finish node type, catchpit, reference number: MH4	00:01:17		

Structural Defects					Constructional Features				
Service and Maintenance Defects					Miscellaneous Features				
Note: In line with the WRc SRM, plastic pipes are not scored against structural defects.									
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	1.0	0.1	1.0	2.0

Section Pictures - 29/05/2018 - GY1X

Section Number: 7	Inspection Direction: GY1 >> MH4	PLR: GY1X	Client's Ref:	Contractor's Ref:
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GY1X_4ae48c69-bb7e-4f0a-8a19-bf8cd0d8e4c5_20180604_113150_073.jpg, 00:00:06, 0.10m
 Settled deposits, fine, 5% cross-sectional area loss, start



GY1X_62b55fb9-55af-4203-8062-cc2fc1078ddd_20180604_113822_372.jpg, 00:01:17, 12.10m
 Finish node type, catchpit, reference number: MH4



Section Inspection - 29/05/2018 - GY2X

Section: 8	Inspection: 8	Date: 29/05/18	Time:	Client's Ref:	Weather: No Rain Or Snow	Pre Cleaned: No	PLR: GY2X
Operator: Cb/Dh	Vehicle: FJ17 ZDS	Camera: Flexi	Preset Length:	Criticality Grade:	Alternative ID:		

Town or Village: YIEWSLEY	Insp Dir: GY2 >> MH7	US MH: GY2
Road: High Street	Inspected Length: 13.20 m	US Depth:
Location:	Total Length: 13.20 m	DS MH: MH7
Surface Cover:	Pipe Length: 0.00 m	DS Depth:
Use: Surface water	Pipe Shape: Circular	
Type of Pipe: Gravity drain/sewer	Height / Width: 100 mm	
Year Constructed:	Pipe Material: Vitrified clay pipe (i.e. all clayware)	
Inspection Purpose:	Lining Type: None	
Flow Control: No flow control	Lining Material: None	
Comment:		
Recommendation:		

1:120	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: GY2 MH7 Depth:						
	0.00	GY	Start node type, gully, reference number: GY2	00:00:00		
	0.00	WL	Water level, 5% of the vertical dimension	00:00:01		
	0.20	HJ	Hole in drain or sewer at a joint from 11 o'clock to 3 o'clock	00:00:07		5
	0.80	JDM	Joint displaced, medium	00:00:12		1
	1.80	CC	Crack, circumferential from 12 o'clock to 12 o'clock	00:00:19		2
	4.70	JDM	Joint displaced, medium	00:00:34		1
	13.20	CPF	Finish node type, catchpit, reference number: MH7	00:01:19		

Structural Defects					Constructional Features				
Service and Maintenance Defects					Miscellaneous Features				
Note: In line with the WRc SRM, plastic pipes are not scored against structural defects.									
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
4	165.0	13.4	13.4	5.0	0	0.0	0.0	0.0	1.0

Section Pictures - 29/05/2018 - GY2X

Section Number: 8	Inspection Direction: GY2 >> MH7	PLR: GY2X	Client's Ref:	Contractor's Ref:
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GY2X_dd061343-718e-4456-898a-1efea845b377_20180604_114119_072.jpg, 00:00:07, 0.20m
 Hole in drain or sewer at a joint from 11 o'clock to 3 o'clock



GY2X_33c5c1ea-f169-4d8f-ada0-a495ecdef433_20180604_114148_482.jpg, 00:00:12, 0.80m
 Joint displaced, medium



GY2X_d3e3e17c-9730-48b7-b2a5-2de544580fdd_20180604_114259_842.jpg, 00:00:19, 1.80m
 Crack, circumferential from 12 o'clock to 12 o'clock



GY2X_a79ea17b-9a1f-4af5-83d4-555353067472_20180604_114230_449.jpg, 00:00:34, 4.70m
 Joint displaced, medium



Section Inspection - 29/05/2018 - GY3X

Section: 9	Inspection: 9	Date: 29/05/18	Time:	Client's Ref:	Weather: No Rain Or Snow	Pre Cleaned: No	PLR: GY3X
Operator: Cb/Dh	Vehicle: FJ17 ZDS	Camera: Flexi	Preset Length:	Criticality Grade:	Alternative ID:		

Town or Village: YIEWSLEY	Insp Dir: GY3 >> MH6	US MH: GY3
Road: High Street	Inspected Length: 5.90 m	US Depth:
Location:	Total Length: 5.90 m	DS MH: MH6
Surface Cover:	Pipe Length: 0.00 m	DS Depth:

Use: Surface water	Pipe Shape: Circular
Type of Pipe: Gravity drain/sewer	Height / Width: 100 mm
Year Constructed:	Pipe Material: Vitrified clay pipe (i.e. all clayware)
Inspection Purpose:	Lining Type: None
Flow Control: No flow control	Lining Material: None

Comment:
 Recommendation:

1:54	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: GY3 Depth: MH6						
	0.00	GY	Start node type, gully, reference number: GY3	00:00:00		
	0.00	WL	Water level, 5% of the vertical dimension	00:00:00		
	0.80	CC	Crack, circumferential from 12 o'clock to 12 o'clock	00:00:10		2
	1.30	CC	Crack, circumferential from 12 o'clock to 12 o'clock	00:00:13		2
	3.00	CC	Crack, circumferential from 7 o'clock to 5 o'clock	00:00:23		2
	5.00	CC	Crack, circumferential from 7 o'clock to 5 o'clock	00:00:31		2
	5.80	CL	Crack, longitudinal at 2 o'clock	00:00:37		2
	5.90	CPF	Finish node type, catchpit, reference number: MH6	00:00:41		

Structural Defects					Constructional Features				
Service and Maintenance Defects					Miscellaneous Features				
Note: In line with the WRc SRM, plastic pipes are not scored against structural defects.									
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
5	10.0	8.5	8.5	2.0	0	0.0	0.0	0.0	1.0

Section Pictures - 29/05/2018 - GY3X

Section Number: 9	Inspection Direction: GY3 >> MH6	PLR: GY3X	Client's Ref:	Contractor's Ref:
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GY3X_dd9d2f66-7a16-4d3e-a03f-82c0c425fc5c_20180604_115332_276.jpg, 00:00:10, 0.80m
 Crack, circumferential from 12 o'clock to 12 o'clock



GY3X_50057357-3fb3-43e8-84e6-5fc63ff7c92e_20180604_115348_849.jpg, 00:00:13, 1.30m
 Crack, circumferential from 12 o'clock to 12 o'clock



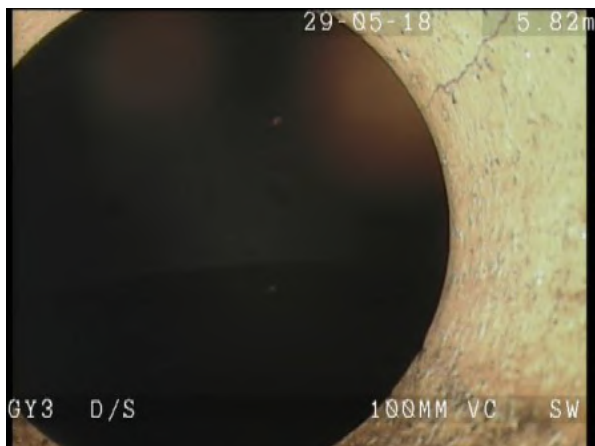
GY3X_f5782e97-a6ba-4fec-a11c-89e9b0a02103_20180604_115415_309.jpg, 00:00:23, 3.00m
 Crack, circumferential from 7 o'clock to 5 o'clock



GY3X_b9039a48-1108-4694-bd18-1360eff10592_20180604_115439_085.jpg, 00:00:31, 5.00m
 Crack, circumferential from 7 o'clock to 5 o'clock

Section Pictures - 29/05/2018 - GY3X

Section Number: 9	Inspection Direction: GY3 >> MH6	PLR: GY3X	Client's Ref:	Contractor's Ref:
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GY3X_323402f6-742c-4e3a-aa89-da4814f1e971_20180604_11

5520_333.jpg, 00:00:37, 5.80m

Crack, longitudinal at 2 o'clock



Section Inspection - 29/05/2018 - MH4X

Section: 10	Inspection: 10	Date: 29/05/18	Time:	Client's Ref:	Weather: No Rain Or Snow	Pre Cleaned: Yes	PLR: MH4X
Operator: Cb/Dh		Vehicle: FJ17 ZDS		Camera: Flexi	Preset Length:	Criticality Grade:	Alternative ID:

Town or Village: YIEWSLEY	Insp Dir: MH5 << MH4	US MH: MH4
Road: High Street	Inspected Length: 1.10 m	US Depth:
Location:	Total Length: 3.00 m	DS MH: MH5
Surface Cover:	Pipe Length: 0.00 m	DS Depth:

Use: Surface water	Pipe Shape: Circular
Type of Pipe: Gravity drain/sewer	Height / Width: 150 mm
Year Constructed:	Pipe Material: Vitrified clay pipe (i.e. all clayware)
Inspection Purpose:	Lining Type: None
Flow Control: No flow control	Lining Material: None

Comment:
 Recommendation:

1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number: MH5	00:00:00		
	0.00	WL	Water level, 10% of the vertical dimension	00:00:00		
	1.00	DES	Settled deposits, fine, 80% cross-sectional area loss	00:00:25		5
	1.10	SA	Survey abandoned: DUE TO DEBRIS	00:00:36		
	3.00		End of pipe			

Structural Defects					Constructional Features				
Service and Maintenance Defects					Miscellaneous Features				
Note: In line with the WRc SRM, plastic pipes are not scored against structural defects.									
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	1	10.0	3.3	10.0	5.0

Section Pictures - 29/05/2018 - MH4X

Section Number: 10	Inspection Direction: MH5 << MH4	PLR: MH4X	Client's Ref:	Contractor's Ref:
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MH4X_43c76f17-273d-43f7-9a21-59457ef01918_20180604_11
 5830_834.jpg, 00:00:25, 1.00m
 Settled deposits, fine, 80% cross-sectional area loss



Section Inspection - 29/05/2018 - MH8X

Section: 12	Inspection: 12	Date: 29/05/18	Time:	Client's Ref:	Weather: No Rain Or Snow	Pre Cleaned: No	PLR: MH8X
Operator: Cb/Dh		Vehicle: FJ17 ZDS		Camera: Flexi	Preset Length:	Criticality Grade:	Alternative ID:

Town or Village: YIEWSLEY	Insp Dir: MH8 >> MH6	US MH: MH8
Road: High Street	Inspected Length: 1.80 m	US Depth:
Location:	Total Length: 1.80 m	DS MH: MH6
Surface Cover:	Pipe Length: 0.00 m	DS Depth:

Use: Surface water	Pipe Shape: Circular
Type of Pipe: Gravity drain/sewer	Height / Width: 100 mm
Year Constructed:	Pipe Material: Vitrified clay pipe (i.e. all clayware)
Inspection Purpose:	Lining Type: None
Flow Control: No flow control	Lining Material: None

Comment:
Recommendation:

1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number: MH8	00:00:00		
	0.00	WL	Water level, 5% of the vertical dimension	00:00:00		
	0.10	DES	Settled deposits, fine, 5% cross-sectional area loss	00:00:06		2
	1.80	CPF	Finish node type, catchpit, reference number: MH6	00:00:25		

Structural Defects

Constructional Features

Service and Maintenance Defects

Miscellaneous Features

Note: In line with the WRc SRM, plastic pipes are not scored against structural defects.

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	1.0	0.6	1.0	2.0

Section Pictures - 29/05/2018 - MH8X

Section Number: 12	Inspection Direction: MH8 >> MH6	PLR: MH8X	Client's Ref:	Contractor's Ref:
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MH8X_bee0a5bd-6969-44a3-b524-0a7d76b6459c_20180604_1

20848_871.jpg, 00:00:06, 0.10m

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

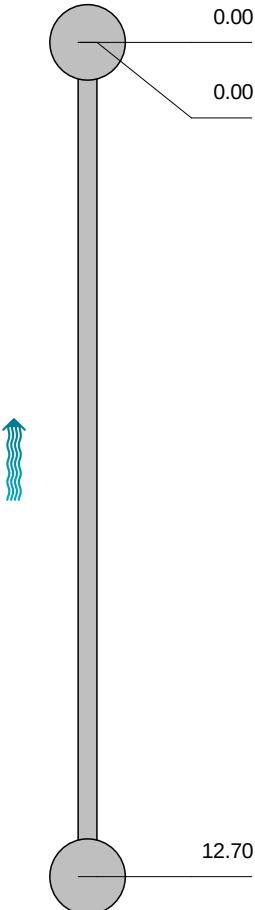
**Section Inspection - 30/05/2018 - A/MH10X**

Section: 13	Inspection: 13	Date: 30/05/18	Time:	Client's Ref:	Weather: No Rain Or Snow	Pre Cleaned: No	PLR: A/MH10X
Operator: Cb/Dh		Vehicle: FJ17 ZDS		Camera: Flexi	Preset Length:	Criticality Grade:	Alternative ID:

Town or Village: YIEWSLEY	Insp Dir: MH10 << A/MH10	US MH: A/MH10
Road: High Street	Inspected Length: 12.70 m	US Depth:
Location:	Total Length: 12.70 m	DS MH: MH10
Surface Cover:	Pipe Length: 0.00 m	DS Depth:

Use: Surface water	Pipe Shape: Circular
Type of Pipe: Gravity drain/sewer	Height / Width: 100 mm
Year Constructed:	Pipe Material: Vitrified clay pipe (i.e. all clayware)
Inspection Purpose:	Lining Type: None
Flow Control: No flow control	Lining Material: None

Comment:
Recommendation:

1:115	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: MH10						
	0.00	MH	Start node type, manhole, reference number: MH10	00:00:00		
	0.00	WL	Water level, 5% of the vertical dimension	00:00:01		
	12.70	GYF	Finish node type, gully, reference number: A/MH10: GULLY	00:01:15		
A/MH10 Depth:						

Structural Defects**Constructional Features****Service and Maintenance Defects****Miscellaneous Features**

Note: In line with the WRc SRM, plastic pipes are not scored against structural defects.

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

**Aqua-Jet Specialist Drainage Contractors Ltd**

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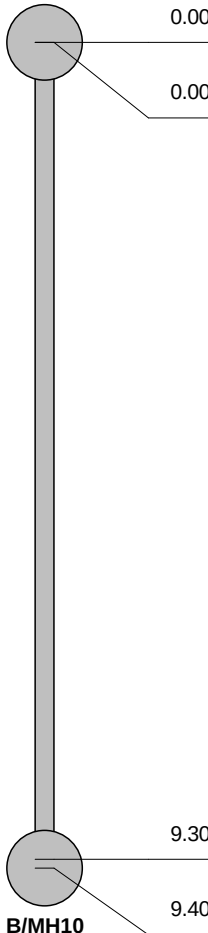
Section Inspection - 30/05/2018 - B/MH10X

Section: 14	Inspection: 14	Date: 30/05/18	Time:	Client's Ref:	Weather: No Rain Or Snow	Pre Cleaned: No	PLR: B/MH10X
Operator: Cb/Dh		Vehicle: FJ17 ZDS		Camera: Flexi	Preset Length:	Criticality Grade:	Alternative ID:

Town or Village: YIEWSLEY	Insp Dir: MH10 << B/MH10	US MH: B/MH10
Road: High Street	Inspected Length: 9.40 m	US Depth:
Location:	Total Length: 9.40 m	DS MH: MH10
Surface Cover:	Pipe Length: 0.00 m	DS Depth:

Use: Surface water	Pipe Shape: Circular
Type of Pipe: Gravity drain/sewer	Height / Width: 100 mm
Year Constructed:	Pipe Material: Vitrified clay pipe (i.e. all clayware)
Inspection Purpose:	Lining Type: None
Flow Control: No flow control	Lining Material: None

Comment:
Recommendation:

1:86	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: MH10						
	0.00	MH	Start node type, manhole, reference number: MH10	00:00:00		
	0.00	WL	Water level, 5% of the vertical dimension	00:00:00		
	9.30	DER	Settled deposits, coarse, 90% cross-sectional area loss: POSSIBLY COLLAPSE OR REDUNDANT	00:00:54		5
	9.40	SA	Survey abandoned: DUE TO DEBRIS	00:00:59		
Depth: B/MH10						

Structural Defects**Constructional Features****Service and Maintenance Defects****Miscellaneous Features**

Note: In line with the WRc SRM, plastic pipes are not scored against structural defects.

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	1	10.0	1.1	10.0	5.0

Section Pictures - 30/05/2018 - B/MH10X

Section Number: 14	Inspection Direction: MH10 << B/MH10	PLR: B/MH10X	Client's Ref:	Contractor's Ref:
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B_MH10X_4d6fb09f-78bf-47cb-b3e9-59aa1e942ddd_20180604_122311_591.jpg, 00:00:54, 9.30m

Settled deposits, coarse, 90% cross-sectional area loss



Section Inspection - 30/05/2018 - C/MH10X

Section: 15	Inspection: 15	Date: 30/05/18	Time:	Client's Ref:	Weather: No Rain Or Snow	Pre Cleaned: No	PLR: C/MH10X
Operator: Cb/Dh		Vehicle: FJ17 ZDS		Camera: Flexi	Preset Length:	Criticality Grade:	Alternative ID:

Town or Village: YIEWSLEY	Insp Dir: MH10 << C/MH10	US MH: C/MH10
Road: High Street	Inspected Length: 4.20 m	US Depth:
Location:	Total Length: 4.20 m	DS MH: MH10
Surface Cover:	Pipe Length: 0.00 m	DS Depth:

Use: Surface water	Pipe Shape: Circular
Type of Pipe: Gravity drain/sewer	Height / Width: 100 mm
Year Constructed:	Pipe Material: Vitrified clay pipe (i.e. all clayware)
Inspection Purpose:	Lining Type: None
Flow Control: No flow control	Lining Material: None

Comment:
Recommendation:

1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: MH10 0.00 0.00 3.90 4.20 4.20 C/MH10 Depth:						
		MH	Start node type, manhole, reference number: MH10	00:00:00		
		WL	Water level, 5% of the vertical dimension	00:00:00		
		JDM	Joint displaced, medium	00:00:27		1
		LU	Line deviates up: 90 BEND	00:00:32		
		SA	Survey abandoned: DUE TO BEND	00:00:32		

Structural Defects

Service and Maintenance Defects

Constructional Features

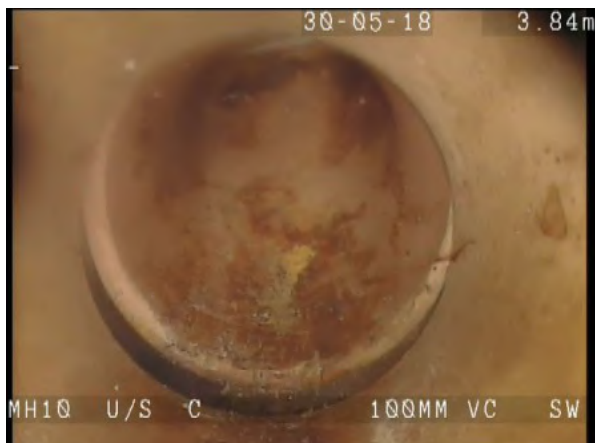
Miscellaneous Features

Note: In line with the WRc SRM, plastic pipes are not scored against structural defects.

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
1	1.0	0.2	0.2	1.0	0	0.0	0.0	0.0	1.0

Section Pictures - 30/05/2018 - C/MH10X

Section Number: 15	Inspection Direction: MH10 << C/MH10	PLR: C/MH10X	Client's Ref:	Contractor's Ref:
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C_MH10X_194d6610-d4d8-461b-be4e-2840784a06d6_201806

04_122550_959.jpg, 00:00:27, 3.90m

Joint displaced, medium



Section Inspection - 30/05/2018 - D/MH10X

Section: 16	Inspection: 16	Date: 30/05/18	Time:	Client's Ref:	Weather: No Rain Or Snow	Pre Cleaned: No	PLR: D/MH10X
Operator: Cb/Dh		Vehicle: FJ17 ZDS		Camera: Flexi	Preset Length:	Criticality Grade:	Alternative ID:

Town or Village: YIEWSLEY	Insp Dir: MH10 << D/MH10	US MH: D/MH10
Road: High Street	Inspected Length: 6.20 m	US Depth:
Location:	Total Length: 6.20 m	DS MH: MH10
Surface Cover:	Pipe Length: 0.00 m	DS Depth:
Use: Surface water	Pipe Shape: Circular	
Type of Pipe: Gravity drain/sewer	Height / Width: 100 mm	
Year Constructed:	Pipe Material: Vitrified clay pipe (i.e. all clayware)	
Inspection Purpose:	Lining Type: None	
Flow Control: No flow control	Lining Material: None	
Comment:		
Recommendation:		

1:57	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: MH10 0.00 MH Start node type, manhole, reference number: MH10 00:00:00 0.00 WL Water level, 5% of the vertical dimension 00:00:00 6.20 GYF Finish node type, gully, reference number: D/MH10 00:00:49 D/MH10 Depth:						

Structural Defects					Constructional Features				
Service and Maintenance Defects					Miscellaneous Features				
Note: In line with the WRc SRM, plastic pipes are not scored against structural defects.									
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

Section Inspection - 30/05/2018 - MH11X

Section: 18	Inspection: 18	Date: 30/05/18	Time:	Client's Ref:	Weather: No Rain Or Snow	Pre Cleaned: No	PLR: MH11X
Operator: Cb/Dh	Vehicle: FJ17 ZDS	Camera: Flexi	Preset Length:	Criticality Grade:	Alternative ID:		

Town or Village: YIEWSLEY	Insp Dir: MH11 >> MH13	US MH: MH11
Road: High Street	Inspected Length: 15.70 m	US Depth:
Location:	Total Length: 15.70 m	DS MH: MH13
Surface Cover:	Pipe Length: 0.00 m	DS Depth:
Use: Surface water	Pipe Shape: Circular	
Type of Pipe: Gravity drain/sewer	Height / Width: 100 mm	
Year Constructed:	Pipe Material: Vitrified clay pipe (i.e. all clayware)	
Inspection Purpose:	Lining Type: None	
Flow Control: No flow control	Lining Material: None	
Comment:		
Recommendation:		

1:143	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: MH11						
	0.00	MH	Start node type, manhole, reference number: MH11	00:00:00		
	0.00	WL	Water level, 5% of the vertical dimension	00:00:00		
	7.50	JN	Junction at 9 o'clock, diameter: 100mm	00:00:57		
	7.50	FLJ	Fracture, longitudinal at joint at 4 o'clock	00:00:57		3
	12.40	S01	DES Settled deposits, fine, 5% cross-sectional area loss, start	00:01:23		
	12.50	WL	Water level, 10% of the vertical dimension	00:01:24		
	13.70	WL	Water level, 20% of the vertical dimension	00:01:32		
	14.70	CUD	Loss of vision, silt	00:01:58		
	15.40	F01	DES Settled deposits, fine, 5% cross-sectional area loss, finish	00:02:02		2
	15.50	WL	Water level, 10% of the vertical dimension	00:02:04		
Depth: MH13	15.70	MHF	Finish node type, manhole, reference number: MH13	00:02:09		

Structural Defects					Constructional Features				
Service and Maintenance Defects					Miscellaneous Features				
Note: In line with the WRc SRM, plastic pipes are not scored against structural defects.									
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
1	40.0	2.5	2.5	3.0	1	1.0	0.1	1.0	2.0

Section Pictures - 30/05/2018 - MH11X

Section Number: 18	Inspection Direction: MH11 >> MH13	PLR: MH11X	Client's Ref:	Contractor's Ref:
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MH11X_45b8ff6e-664e-4988-89f3-78e69c1534ea_20180604_1

30155_767.jpg, 00:00:57, 7.50m

Fracture, longitudinal at joint at 4 o'clock



MH11X_c36e24ac-677f-42e1-8109-ac41a0b01cfb_20180604_1

30344_193.jpg, 00:01:23, 12.40m

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

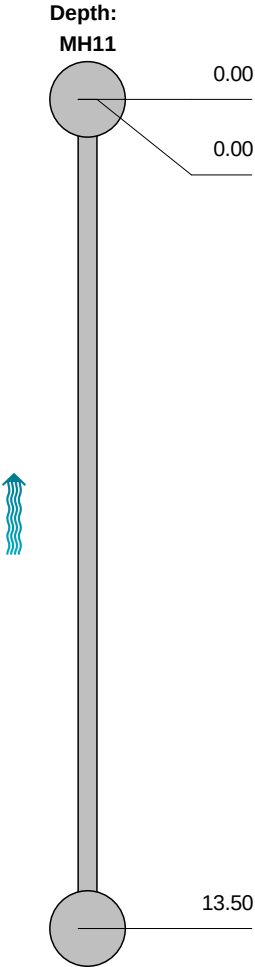
**Section Inspection - 30/05/2018 - A/MH11X**

Section: 19	Inspection: 19	Date: 30/05/18	Time:	Client's Ref:	Weather: No Rain Or Snow	Pre Cleaned: No	PLR: A/MH11X
Operator: Cb/Dh		Vehicle: FJ17 ZDS		Camera: Flexi	Preset Length:	Criticality Grade:	Alternative ID:

Town or Village: YIEWSLEY	Insp Dir: MH11 << A/MH11	US MH: A/MH11
Road: High Street	Inspected Length: 13.50 m	US Depth:
Location:	Total Length: 13.50 m	DS MH: MH11
Surface Cover:	Pipe Length: 0.00 m	DS Depth:

Use: Surface water	Pipe Shape: Circular
Type of Pipe: Gravity drain/sewer	Height / Width: 100 mm
Year Constructed:	Pipe Material: Vitrified clay pipe (i.e. all clayware)
Inspection Purpose:	Lining Type: None
Flow Control: No flow control	Lining Material: None

Comment:
Recommendation:

1:123	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth:						
MH11						
	0.00	MH	Start node type, manhole, reference number: MH11	00:00:00		
	0.00	WL	Water level, 5% of the vertical dimension	00:00:00		
	13.50	GYF	Finish node type, gully, reference number: A/MH11	00:01:20		
A/MH11						
Depth:						

Structural Defects**Constructional Features****Service and Maintenance Defects****Miscellaneous Features**

Note: In line with the WRc SRM, plastic pipes are not scored against structural defects.

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

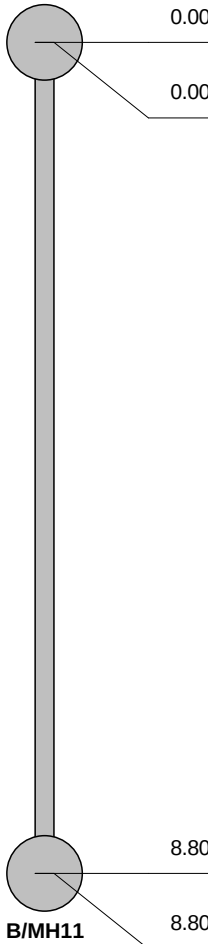
**Section Inspection - 30/05/2018 - B/MH11X**

Section: 20	Inspection: 20	Date: 30/05/18	Time:	Client's Ref:	Weather: No Rain Or Snow	Pre Cleaned: No	PLR: B/MH11X
Operator: Cb/Dh		Vehicle: FJ17 ZDS		Camera: Flexi	Preset Length:	Criticality Grade:	Alternative ID:

Town or Village: YIEWSLEY	Insp Dir: MH11 << B/MH11	US MH: B/MH11
Road: High Street	Inspected Length: 8.80 m	US Depth:
Location:	Total Length: 8.80 m	DS MH: MH11
Surface Cover:	Pipe Length: 0.00 m	DS Depth:

Use: Surface water	Pipe Shape: Circular
Type of Pipe: Gravity drain/sewer	Height / Width: 100 mm
Year Constructed:	Pipe Material: Vitrified clay pipe (i.e. all clayware)
Inspection Purpose:	Lining Type: None
Flow Control: No flow control	Lining Material: None

Comment:
Recommendation:

1:80	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth:						
MH11						
	0.00	MH	Start node type, manhole, reference number: MH11	00:00:00		
	0.00	WL	Water level, 5% of the vertical dimension	00:00:00		
						
	8.80	DER	Settled deposits, coarse, 50% cross-sectional area loss: POSSIBLY LINE UP	00:01:07		4
	8.80	SA	Survey abandoned: DUE TO DEBRIS / POSSIBLY 90 BEND	00:01:07		
Depth:						

Structural Defects**Constructional Features****Service and Maintenance Defects****Miscellaneous Features**

Note: In line with the WRc SRM, plastic pipes are not scored against structural defects.

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	1	5.0	0.6	5.0	4.0

Section Pictures - 30/05/2018 - B/MH11X

Section Number: 20	Inspection Direction: MH11 << B/MH11	PLR: B/MH11X	Client's Ref:	Contractor's Ref:
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B_MH11X_ece2156b-2a64-47e8-81b9-f28b627ce6dd_20180604_131600_646.jpg, 00:01:07, 8.80m

Settled deposits, coarse, 50% cross-sectional area loss

Section Inspection - 30/05/2018 - C/MH11X

Section: 21	Inspection: 21	Date: 30/05/18	Time:	Client's Ref:	Weather: No Rain Or Snow	Pre Cleaned: No	PLR: C/MH11X
Operator: Cb/Dh		Vehicle: FJ17 ZDS		Camera: Flexi	Preset Length:	Criticality Grade:	Alternative ID:

Town or Village: YIEWSLEY	Insp Dir: MH11 << C/MH11	US MH: C/MH11
Road: High Street	Inspected Length: 3.40 m	US Depth:
Location:	Total Length: 3.50 m	DS MH: MH11
Surface Cover:	Pipe Length: 0.00 m	DS Depth:
Use: Surface water	Pipe Shape: Circular	
Type of Pipe: Gravity drain/sewer	Height / Width: 100 mm	
Year Constructed:	Pipe Material: Vitrified clay pipe (i.e. all clayware)	
Inspection Purpose:	Lining Type: None	
Flow Control: No flow control	Lining Material: None	
Comment:		
Recommendation:		

1:50	Position [m]	Code	Observation	MPEG	Photo	Grade																														
Depth: MH11 0.00 0.00 3.40 3.40 3.50 C/MH11 Depth: ↑ <table><tr><td>MH</td><td>Start node type, manhole, reference number: MH11</td><td>00:00:00</td><td></td><td></td><td></td></tr><tr><td>WL</td><td>Water level, 5% of the vertical dimension</td><td>00:00:00</td><td></td><td></td><td></td></tr><tr><td>DER</td><td>Settled deposits, coarse, 95% cross-sectional area loss: POSSIBLY 90 BEND</td><td>00:00:29</td><td></td><td></td><td>5</td></tr><tr><td>SA</td><td>Survey abandoned: DUE TO DEBRIS</td><td>00:00:29</td><td></td><td></td><td></td></tr><tr><td></td><td>End of pipe</td><td></td><td></td><td></td><td></td></tr></table>							MH	Start node type, manhole, reference number: MH11	00:00:00				WL	Water level, 5% of the vertical dimension	00:00:00				DER	Settled deposits, coarse, 95% cross-sectional area loss: POSSIBLY 90 BEND	00:00:29			5	SA	Survey abandoned: DUE TO DEBRIS	00:00:29					End of pipe				
MH	Start node type, manhole, reference number: MH11	00:00:00																																		
WL	Water level, 5% of the vertical dimension	00:00:00																																		
DER	Settled deposits, coarse, 95% cross-sectional area loss: POSSIBLY 90 BEND	00:00:29			5																															
SA	Survey abandoned: DUE TO DEBRIS	00:00:29																																		
	End of pipe																																			
Structural Defects			Constructional Features																																	
Service and Maintenance Defects			Miscellaneous Features																																	
Note: In line with the WRc SRM, plastic pipes are not scored against structural defects.																																				
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade																											
0	0.0	0.0	0.0	1.0	1	10.0	2.9	10.0	5.0																											

Section Pictures - 30/05/2018 - C/MH11X

Section Number: 21	Inspection Direction: MH11 << C/MH11	PLR: C/MH11X	Client's Ref:	Contractor's Ref:
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C_MH11X_2567db29-1375-41da-92e6-dec86a3494df_2018060

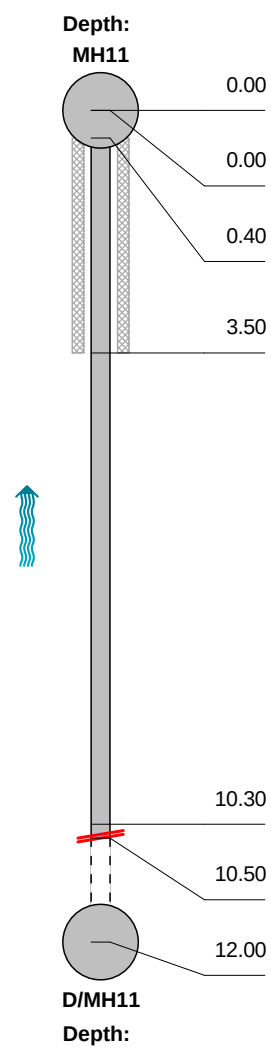
4_131952_395.jpg, 00:00:29, 3.40m

Settled deposits, coarse, 95% cross-sectional area loss

Section Inspection - 30/05/2018 - D/MH11X

Section: 22	Inspection: 22	Date: 30/05/18	Time:	Client's Ref:	Weather: No Rain Or Snow	Pre Cleaned: No	PLR: D/MH11X
Operator: Cb/Dh	Vehicle: FJ17 ZDS	Camera: Flexi	Preset Length:	Criticality Grade:	Alternative ID:		

Town or Village: YIEWSLEY	Insp Dir: MH11 << D/MH11	US MH: D/MH11
Road: High Street	Inspected Length: 10.50 m	US Depth:
Location:	Total Length: 12.00 m	DS MH: MH11
Surface Cover:	Pipe Length: 0.00 m	DS Depth:
Use: Surface water	Pipe Shape: Circular	
Type of Pipe: Gravity drain/sewer	Height / Width: 100 mm	
Year Constructed:	Pipe Material: Vitrified clay pipe (i.e. all clayware)	
Inspection Purpose:	Lining Type: None	
Flow Control: No flow control	Lining Material: None	
Comment:		
Recommendation:		

1:109	Position [m]	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number: MH11	00:00:00		
	0.00	WL	Water level, 5% of the vertical dimension	00:00:01		
	0.40	S01	DES Settled deposits, fine, 10% cross-sectional area loss, start	00:00:10		
	3.50	F01	DES Settled deposits, fine, 10% cross-sectional area loss, finish	00:00:27		3
	10.30	LL	Line deviates left	00:01:04		
	10.50	SA	Survey abandoned: DUE TO BEND	00:02:18		
	12.00		End of pipe			

Structural Defects					Constructional Features				
Service and Maintenance Defects					Miscellaneous Features				
Note: In line with the WRc SRM, plastic pipes are not scored against structural defects.									
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 - 30/05/2018 - D/MH11X

Section Number: 22	Inspection Direction: MH11 << D/MH11	PLR: D/MH11X	Client's Ref:	Contractor's Ref:
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D_MH11X_836448f8-7026-4146-97aa-9682418fdd29_2018060

4_132208_441.jpg, 00:00:10, 0.40m

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



Section Inspection - 30/05/2018 - GY4X

Section: 23	Inspection: 23	Date: 30/05/18	Time:	Client's Ref:	Weather: No Rain Or Snow	Pre Cleaned: No	PLR: GY4X
Operator: Cb/Dh		Vehicle: FJ17 ZDS		Camera: Flexi	Preset Length:	Criticality Grade:	Alternative ID:

Town or Village: YIEWSLEY	Insp Dir: GY4 >> D/S GY4	US MH: GY4
Road: High Street	Inspected Length: 6.50 m	US Depth:
Location:	Total Length: 6.50 m	DS MH: D/S GY4
Surface Cover:	Pipe Length: 0.00 m	DS Depth:

Use: Surface water	Pipe Shape: Circular
Type of Pipe: Gravity drain/sewer	Height / Width: 100 mm
Year Constructed:	Pipe Material: Vitrified clay pipe (i.e. all clayware)
Inspection Purpose:	Lining Type: None
Flow Control: No flow control	Lining Material: None

Comment:
Recommendation:

1:59	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: GY4 D/S GY4 Depth:						
	0.00	GY	Start node type, gully, reference number: GY4	00:00:00		
	0.00	WL	Water level, 5% of the vertical dimension	00:00:00		
	0.10	DES	Settled deposits, fine, 10% cross-sectional area loss	00:00:00		3
	0.60	JDM	Joint displaced, medium	00:00:18		1
	2.10	WL	Water level, 20% of the vertical dimension	00:00:28		
	2.40	CUW	Loss of vision, camera under water	00:00:37		
	4.50	WL	Water level, 10% of the vertical dimension	00:00:59		
	6.00	LL	Line deviates left	00:01:11		
	6.50	SA	Survey abandoned: JOINS CARRIER RUN BLIND	00:01:15		

Structural Defects

Constructional Features

Service and Maintenance Defects

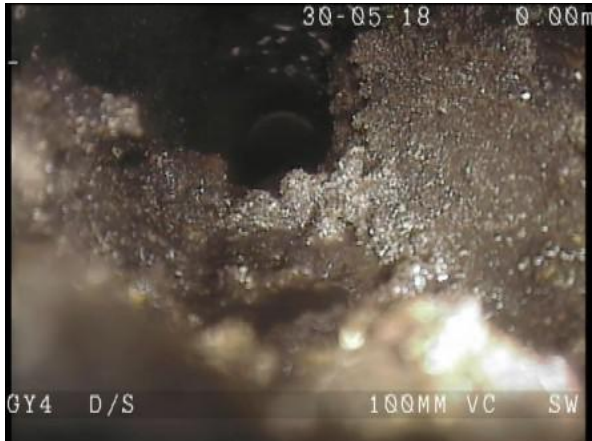
Miscellaneous Features

Note: In line with the WRc SRM, plastic pipes are not scored against structural defects.

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
1	1.0	0.2	0.2	1.0	1	2.0	0.3	2.0	3.0

Section Pictures - 30/05/2018 - GY4X

Section Number: 23	Inspection Direction: GY4 >> D/S GY4	PLR: GY4X	Client's Ref:	Contractor's Ref:
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GY4X_89492c26-b0de-426a-9dc6-f6b212b91f96_20180604_132822_598.jpg, 00:00:00, 0.10m
 Settled deposits, fine, 10% cross-sectional area loss



GY4X_fb7ebc75-bacb-4bc7-9aa2-9c46b27d4ab2_20180604_132856_232.jpg, 00:00:18, 0.60m
 Joint displaced, medium



GY4X_f2a9412c-e04b-47e4-a18a-4c80e63c3138_20180604_132918_034.jpg, 00:00:28, 2.10m
 Water level, 20% of the vertical dimension



Section Inspection - 30/05/2018 - U/S MH12X

Section: 24	Inspection: 24	Date: 30/05/18	Time:	Client's Ref:	Weather: No Rain Or Snow	Pre Cleaned: No	PLR: U/S MH12X
Operator: Cb/Dh	Vehicle: FJ17 ZDS	Camera: Flexi	Preset Length:	Criticality Grade:	Alternative ID:		

Town or Village: YIEWSLEY	Insp Dir: MH12 << U/S MH12	US MH: U/S MH12
Road: High Street	Inspected Length: 19.20 m	US Depth:
Location:	Total Length: 19.20 m	DS MH: MH12
Surface Cover:	Pipe Length: 0.00 m	DS Depth:
Use: Surface water	Pipe Shape: Circular	
Type of Pipe: Gravity drain/sewer	Height / Width: 100 mm	
Year Constructed:	Pipe Material: Vitrified clay pipe (i.e. all clayware)	
Inspection Purpose:	Lining Type: None	
Flow Control: No flow control	Lining Material: None	
Comment:		
Recommendation:		

1:174	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: MH12						
	0.00	MH	Start node type, manhole, reference number: MH12	00:00:00		
	0.00	WL	Water level, 5% of the vertical dimension	00:00:00		
	5.60	JN	Junction at 9 o'clock, diameter: 100mm	00:00:41		
	10.10	S01	DES Settled deposits, fine, 5% cross-sectional area loss, start	00:01:11		
	11.70	DES	Settled deposits, fine, 10% cross-sectional area loss	00:01:21		3
	16.30	F01	DES Settled deposits, fine, 5% cross-sectional area loss, finish	00:01:51		2
	19.20	OCF	Finish node type, other special chamber, reference number: U/S MH12: ACO CHANNEL SUMP	00:02:07		

Structural Defects					Constructional Features				
Service and Maintenance Defects					Miscellaneous Features				
Note: In line with the WRc SRM, plastic pipes are not scored against structural defects.									
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	2	2.0	0.2	3.0	3.0

Section Pictures - 30/05/2018 - U/S MH12X

Section Number: 24	Inspection Direction: MH12 << U/S MH12	PLR: U/S MH12X	Client's Ref:	Contractor's Ref:
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U_S
 MH12X_427be56e-b667-4e80-a128-1737d92584ef_20180604_
 133524_873.jpg, 00:01:11, 10.10m
 Settled deposits, fine, 5% cross-sectional area loss, start



U_S
 MH12X_2bbc4dde-a064-4af7-8145-a1a1beeace39_20180604_
 133947_373.jpg, 00:01:21, 11.70m
 Settled deposits, fine, 10% cross-sectional area loss

**Aqua-Jet Specialist Drainage Contractors Ltd**

Yard 21, Hilton Ind Est, Sutton Lane, Hilton, Derbyshire, DE65 5FE

Tel. 01283 730333

aquajetltd@aol.com

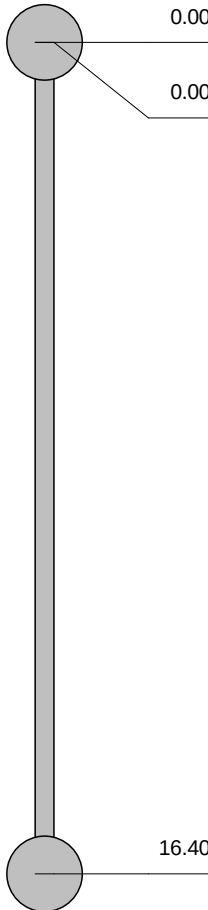
Section Inspection - 30/05/2018 - MH12X

Section: 25	Inspection: 25	Date: 30/05/18	Time:	Client's Ref:	Weather: No Rain Or Snow	Pre Cleaned: No	PLR: MH12X
Operator: Cb/Dh		Vehicle: FJ17 ZDS		Camera: Flexi	Preset Length:	Criticality Grade:	Alternative ID:

Town or Village: YIEWSLEY	Insp Dir: MH12 >> MH13	US MH: MH12
Road: High Street	Inspected Length: 16.40 m	US Depth:
Location:	Total Length: 16.40 m	DS MH: MH13
Surface Cover:	Pipe Length: 0.00 m	DS Depth:

Use: Surface water	Pipe Shape: Circular
Type of Pipe: Gravity drain/sewer	Height / Width: 100 mm
Year Constructed:	Pipe Material: Vitrified clay pipe (i.e. all clayware)
Inspection Purpose:	Lining Type: None
Flow Control: No flow control	Lining Material: None

Comment:
Recommendation:

1:149	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: MH12						
	0.00	MH	Start node type, manhole, reference number: MH12	00:00:00		
	0.00	WL	Water level, 5% of the vertical dimension	00:00:00		
	16.40	MHF	Finish node type, manhole, reference number: MH13	00:01:48		
MH13 Depth:						

Structural Defects**Constructional Features****Service and Maintenance Defects****Miscellaneous Features**

Note: In line with the WRc SRM, plastic pipes are not scored against structural defects.

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	0	0.0	0.0	0.0	1.0

Section Inspection - 30/05/2018 - MH13X

Section: 26	Inspection: 26	Date: 30/05/18	Time:	Client's Ref:	Weather: No Rain Or Snow	Pre Cleaned: No	PLR: MH13X
Operator: Cb/Dh	Vehicle: FJ17 ZDS	Camera: Flexi	Preset Length:	Criticality Grade:	Alternative ID:		

Town or Village: YIEWSLEY	Insp Dir: MH13 >> INT2	US MH: MH13
Road: High Street	Inspected Length: 29.90 m	US Depth:
Location:	Total Length: 29.90 m	DS MH: INT2
Surface Cover:	Pipe Length: 0.00 m	DS Depth:

Use: Surface water	Pipe Shape: Circular
Type of Pipe: Gravity drain/sewer	Height / Width: 150 mm
Year Constructed:	Pipe Material: Vitrified clay pipe (i.e. all clayware)
Inspection Purpose:	Lining Type: None
Flow Control: No flow control	Lining Material: None

Comment:
Recommendation:

1:271	Position [m]	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number: MH13	00:00:00		
Depth: MH13	0.00	WL	Water level, 5% of the vertical dimension	00:00:01		
	15.30	JN	Junction at 10 o'clock, diameter: 100mm	00:01:32		
	15.40	LR	Line deviates right	00:01:34		
	16.30	WL	Water level, 10% of the vertical dimension	00:01:42		
	16.60	S01	DES Settled deposits, fine, 5% cross-sectional area loss, start	00:01:44		
	20.70	JN	Junction at 2 o'clock, diameter: 100mm	00:02:03		
	22.80	F01	DES Settled deposits, fine, 5% cross-sectional area loss, finish	00:02:15		2
	24.30	WL	Water level, 20% of the vertical dimension	00:02:23		
	26.10	DER	Settled deposits, coarse, 10% cross-sectional area loss	00:02:36		3
	27.00	S02	DES Settled deposits, fine, 5% cross-sectional area loss, start	00:02:42		
	28.80	WL	Water level, 10% of the vertical dimension	00:02:53		
	29.30	LR	Line deviates right	00:02:56		
	29.50	F02	DES Settled deposits, fine, 5% cross-sectional area loss, finish	00:02:56		2
INT2	29.90	OCF	Finish node type, other special chamber, reference number: INT2: INTERCEPTOR	00:02:58		

Structural Defects					Constructional Features				
Service and Maintenance Defects					Miscellaneous Features				
Note: In line with the WRc SRM, plastic pipes are not scored against structural defects.									
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
0	0.0	0.0	0.0	1.0	3	2.0	0.1	4.0	3.0

Section Pictures - 30/05/2018 - MH13X

Section Number: 26	Inspection Direction: MH13 >> INT2	PLR: MH13X	Client's Ref:	Contractor's Ref:
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MH13X_3a5ea860-e9c1-4aa8-bd1c-61770eea8ec1_20180604_140213_355.jpg, 00:01:44, 16.60m
 Settled deposits, fine, 5% cross-sectional area loss, start



MH13X_7c3a29fa-817e-4c34-b5ab-992eafca8806_20180604_140331_807.jpg, 00:02:23, 24.30m
 Water level, 20% of the vertical dimension



MH13X_5646dd2b-e2fd-4983-bc3b-baadbd282d9a_20180604_140400_848.jpg, 00:02:36, 26.10m
 Settled deposits, coarse, 10% cross-sectional area loss



MH13X_1bfd6dfd-bb9d-4c16-adf4-dd01b0b5bb0a_20180604_140445_777.jpg, 00:02:42, 27.00m
 Settled deposits, fine, 5% cross-sectional area loss, start



Section Inspection - 30/05/2018 - GY6X

Section: 27	Inspection: 27	Date: 30/05/18	Time:	Client's Ref:	Weather: No Rain Or Snow	Pre Cleaned: No	PLR: GY6X
Operator: Cb/Dh		Vehicle: FJ17 ZDS		Camera: Flexi	Preset Length:	Criticality Grade:	Alternative ID:

Town or Village: YIEWSLEY	Insp Dir: GY6 >> D/S GY6	US MH: GY6
Road: High Street	Inspected Length: 4.50 m	US Depth:
Location:	Total Length: 4.50 m	DS MH: D/S GY6
Surface Cover:	Pipe Length: 0.00 m	DS Depth:

Use: Surface water	Pipe Shape: Circular
Type of Pipe: Gravity drain/sewer	Height / Width: 100 mm
Year Constructed:	Pipe Material: Vitrified clay pipe (i.e. all clayware)
Inspection Purpose:	Lining Type: None
Flow Control: No flow control	Lining Material: None

Comment:
 Recommendation:

1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
	0.00	GY	Start node type, gully, reference number: GY6	00:00:00		
	0.00	WL	Water level, 5% of the vertical dimension	00:00:00		
	0.10	S01	DES Settled deposits, fine, 20% cross-sectional area loss, start	00:00:05		
	2.50	F01	DES Settled deposits, fine, 20% cross-sectional area loss, finish	00:00:26		3
	2.60	WL	Water level, 20% of the vertical dimension	00:00:26		
	4.10	LR	Line deviates right	00:00:46		
	4.50	SA	Survey abandoned: JOINS ANOTHER RUN BLIND	00:00:54		

Structural Defects					Constructional Features				
Service and Maintenance Defects					Miscellaneous Features				
Note: In line with the WRc SRM, plastic pipes are not scored against structural defects.									
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 - 30/05/2018 - GY6X

Section Number: 27	Inspection Direction: GY6 >> D/S GY6	PLR: GY6X	Client's Ref:	Contractor's Ref:
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GY6X_4f11b5a9-0457-4edd-8c58-6809d6ef90ec_20180604_141001_233.jpg, 00:00:05, 0.10m
 Settled deposits, fine, 20% cross-sectional area loss, start



GY6X_b725a713-67d4-4dc1-8d3a-32cf0ec695b7_20180604_141144_644.jpg, 00:00:26, 2.60m
 Water level, 20% of the vertical dimension



Section Inspection - 30/05/2018 - U/S MH3X

Section: 28	Inspection: 28	Date: 30/05/18	Time:	Client's Ref:	Weather: No Rain Or Snow	Pre Cleaned: No	PLR: U/S MH3X
Operator: Cb/Dh	Vehicle: FJ17 ZDS	Camera: Flexi	Preset Length:	Criticality Grade:	Alternative ID:		

Town or Village: YIEWSLEY	Insp Dir: MH3 << U/S MH3	US MH: U/S MH3
Road: High Street	Inspected Length: 5.00 m	US Depth:
Location:	Total Length: 5.00 m	DS MH: MH3
Surface Cover:	Pipe Length: 0.00 m	DS Depth:
Use: Surface water	Pipe Shape: Circular	
Type of Pipe: Gravity drain/sewer	Height / Width: 150 mm	
Year Constructed:	Pipe Material: Vitrified clay pipe (i.e. all clayware)	
Inspection Purpose:	Lining Type: None	
Flow Control: No flow control	Lining Material: None	
Comment:		
Recommendation:		

1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: MH3 U/S MH3 Depth:						
	0.00	MH	Start node type, manhole, reference number: MH3	00:00:00		
	0.00	WL	Water level, 5% of the vertical dimension	00:00:01		
	1.20	LL	Line deviates left	00:00:16		
	1.50	WL	Water level, 10% of the vertical dimension	00:00:19		
	2.60	DES	Settled deposits, fine, 20% cross-sectional area loss	00:00:26		3
	3.40	REM	General remark: RESTRICTED VIEW DUE TO DIRT ON LENSE	00:00:44		
	5.00	LU	Line deviates up: 90 BEND	00:00:53		
	5.00	SA	Survey abandoned: DUE TO BEND	00:00:53		

Structural Defects					Constructional Features				
Service and Maintenance Defects					Miscellaneous Features				
Note: In line with the WRc SRM, plastic pipes are not scored against structural defects.									
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 - 30/05/2018 - U/S MH3X

Section Number: 28	Inspection Direction: MH3 << U/S MH3	PLR: U/S MH3X	Client's Ref:	Contractor's Ref:
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U_S

MH3X_f8612077-ef92-47e7-a340-44c9e82f0511_20180604_14

2336_384.jpg, 00:00:26, 2.60m

Settled deposits, fine, 20% cross-sectional area loss



Section Inspection - 30/05/2018 - A/MH14X

Section: 29	Inspection: 29	Date: 30/05/18	Time:	Client's Ref:	Weather: No Rain Or Snow	Pre Cleaned: No	PLR: A/MH14X
Operator: Cb/Dh		Vehicle: FJ17 ZDS		Camera: Flexi	Preset Length:	Criticality Grade:	Alternative ID:

Town or Village: YIEWSLEY	Insp Dir: MH14 << A/MH14	US MH: A/MH14
Road: High Street	Inspected Length: 7.30 m	US Depth:
Location:	Total Length: 7.30 m	DS MH: MH14
Surface Cover:	Pipe Length: 0.00 m	DS Depth:

Use: Foul	Pipe Shape: Circular
Type of Pipe: Gravity drain/sewer	Height / Width: 100 mm
Year Constructed:	Pipe Material: Vitrified clay pipe (i.e. all clayware)
Inspection Purpose:	Lining Type: None
Flow Control: No flow control	Lining Material: None

Comment:
Recommendation:

1:67	Position [m]	Code	Observation	MPEG	Photo	Grade
	Depth: MH14					
	0.00	MH	Start node type, manhole, reference number: MH14	00:00:00		
	0.00	WL	Water level, 5% of the vertical dimension	00:00:01		
	0.10	DEG	Attached deposits, grease from 3 o'clock to 8 o'clock, 5% cross-sectional area loss	00:00:05		2
	1.90	JDM	Joint displaced, medium	00:00:16		1
	5.30	JDM	Joint displaced, medium	00:00:38		1
	5.40	DEG	Attached deposits, grease from 3 o'clock to 6 o'clock, 5% cross-sectional area loss	00:00:38		2
	7.20	OBZ	Other obstacles from 5 o'clock to 7 o'clock, 20% cross-sectional area loss: ON 90 BEND	00:00:52		5
	7.30	LU	Line deviates up: 90 BEND	00:00:53		
	7.30	SA	Survey abandoned: DUE TO BEND/OBSTRUCTION	00:01:04		
Depth: A/MH14						

Structural Defects					Constructional Features				
Service and Maintenance Defects					Miscellaneous Features				
Note: In line with the WRc SRM, plastic pipes are not scored against structural defects.									
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
2	1.0	0.3	0.3	1.0	3	10.0	1.6	12.0	5.0

Section Pictures - 30/05/2018 - A/MH14X

Section Number: 29	Inspection Direction: MH14 << A/MH14	PLR: A/MH14X	Client's Ref:	Contractor's Ref:
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A_MH14X_04528b0a-7455-46eb-b22f-35010d4167e5_20180604_143517_428.jpg, 00:00:05, 0.10m
 Attached deposits, grease from 3 o'clock to 8 o'clock, 5% cross-sectional area loss



A_MH14X_0ebe5ef9-0fe6-42d8-a01f-5de9df510e83_20180604_143440_621.jpg, 00:00:16, 1.90m
 Joint displaced, medium



A_MH14X_f734058e-39ba-499b-9f6f-974fac535ce5_20180604_143727_323.jpg, 00:00:38, 5.30m
 Joint displaced, medium



A_MH14X_9e96a233-ed1c-48e5-94ed-759369fd6198_20180604_143909_323.jpg, 00:00:52, 7.20m
 Other obstacles from 5 o'clock to 7 o'clock, 20% cross-sectional area loss

**Section Inspection - 30/05/2018 - B/MH14X**

Section: 30	Inspection: 30	Date: 30/05/18	Time:	Client's Ref:	Weather: No Rain Or Snow	Pre Cleaned: No	PLR: B/MH14X
Operator: Cb/Dh		Vehicle: FJ17 ZDS		Camera: Flexi	Preset Length:	Criticality Grade:	Alternative ID:

Town or Village: YIEWSLEY	Insp Dir: MH14 << B/MH14	US MH: B/MH14
Road: High Street	Inspected Length: 18.20 m	US Depth:
Location:	Total Length: 18.20 m	DS MH: MH14
Surface Cover:	Pipe Length: 0.00 m	DS Depth:

Use: Foul	Pipe Shape: Circular
Type of Pipe: Gravity drain/sewer	Height / Width: 100 mm
Year Constructed:	Pipe Material: Vitrified clay pipe (i.e. all clayware)
Inspection Purpose:	Lining Type: None
Flow Control: No flow control	Lining Material: None

Comment:
Recommendation:

1:165	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: MH14						
	0.00	MH	Start node type, manhole, reference number: MH14	00:00:00		
	0.00	WL	Water level, 5% of the vertical dimension	00:00:01		
	7.10	JN	Junction at 9 o'clock, diameter: 100mm	00:00:57		
	10.00	JDM	Joint displaced, medium	00:01:13		1
	13.50	MCCI	Material changes to cast iron	00:01:44		
	16.20	LL	Line deviates left	00:02:07		
	18.20	GYF	Finish node type, gully, reference number: B/MH14	00:02:46		
			B/MH14			
			Depth:			

Structural Defects**Constructional Features****Service and Maintenance Defects****Miscellaneous Features**

Note: In line with the WRc SRM, plastic pipes are not scored against structural defects.

STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
1	1.0	0.1	0.1	1.0	0	0.0	0.0	0.0	1.0

Section Pictures - 30/05/2018 - B/MH14X

Section Number: 30	Inspection Direction: MH14 << B/MH14	PLR: B/MH14X	Client's Ref:	Contractor's Ref:
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B_MH14X_f80fcc4a-b6ef-4fc9-a41e-e90103d837d1_20180604_145211_035.jpg, 00:01:13, 10.00m
 Joint displaced, medium



B_MH14X_18d6d96b-3466-4bf2-97b0-6d6743690ace_20180604_150518_290.jpg, 00:01:44, 13.50m
 Material changes to cast iron



Section Inspection - 30/05/2018 - C/MH14X

Section: 31	Inspection: 31	Date: 30/05/18	Time:	Client's Ref:	Weather: No Rain Or Snow	Pre Cleaned: No	PLR: C/MH14X
Operator: Cb/Dh		Vehicle: FJ17 ZDS		Camera: Flexi	Preset Length:	Criticality Grade:	Alternative ID:

Town or Village: YIEWSLEY	Insp Dir: MH14 << C/MH14	US MH: C/MH14
Road: High Street	Inspected Length: 2.50 m	US Depth:
Location:	Total Length: 2.50 m	DS MH: MH14
Surface Cover:	Pipe Length: 0.00 m	DS Depth:

Use: Foul	Pipe Shape: Circular
Type of Pipe: Gravity drain/sewer	Height / Width: 100 mm
Year Constructed:	Pipe Material: Vitrified clay pipe (i.e. all clayware)
Inspection Purpose:	Lining Type: None
Flow Control: No flow control	Lining Material: None

Comment:
Recommendation:

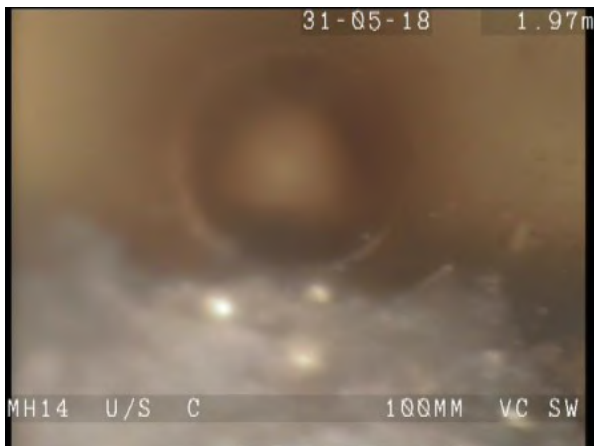
1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number: MH14	00:00:00		
	0.00	WL	Water level, 5% of the vertical dimension	00:00:00		
	0.10	DES	Settled deposits, fine, 5% cross-sectional area loss	00:00:07		2
	1.30	JN	Junction at 2 o'clock, diameter: 100mm	00:00:19		
	2.00	DES	Settled deposits, fine, 5% cross-sectional area loss	00:00:23		2
	2.40	LU	Line deviates up: 90 BEND	00:00:28		
	2.50	SA	Survey abandoned: DUE TO BEND	00:00:28		

Section Pictures - 30/05/2018 - C/MH14X

Section Number: 31	Inspection Direction: MH14 << C/MH14	PLR: C/MH14X	Client's Ref:	Contractor's Ref:
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C_MH14X_680d6f3c-0fea-4b52-9ccd-474b44ce4e91_20180604_151707_649.jpg, 00:00:07, 0.10m
 Settled deposits, fine, 5% cross-sectional area loss



C_MH14X_4ecbaa30-d2c2-4194-8ce2-954695fa2ab7_20180604_151814_784.jpg, 00:00:23, 2.00m
 Settled deposits, fine, 5% cross-sectional area loss



Section Inspection - 30/05/2018 - D/MH14X

Section: 32	Inspection: 32	Date: 30/05/18	Time:	Client's Ref:	Weather: No Rain Or Snow	Pre Cleaned: No	PLR: D/MH14X
Operator: Cb/Dh		Vehicle: FJ17 ZDS		Camera: Flexi	Preset Length:	Criticality Grade:	Alternative ID:

Town or Village: YIEWSLEY	Insp Dir: MH14 << D/MH14	US MH: D/MH14
Road: High Street	Inspected Length: 2.90 m	US Depth:
Location:	Total Length: 2.90 m	DS MH: MH14
Surface Cover:	Pipe Length: 0.00 m	DS Depth:

Use: Foul	Pipe Shape: Circular
Type of Pipe: Gravity drain/sewer	Height / Width: 100 mm
Year Constructed:	Pipe Material: Vitrified clay pipe (i.e. all clayware)
Inspection Purpose:	Lining Type: None
Flow Control: No flow control	Lining Material: None

Comment:
 Recommendation:

1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number: MH14	00:00:00		
	0.00	WL	Water level, 5% of the vertical dimension	00:00:00		
	0.80	S01	DES Settled deposits, fine, 10% cross-sectional area loss, start	00:00:11		
	2.90	F01	DES Settled deposits, fine, 10% cross-sectional area loss, finish	00:00:45		3
	2.90	OBZ	Other obstacles from 4 o'clock to 8 o'clock, 40% cross-sectional area loss: ON 90 BEND	00:00:45		5
	2.90	LU	Line deviates up: 90 BEND	00:00:45		
	2.90	SA	Survey abandoned: DUE TO BEND/OBSTRUCTION	00:00:45		

Structural Defects					Constructional Features				
Service and Maintenance Defects					Miscellaneous Features				
Note: In line with the WRc SRM, plastic pipes are not scored against structural defects.									
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	10.0	4.1	12.0	5.0

Section Pictures - 30/05/2018 - D/MH14X

Section Number: 32	Inspection Direction: MH14 << D/MH14	PLR: D/MH14X	Client's Ref:	Contractor's Ref:
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D_MH14X_b1db26ca-8089-47d0-a1ff-45bb5a26b379_20180604_152331_678.jpg, 00:00:11, 0.80m
 Settled deposits, fine, 10% cross-sectional area loss, start



D_MH14X_a3025a4a-48bc-453f-b890-f5ff270501e4_20180604_154048_176.jpg, 00:00:45, 2.90m
 Other obstacles from 4 o'clock to 8 o'clock, 40% cross-sectional area loss



Section Inspection - 30/05/2018 - MH14X

Section: 33	Inspection: 33	Date: 30/05/18	Time:	Client's Ref:	Weather: No Rain Or Snow	Pre Cleaned: No	PLR: MH14X
Operator: Cb/Dh		Vehicle: FJ17 ZDS		Camera: Flexi	Preset Length:	Criticality Grade:	Alternative ID:

Town or Village: YIEWSLEY	Insp Dir: MH14 >> D/S MH14	US MH: MH14
Road: High Street	Inspected Length: 18.50 m	US Depth:
Location:	Total Length: 18.50 m	DS MH: D/S MH14
Surface Cover:	Pipe Length: 0.00 m	DS Depth:

Use: Foul	Pipe Shape: Circular
Type of Pipe: Gravity drain/sewer	Height / Width: 100 mm
Year Constructed:	Pipe Material: Vitrified clay pipe (i.e. all clayware)
Inspection Purpose:	Lining Type: None
Flow Control: No flow control	Lining Material: None

Comment:
 Recommendation:

1:168	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: MH14 0.00 0.50 2.90 3.40 18.40 18.50 D/S MH14 Depth:						
	0.00	MH	Start node type, manhole, reference number: MH14	00:00:00		
	0.00	WL	Water level, 5% of the vertical dimension	00:00:00		
	0.50	CLJ	Crack, longitudinal at joint at 2 o'clock	00:00:09		2
	2.90	WL	Water level, 20% of the vertical dimension	00:00:22		
	3.40	S01	CUW	Loss of vision, camera under water, start	00:00:27	
	18.40	F01	CUW	Loss of vision, camera under water, finish	00:01:40	
	18.50	SA	Survey abandoned: DUE TO WATER LEVEL / UNKNOWN PIPE LENGTH	00:01:44		

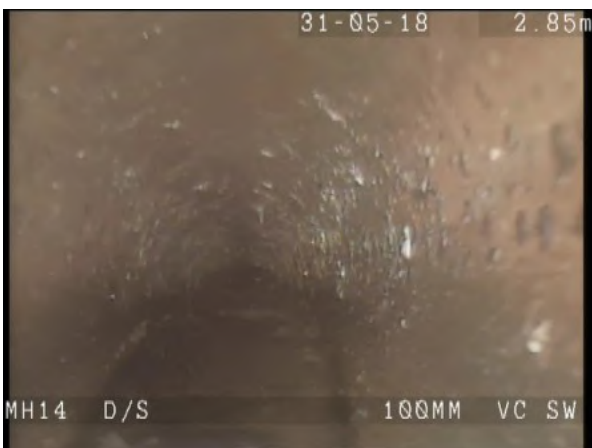
Structural Defects					Constructional Features				
Service and Maintenance Defects					Miscellaneous Features				
Note: In line with the WRc SRM, plastic pipes are not scored against structural defects.									
STR No. Def	STR Peak	STR Mean	STR Total	STR Grade	SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
1	10.0	0.5	0.5	2.0	0	0.0	0.0	0.0	1.0

Section Pictures - 30/05/2018 - MH14X

Section Number: 33	Inspection Direction: MH14 >> D/S MH14	PLR: MH14X	Client's Ref:	Contractor's Ref:
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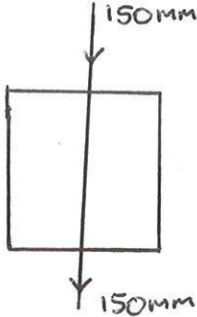
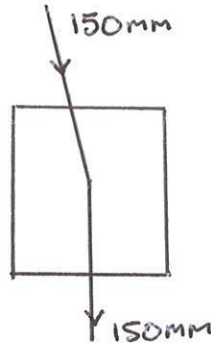
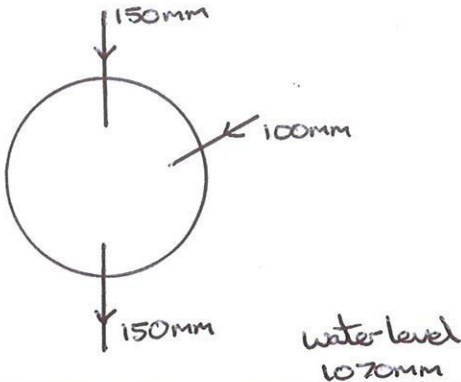
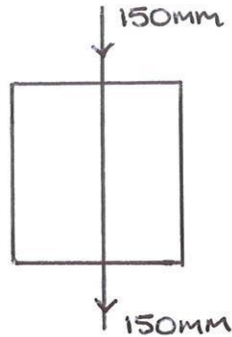


MH14X_168c0c70-77c0-4d60-9b76-dbb6a92cb306_20180604_154812_244.jpg, 00:00:09, 0.50m
 Crack, longitudinal at joint at 2 o'clock



MH14X_cb3f99e3-0051-486d-941d-521f01aa8701_20180604_154912_875.jpg, 00:00:22, 2.90m
 Water level, 20% of the vertical dimension

Manhole Information

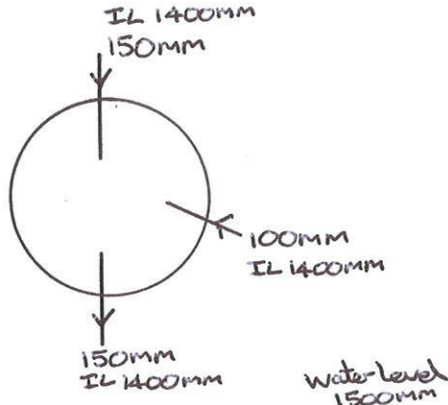
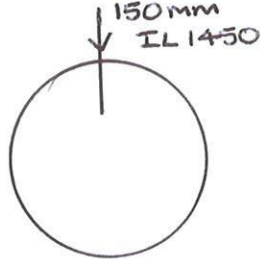
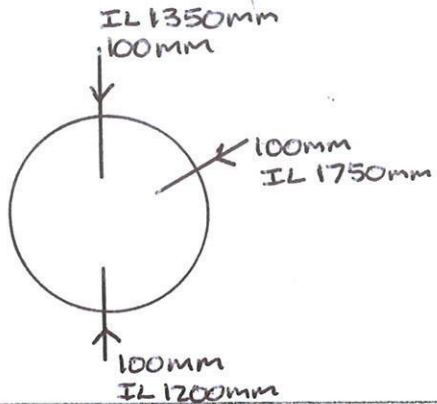
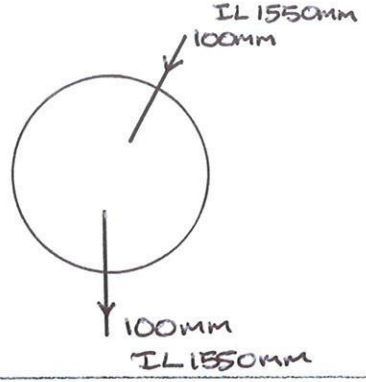
REFERENCE: MHI	DUTY: SW	REFERENCE: MH2	DUTY: SW
DIAGRAM: 		DIAGRAM: 	
DEPTH AT OUTLET: 1160mm		DEPTH AT OUTLET: 950mm	
MH SIZE 1000mm x 700mm		MH SIZE 800mm x 800mm	
MH MATERIAL Brick		MH MATERIAL Brick	
OBSERVATIONS/ COMMENTS:		OBSERVATIONS/ COMMENTS:	
REFERENCE: Int 1	DUTY: SW	REFERENCE: MH3	DUTY: SW
DIAGRAM: 		DIAGRAM: 	
DEPTH AT OUTLET: 1100mm (Total depth 2300mm)		DEPTH AT OUTLET: 1730mm	
MH SIZE 1100mm Ø		MH SIZE 900mm x 700mm	
MH MATERIAL		MH MATERIAL Brick	
OBSERVATIONS/ COMMENTS:		OBSERVATIONS/ COMMENTS:	

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Manhole Information

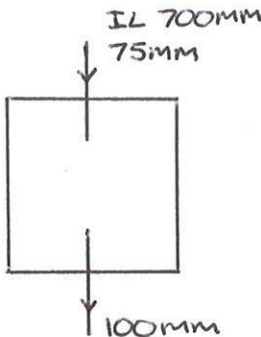
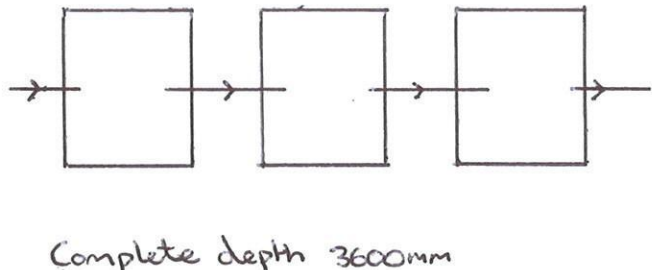
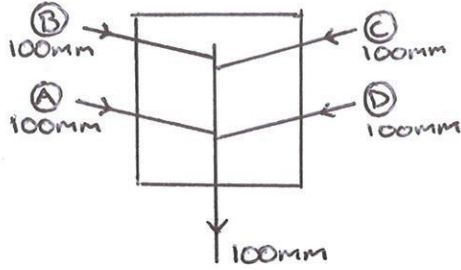
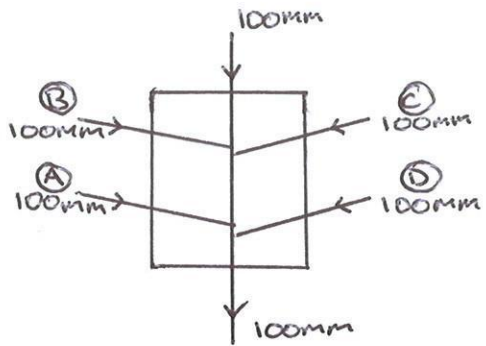
REFERENCE: MH4	DUTY: SW	REFERENCE: MH5	DUTY: SW
DIAGRAM: 		DIAGRAM: 	
DEPTH AT OUTLET: Total depth 3000mm		DEPTH AT OUTLET: Total depth 2450mm	
MH SIZE 1250mm Ø		MH SIZE 1250mm Ø	
MH MATERIAL Concrete		MH MATERIAL Concrete	
OBSERVATIONS/ COMMENTS:		OBSERVATIONS/ COMMENTS: No outlet Possible soakaway	
REFERENCE: MH6	DUTY: SW	REFERENCE: MH7	DUTY: SW
DIAGRAM: 		DIAGRAM: 	
DEPTH AT OUTLET: No outlet		DEPTH AT OUTLET: 1550mm	
MH SIZE 1250mm Ø		MH SIZE 1250mm Ø	
MH MATERIAL Concrete		MH MATERIAL Concrete	
OBSERVATIONS/ COMMENTS: Catch pit possible soakaway		OBSERVATIONS/ COMMENTS: Catch pit	

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Manhole Information

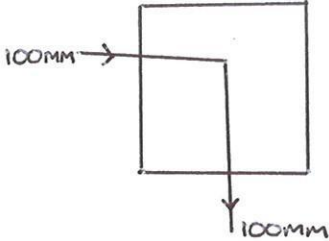
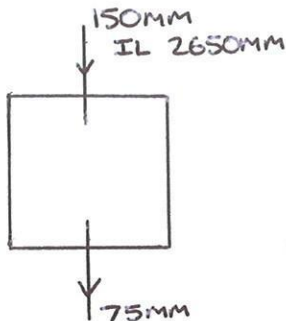
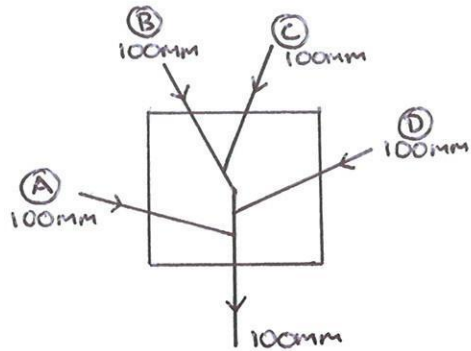
REFERENCE: MH8	DUTY: SW	REFERENCE: Int 2	DUTY: SW
DIAGRAM: 		DIAGRAM: 	
DEPTH AT OUTLET: 1200mm		DEPTH AT OUTLET: 2550mm	
MH SIZE 700mm x 600mm		MH SIZE 750mm x 500mm	
MH MATERIAL Brick		MH MATERIAL PVC	
OBSERVATIONS/ COMMENTS: Catch pit		OBSERVATIONS/ COMMENTS: Interceptor	
REFERENCE: MH10	DUTY: SW	REFERENCE: MH11	DUTY: SW
DIAGRAM: 		DIAGRAM: 	
DEPTH AT OUTLET: 550mm		DEPTH AT OUTLET: 750mm	
MH SIZE 800mm x 650mm		MH SIZE 750mm x 700mm	
MH MATERIAL Concrete		MH MATERIAL Concrete	
OBSERVATIONS/ COMMENTS:		OBSERVATIONS/ COMMENTS:	

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Manhole Information

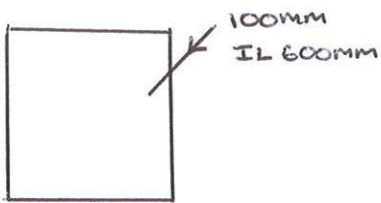
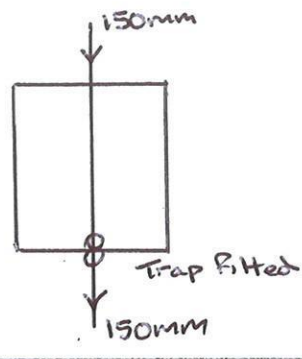
REFERENCE: MH12	DUTY: SW	REFERENCE: MH13	DUTY: SW
DIAGRAM: 		DIAGRAM: UTR	
DEPTH AT OUTLET: 690mm		DEPTH AT OUTLET:	
MH SIZE 750mm x 750mm		MH SIZE	
MH MATERIAL Concrete		MH MATERIAL	
OBSERVATIONS/ COMMENTS:		OBSERVATIONS/ COMMENTS:	
REFERENCE: MH9	DUTY: SW	REFERENCE: MH14	DUTY: FW
DIAGRAM: 		DIAGRAM: 	
DEPTH AT OUTLET: 750mm (total depth 3700mm)		DEPTH AT OUTLET: 1550mm	
MH SIZE 1500mm x 1500mm		MH SIZE 1200mm x 800mm	
MH MATERIAL Brick		MH MATERIAL Brick	
OBSERVATIONS/ COMMENTS: Pump station		OBSERVATIONS/ COMMENTS:	

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Manhole Information

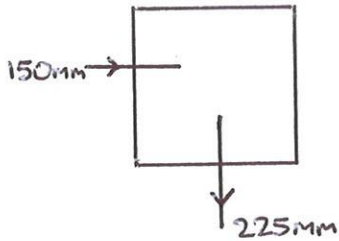
REFERENCE: MH15	DUTY: FW	REFERENCE: MH16	DUTY: ?
DIAGRAM: Blocked unable to clear		DIAGRAM: 	
DEPTH AT OUTLET:		DEPTH AT OUTLET: 1750mm	
MH SIZE		MH SIZE 900mm x 500mm	
MH MATERIAL		MH MATERIAL Brick	
OBSERVATIONS/ COMMENTS:		OBSERVATIONS/ COMMENTS: Heavy silt unable to see outlet	
REFERENCE: MH17	DUTY:	REFERENCE: MH20	DUTY: FW
DIAGRAM: 		DIAGRAM: 	
DEPTH AT OUTLET: 1750mm		DEPTH AT OUTLET: 1250mm	
MH SIZE		MH SIZE 700mm x 550mm	
MH MATERIAL		MH MATERIAL Brick	
OBSERVATIONS/ COMMENTS: Possible Redundant chamber		OBSERVATIONS/ COMMENTS: Trap on outlet	

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Manhole Information

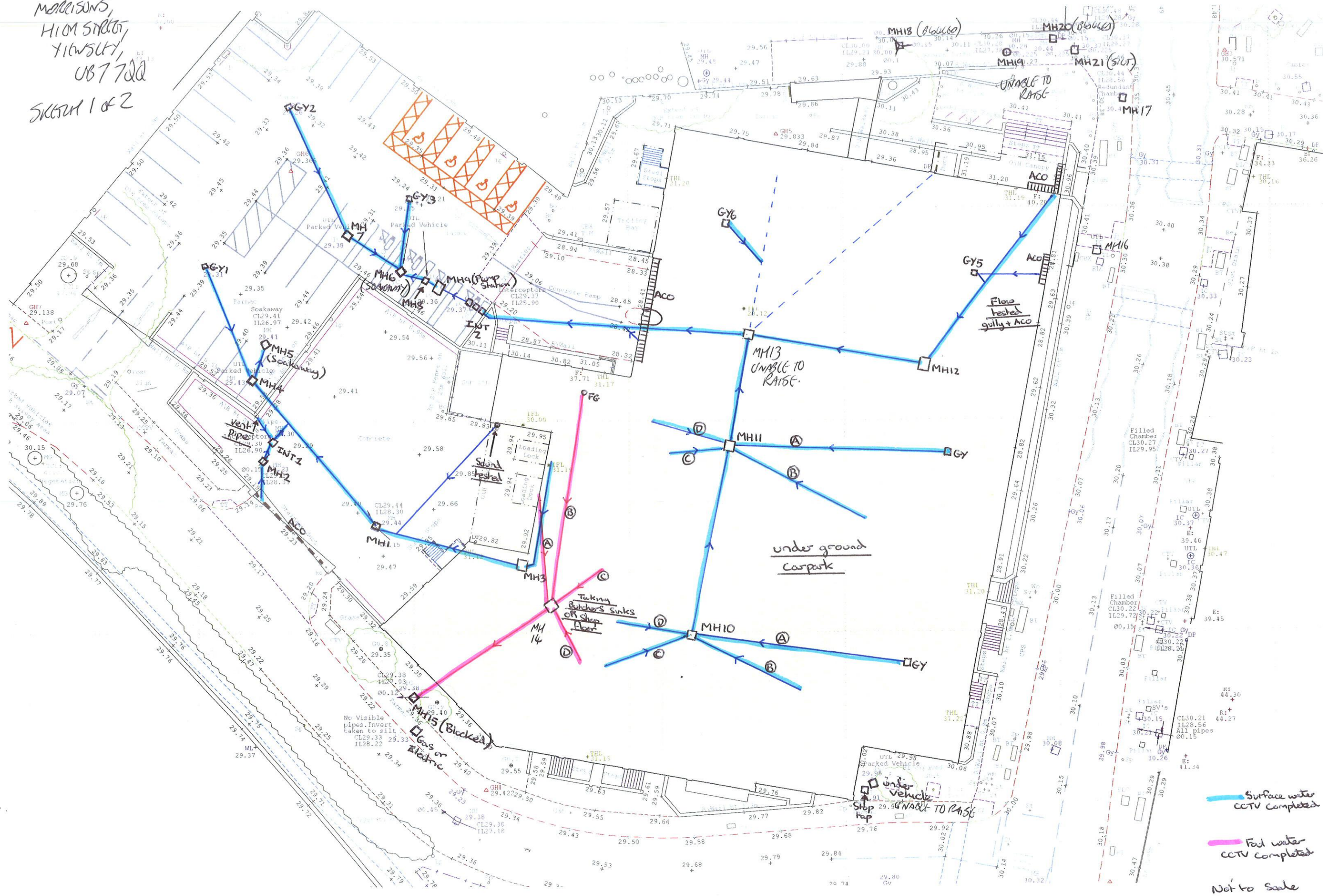
REFERENCE: MH21	DUTY: SW	REFERENCE:	DUTY:
DIAGRAM: 		DIAGRAM:	
DEPTH AT OUTLET: 1150mm		DEPTH AT OUTLET:	
MH SIZE 700mm x 650mm		MH SIZE	
MH MATERIAL Brick		MH MATERIAL	
OBSERVATIONS/ COMMENTS: Catchpit , Heavy Silt		OBSERVATIONS/ COMMENTS:	
REFERENCE:	DUTY:	REFERENCE:	DUTY:
DIAGRAM:		DIAGRAM:	
DEPTH AT OUTLET:		DEPTH AT OUTLET:	
MH SIZE		MH SIZE	
MH MATERIAL		MH MATERIAL	
OBSERVATIONS/ COMMENTS:		OBSERVATIONS/ COMMENTS:	

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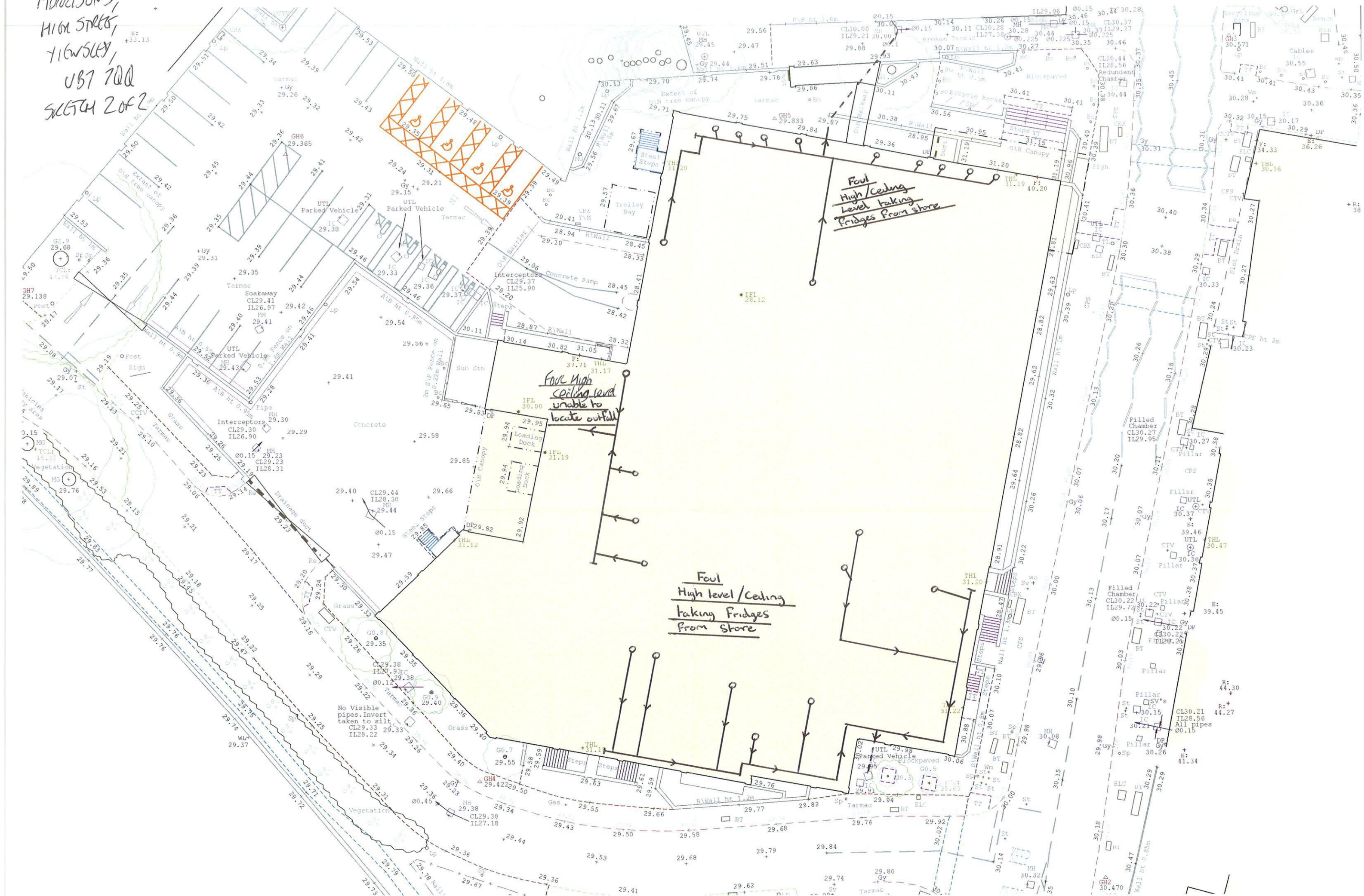
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MORRISONS,
1101M STREET,
TOWNSLEY,
UB7 7QA
SHEET 1 of 2



MORRISONS,
HIGH STREET,
TIGWICK,
UB7 7QQ
SKETCH 2 OF 2



Appendix D

Thames Water Sewer Record Map

This is a detailed street map of a residential area in Warrington, likely for planning or transport purposes. The map shows a network of streets including Bentinck Road, Warrington Road, Albert Road, and Station Approach. Numerous buildings, houses, and landmarks are labeled, such as St. Matthew's Church, Zeys Court, Felix Court, and the Yewley Health Centre. A prominent feature is a network of red dashed lines with arrows, which likely represent a proposed or existing transport route, possibly a bus or tram line. These lines connect various points across the area, often passing through or near residential streets. Numerical identifiers, such as 8410, 8409, 8408, 8405, 8404, 8403, 8402, 8401, 8302, 8303, 8304, 8305, 8306, 8307, 8308, 8309, 8310, 8311, 8312, 8313, 8314, 8315, 8316, 8317, 8318, 8319, 8320, 8321, 8322, 8323, 8324, 8325, 8326, 8327, 8328, 8329, 8330, 8331, 8332, 8333, 8334, 8335, 8336, 8337, 8338, 8339, 8340, 8341, 8342, 8343, 8344, 8345, 8346, 8347, 8348, 8349, 8350, 8351, 8352, 8353, 8354, 8355, 8356, 8357, 8358, 8359, 8360, 8361, 8362, 8363, 8364, 8365, 8366, 8367, 8368, 8369, 8370, 8371, 8372, 8373, 8374, 8375, 8376, 8377, 8378, 8379, 8380, 8381, 8382, 8383, 8384, 8385, 8386, 8387, 8388, 8389, 8390, 8391, 8392, 8393, 8394, 8395, 8396, 8397, 8398, 8399, 8400, 8401, 8402, 8403, 8404, 8405, 8406, 8407, 8408, 8409, 8410, 8411, 8412, 8413, 8414, 8415, 8416, 8417, 8418, 8419, 8420, 8421, 8422, 8423, 8424, 8425, 8426, 8427, 8428, 8429, 8430, 8431, 8432, 8433, 8434, 8435, 8436, 8437, 8438, 8439, 8440, 8441, 8442, 8443, 8444, 8445, 8446, 8447, 8448, 8449, 8450, 8451, 8452, 8453, 8454, 8455, 8456, 8457, 8458, 8459, 8460, 8461, 8462, 8463, 8464, 8465, 8466, 8467, 8468, 8469, 8470, 8471, 8472, 8473, 8474, 8475, 8476, 8477, 8478, 8479, 8480, 8481, 8482, 8483, 8484, 8485, 8486, 8487, 8488, 8489, 8490, 8491, 8492, 8493, 8494, 8495, 8496, 8497, 8498, 8499, 8500, 8501, 8502, 8503, 8504, 8505, 8506, 8507, 8508, 8509, 8510, 8511, 8512, 8513, 8514, 8515, 8516, 8517, 8518, 8519, 8520, 8521, 8522, 8523, 8524, 8525, 8526, 8527, 8528, 8529, 8530, 8531, 8532, 8533, 8534, 8535, 8536, 8537, 8538, 8539, 8540, 8541, 8542, 8543, 8544, 8545, 8546, 8547, 8548, 8549, 8550, 8551, 8552, 8553, 8554, 8555, 8556, 8557, 8558, 8559, 8560, 8561, 8562, 8563, 8564, 8565, 8566, 8567, 8568, 8569, 8570, 8571, 8572, 8573, 8574, 8575, 8576, 8577, 8578, 8579, 8580, 8581, 8582, 8583, 8584, 8585, 8586, 8587, 8588, 8589, 8590, 8591, 8592, 8593, 8594, 8595, 8596, 8597, 8598, 8599, 8600, 8601, 8602, 8603, 8604, 8605, 8606, 8607, 8608, 8609, 8610, 8611, 8612, 8613, 8614, 8615, 8616, 8617, 8618, 8619, 8620, 8621, 8622, 8623, 8624, 8625, 8626, 8627, 8628, 8629, 8630, 8631, 8632, 8633, 8634, 8635, 8636, 8637, 8638, 8639, 8640, 8641, 8642, 8643, 8644, 8645, 8646, 8647, 8648, 8649, 8650, 8651, 8652, 8653, 8654, 8655, 8656, 8657, 8658, 8659, 8660, 8661, 8662, 8663, 8664, 8665, 8666, 8667, 8668, 8669, 8670, 8671, 8672, 8673, 8674, 8675, 8676, 8677, 8678, 8679, 8680, 8681, 8682, 8683, 8684, 8685, 8686, 8687, 8688, 8689, 8690, 8691, 8692, 8693, 8694, 8695, 8696, 8697, 8698, 8699, 8700, 8701, 8702, 8703, 8704, 8705, 8706, 8707, 8708, 8709, 8710, 8711, 8712, 8713, 8714, 8715, 8716, 8717, 8718, 8719, 8720, 8721, 8722, 8723, 8724, 8725, 8726, 8727, 8728, 8729, 8730, 8731, 8732, 8733, 8734, 8735, 8736, 8737, 8738, 8739, 8740, 8741, 8742, 8743, 8744, 8745, 8746, 8747, 8748, 8749, 8750, 8751, 8752, 8753, 8754, 8755, 8756, 8757, 8758, 8759, 8760, 8761, 8762, 8763, 8764, 8765, 8766, 8767, 8768, 8769, 8770, 8771, 8772, 8773, 8774, 8775, 8776, 8777, 8778, 8779, 8780, 8781, 8782, 8783, 8784, 8785, 8786, 8787, 8788, 8789, 8790, 8791, 8792, 8793, 8794, 8795, 8796, 8797, 8798, 8799, 8800, 8801, 8802, 8803, 8804, 8805, 8806, 8807, 8808, 8809, 8810, 8811, 8812, 8813, 8814, 8815, 8816, 8817, 8818, 8819, 8820, 8821, 8822, 8823, 8824, 8825, 8826, 8827, 8828, 8829, 8830, 8831, 8832, 8833, 8834, 8835, 8836, 8837, 8838, 8839, 8840, 8841, 8842, 8843, 8844, 8845, 8846, 8847, 8848, 8849, 8850, 8851, 8852, 8853, 8854, 8855, 8856, 8857, 8858, 8859, 8860, 8861, 8862, 8863, 8864, 8865, 8866, 8867, 8868, 8869, 8870, 8871, 8872, 8873, 8874, 8875, 8876, 8877, 8878, 8879, 8880, 8881, 8882, 8883, 8884, 8885, 8886, 8887, 8888, 8889, 8890, 8891, 8892, 8893, 8894, 8895, 8896, 8897, 8898, 8899, 8900, 8901, 8902, 8903, 8904, 8905, 8906, 8907, 8908, 8909, 8910, 8911, 8912, 8913, 8914, 8915, 8916, 8917, 8918, 8919, 8920, 8921, 8922, 8923, 8924, 8925, 8926, 8927, 8928, 8929, 8930, 8931, 8932, 8933, 8934, 8935, 8936, 8937, 8938,

The position of the apparatus shown on this plan is given without obligation and warranty, and the accuracy cannot be guaranteed. Service pipes are not shown but their presence should be anticipated. No liability of any kind whatsoever is accepted by Thames Water for any error or omission. The actual position of mains and services must be verified and established on site before any works are undertaken.

Appendix E

Proposed Drainage Strategy Plan