

VIADUX PHASE 2, MANCHESTER

FLOOD RISK ASSESSMENT

Project No: 2209-01

November 2024

Rev: P01

V2B-REN-XX-XX-RP-C-00001

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1. INTRODUCTION

1.1 Project Description

The Site is located in Manchester city centre. It is bounded by the Manchester Central Conference Complex and Great Northern Warehouse to the north, Albion Street to the east, the Deansgate Castlefield Metrolink station and Deansgate Locks to the south, and the Beetham Tower to the west. It extends to 1.49 ha.

The Proposed Development will be delivered across two plots comprising the following principal uses:

Plot A: A hotel with residential apartments above.

Plot B: Affordable homes.

Together with these principal uses, the Proposed Development comprises residential amenities; secure cycle parking; public realm improvements and new green landscaping; and associated works to the public highway.

Plot 2a is located immediately east of the recently completed Phase 1 building, on land partially comprising the grade II listed Castlefield Viaduct. This plot will deliver a 76-storey mixed use tower comprising a hotel (Use Class C1) with associated bar and restaurant and residential units above comprising 1, 2 and 3 bed, and penthouse apartments (Use Class C3) with associated residential amenity spaces. Secure cycle spaces, serving this and the Phase 1 building, are provided at the ground floor level. At viaduct level, a redesigned service yard for the conference centre is enclosed by a new podium structure with residents' external amenity space above. A section of the Great Bridgewater Street bridge (deck) is removed to bring light into the street below.

Plot 2b, located at the western-most section of the Site between the viaduct and Beetham Tower, consists of a 23-storey residential building accommodating affordable 1-, 2-, and 3-bed apartments (Use Class C3), secure cycle parking spaces, flexible commercial units (Use Class E) opening onto the viaduct, and public realm enhancements on Great Bridgewater Street.

For Further information of the proposed development refer to Appendix E.

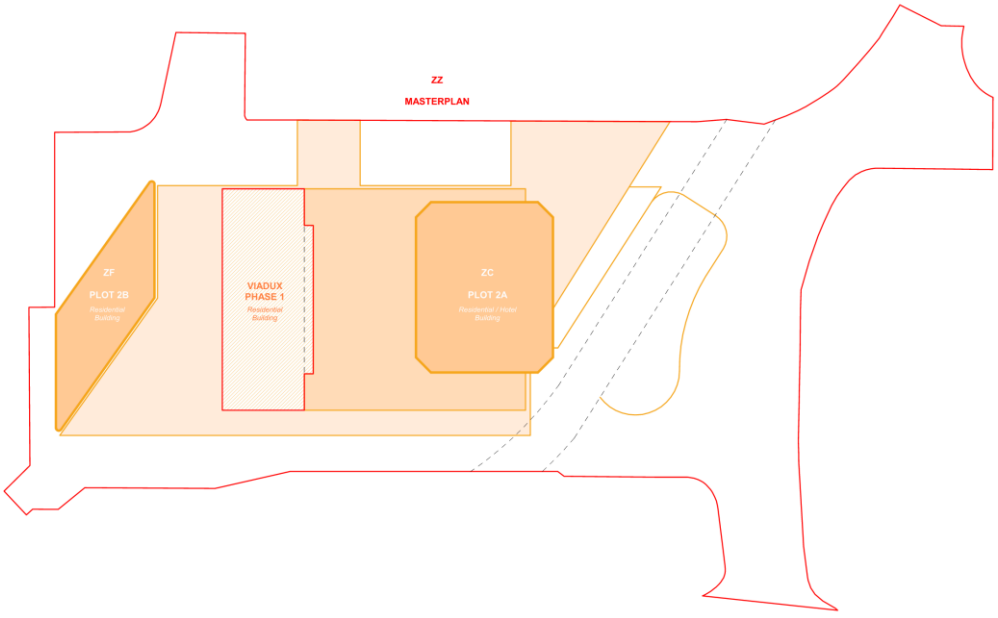


Figure 1.1: Development Phasing Plan

1.2 Purpose of this report

This Site-Specific Flood Risk Assessment (FRA) has been produced to support the planning application of the proposed Viadux Phase 2 Development. The assessment investigates the potential flood risk impacts of the proposed development in accordance with the National Planning Policy Framework (NPPF) and Policy JP-S4: Flood Risk and the Water Environment of the Greater Manchester Combined Authority Places for Everyone Joint Development Plan.

This FRA is considered proportionate to the degree of flood risk and to the scale, nature, and location of the development, and has been prepared in accordance with non-statutory technical standards for sustainable drainage and NPPF climate change allowances.

This report should be read in conjunction with the renaissance drainage strategy documents for each plot of the Phase 2 development:

Plot 2a (Block C, D & E) Drainage Strategy, (renaissance, V2B-REN-CC-XX-RP-C-00002)

Plot 2b (Block F) Drainage Strategy, (renaissance, V2B-REN-FF-XX-RP-C-00002)

2. THE SITE

2.1 Site Location

The proposed development site is located off Albion Street, Manchester.

The site location is described below:

- Post Code M1 5LH
- OS X (Easting) 383550
- OS Y (Northing) 397630
- Nat. Grid SJ835976

The site location is illustrated in Figure 2.1 below.



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Figure 2.1: Indicative Site Location

2.2 Site Description

The overall Viadux site (Figure 2.1) is circa 0.820 Ha which excludes adopted areas i.e. highways. The site currently comprises a Grade II listed masonry viaduct and the 40 storey tower associated with Phase 1 of the development. The Upper Deck (Level 01) of the Grade II listed masonry viaduct is currently used as a service yard. The western portion of the Viaduct Lower Deck (Ground Level) is being constructed as part of the Phase 1 works and the eastern portion used as storage. Both levels to the viaduct are generally flat, with access to the upper deck provided by a ramp along Trafford Street.

The Metrolink Tram line crosses the eastern portion of the site. The site boundary is formed by Trafford Street to the south, Hilton Hotel to the west, Great Bridgewater Street and Manchester Central building (former GMEX) to the north, and Albion Street to the east. The Rochdale canal is located within close proximity to the south, and the surrounding land use is predominantly commercial and residential.

For further details of the existing site, refer to topographical survey in Appendix A.

2.3 Existing Site Drainage

CCTV and Utility Surveys have been carried out to trace the existing drainage of the overall Viadux site and the eastern area that comprises the entrance to the hotel and residential apartments (Block E).

The existing surface water drainage network associated with the existing viaduct upper deck and within the undercroft is indicated to discharge from the site to the west of the site and has been addressed within the Phase 1 drainage. The ground floor level drainage to the west of the viaduct has not been traced and potentially discharges beneath the Metrolink Tram Viaduct and into the Block E site and into Trafford Street.

At this this stage it is assumed that the Surface water from the site discharges into the combined sewer beneath Trafford Street

Refer to Appendix B for the United Utilities sewer records, Appendix C for CCTV Survey and Appendix D for the final construction Drainage Information from Phase 1 of the development.

2.4 Geology

British Geological Survey information indicates made ground deposits on site. The site is indicated to be underlain by superficial Glaciofluvial Sheet Deposits, typically comprising sands and gravels and bedrock of the Chester Formation which typically comprises sandstone.

The Envirocheck Report (included within the Brownfields Phase 1 report) and the Coal Authority's online interactive mapping confirms that the site is situated in a coal mining referral area. No evidence of mining was noted within the historical mapping within the site, or the area immediately surrounding the site, therefore, the likelihood of encountering relic mining features on site is considered to be unlikely and has not been considered further.

2.5 Hydrogeology & Hydrology

The site is underlain by superficial Glaciofluvial Sheet Deposits (Secondary A Aquifer) and bedrock of Chester Pebble (Principle Aquifer).

Secondary (A) Aquifers are classified as permeable layers capable of supporting water supplies at a local rather than strategic scale, and in some cases forming an important source of base flow to rivers.

Principle Aquifers are classified as Geology of high intergranular and/or fracture permeability, usually providing a high level of water storage and may support water supply/river base flow on a strategic scale.

The nearest surface water feature is the Rochdale Canal 26m south of the site which flows from east to west. No water quality data is available for this feature. There are no surface water abstractions within 1 km of the site.

The site is not located within an area from rivers or seas but is not located within a zone of limited potential for groundwater flooding, and the south and east boundaries are at Low (1 in 1000-year event) and Medium (1 in 100-year event) risk of surface water flooding.

2.6 Proposed Development

The Viadux development comprises three separate buildings: Phase 1, Plot 2a (Block C, D and E) and Plot 2b (Block F). Phase 1 of the development formed part of a separate planning application (Planning ref: 126868/JO/2020) with the majority of the associated works now completed. This comprised: the construction of a 40 storey residential tower over the grade II listed

masonry Viaduct Arches and podium structure at level 03, external public realm space at level 01 and ground level and the conversion of the western portion of the grade II listed masonry Viaduct arches at ground level.

The remaining plots (Plots 2a and 2b) will be delivered under one planning application of which this report has been produced to support.

The two plots outlined above are referred to as Blocks C,D, E and F within this report to ensure consistency with the Structural Proposals. Each block has been designed as its own discrete structure with the associated document naming convention adapted to reflect this.

The phases are treated as two separate sites for drainage as they have existing structures between them and can therefore not be connected to a single site network

Plots 2a of the development (referred to as block C, D and E in this report) comprises the construction of; a 76 storey Hotel and residential tower (Block C) over the grade II listed masonry Viaduct Arches, podium structure at level 03 (Block D) abutting the phase 1 podium, public realm area to the east of the Viaduct Arches at ground level, the conversion of the eastern portion of the arches at ground level and the construction of a new entrance area to the east of the site that fronts onto Albion Street (Block E).

Plot 2b (referred to as block F in this report) comprises the construction of a 23-storey residential building with associated commercial units at level 01 and external areas to the west of the existing viaduct structure.

3. SUITABILITY

3.1 National Planning Policy

The National Planning Policy Framework (NPPF) and the accompanying Planning Practice Guidance (PPG) aim to ensure that flood risk is taken into consideration at all stages of the planning process and advocates the use of a risk-based 'Sequential Test' to preferentially locate development in areas with a low risk of flooding. Where development is necessary in high-risk areas, the NPPF aims to ensure that the development is safe without increasing flood risk through the application of the Exception Test.

The PPG, defines the levels of flood risk within England as follows:

- Flood Zone 1 - Low Probability - Land having less than a 1 in 1,000 annual probability of river or sea flooding.
- Flood Zone 2 - Medium Probability - Land having between a 1 in 100 and 1 in 1,000 annual probability of river flooding; or between a 1 in 200 and 1 in 1,000 annual probability of sea flooding.
- Flood Zone 3a - High Probability - Land having a 1 in 100 or greater annual probability of river flooding; or having a 1 in 200 or greater annual probability of sea flooding.
- Flood Zone 3b - Functional Floodplain - Land where water must flow or be stored in times of flood.

The PPG states that a site-specific FRA is required for all new development proposals located in Flood Zones 2 and 3, and for any proposal of 1 hectare or greater regardless of its flood zone classification. The flood zones as described above are shown on the Environment Agency's Flood Map for Planning, available online.

Table 2 of the PPG classifies development types based on their vulnerability to flooding, ranging from 'Essential Infrastructure' which has to be operational in times of flood, through 'Highly Vulnerable' (e.g. emergency service stations), 'More Vulnerable' (e.g. residential dwellings and establishments), 'Less Vulnerable' (e.g. offices/retail), to 'Water Compatible' development (e.g. open space, docks, marinas and wharves).

Table 3 of the PPG indicates which 'vulnerability classes' are acceptable in each of the Flood Zones, and when the Exception Test should be applied. This is reproduced as Table 3.1 below.

3.2 Flood Risk Vulnerability

The Flood Risk Vulnerability Classification has been determined in accordance with Planning Practice Guidance, Flood Risk and Coastal Change. For multi-occupancy sites, the Flood Risk Vulnerability should be based upon the most vulnerable part of the site. The Flood Risk Vulnerability Classification is 'More Vulnerable', which includes 'Buildings used for dwelling houses, student halls of residence, drinking establishments, nightclubs and hotels'.

3.3 Flood Zone Compatibility

The Flood Zone Compatibility has been reviewed in accordance with Planning Practice Guidance, Flood Risk and Coastal Change, paragraph 067.

FLOOD ZONES	FLOOD RISK VULNERABILITY CLASSIFICATION				
	Essential infrastructure	Highly vulnerable	More Vulnerable	Less Vulnerable	Water Compatible
Zone 1	✓	✓	✓	✓	✓
Zone 2	✓	Exception Test Required	✓	✓	✓
Zone 3a	Exception Test Required	✗	Exception Test Required	✓	✓
Zone 3b	Exception Test Required	✗	✗	✗	✓*

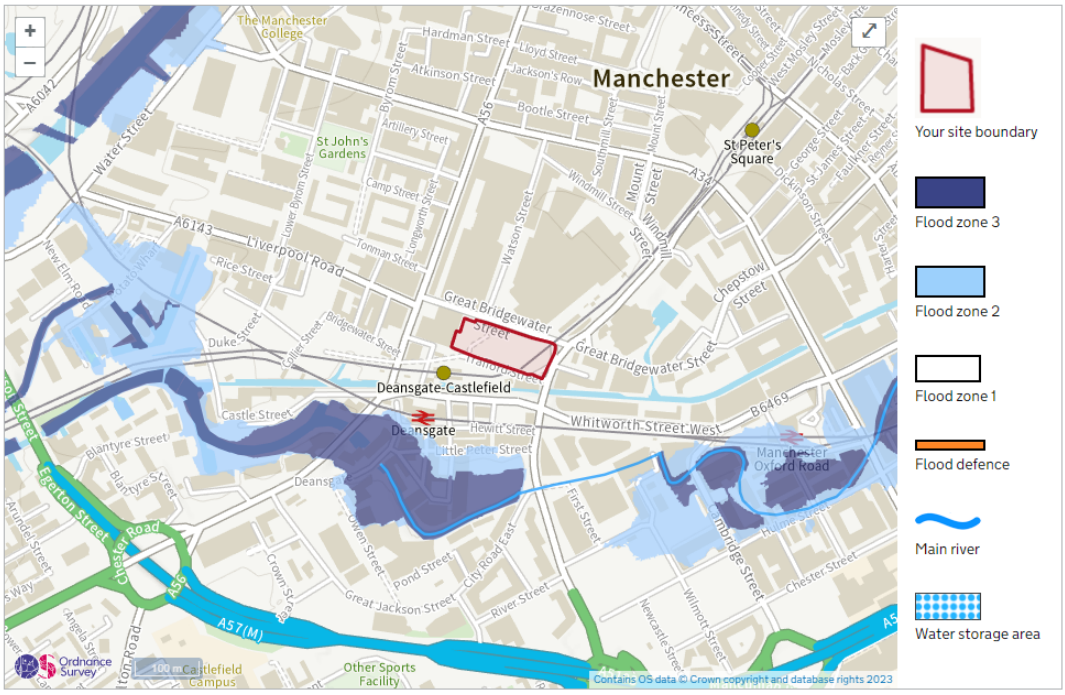
Table 3.1: Flood Risk Vulnerability and Flood Zone Compatibility Key

Key:

✓ Development is appropriate

✗ Development should not be permitted

The entire Viadux development site is shown on the Environment Agency's Flood Map for Planning to be located within Flood Zone 1 (refer to Figure 3.1 for map). Therefore, the proposals are considered appropriate in accordance with Planning Practice Guidance.



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Figure 3.1: Environment Agency Flood Map for planning

3.4 Application of Sequential Test

The above Table 3.1 indicates which 'vulnerability classes' are acceptable in each of the Flood Zones, and when the Exception Test should be applied.

The Sequential Test, as set out in the NPPF, aims to steer developments to areas with the lowest risk of flooding (i.e. to steer developments to Flood Zone 1 areas where possible). Since the proposed development area is located wholly within Flood Zone 1, based on the guidance presented in Table 3.1 above, the Sequential Test is deemed to have been passed.

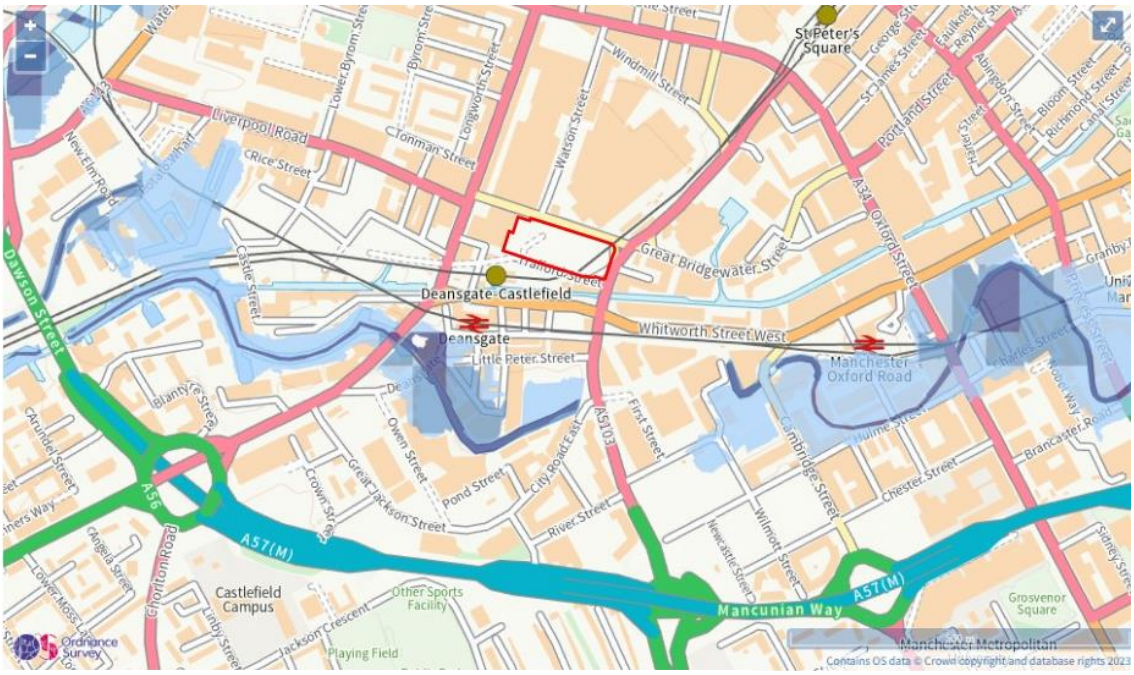
The Exception Test, as detailed in paragraph 159 of the NPPF, is applied after the Sequential Test has been undertaken and, in circumstances when 'More Vulnerable' development and 'Essential Infrastructure' cannot be located within Flood Zones 1 or 2, or 'Highly Vulnerable' development cannot be located within Flood Zone 1. The proposed land use at Viadux is classified as a 'More Vulnerable' development in accordance with Table 2 of the NPPF. Table 3.1, shows that a 'More Vulnerable' development is appropriate within Flood Zone 1, and it is not necessary to apply the Exception Test.

4. SOURCES OF FLOODING

4.1 Flood Map for Planning (Rivers and Seas)

Fluvial flooding occurs when high flows exceed the capacity of the river channel and spill out onto the floodplain, usually after a period of prolonged or heavy rainfall.

The EA Flood Map for planning (rivers and sea) has been reviewed (Figure 4.1). The site falls wholly within Flood Zone 1. The risk of flooding from Rivers and Sea across the site is very low. It means that each year the land is assessed as having a less than 1 in 1,000 annual probability of river or sea flooding (<0.1%).



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Figure 4.1: Risk of flooding from Rivers and Seas

4.2 Flooding from Land (Pluvial Flooding)

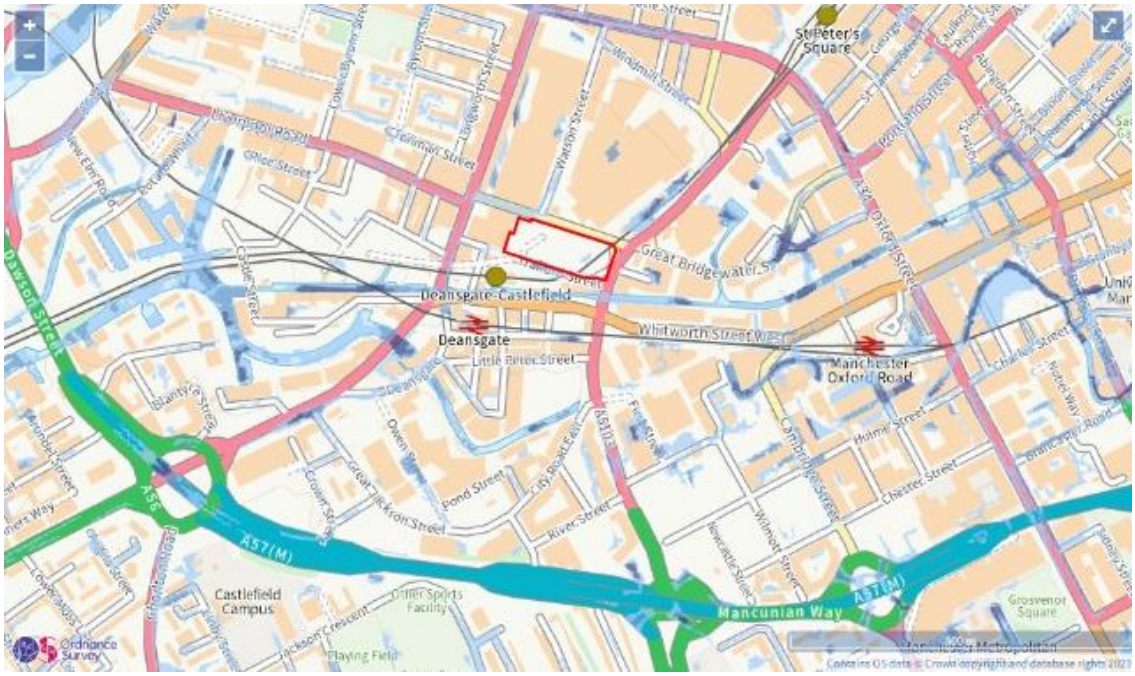
The Environment Agency Map showing risk of flooding from surface water is presented in Figure 4.2. This type of flooding can be difficult to predict, much more so than river or sea flooding as it is hard to forecast exactly where or how much rain will fall in any storm.

As illustrated in figure 4.2, the site is typically at very low (<0.1%) risk of surface water flooding with a small area of low risk located to the eastern end of the site between the existing viaduct and Metrolink Viaduct. The low risk area is associated with a low point within the external levels.

This map is not definitive and is based on the best information available to the Environment Agency, such as ground levels and drainage.

For Plot 2a the existing viaduct structure covers the central section of the site and is to be maintained. With the new building, and works to the existing viaduct, the risk of pluvial flooding is considered to be very low. The external landscaping levels within the eastern area of plot 2a, where the risk of pluvial flooding is indicated as medium, are to be slightly raised. The landscaping proposals include slight reprofiling of levels to drainage channels and gullies to ensure surface water can flow freely into the drainage network. The landscaping proposals also provide an overland flow route between Great Bridgewater Street and Trafford Street in the event of exceedance events.

Plot 2b plot to the western end of the site, and Plot 2c plot to the eastern end of the site, are both at very low risk of pluvial flooding. The landscaping proposals include slight reprofiling of levels to drainage channels and gullies to ensure surface water can flow freely into the drainage network. The landscaping proposals also provide an overland floor routed between Great Bridgewater Street and Trafford Street in the event of exceedance events.



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Figure 4.2: Risk of Flooding from Surface Water

4.3 Flooding from Groundwater

Groundwater flooding tends to occur sporadically in both location and time. When groundwater flooding does occur, it tends to mostly affect low-lying areas, below surface infrastructure and buildings (for example, tunnels, basements, and car parks) underlain by permeable rocks (aquifers).

A review of the record searches carried out as part of the phase I geo-environmental survey for the site shows that the site is within a low vulnerability area for groundwater flooding. Site investigation reports across the phasing plots confirmed ground water to typically be 11-15m below ground level, confirming the site is at low vulnerability of surface water flooding.

Groundwater flooding tends to occur sporadically in both location and time. When groundwater flooding does occur, it tends to mostly affect low-lying areas, below surface infrastructure and buildings (for example, tunnels, basements and car parks) underlain by permeable rocks (aquifers).

According to the Groundwater Flooding Map for Manchester Salford and Trafford Strategic Flood Risk Assessment (SFRA), “Manchester City, Salford City and Trafford Councils Level 2 Hybrid Strategic Flood Risk Assessment”, the site is not within the groundwater flooding area.

Based on the above, the site is not considered to be at risk from groundwater flooding.

4.4 Flooding from Sewers

Sewer flooding occurs when urban drainage networks become overwhelmed and maximum capacity is reached. This can occur if there is a blockage in the network causing water to back up behind it or if the sheer volume of water draining into the system is too great to be handled. This

type of flooding tends to occur sporadically in both location and time. The majority of sewers are built to the guidelines within Sewers for Adoption. These sewers have a design standard to the 1 in 30-year flood event and therefore it is likely that most sewer systems will surcharge during rainstorm events with a return period greater than 30 years.

Greater Manchester Combined Authority records for Manchester City Council show no incidents of flooding on the site because of surcharging of public sewers.

4.5 Flooding from Reservoirs

The Environment Agency Reservoir flood risk map indicates the site to be outside of the maximum flood extent of a breach to any local reservoir.



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Figure 4.3: Risk of Flooding from Reservoirs

4.6 Summary of Flooding Risks

Based on the above review, the site entire site is within Flood Zone 1.

The risk of flooding from pluvial, surface water, groundwater and reservoirs are all considered to be low.

5. DRAINAGE STRATEGY

For the detailed drainage strategy for the Viadux Development, refer to renaissance drainage strategy documents:

- Drainage Strategy report for Plot 2a (Block C, D & E) (document ref: V2B-REN-CC-XX-RP-C-00002)
- Drainage Strategy report for Plot 2b (Block F) (document ref: V2B-REN-FF-XX-RP-C-00002)

5.1 Drainage Hierarchy

In accordance with NPPF, the following hierarchy of surface water drainage options has been considered:

- Discharge into the ground (infiltration);
- Discharge to a surface water body;
- Discharge to a surface water sewer, highway drain, or another drainage system;
- Discharge to a combined sewer.

Refer to drainage Strategy reports for each plot for details

5.2 Climate Change

The drainage strategy will include for increases in storm intensities of 40% and 45% for the 1 in 30-year and 1 in 100-year events respectively, which is consistent with the effects of climate change for a development with a design life of 100 years, as outlined in NPPF.

6. CONCLUSION

The entire site for the Viadux development is located within flood zone 1 and is considered to have a very low risk of flooding from surface water.

The site is considered appropriate under Planning Practice Guidance.

The site is considered to have a low risk of flooding from surface water.

The site is not considered to be at risk from groundwater flooding.

The site is not considered to be at risk from sewer flooding.

The site is not considered to be at risk of flooding from reservoirs.

APPENDIX A

TOPOGRAPHICAL SURVEY INFORMATION

Topographical Survey Legend

B	Bollard	h	Height	FWP	Rain Water Pipe	Level Prefix Descriptions	
BS	Bus Stop	HydI	Hydrant	SP	Soil Pipe	AL	Arch Level
BT	Telecommunications IC	IC	Inspection Cover	SPS	Stone Paving Slabs	BL	Bed Level
CCTV	CCTV Surveying Station	KO	Kerb Outlet	SW	Soil Vent	CL	Cover Level
CTV	Cable Television Cover	LO	Kerb Outlet	SVy	Spy Valve	EL	Eaves Level
DP	Downpipe	LB	Letter Box	SV	Stop Valve	FL	Floor Level
DR	Drain	LP	Lamp Post	TCB	Telephone Call Box	IL	Invert Level
Elec	Electrical IC	MH	Utility Marker	TL	Traffic Light	OL	Overhead Cable Lev
EP	Ele. Post	MP	Mile Post	TP	Tactile Paving	PL	Parapet Level
ER	Earth Rod	NP	Name Plate	TPS	Tactile Paving Slabs	RL	Roofridge Level
FP	Flagpole	P	Post	VP	Vent Pipe	SL	Soffit Level
FT	Floodlight	PM	Parking Meter	WM	Water Meter	SpI	Arch Springing Level
G	Gully	RE	Rodding Eye	WO	Water Outlet	TF	Top Of Fence Level
GP	Guard Post	RS	Road Sign	UTL	Unable To Lift	TW	Top Of Wall Level
GV	Gas Valve	RTW	Retaining Wall			Thr	Threshold Level
						WL	Water Level

Fence Annotation

B/W Barbed Wire
C/B Closed Boarded
C/I Corrugated Iron
C/L Chain Link
M/P Metal Panel
H/R Hand Rail
I/R Iron Railings
O/B Open Boarded
P/C Post & Chain
P/R Post & Rail
P/W Post & Wire
W/M Wire Mesh

Fence
Safety Barrier
Gate
Stile
Hedge
Limit of Foliage & Tree Canopy
Spot Level
Survey Control Stats (coordinated point)
Tree
Multi Trunk

Levels defining edge of carriageway are observed at channel (bottom of kerb). Unless otherwise stated.

Drainage/Services Legend

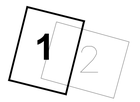
Foul	CCTV	CCTV	Ducting		
Surface	E	Electric			
Combined	SL	Street lighting	d	Service depth (m)	
Drainage (unspecified)	TM	Traffic management	ø	Pipe diameter (mm)	
BT British telecom	GAS	Gas	EOT	End of trace	
T Telecom	W	Water	UTT	Unable to trace	
FO Fibre optics	F	Fuel		Utility Survey Boundary	
CATV CATV	UK	Unknown / misc			

Drainage pipe size data has been determined from the surface, in order to comply with confined spaces health and safety legislation. Please regard this data as approximate.

Survey Station Coordinates

STN	EASTINGS	NORTHINGS	LEVEL
TN01	383571.563	397649.717	43.517
TN02	383530.169	397648.659	43.320
TN03	383529.166	397660.252	43.289
TN04	383477.538	397615.506	34.637
TN05	383532.250	397605.986	34.915
TN06	383536.592	397633.215	34.855
TN07	383555.589	397629.172	34.969
TNX3	383529.930	397663.805	43.271
SP01	383500.524	397634.801	35.337
SP02	383508.435	397644.583	35.513
SP03	383520.107	397655.409	35.572
SP04	383524.736	397669.440	35.570
RP13	383541.717	397678.639	35.727
RP14	383591.196	397648.580	35.847
RP15	383647.322	397642.366	36.097
RP16	383653.658	397622.021	36.944
RP17	383632.750	397584.526	36.483
R17B	383589.017	397579.052	35.446
RP24	383521.711	397610.047	42.059
RP25	383498.335	397617.024	42.586
SP2A	383516.991	397641.143	35.483
RP18	383632.680	397551.014	35.931
RP19	383641.526	397520.912	34.828
RP20	383604.275	397533.248	34.568
RP21	383567.565	397543.886	34.120
RP5A	383462.768	397539.232	33.397
RP05	383430.740	397559.090	33.056
RP04	383445.045	397580.270	34.521
RP03	383458.957	397621.271	34.461
RP02	383478.714	397615.275	34.652
RP06	383393.144	397555.006	32.384
RP07	383366.139	397555.078	32.344
RP08	383411.196	397614.969	33.559
RP01	383422.663	397644.486	34.321
RP09	383433.568	397673.824	34.981
RP10	383441.031	397690.878	35.339
RP11	383464.975	397702.338	35.380
RP12	383512.243	397671.322	35.490
R13A	383550.920	397712.566	35.767
R16A	383652.170	397649.457	35.901
16A1	383680.297	397647.818	35.589
R16B	383699.438	397653.655	37.549
R16C	383719.249	397620.486	37.322
R17A	383632.098	397604.655	37.261
R17C	383639.362	397623.299	36.941
SH03	383624.716	397621.894	35.619
SH04	383596.361	397596.972	35.510
SH02	383614.897	397602.001	35.645
RP23	383538.514	397594.353	34.851
RP22	383520.691	397609.309	34.946
001A	383582.396	397581.218	35.132
R19A	383613.236	397483.896	33.708
TN1A	383543.964	397619.685	43.289
TN18	383585.039	397593.280	43.192
RP27	383611.186	397636.749	43.539
RP28	383611.798	397659.265	43.445
R26C	383585.571	397667.220	43.540
RP26	383568.031	397674.912	43.546
R26A	383576.292	397700.067	43.303
R26B	383587.196	397697.530	43.342
R28A	383620.376	397659.169	43.342
JS01	383494.376	397618.307	34.794

Sheet Layout



Drawing caveats, please note:

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Depth data is limited by the accuracy of the detection equipment. Average accuracy is +/- 10% of depth with GPR and +/- 5% of the depth with electromagnetic technologies.

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In accordance with British Telecom (BT) national policy, SSL are not permitted to raise BT inspection chamber covers.

Drainage routes between manholes, if not able to be traced by SSL's methodologies, are assumed to be direct direct lines between manholes.

SSL advise that excavations in the vicinity of services shown are carried out with due diligence, please refer HSG47.

Please note:

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Levels are related to **OSGB15**
Value **n/a**

Coordinates are related to **National Grid** (GPS)

Scale **1:250**

0 2.5 5.0 7.5 10.0 12.5 15.0 17.5 20.0 22.5
metres

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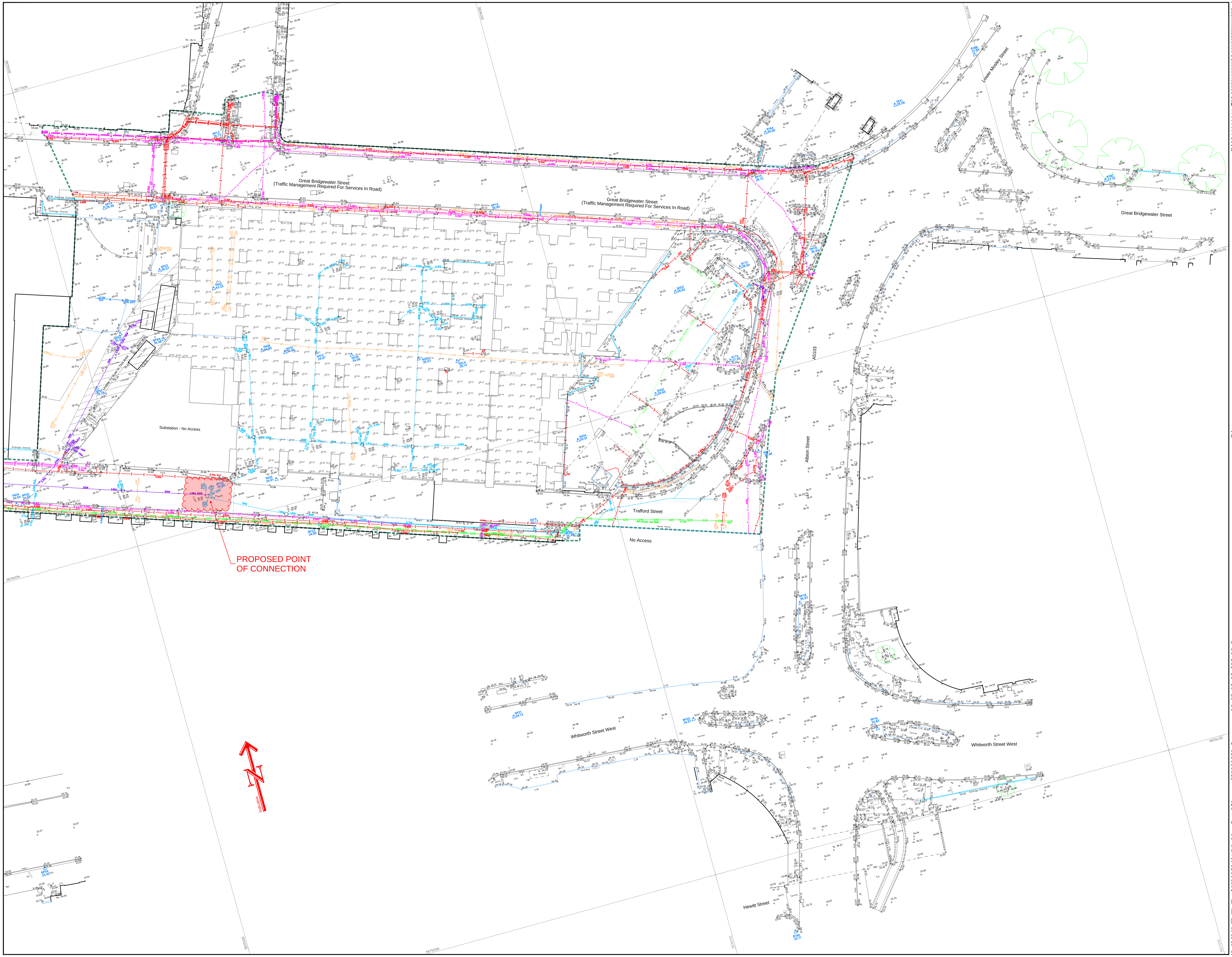
Client: Curtins

Title:

Topographical & Utility Survey Lower Level Manchester Central

Surveyed	RP SP CM AT JDS	Drawn	GAT AG
Date	October 2016	Checked	AG MT
File name	1468R-Lower	Revision No.	Sheet size A0
Drawing No.	SSL:1468R:250:1:2:LOWER		

SURVEYsystems



Topographical Survey Legend

B	Bollard	h	Height	RWP	Rain Water Pipe		Level Prefix Descriptions
BS	Bus Stop	Hyd	Hydrant	SP	Soil Pipe	AL	Arch Level
BT	Telecommunications IC	IC	Inspection Cover	SPS	Stone Paving Slabs	BL	Bed Level
CPS	Concrete Paving Slabs	JB	Junction Box	ST	Stop Tap	CL	Cover Level
CTV	Cable Television Cover	KO	Kerb Outlet	Stay	Cable Stay	EL	Eaves Level
DP	Downpipe	LB	Letter Box	SV	Stop Valve	FL	Floor Level
DR	Drain	LP	Lamp Post	TCB	Telephone Call Box	IL	Invert Level
Elec	Electrical IC	Mkr	Utility Marker	TL	Traffic Light	OL	Overhead Cable Level
EP	Elec. Pole	MP	Mile Post	TP	Telegraph Pole	PL	Parapet Level
ER	Earth Rod	NP	Name Plate	TPS	Tactile Paving Slabs	RL	Roof/ridge Level
FP	Flagpole	P	Post	VP	Vent Pipe	SL	Soffit Level
FT	Floodlight	PM	Parking Meter	WM	Water Meter	Spr	Arch Springing Level
G	Gully	RE	Rodding Eye	WO	Water Outlet	TF	Top Of Fence Level
GP	Gate Post	RS	Road Sign	UTL	Unable To Lift	TW	Top Of Wall Level
GV	Gas Valve	RTW	Retaining Wall			Thr	Threshold Level
						WL	Water Level

Fence Annotation

- B/W Barbed Wire
- C/B Closed Boarded
- C/I Corrugated Iron
- C/L Chain Link
- C/P Concrete Panel
- H/R Hand Rail
- I/R Iron Railings
- O/B Open Boarded
- P/C Post & Chain
- P/R Post & Rail
- P/W Post & Wire
- W/M Wire Mesh

C/L Fence; Safety Barrier; Gate; Stile; Hedge; Limit of Foliage & Tree Canopy; 50.00 Spot Level; SSL1 50.00 Survey Control Station (coordinated point); Tree, MT Multi Trunk

Levels defining edge of carriageway are observed at channel (bottom of kerb). Unless otherwise stated.

Drainage/Services Legend

	Foul	CCTV	CCTV		Ducting
	Surface	E	Electric		
	Combined	SL	Street lighting	d	Service depth (m)
	Drainage (unspecified)	TM	Traffic management	ø	Pipe diameter (mm)
BT	British telecom	GAS	Gas	EOT	End of trace
T	Telecom	W	Water	UTT	Unable to trace
FO	Fibre optics	F	Fuel		Utility Survey Boundary
CATV	CATV	UK	Unknown / misc		

Drainage pipe size data has been determined from the surface, in order to comply with confined spaces health and safety legislation. Please regard this data as approximate.

Survey Station Coordinates

STN	EASTINGS	NORTHINGS	LEVEL
TN01	383571.563	397649.717	43.517
TN02	383530.169	397648.659	43.320
TN03	383529.166	397666.232	43.289
TN04	383477.538	397615.506	34.637
TN05	383532.250	397605.986	34.915
TN06	383536.592	397633.215	34.855
TN07	383555.589	397629.172	34.969
TNX3	383529.930	397663.805	43.271
SP01	383500.524	397634.801	35.337
SP02	383508.435	397644.583	35.513
SP03	383520.107	397655.409	35.572
SP04	383524.736	397669.440	35.570
RP13	383541.717	397678.639	35.727
RP14	383591.196	397648.580	35.847
RP15	383647.322	397642.366	36.097
RP16	383653.658	397622.021	36.944
RP17	383632.750	397584.526	36.483
R17B	383589.017	397579.052	35.446
RP24	383521.711	397610.047	42.059
RP25	383498.335	397617.024	42.586
SP2A	383516.991	397641.143	35.483
RP18	383632.680	397551.014	35.931
RP19	383641.526	397520.912	34.828
RP20	383604.275	397533.248	34.568
RP21	383567.565	397543.886	34.120
RP5A	383462.768	397539.232	33.397
RP05	383430.740	397559.090	33.056
RP04	383445.045	397580.270	34.521
RP03	383458.957	397621.271	34.461
RP02	383478.714	397615.275	34.652
RP06	383393.144	397555.006	32.384
RP07	383366.139	397555.078	32.344
RP08	383411.196	397614.969	33.559
RP01	383422.663	397644.486	34.321
RP09	383433.568	397673.824	34.981
RP10	383441.031	397690.878	35.339
RP11	383464.975	397702.338	35.380
RP12	383512.243	397671.322	35.490
R13A	383550.920	397712.566	35.767
R16A	383652.170	397649.457	35.901
16A1	383680.297	397647.818	35.589
R16B	383699.438	397653.655	37.549
R16C	383719.249	397620.486	37.322
R17A	383632.098	397604.655	37.261
R17C	383639.362	397623.299	36.941
SH03	383624.716	397621.894	35.619
SH04	383596.361	397596.972	35.510
SH02	383614.897	397602.001	35.645
RP23	383538.514	397594.353	34.851
RP22	383520.691	397609.309	34.946
001A	383582.396	397581.218	35.132
R19A	383613.236	397483.896	33.708
TN1A	383543.964	397619.685	43.289
TN1B	383585.039	397593.280	43.192
RP27	383611.186	397636.749	43.539
RP28	383611.798	397659.265	43.445
R26C	383585.571	397667.220	43.540
RP26	383568.031	397674.912	43.546
R26A	383576.292	397705.067	43.303
R26B	383587.196	397697.530	43.342
R28A	383620.378	397659.169	43.342
JS01	383494.376	397618.307	34.794

Sheet Layout

1 2

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Please note:

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www.survsys.co.uk

Levels are related to **OSGM02**
Value **n/a**

Coordinates are related to **National Grid (GPS)**

Scale **1:250**

0 2.5 5.0 7.5 10.0 12.5 15.0 17.5 20.0 22.5
metres

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Client Curtins

Title
Topographical & Utility Survey Lower Level Manchester Central

Surveyed RP SP CM AT JDS | Drawn GAT AG
Date October 2016 | Checked AG MT
File name 1468R-Lower | Revision No. | Sheet size A0
Drawing No. **SSL:1468R:250:2:2:LOWER**

SURVEYsystems

Topographical Survey Legend

B	Bollard	h	Height	RWP	Rain Water Pipe	Level Prefix Descriptions	
BS	Bus Stop	Hyd	Hydrant	SP	Soil Pipe	AL	Arch Level
BT	Telecommunications BC	IC	Inspection Cover	SPS	Stone Paving Slabs	BL	Bed Level
CP	Concrete Paving Slabs	JB	Junction Box	SS	Sign Stand	CL	Cill Level
CTV	Cable Television Cover	KO	Kerb Outlet	TCo	Cable Stay	EL	Eaves Level
DP	Downpipe	LB	Letter Box	SV	Stop Valve	FL	Floor Level
DR	Drain	LP	Lamp Post	TCB	Telephone Call Box	IL	Invert Level
Elec	Electrical IC	MH	Utility Marker	TL	Traffic Light	OL	Overhead Cable Lev
EP	Ext. Power	NP	Name Plate	TP	Tactile Paving Slabs	PL	Parapet Level
ER	Earth Rod	NP	Name Plates	TPS	Tactile Paving Slabs	RL	Roof/ridge Level
FP	Flagpole	P	Post	VP	Vent Pipe	SL	Soffit Level
FT	Floodlight	PM	Parking Meter	WM	Water Meter	Spr	Arch Springing Level
G	Gully	RE	Rodding Eye	WO	Water Outlet	TF	Top Of Fence Level
GP	Guard Post	RS	Road Sign	UTL	Unable To Lift	TW	Top Of Wall Level
GV	Gas Valve	RTB	Retaining Wall			Thr	Threshold Level
						WL	Water Level

Fence Annotation

B/W	Barbed Wire		Fence
C/B	Closed Boarded		Safety Barrier
C/I	Corrugated Iron		Gate
C/L	Chain Link		
H/R	Hand Railed		Stile
H/R	Hand Rail		
I/R	Iron Railings		Hedge
O/B	Open Boarded		
P/C	Post & Chain		
P/R	Post & Rail		Limit of Foliage & Tree Canopy
P/W	Post & Wire		
W/M	Wire Mesh		

Spot Level: 50.00

Survey Control Stats (coordinated point): SDL1 50.00

Tree: MT Multi Trunk

Levels defining edge of carriageway are observed at channel (bottom of kerb). Unless otherwise stated.

Survey Station Coordinates

STN	EASTINGS	NORTHINGS	LEVEL
TN01	383571.563	397649.717	43.517
TN02	383530.169	397648.659	43.320
TN03	383529.166	397666.232	43.289
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TN05	383532.250	397605.986	34.915
TN06	383536.592	397633.215	34.805
TN07	383555.589	397629.172	34.969
TN13	383529.930	397663.805	43.271
SP01	383500.524	397634.801	35.337
SP02	383508.435	397644.583	35.513
SP03	383520.107	397655.409	35.572
SP04	383524.736	397669.440	35.570
RP13	383541.717	397678.639	35.727
RP14	383591.196	397648.580	35.847
RP15	383647.322	397642.366	36.097
RP16	383653.658	397622.021	36.944
RP17	383632.750	397584.526	36.483
R17B	383589.017	397579.052	35.446
RP24	383521.711	397610.047	42.059
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SP2A	383516.991	397641.143	35.483
RP18	383632.680	397551.014	35.931
RP19	383641.526	397520.912	34.828
RP20	383604.275	397533.248	34.568
RP21	383567.565	397543.886	34.120
RP3A	383462.768	397539.232	33.397
RP05	383430.740	397559.090	33.056
RP04	383445.045	397580.270	34.521
RP03	383458.957	397621.271	34.461
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RP06	383393.144	397555.006	32.384
RP07	383366.139	397555.078	32.344
RP08	383411.196	397614.969	33.559
RP01	383422.663	397644.486	34.321
RP09	383433.568	397673.824	34.981
RP10	383441.031	397690.878	35.339
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R13A	383550.920	397712.566	35.767
R16A	383652.170	397649.457	35.901
16A1	383680.297	397647.818	35.589
R16B	383699.438	397653.655	37.549
R16C	383719.249	397629.486	37.322
R17A	383632.098	397604.655	37.261
R17C	383639.362	397623.299	36.941
SH03	383624.716	397621.894	35.619
SH04	383596.381	397596.972	35.510
SH02	383614.897	397602.001	35.645
RP23	383538.514	397594.353	34.851
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O01A	383582.396	397581.218	35.132
R19A	383613.236	397483.896	33.708
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TN1B	383585.039	397593.280	43.192
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R26C	383585.571	397687.220	43.540
RP26	383568.031	397674.912	43.546
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R26B	383587.196	397697.530	43.342
R28A	383620.378	397659.169	43.342
JS01	383494.376	397618.307	34.784

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www.survsys.co.uk

Levels are related to **OSGB15**
Value **n/a**

Coordinates are related to **National Grid** (GPS)

Scale **1:250**

0 2.5 5.0 7.5 10.0 12.5 15.0 17.5 20.0 22.5 metres

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Client: Curtins

Title:

Topographical Survey
Upper Level
Manchester Central

Surveyed: RP SP CM | Drawn: GAT AG

Date: October 2016 | Checked: AG

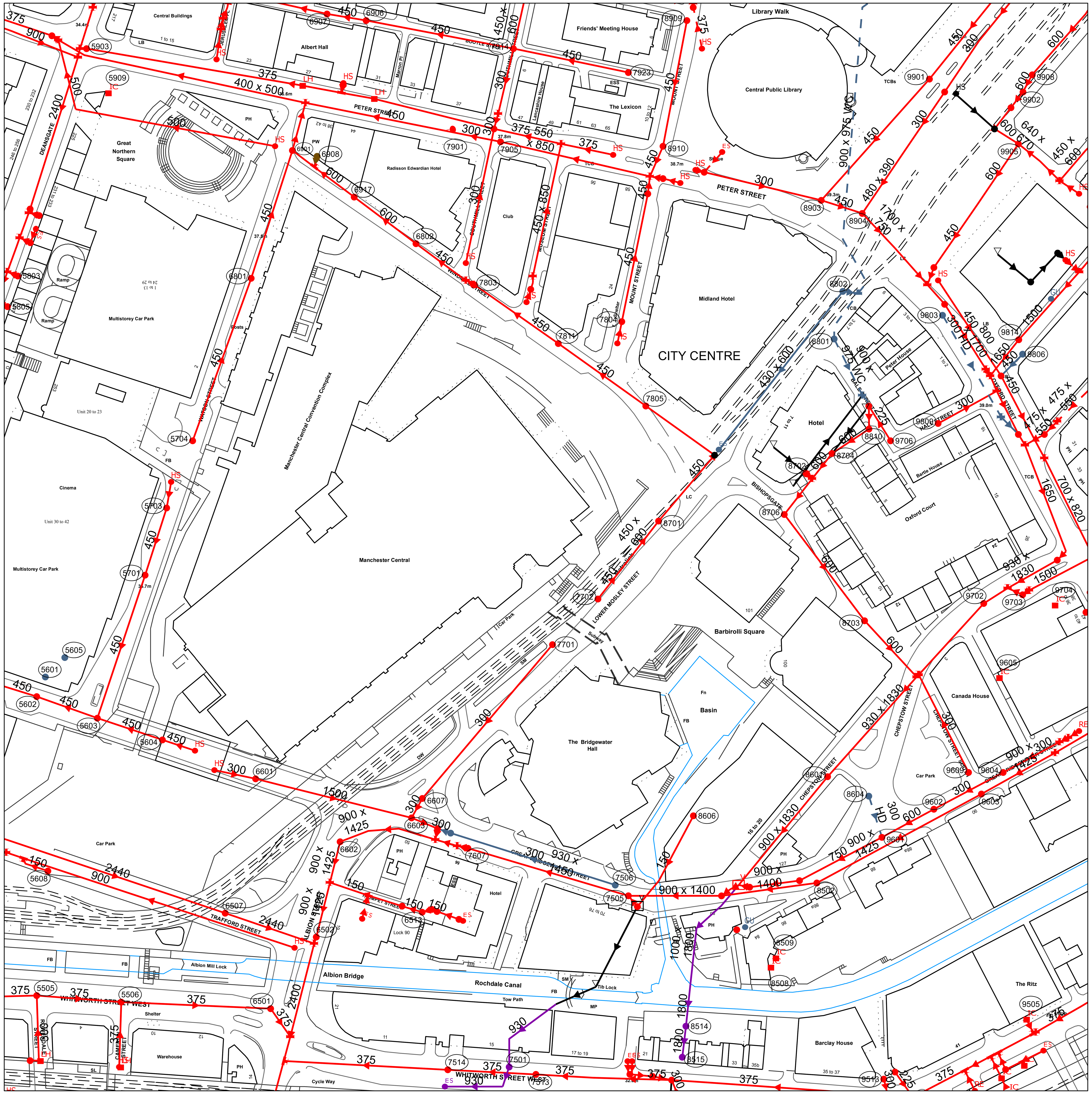
File name: 1468R-UPPER | Revision No. | Sheet size: A0

Drawing No.: **SSL:1468R:250:1:1:UPPER**

SURVEYsystems

APPENDIX B

UNITED UTILITIES MAP



OS Sheet No: SJ8397NE

Scale: 1:1250 Date: 25/11/2016

Printed By: Property Searches

Refno	Cover	Func	Invert	Size.x	Size.y	Shape	Matl	Length	Grad
5503	33.4	CO	30.67	300		CI	VC	34.02	8
5505	33.83	CO							
5506	34.08	CO							
5601	36.03	SW							
5602	35.48	CO	31.92	450		CI	CO	80.65	
5603	35.59	CO	0	450		CI	CO	29.73	
5604	35.71	CO	32.67	450		CI	CO	31.62	
5605	35.76	SW							
5608		CO		150		CI	VC	13.54	
5701	35.76	CO							
5703	17.87	CO	0	450		CI	CO	32.57	
5704		CO	0	450		CI	CO	79.71	
5801		CO		0		CI	VC	5.41	
5803		CO		0		CI	VC	5.16	
5805		CO		0		CI	VC	5.45	
5901	34.79	CO	21.81	2400		CI	BR	70.23	780
5902	34.19	CO							
5903	34.5	CO							
5909		CO							
5912		CO		0		CI	VC	4.98	
6501	34.91	CO	0	375		CI	VC	15.81	
6502	36.02	CO	22.59	2400		CI	BR	3.16	
6505	35.94	CO		150		CI	VC	35.13	
6507	9.01	CO	0	2440		CI	CO	43.32	
6513		CO		150		CI	VC	9.62	
6514		CO		150		CI	VC	4.65	
6515		CO		150		CI	VC	2.51	
6601	35.88	CO							
6602	36.37	CO	22.74	900	1425	EG	BR	19.4	129
6603	37.02	CO							
6607	38.01	CO	0	300		CI	CO	10.3	
6801		CO	0	450		CI	CO	61.98	
6802	18.46	CO	14.43	600		CI	CO	35.73	
6901	36.94	CO							
6906	18.09	CO	0	450		CI	VC	18.25	
6907	27.13	CO	0	450		CI	VC	22.56	
6908		FO		150		CI	VC	5.12	
6910		CO							
6917		CO							
7501	33.14	OV	27.68	900	1330	EG	BR	9.49	
7505	37.28	CO							
7506	37.31	SW	34.55	300		CI	CO	79.7	347
7507	32.51	CO		225		CI	UN	10.5	
7508		CO		150		CI	VC	10.77	
7512	32.37	CO		225		CI	UN	8.97	
7513		CO		375		CI	VC	40.74	
7514		CO		375		CI	VC	75.83	
7516		CO							
7607	37.09	CO	23.12	900	1425	EG	BR	5.1	
7608	37.09	SW	34.32	300		CI	CO	6.32	1
7609	37.12	CO							
7701	39	CO	35.54	300		CI	CO	92.96	
7702		CO	0	450		CI	CO	22.8	
7801	39.53	CO							
7803	39.37	CO	34.88	450		CI	CO	4.47	
7804	39.52	CO							
7805	40.87	CO							
7811		CO							
7901		CO	34.09	450		CI	VC	66.29	
7905	37.89	CO							
7907	37.82	CO	30.14	375		CI	VC	191.71	342
7911		CO							
7914	38.51	CO							
7923		CO	0	450		CI	VC	54.13	
8502	36.36	CO							
8503	36.47	CO	31.55	750		CI	CO	23.19	63
8504	36.93	CO	28.16	525		CI	CO	5.2	
8505	32.34	CO							
8506	36.98	CO	23.44	900	1400	EG	BR	42.95	226
8508		CO							
8509		CO							
8510		CO							
8514		OV	0	1800		CI	BR	14.41	
8515		OV							
8601	36.5	CO	27.8	900	1830	EG	BR	64.73	141
8604	35.93	SW	33.35	300		CI	VC	19.92	25
8606		CO	0	150		CI	VC	49.49	
8701	39.37	CO							
8702	37.28	CO	34.68	600		CI	CO	3.8	
8703	36.76	CO	28.96	600		CI	CO	35.38	
8704	37.6	CO							
8706	37.42	CO	32.92	600		CI	CO	61.4	16
8801	39.34	SW							
8802	39.51	SW	35.59	600		CI	VC	7.07	
8803	37.76	CO							
8810	37.6	CO	34	600		CI	CO	20.52	47
8901	38.88	CO	35.32	550	850	EG	BR	6.08	
8902	39.04	CO	33.7	300		CI	VC	55.54	40
8903	39.45	CO							
8904	39.55	CO	30.92	1700	750	EG	CO	21.93	
8905	39.82	CO							
8909		CO	0	450		CI	VC	59.03	
8910		CO	0	450		CI	VC	15.23	
9502		CO	0	225		CI	VC	8.67	
9505		CO							
9512		CO		225		CI	UN	14.29	
9513		CO		300		CI	VC	7.63	
9514		CO							
9514		CO							
9601	36.54	CO							
9602	36.14	CO	32.73	600		CI	CO	27.29	161
9603	36.26	CO							
9604	36.45	CO							
9605	0	CO							
9609	36.22	CO	29.73	300		CI	VC	50.54	
9701		CO		150		CI	VC	6.17	
9702	38.08	CO							
9703	38.33	CO	29.42	1500		CI	CO	7.62	
9704		CO							
9705	38.49	CO	28.14	930	1830	EG	BR	39.46	
9706	37.71	CO	36.36	225		CI	VC	18.87	70
9801	39.33	CO	31	450		CI	CI	8.54	
9802	39.35	CO							
9803	39.23	SW	35.83	300		CI	VC	54.2	
9806	39.32	SW	36.1	450		CI	VC	14.14	28
9808	39.09	CO							
9809	38.17	CO	30.88	300		CI	VC	30.89	
9814		CO	0	1650		CI	CO	21.31	
9820	39.27	CO	37.25	550		CI	BR	10.3	
9822	38.93	CO							
9901	39.86	CO	33.36	450		CI	VC	75.07	70
9902	40.37	CO	36.65	600		CI	CO	9.04	452
9903	40.42	CO	36.63	600		CI	VC	25.39	77
9905	40.25	CO							
9906	39.99	CO							
9908		CO		600		CI	CO	9.08	
5606		CO	0	450		CI	CO	15.81	
5607		CO	0	300		CI	PVC	19.42	
5610		CO	0	2440		CI	CO	106.57	
5702		CO	0	450		CI	CO	12.17	
5904		CO	0	939		CI	CO	14.14	
5908		CO	0	500		CI	BR	32.98	
5911		CO	0	900		CI	BR	35.47	
6503		CO	0	900		CI	BR	140.09	
6512		CO							
6904		CO							
6905		CO							
6914		CO							
6915		CO	0	500		CI	CO	93.56	
7502		OV	0	930		CI	BR	39.9	
7503		CO							
7515		OV							
7703		CO							
7802		CO	0	450	850	EG	BR	3	
7808		CO	0	300		CI	VC	63.35	
7812		CO	0	470	800	FT	BR	6.32	
7815		CO	0	450		CI	VC	10.2	
7920		CO	0	375		CI	VC	24.52	
8501		CO	25.57	300		CI	CO	5	3
8511		OV	0	1800		CI	BR	20.32	

Refno	Cover	Func	Invert	Size.x	Size.y	Shape	Matl	Length	Grad
8512		SW							
8809		SW							
8906		CO	0	850		CI	VC	8.25	
8907		CO	0	300		CI	VC	4.12	
8908		CO		375		CI	VC	19.42	
8911		CO							
9501		CO	0	375		CI	VC	24.19	
9507		CO		150		CI	UN	8.96	
9510		CO							
9515		CO							
9710		CO							
9804		CO	0	800	1700	EG	CO	34.71	
9805		SW							
9813		CO							
9815		CO							
9818		CO	0	450		CI	VC	52.7	
9909		CO							
9912		CO	0	450	600	EG	BR	10.82	
9914		CO	33.64	450		CI	CI	35.23	13
9915		CO	0	640	670	RE	BR	12.81	
5502		CO							
5508		CO							
5609		CO							
5611		CO							
5802		CO							
5804		CO							
5905		CO							
5906		CO	0	2400		CI	BR	97.42	
5907		CO							
5910		CO							
5913		CO							
6504		CO							
6506		CO							
6508		CO	22.74	900	1425	EG	BR	25.96	173
6509		CO							
6510		CO							
6606		CO	0	900	1425	EG	BR	45.68	
6902		CO							
6903		CO							
6909		CO							
6911		CO							
6912		CO							
6913		CO							
6916		CO							
7611		CO	0	900	1425	EG	BR	10.44	
7809		CO	0	450		CI	CO	28.6	
7813		CO							
7921		CO							
7922		CO	0	300		CI	VC	7.28	
7930		CO	0	550	850	EG	BR	70.83	
8705		CO	0	600		CI	CO	20.96	
8804		SW		900	975	EG	BR	2.83	
8807		SW							
9503		CO							
9504		CO							
9506		CO							
9508		CO							
9509		CO							
9516		CO							
9612		CO							
9613		CO							
9615		CO	0	300		CI	CO	29.53	
9616		CO	0	900	1425	EG	BR	38.95	
9617		CO	0	300		CI	CO	4.47	
9708		CO							
9709		CO	0	1500		CI	CO	3.61	
9711		CO							
9712		CO							
9807		CO							
9811		SW	0	300		CI	VC	11.31	
9812		CO							
9817		CO							
9823		CO							
9825		CO							
9827		CO	0	475	550	EG	BR	8.49	
9910		CO							
7504		CO							
7508		OV							
8707		SW							
8709		CO							
8710	39.43	CO							
8811		CO							
9805		CO							
9810		CO							
9819		CO							
9904	40.27	CO							
9907		CO							
8507		CO							

WASTE WATER SYMBOLOGY

Foul Surface Combined Overflow

- Manhole
- Manhole, Side Entry
- MainSewer, Public
- MainSewer, Private
- MainSewer, S104
- Rising Main, Public
- Rising Main, Private
- Rising Main, S104
- Highway Drain, Private

Foul Surface Combined

- WW Site Termination
- Air Valve
- Cascade
- Non Return Valve
- Extent of Survey
- Flow Meter
- Gulley
- Hatch Box
- Head of System
- Hydrobrake / Vortex
- Inlet
- Inspection Chamber
- Bifurcation
- Catchpit
- Contaminated Surface Water
- WW Pumping Station
- Sludge Pumping Station
- Sewer Overflow
- T Junction/Saddle
- LampHole
- OilInterceptor
- PenStock
- Pump
- RoddingEye
- Soakaway
- Summit
- Valve
- Valve Chamber
- Washout Chamber
- DropShaft
- WW Treatment Works
- Septic Tank
- Vent Column
- Network Storage Tank
- Orifice Plate
- Vortex Chamber
- Penstock Chamber
- Blind Manhole

- Sludge Main, Public
- Sludge Main, Private
- Sludge Main, S104

ABANDONED PIPE

- MainSewer
- Rising Main
- Highway Drain
- Sludge Main

Foul Surface Combined Overflow

- Screen Chamber
- Discharge Point
- Outfall
- Control Kiosk
- Unspecified

LEGEND

MANHOLE FUNCTION

FO	Foul
SW	Surface Water
CO	Combined
OV	Overflow

SEWER SHAPE

CI	Circular	TR	Trapezoidal
EG	Egg	AR	Arch
OV	Oval	BA	Barrel
FT	Flat Top	HO	HorseShoe
RE	Rectangular	UN	Unspecified
SQ	Square		

SEWER MATERIAL

AC	Asbestos Cement	DI	Ductile Iron
BR	Brick	PVC	Polyvinyl Chloride
PE	Polyethylene	CI	Cast Iron
RP	Reinforced Plastic Matrix	SI	Spun Iron
CO	Concrete	ST	Steel
CSB	Concrete Segment Bolted	VC	Vitrified Clay
CSU	Concrete Segment Unbolted	PP	Polypropylene
CC	Concrete Box Culverted	PF	Pitch Fibre
PSC	Plastic/Steel Composite	MAC	Masonry, Coursed
GRC	Glass Reinforced Concrete	MAR	Masonry, Random
GRP	Glass Reinforced Plastic	U	Unspecified

The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown.

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OS Sheet No: SJ8397NE

Scale: 1:1250 Date: 25/11/2016

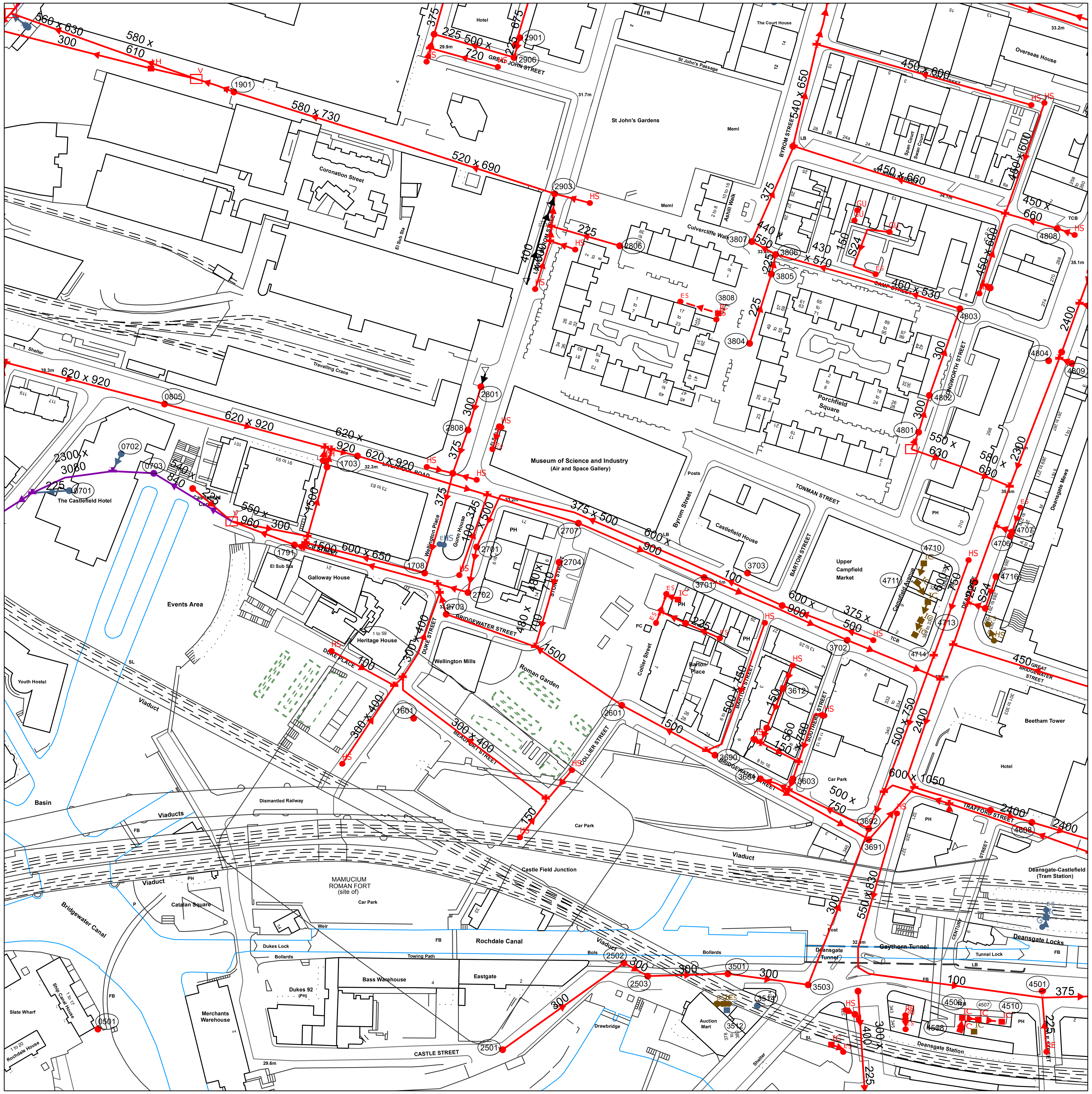
238 Nodes

Sheet 1 of 1

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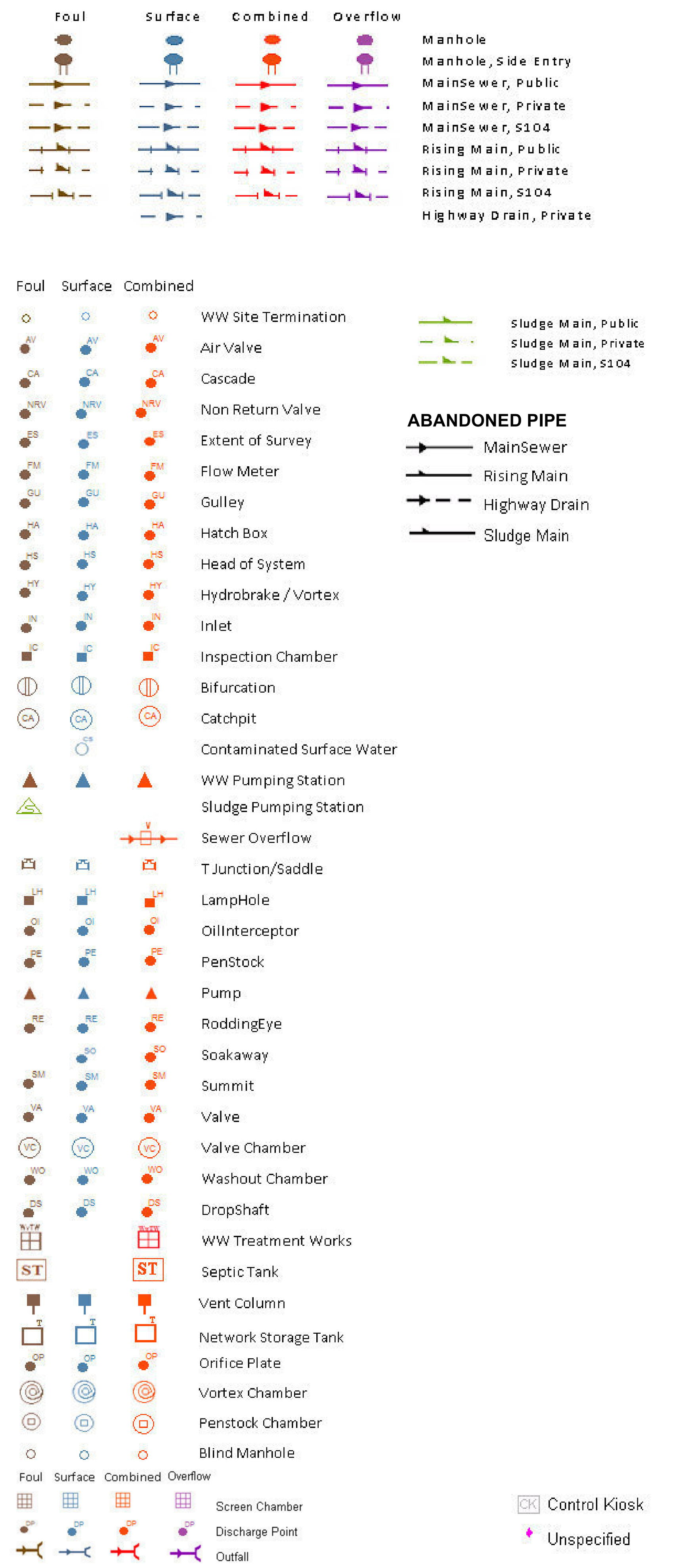
SEWER RECORDS



Refno	Cover	Func	Invert	Size.x	Size.y	Shape	Matl	Length	Grad
0501		CO							
0701	25.6	SW	24.47	225		CI	VC	17.03	
0702	25.59	SW	24.74	225		CI	VC	8.94	
0703	25.81	OV	22.78	2300	3080	UN	BR	128.36	
0704	26.25	CO	23.77	225		CI	VC	23.54	81
0805	29.54	CO							
0901	26.68	SW	23.4	400		CI	VC	5	26
1601	33.23	CO							
1703	31.99	CO	22.21	620	920	EG	BR	106.61	
1708	32.57	CO							
1709	31.39	CO							
1791	29.37	CO							
1901	28.95	CO							
1906		CO							
2501	31.09	CO	24.95	300		CI	VC	68.82	299
2502	29.53	CO							
2503	32.16	CO							
2601	33.75	CO	26.77	1500		CI	CO	91.92	919
2701	33.05	CO	28.12	300		CI	BR	10.2	
2702	33.12	CO	25.87	1500		CI	CO	14.56	
2703	33.04	CO	25.9	1500		CI	CO	14.56	
2704	33.44	CO	30.36	480	710	FT	BR	19.65	
2706	32.91	CO	29.87	375		CI	CO	23.77	
2707	33.5	CO	22.19	600	900	EG	BR	63.16	1263
2801	33.17	CO	30.67	300		CI	BR	20.88	54
2802		CO		150		CI	VC	10.86	
2806	33.42	CO	31.38	225		CI	VC	32.7	
2808		CO	30.28	375		CI	CO	21.19	54
2901		CO		225		CI	VC	9.54	
2902		CO	0	675		CI	VC	66.76	
2903	32.21	CO							
2906		CO		225		CI	VC	38.34	
3501	32.11	CO							
3502		CO							
3503	32.24	CO							
3504	31.9	CO	30	300	400	EG	VC	30.07	15
3505		CO		100		CI	VC	3.08	
3512		SW							
3513	0	FO							
3514		SW							
3601	34.38	CO	26.9	375		CI	VC	28.65	
3603		CO	0	560	760	UN	BR	5.39	
3605		CO							
3612		CO							
3690	34.2	CO	27.14	1500		CI	CO	48.77	139
3691	33.4	CO							
3692	33.74	CO	0	500	750	UN	BR	41.15	
3701	34.12	CO							
3702	34.7	CO							
3703	34.32	CO							
3707	34.62	CO							
3710		CO		225		CI	VC	12.82	
3711		CO							
3804	34.07	CO	33.04	225		CI	VC	33.53	17
3805	33.63	CO	31.01	225		CI	VC	9.22	33
3806	33.49	CO							
3807	33.44	CO							
3808		CO							
3901	33.28	CO	29.58	540	650	FT	BR	48.27	
4501	33.52	CO							
4506		CO							
4507		CO							
4508		CO							
4509		FO							
4510		CO							
4512		SW							
4608		CO	0	2400		CI	BR	27.9	
4609		CO		2400		CI	BR	19.89	
4704	35.36	CO							
4706		CO		150		CI	VC	2.11	
4707		CO							
4710		FO							
4711		FO							
4712		FO							
4713		FO							
4714		FO							
4715		CO							
4716		CO		225		CI	VC	15.41	
4801	34.39	CO							
4802	34.21	CO							
4803	34.44	CO	31.43	460	530	UN	BR	43.97	92
4804	35.23	CO							
4805	35.27	CO							
4808	35.15	CO	31.85	450	660	UN	BR	25	
4809		CO		0		CI	VC	6.15	
4812		CO		225		CI	VC	4.05	
9026		CO	0	600	750	UN	CO	16.81	
3100		CO		150		CI	VC	11.49	
0708		OV	0	540	840	UN	BR	21.1	
0905		SW	23.21	500	700	UN	BR	5.11	27
0906		CO	23.89	560	630	UN	BR	45.54	52
0907		CO	24.9	570	640	FT	BR	9.79	98
1602		CO	0	300	400	UN	CO	48.92	
1702		CO	0	450		CI	CO	12.37	
1704		CO	0	100		CI	CO	33.12	
1902		CO	0	500	750	UN	VC	6.42	
1904		CO							
1905		CO							
2602		CO	0	150		CI	VC	20	
2603		CO	0	150		CI	VC	15.62	
2605		CO	0	400		CI	VC	2.24	
2606		CO							
2705		SW							
2708		CO							
2710		CO	0	100		CI	VC	39.22	
2711		CO	0	450		CI	CO	11.4	
2713		CO	30.62	1500		CI	CO	11.18	
2714		CO							
2715		CO	31.22	600	650	UN	CO	24.04	
2800		CO	0	400	600	UN	CO	12.28	
2803		CO							
2807		CO	0	400	600	UN	CO	23.22	
2904		CO	0	500	720	UN	VC	32.35	
3506		CO	0	100		CI	VC	80.75	
3507		CO	27.93	225		CI	VC	30.07	15
3509		CO		100		CI	VC	4.71	
3511		CO							
3600		CO	0	150		CI	VC	3.78	
3604		CO	0	560	760	UN	VC	31.62	
3607		CO							
3608		CO							
3611		CO							
3704		CO	0	500	750	UN	CO	67.08	
3705		CO	22.11	600	900	EG	BR	36.25	3625
3706		CO							
3708		CO	0	100		CI	VC	22.47	
3715		CO							
3801		CO							
3802		CO							
3904		CO							
3905		CO							
3906		CO							
4505		CO							
4511		SW							
4514		SW							
4603		CO	0	550	830	UN	VC	79.39	
4604		CO							
4605		CO	0	600	1050	UN	BR	53.38	
4606		CO							
4703		CO	0	375	500	UN	VC	22.47	
4705		CO	0	580	630	UN	BR	23.77	
4719		FO							
4792		CO	0	500	750	UN	BR	46.82	
4806		CO	0	450	600	UN	CO	38.9	
4807		CO	0	450	660	UN	BR	8.54	
4813		CO		150		CI	VC	39.09	
4901		CO	0	450	600	UN	CO	54.08	
4902		CO	0	450	600	UN	CO	102.88	
6400		CO							
0705		OV							

Refno	Cover	Func	Invert	Size.x	Size.y	Shape	Matl	Length	Grad
0706		OV							
0890		CO							
0902		CO							
1603		CO							
1605		CO							
1700		CO							
1706		CO							
1707		CO							
1790		CO							
1792		CO							
1903		CO							
2604		CO	0	300	400	UN	CO	88.8	
2709		CO							
2712		CO							
2790		CO							
2791		CO							
2809		CO							
2900		CO							
3508		CO							
3602		CO	0	500	750	UN	BR	6.71	
3606		CO							
3609		CO							
3610		CO							
3714		CO							
3716		CO							
3902		CO	0	540	650	FT	BR	10.44	
3903		CO							
4607		CO							
4690		CO							
4691		CO							
4692		CO							
4702		CO							
4709		CO							
4717		CO							
4790		CO							
4791		CO	0	500	750	UN	BR	67.07	
4800		CO							
4810		CO							
4811		CO							
4903		CO							
2802		CO							
2803		CO							
2804		CO							
2905		CO							
0903		CO	25.45	300		CI	VC	95.49	48
0904		CO							
1701		CO							
4701		CO	31.33	550	630	UN	BR	24.72	

WASTE WATER SYMBOLOGY



LEGEND

MANHOLE FUNCTION

FO	Foul
SW	Surface Water
CO	Combined
OV	Overflow

SEWER SHAPE

CI	Circular	TR	Trapezoidal
EG	Egg	AR	Arch
OV	Oval	BA	Barrel
FT	Flat Top	HO	HorseShoe
RE	Rectangular	UN	Unspecified
SQ	Square		

SEWER MATERIAL

AC	Asbestos Cement	DI	Ductile Iron
BR	Brick	PVC	Polyvinyl Chloride
PE	Polyethylene	CI	Cast Iron
RP	Reinforced Plastic Matrix	SI	Spun Iron
CO	Concrete	ST	Steel
CSB	Concrete Segment Bolted	VC	Vitrified Clay
CSU	Concrete Segment Unbolted	PP	Polypropylene
CC	Concrete Box Culverted	PF	Pitch Fibre
PSC	Plastic/Steel Composite	MAC	Masonry, Coursed
GRC	Glass Reinforced Concrete	MAR	Masonry, Random
GRP	Glass Reinforced Plastic	U	Unspecified

The position of the underground apparatus shown on this plan is approximate only and is given in accordance with the best information currently available. United Utilities Water will not accept liability for any loss or damage caused by the actual position being different from those shown.

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OS Sheet No: SJ8397NW

Scale: 1:1250 Date: 25/11/2016

198 Nodes

Sheet 1 of 1

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SEWER RECORDS

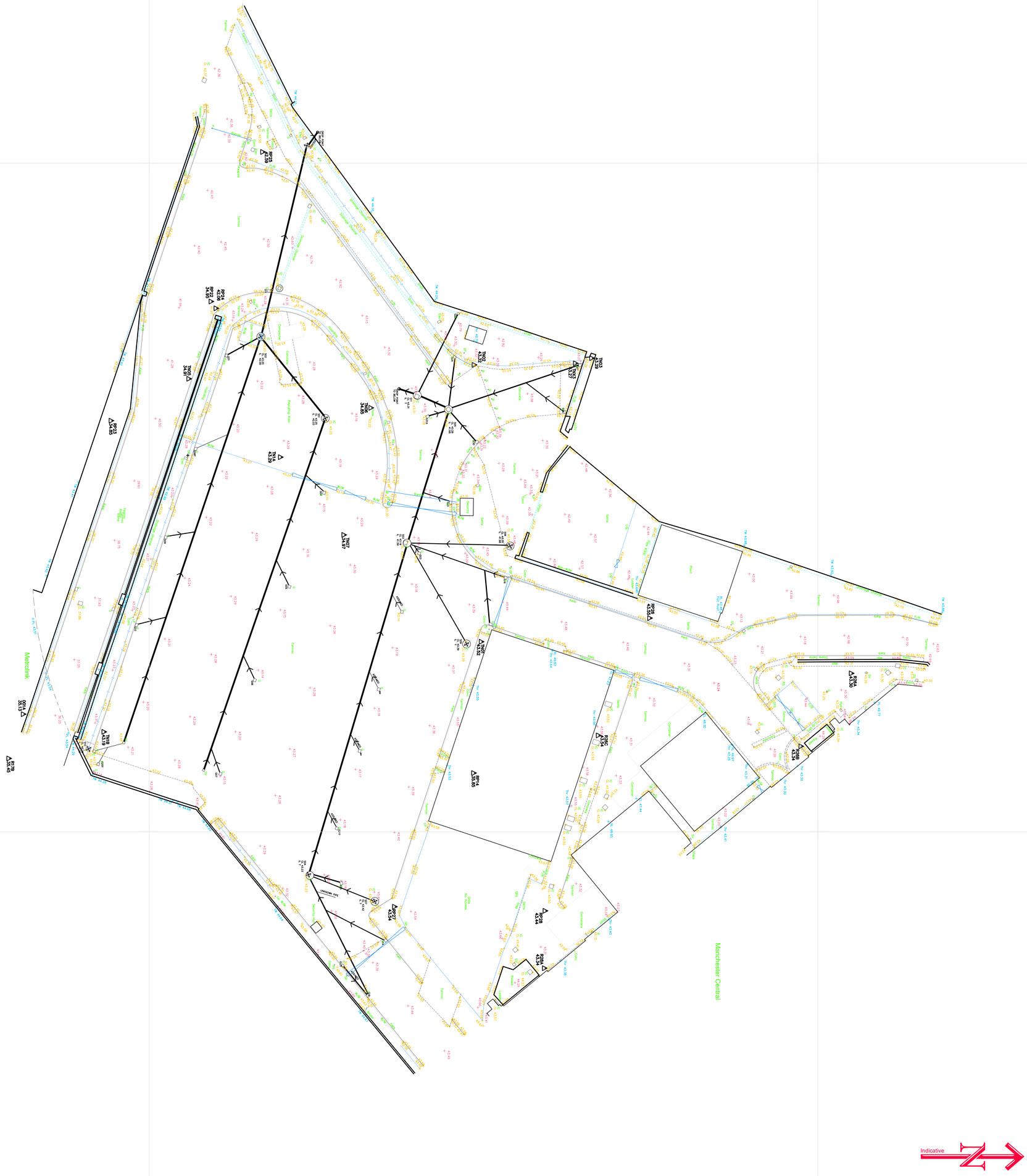
OS Sheet No: SJ8397NW

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Scale: 1:1250 Date: 25/11/2016

APPENDIX C

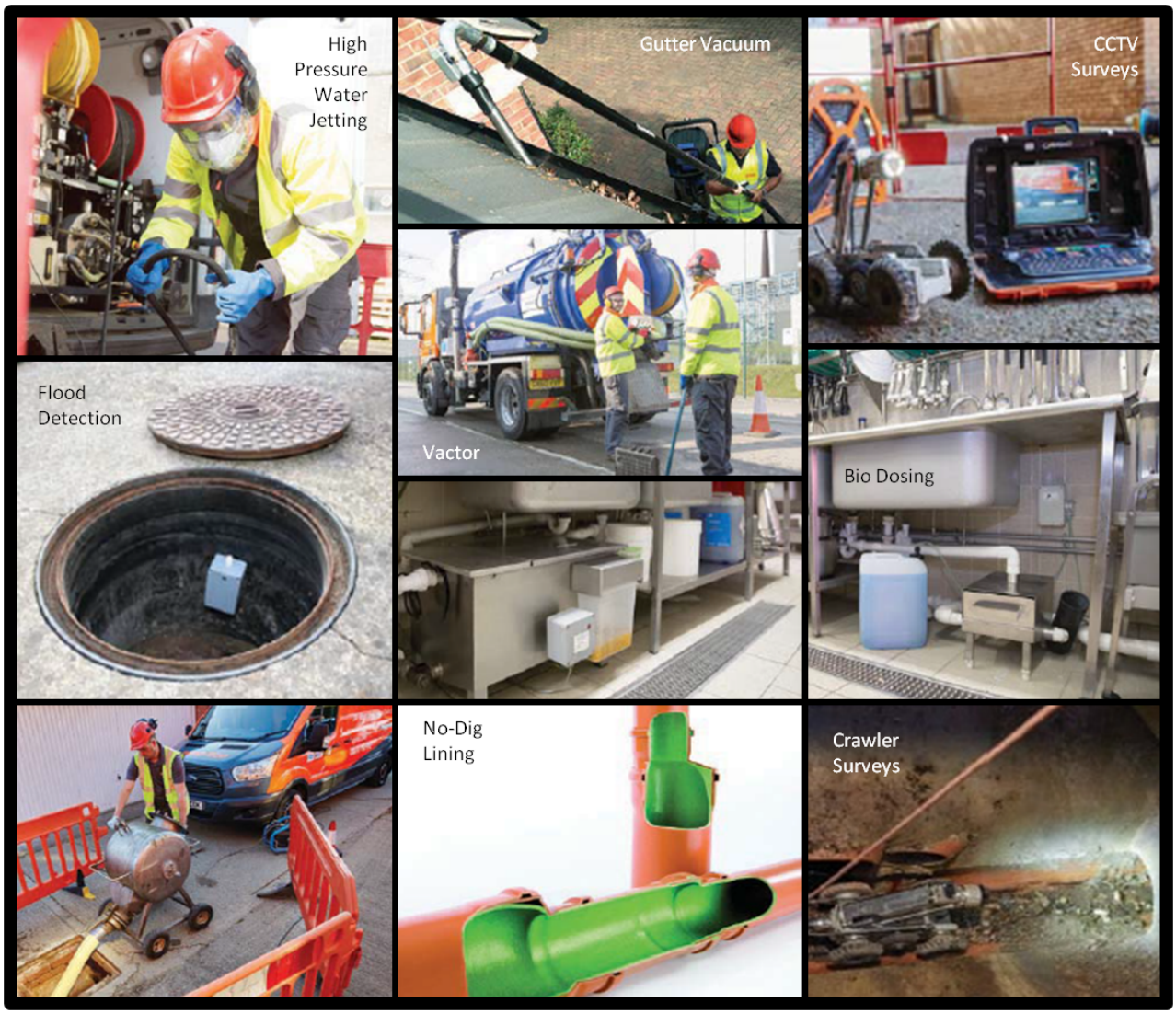
CCTV SURVEY INFORMATION


Metrolink
Manchester Central
Indicative

DYNOROD (ROGER LITTLE NW LTD)
UNIT 15, HAIGH PARK, HAIGH AVENUE, WHITEHILL INDUSTRIAL ESTATE
Tel. 0161 4297007
claire@rlittle.co.uk

Project

Project Name: CY_MCR CENTRAL_M2 3GX
Project Description: WINDMILL STREET, MANCHESTER
Project Date: 17/05/2021
Inspection Standard: MSCC5 Sewers & Drainage GB (SRM5 Scoring)



DYNOROD (ROGER LITTLE NW LTD)
UNIT 15, HAIGH PARK, HAIGH AVENUE, WHITEHILL INDUSTRIAL ESTATE
Tel. 0161 4297007
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CY_MCR CENTRAL_M2 3GX		17/05/2021

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Project Name	Project Number	Project Date
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Project Information

Project Name	Project Number	Project Date
CY_MCR CENTRAL_M2 3GX		17/05/2021

Client

Company: MANCHESTER CENTRAL
Street: WINDMILL STREET
Town or City: MANCHESTER
Post Code: M2 3GX

Site

Company: BAUER MILLET
Street: ABOVE DRAINAGE

Contractor

Company: DYNOROD (ROGER LITTLE NW LTD)
Contact: CLAIRE YOUNG
Department: DRAINAGE DIRECTOR
Street: UNIT 15, HAIGH PARK, HAIGH AVENUE
Town or City: WHITEHILL INDUSTRIAL ESTATE
County: STOCKPORT
Post Code: SK4 1QR
Phone: 0161 4297007
Mobile: 07725885315
Email: claire@rlittle.co.uk

DYNOROD (ROGER LITTLE NW LTD)
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Scoring Summary

Project Name	Project Number	Project Date
CY_MCR CENTRAL_M2 3GX		17/05/2021

Structural Defects

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

Service / Operational Condition

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

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

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

Section	PLR	Grade	Description
65		3	Joint displaced, medium
72		3	Settled deposits, hard or compacted, 5% cross-sectional area loss, finish
75		3	Settled deposits, hard or compacted, 10% cross-sectional area loss, finish
83		3	Settled deposits, hard or compacted, 10% cross-sectional area loss
132		3	Joint displaced, medium
134		3	Multiple defects
136		3	Joint displaced, medium
137		3	Joint displaced, medium
138		3	Settled deposits, hard or compacted, 10% cross-sectional area loss

Abandoned Surveys

Section	PLR	Description
All inspections complete, none are abandoned.		

Information

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

DYNOROD (ROGER LITTLE NW LTD)
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Section Inspection - 19/05/2021

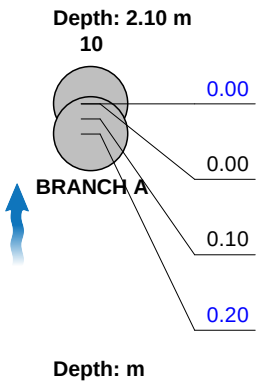
Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
58	59	19/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Upstream	**Upstream Node:**	BRANCH A
Road:	Mcr Central	**Inspected Length:**	0.20 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	0.20 m	**Downstream Node:**	10
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	2.100 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:



Scale: 1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number: 10	00:00:00	1, 2	
	0.00	WL	Water level, 0% of the vertical dimension	00:00:10	3	
	0.10	GP	General photograph taken at this point	00:00:27	4	
	0.20	OCF	Finish node type, other special chamber, reference number: BRANCH A: DISUSED GULLY ?	00:01:12	5	

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

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Section Pictures - 19/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
58	Upstream			



1, 00:00:00, 0.00 m
Start node type, manhole, reference number: 10



2, 00:00:00, 0.00 m
Start node type, manhole, reference number: 10



3, 00:00:10, 0.00 m
Water level, 0% of the vertical dimension



4, 00:00:27, 0.10 m
General photograph taken at this point



5, 00:01:12, 0.20 m
Finish node type, other special chamber, reference number: BRANCH A, DISUSED GULLY ?

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Section Inspection - 19/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
59	60	19/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Upstream	**Upstream Node:**	BRANCH B
Road:	Mcr Central	**Inspected Length:**	0.20 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	0.20 m	**Downstream Node:**	10
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	2.100 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: 2.10 m 10						
	0.00	MH	Start node type, manhole, reference number: 10	00:00:00		
	0.00	WL	Water level, 0% of the vertical dimension	00:00:22	1	
BRANCH B	0.20	OCF	Finish node type, other special chamber, reference number: BRANCH B: UNABLE TO PUSH FURTHER	00:00:03		
Depth: m						

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

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Section Pictures - 19/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
59	Upstream			



1, 00:00:22, 0.00 m
Water level, 0% of the vertical dimension

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Section Inspection - 19/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
60	61	19/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Downstream	**Upstream Node:**	10
Road:	Mcr Central	**Inspected Length:**	8.60 m	**Upstream Pipe Depth:**	2.100 m
Location:		**Total Length:**	8.60 m	**Downstream Node:**	D.S
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	225 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:75



Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node type, manhole, reference number: 10	00:00:00	1	
0.00	WL	Water level, 0% of the vertical dimension	00:00:27		
0.00	SCR	Shape changes to rectangular, new size(s), 300mm high, 300mm wide	00:00:48		
0.10	REM	General remark: drop pipe from mh	00:00:23	2	
0.40	MCCI	Pipe material changes to cast iron at this point	00:00:27		
3.40	GP	General photograph taken at this point	00:00:39	3	
5.90	GP	General photograph taken at this point	00:00:57	4	
7.70	REM	General remark: REST BEND	00:01:13		
8.60	OFF	Finish node type, outfall, reference number: D.S: AT CHAMBER	00:01:28	5	

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

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Section Pictures - 19/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
60	Downstream			



1, 00:00:00, 0.00 m
Start node type, manhole, reference number: 10



2, 00:00:23, 0.10 m
General remark, drop pipe from mh



3, 00:00:39, 3.40 m
General photograph taken at this point



4, 00:00:57, 5.90 m
General photograph taken at this point



5, 00:01:28, 8.60 m
Finish node type, outfall, reference number: D.S, AT CHAMBER

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Section Inspection - 19/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
61	62	19/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Downstream	**Upstream Node:**	G24
Road:	Mcr Central	**Inspected Length:**	5.30 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	5.30 m	**Downstream Node:**	D.S
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m G24						
	0.00	OC	Start node type, other special chamber, reference number: G24: CAR PARK	00:00:00	1, 2	
	0.00	WL	Water level, 5% of the vertical dimension	00:00:19	3	
	0.95	JN	Junction at 03 o'clock, diameter: 100mm	00:01:15	4	
	4.20	JN	Junction at 02 o'clock, diameter: 100mm	00:01:32	5	
	5.30	OFF	Finish node type, outfall, reference number: D.S: AT LINE TO S02	00:01:44	6	
D.S Depth: m						



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

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Section Pictures - 19/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
61	Downstream			



1, 00:00:00, 0.00 m
Start node type, other special chamber, reference number: G24, CAR PARK



2, 00:00:00, 0.00 m
Start node type, other special chamber, reference number: G24, CAR PARK



3, 00:00:19, 0.00 m
Water level, 5% of the vertical dimension



4, 00:01:15, 0.95 m
Junction at 03 o'clock, diameter: 100mm



5, 00:01:32, 4.20 m
Junction at 02 o'clock, diameter: 100mm



6, 00:01:44, 5.30 m
Finish node type, outfall, reference number: D.S, AT LINE TO S02

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Section Inspection - 19/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
62	63	19/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Downstream	**Upstream Node:**	G25
Road:	Mcr Central	**Inspected Length:**	4.70 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	4.70 m	**Downstream Node:**	D.S
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:50



Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	OC	Start node type, other special chamber, reference number: G25: .	00:00:00	1, 2	
0.00	WL	Water level, 0% of the vertical dimension	00:00:05	3	
2.50	GP	General photograph taken at this point	00:00:34	4	
4.10	LD	Line deviates down	00:00:41	5	
4.70	OFF	Finish node type, outfall, reference number: D.S: AT LINE FROM G24	00:00:46		

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

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Section Pictures - 19/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
62	Downstream			



1, 00:00:00, 0.00 m
Start node type, other special chamber, reference number: G25, .



2, 00:00:00, 0.00 m
Start node type, other special chamber, reference number: G25, .



3, 00:00:05, 0.00 m
Water level, 0% of the vertical dimension



4, 00:00:34, 2.50 m
General photograph taken at this point



5, 00:00:41, 4.10 m
Line deviates down

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Section Inspection - 19/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
63	64	19/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

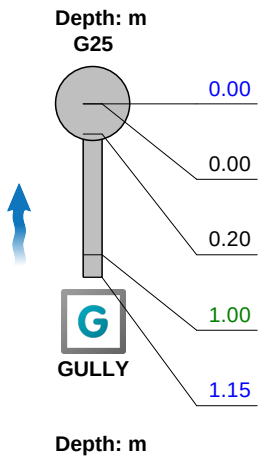
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Upstream	**Upstream Node:**	GULLY
Road:	Mcr Central	**Inspected Length:**	1.15 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	1.15 m	**Downstream Node:**	G25
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Year Constructed:		**Material:**	Polyvinyl chloride
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:50



Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	OC	Start node type, other special chamber, reference number: G25: .	00:00:00	1, 2	
0.00	WL	Water level, 0% of the vertical dimension	00:00:16		
0.20	GP	General photograph taken at this point	00:00:25	3	
1.00	LU	Line deviates up	00:00:29		
1.15	OCF	Finish node type, other special chamber, reference number: GULLY: .	00:00:00		

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

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Section Pictures - 19/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
63	Upstream			



1, 00:00:00, 0.00 m
Start node type, other special chamber, reference number: G25, .



2, 00:00:00, 0.00 m
Start node type, other special chamber, reference number: G25, .



3, 00:00:25, 0.20 m
General photograph taken at this point

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Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
64	65	19/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Downstream	**Upstream Node:**	G07
Road:	Mcr Central	**Inspected Length:**	3.25 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	3.25 m	**Downstream Node:**	D.S
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:50

Position [m]	Code	Observation	MPEG	Photo	Grade
		Depth: m			
		G07			
0.00	OC	Start node type, other special chamber, reference number: G07: ,	00:00:00	1, 2	
0.00	WL	Water level, 0% of the vertical dimension	00:00:06		
2.50	GP	General photograph taken at this point	00:00:34	3	
3.25	OFF	Finish node type, outfall, reference number: D.S: AT LINE TO S01	00:00:38	4	
		D.S			
		Depth: m			

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

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Section Pictures - 19/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
64	Downstream			



1, 00:00:00, 0.00 m
Start node type, other special chamber, reference number: G07, ,



2, 00:00:00, 0.00 m
Start node type, other special chamber, reference number: G07, ,



3, 00:00:34, 2.50 m
General photograph taken at this point



4, 00:00:38, 3.25 m
Finish node type, outfall, reference number: D.S, AT LINE TO S01

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Section Inspection - 19/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
65	66	19/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Downstream	**Upstream Node:**	G10
Road:	Mcr Central	**Inspected Length:**	3.75 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	3.75 m	**Downstream Node:**	D.S
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m G10						
	0.00	OC	Start node type, other special chamber, reference number: G10: .	00:00:00	1	
	0.00	WL	Water level, 0% of the vertical dimension	00:00:16		
	0.10	JDM	Joint displaced, medium	00:00:16	2	1 / 3
	2.60	GP	General photograph taken at this point	00:00:41	3	
	3.75	OFF	Finish node type, outfall, reference number: D.S: AT LINE TO SO2	00:00:49		
D.S Depth: m						

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
1	1.0	0.4	1.0	1.0	1	2.0	0.8	2.0	3.0

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Section Pictures - 19/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
65	Downstream			



1, 00:00:00, 0.00 m
Start node type, other special chamber, reference number: G10, .



2, 00:00:16, 0.10 m
Joint displaced, medium



3, 00:00:41, 2.60 m
General photograph taken at this point

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Section Inspection - 19/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
66	67	19/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Downstream	**Upstream Node:**	G09
Road:	Mcr Central	**Inspected Length:**	3.80 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	3.80 m	**Downstream Node:**	D.S
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:50



Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	OC	Start node type, other special chamber, reference number: G09: .	00:00:00	1, 2	
0.00	WL	Water level, 0% of the vertical dimension	00:00:06	3	
2.90	GP	General photograph taken at this point	00:00:34	4	
3.80	OFF	Finish node type, outfall, reference number: D.S: AT LINE TO S02	00:00:39		

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

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Section Pictures - 19/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
66	Downstream			



1, 00:00:00, 0.00 m
Start node type, other special chamber, reference number: G09, .



2, 00:00:00, 0.00 m
Start node type, other special chamber, reference number: G09, .



3, 00:00:06, 0.00 m
Water level, 0% of the vertical dimension



4, 00:00:34, 2.90 m
General photograph taken at this point

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Section Inspection - 19/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
67	68	19/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Downstream	**Upstream Node:**	G08
Road:	Mcr Central	**Inspected Length:**	4.70 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	4.70 m	**Downstream Node:**	D.S
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:50



Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	OC	Start node type, other special chamber, reference number: G08: .	00:00:00	1	
0.00	WL	Water level, 0% of the vertical dimension	00:00:19	2	
2.30	GP	General photograph taken at this point	00:00:32	3	
4.70	OFF	Finish node type, outfall, reference number: D.S: AT LINE TO S02	00:00:39	4	

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

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Section Pictures - 19/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
67	Downstream			



1, 00:00:00, 0.00 m
Start node type, other special chamber, reference number: G08, .



2, 00:00:19, 0.00 m
Water level, 0% of the vertical dimension



3, 00:00:32, 2.30 m
General photograph taken at this point



4, 00:00:39, 4.70 m
Finish node type, outfall, reference number: D.S, AT LINE TO S02

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Section Inspection - 19/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
68	69	19/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Downstream	**Upstream Node:**	G06
Road:	Mcr Central	**Inspected Length:**	3.40 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	3.40 m	**Downstream Node:**	D.S
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:50

Position [m]	Code	Observation	MPEG	Photo	Grade
		Depth: m			
		G06			
0.00	OC	Start node type, other special chamber, reference number: G06: .	00:00:00	1, 2	
0.00	WL	Water level, 0% of the vertical dimension	00:00:04	3	
2.30	GP	General photograph taken at this point	00:00:41	4	
3.40	OFF	Finish node type, outfall, reference number: D.S: AT LINE TO S01	00:00:46		
		D.S			
		Depth: m			

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

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Section Pictures - 19/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
68	Downstream			



1, 00:00:00, 0.00 m
Start node type, other special chamber, reference number: G06, .



2, 00:00:00, 0.00 m
Start node type, other special chamber, reference number: G06, .



3, 00:00:04, 0.00 m
Water level, 0% of the vertical dimension



4, 00:00:41, 2.30 m
General photograph taken at this point

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Section Inspection - 19/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
69	70	19/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Downstream	**Upstream Node:**	G05
Road:	Mcr Central	**Inspected Length:**	3.70 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	3.70 m	**Downstream Node:**	D.S
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:50



Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m					
G05					
0.00	OC	Start node type, other special chamber, reference number: G05: .	00:00:00	1, 2	
0.00	WL	Water level, 0% of the vertical dimension	00:00:03		
1.00	GP	General photograph taken at this point	00:00:35	3	
3.70	OFF	Finish node type, outfall, reference number: D.S: AT LINE TO S01	00:00:47	4	
D.S					
Depth: m					

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

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Section Pictures - 19/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
69	Downstream			



1, 00:00:00, 0.00 m
Start node type, other special chamber, reference number: G05, .



2, 00:00:00, 0.00 m
Start node type, other special chamber, reference number: G05, .



3, 00:00:35, 1.00 m
General photograph taken at this point



4, 00:00:47, 3.70 m
Finish node type, outfall, reference number: D.S, AT LINE TO S01

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Section Inspection - 19/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
70	71	19/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Downstream	**Upstream Node:**	G04
Road:	Mcr Central	**Inspected Length:**	3.35 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	3.35 m	**Downstream Node:**	D.S
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m G04						
	0.00	OC	Start node type, other special chamber, reference number: G04: .	00:00:00	1, 2	
	0.00	WL	Water level, 0% of the vertical dimension	00:00:05		
	2.40	GP	General photograph taken at this point	00:00:27	3	
	3.35	OFF	Finish node type, outfall, reference number: D.S: AT LINE TO S01	00:00:31		
D.S Depth: m						

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

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Section Pictures - 19/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
70	Downstream			



1, 00:00:00, 0.00 m
Start node type, other special chamber, reference number: G04, .



2, 00:00:00, 0.00 m
Start node type, other special chamber, reference number: G04, .



3, 00:00:27, 2.40 m
General photograph taken at this point

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Section Inspection - 19/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
71	72	19/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Upstream	**Upstream Node:**	G01
Road:	Mcr Central	**Inspected Length:**	5.20 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	5.20 m	**Downstream Node:**	S02
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	1.200 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	150 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:50



Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node type, manhole, reference number: S02	00:00:00	1, 2	
0.00	WL	Water level, 0% of the vertical dimension	00:00:09		
0.40	LL	Line deviates left	00:00:18		
2.30	GP	General photograph taken at this point	00:00:27	3	
5.20	OCF	Finish node type, other special chamber, reference number: G01: .	00:00:41		

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

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Section Pictures - 19/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
71	Upstream			



1, 00:00:00, 0.00 m
Start node type, manhole, reference number: S02



2, 00:00:00, 0.00 m
Start node type, manhole, reference number: S02



3, 00:00:27, 2.30 m
General photograph taken at this point

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Section Inspection - 19/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
72	73	19/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Upstream	**Upstream Node:**	S01
Road:	Mcr Central	**Inspected Length:**	13.95 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	13.95 m	**Downstream Node:**	S02
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	1.200 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	225 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:122



Position [m]		Code	Observation	MPEG	Photo	Grade
0.00		MH	Start node type, manhole, reference number: S02	00:00:00	1	
0.00		WL	Water level, 0% of the vertical dimension	00:00:04		
0.00	S01	DEC	Settled deposits, hard or compacted, 5% cross-sectional area loss, start	00:00:04		
1.70	F01	DEC	Settled deposits, hard or compacted, 5% cross-sectional area loss, finish	00:00:13		3
6.00		GP	General photograph taken at this point	00:00:38	2	
10.70		GP	General photograph taken at this point	00:01:02	3	
13.95		MHF	Finish node type, manhole, reference number: S01	00:01:18	4	

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	1	2.0	0.4	4.0	3.0

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Section Pictures - 19/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
72	Upstream			



1, 00:00:00, 0.00 m
Start node type, manhole, reference number: S02



2, 00:00:38, 6.00 m
General photograph taken at this point



3, 00:01:02, 10.70 m
General photograph taken at this point



4, 00:01:18, 13.95 m
Finish node type, manhole, reference number: S01

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Section Inspection - 19/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
73	74	19/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

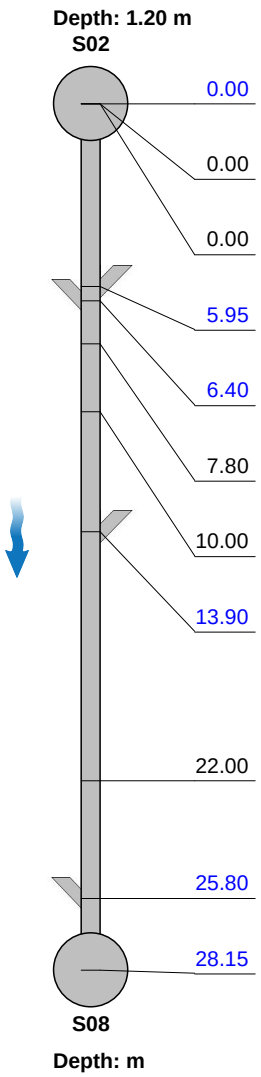
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Downstream	**Upstream Node:**	S02
Road:	Mcr Central	**Inspected Length:**	28.15 m	**Upstream Pipe Depth:**	1.200 m
Location:		**Total Length:**	28.15 m	**Downstream Node:**	S08
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	225 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:245



Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node type, manhole, reference number: S02	00:00:00		
0.00	WL	Water level, 5% of the vertical dimension	00:00:00		
0.00	REM	General remark: START OF LINING	00:00:00	1	
5.95	CN	Connection other than junction at 09 o'clock, diameter: 100mm	00:00:36	2	
6.40	CN	Connection other than junction at 03 o'clock, diameter: 100mm	00:00:41		
7.80	REM	General remark: END OF LINING	00:00:50		
10.00	GP	General photograph taken at this point	00:01:25	3	
13.90	JN	Junction at 09 o'clock, diameter: 100mm	00:01:44	4, 5	
22.00	GP	General photograph taken at this point	00:02:52	6	
25.80	JN	Junction at 03 o'clock, diameter: 100mm	00:03:14		
28.15	MHF	Finish node type, manhole, reference number: S08	00:03:50	7	

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

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Section Pictures - 19/05/2021

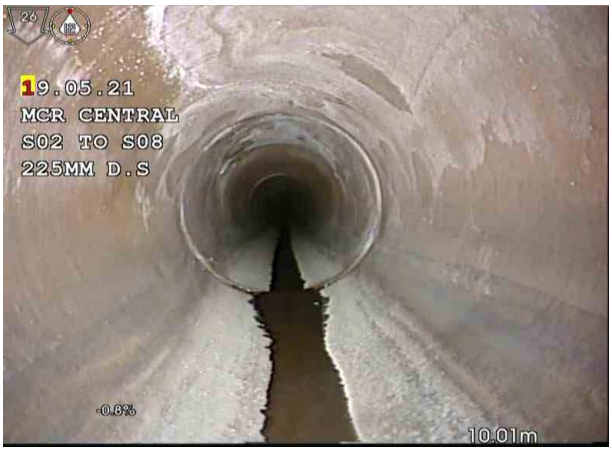
Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
73	Downstream			



1, 00:00:00, 0.00 m
General remark, START OF LINING



2, 00:00:36, 5.95 m
Connection other than junction at 09 o'clock, diameter: 100mm



3, 00:01:25, 10.00 m
General photograph taken at this point



4, 00:01:44, 13.90 m
Junction at 09 o'clock, diameter: 100mm



5, 00:01:44, 13.90 m
Junction at 09 o'clock, diameter: 100mm



6, 00:02:52, 22.00 m
General photograph taken at this point

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Section Pictures - 19/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
73	Downstream			



7, 00:03:50, 28.15 m
Finish node type, manhole, reference number: S08

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Section Inspection - 19/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
74	75	19/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

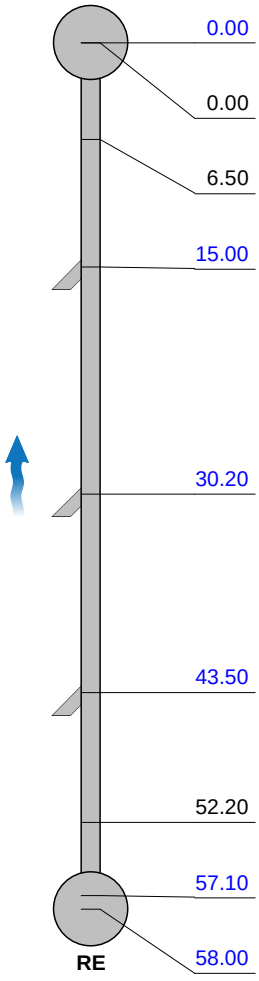
Town or Village:	Manchester	**Inspection Direction:**	Upstream	**Upstream Node:**	RE
Road:	Mcr Central	**Inspected Length:**	58.00 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	58.00 m	**Downstream Node:**	S02
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	1.200 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	225 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:505

Depth: 1.20 m
S02



Depth: m

Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node type, manhole, reference number: S02	00:00:00		
0.00	WL	Water level, 5% of the vertical dimension	00:00:33		
6.50	GP	General photograph taken at this point	00:00:33	1	
15.00	JN	Junction at 03 o'clock, diameter: 100mm	00:01:16	2	
30.20	JN	Junction at 03 o'clock, diameter: 100mm	00:02:59	3	
43.50	JN	Junction at 03 o'clock, diameter: 100mm	00:04:26	4	
52.20	GP	General photograph taken at this point	00:05:26	5	
57.10	SCC	Shape changes to circular, new size, 150mm high	00:05:55	6	
58.00	OCF	Finish node type, other special chamber, reference number: RE: WITHIN VIEW	00:05:58		

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

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Section Pictures - 19/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
74	Upstream			



1, 00:00:33, 6.50 m
General photograph taken at this point



2, 00:01:16, 15.00 m
Junction at 03 o'clock, diameter: 100mm



3, 00:02:59, 30.20 m
Junction at 03 o'clock, diameter: 100mm



4, 00:04:26, 43.50 m
Junction at 03 o'clock, diameter: 100mm



5, 00:05:26, 52.20 m
General photograph taken at this point



6, 00:05:55, 57.10 m
Shape changes to circular, new size, 150mm high

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Section Inspection - 19/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
75	76	19/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Upstream	**Upstream Node:**	RE
Road:	Mcr Central	**Inspected Length:**	54.60 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	54.60 m	**Downstream Node:**	S01
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	1.220 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	225 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:475



Position [m]		Code	Observation	MPEG	Photo	Grade
0.00		MH	Start node type, manhole, reference number: S01	00:00:00		
0.00		WL	Water level, 5% of the vertical dimension	00:00:00	1	
0.00	S01	DEC	Settled deposits, hard or compacted, 10% cross-sectional area loss, start	00:00:00		
0.80		REM	General remark: HOLE CUT IN TOP OF PIPE . STONES FROM HOLE	00:00:16	2, 3	
3.00	F01	DEC	Settled deposits, hard or compacted, 10% cross-sectional area loss, finish	00:02:04		3
8.20		JN	Junction at 09 o'clock, diameter: 100mm	00:02:36	4	
18.70		GP	General photograph taken at this point	00:03:30	5	
21.60		JN	Junction at 09 o'clock, diameter: 100mm	00:03:45	6	
36.70		JN	Junction at 09 o'clock, diameter: 100mm	00:05:05	7	
47.60		GP	General photograph taken at this point	00:06:06	8	
51.90		JN	Junction at 09 o'clock, diameter: 100mm	00:06:27	9	
54.05		SCC	Shape changes to circular, new size, 150mm high	00:06:46		
54.40		LU	Line deviates up	00:06:48		
54.60		OCF	Finish node type, other special chamber, reference number: RE: .	00:06:48		

Construction Features / Structural Defects

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

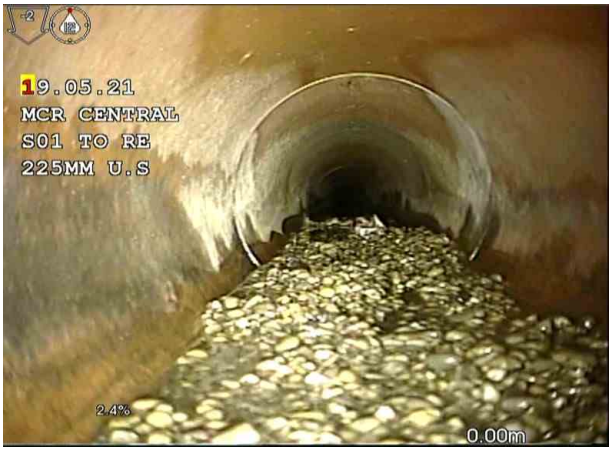
Miscellaneous Features / Service & Operational Observations

SER No. Def	SER Peak	SER Mean	SER Total	SER Grade
1	2.0	0.1	6.0	3.0

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Section Pictures - 19/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
75	Upstream			



1, 00:00:00, 0.00 m
Water level, 5% of the vertical dimension



2, 00:00:16, 0.80 m
General remark, HOLE CUT IN TOP OF PIPE . STONES FROM HOLE



3, 00:00:16, 0.80 m
General remark, HOLE CUT IN TOP OF PIPE . STONES FROM HOLE



4, 00:02:36, 8.20 m
Junction at 09 o'clock, diameter: 100mm



5, 00:03:30, 18.70 m
General photograph taken at this point



6, 00:03:45, 21.60 m
Junction at 09 o'clock, diameter: 100mm

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Section Pictures - 19/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
75	Upstream			



7, 00:05:05, 36.70 m
Junction at 09 o'clock, diameter: 100mm



8, 00:06:06, 47.60 m
General photograph taken at this point



9, 00:06:27, 51.90 m
Junction at 09 o'clock, diameter: 100mm

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Section Inspection - 19/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
76	77	19/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Upstream	**Upstream Node:**	G02
Road:	Mcr Central	**Inspected Length:**	5.15 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	5.15 m	**Downstream Node:**	S01
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	1.220 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	150 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: 1.22 m **S01**						
	0.00	MH	Start node type, manhole, reference number: S01	00:00:00		
	0.00	WL	Water level, 0% of the vertical dimension	00:00:03	1	
	0.90	LL	Line deviates left	00:00:06		
	3.00	GP	General photograph taken at this point	00:00:17	2	
	5.15	OCF	Finish node type, other special chamber, reference number: G02: .	00:00:37		
G02 **Depth: m**						

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

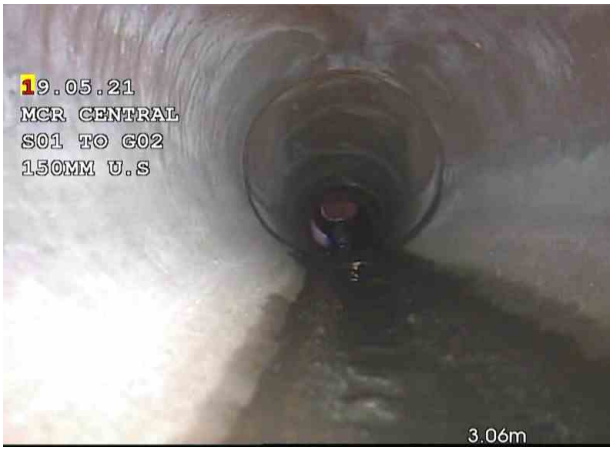
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Section Pictures - 19/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
76	Upstream			



1, 00:00:03, 0.00 m
Water level, 0% of the vertical dimension



2, 00:00:17, 3.00 m
General photograph taken at this point

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Section Inspection - 19/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
77	78	19/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Upstream	**Upstream Node:**	U.S
Road:	Mcr Central	**Inspected Length:**	3.90 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	3.90 m	**Downstream Node:**	S07
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	1.160 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:50



Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node type, manhole, reference number: S07	00:00:00	1, 2	
0.00	WL	Water level, 10% of the vertical dimension	00:00:07	3	
2.00	WL	Water level, 0% of the vertical dimension	00:00:27		
3.80	WL	Water level, 5% of the vertical dimension	00:00:39		
3.90	OCF	Finish node type, other special chamber, reference number: U.S: SLOT DRAIN	00:00:47	4	

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

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Section Pictures - 19/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
77	Upstream			



1, 00:00:00, 0.00 m
Start node type, manhole, reference number: S07



2, 00:00:00, 0.00 m
Start node type, manhole, reference number: S07



3, 00:00:07, 0.00 m
Water level, 10% of the vertical dimension



4, 00:00:47, 3.90 m
Finish node type, other special chamber, reference number: U.S, SLOT DRAIN

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Section Inspection - 19/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
78	79	19/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Downstream	**Upstream Node:**	S07
Road:	Mcr Central	**Inspected Length:**	10.00 m	**Upstream Pipe Depth:**	1.160 m
Location:		**Total Length:**	10.00 m	**Downstream Node:**	S04
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	1.150 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:87

Depth: 1.16 m
S07

Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node type, manhole, reference number: S07	00:00:00		
0.00	WL	Water level, 5% of the vertical dimension	00:00:04		
0.00	REM	General remark: THRU TRAP	00:00:04	1	
2.70	GP	General photograph taken at this point	00:00:23	2	
7.90	WL	Water level, 10% of the vertical dimension	00:01:01	3	
9.80	WL	Water level, 5% of the vertical dimension	00:01:30	4	
10.00	MHF	Finish node type, manhole, reference number: S04	00:01:26		

S04
Depth: 1.15 m

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

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Section Pictures - 19/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
78	Downstream			



1, 00:00:04, 0.00 m
General remark, THRU TRAP



2, 00:00:23, 2.70 m
General photograph taken at this point



3, 00:01:01, 7.90 m
Water level, 10% of the vertical dimension



4, 00:01:30, 9.80 m
Water level, 5% of the vertical dimension

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Section Inspection - 19/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
79	80	19/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Upstream	**Upstream Node:**	G15
Road:	Mcr Central	**Inspected Length:**	4.60 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	4.60 m	**Downstream Node:**	S04
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	1.150 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	150 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:50

Position [m]	Code	Observation	MPEG	Photo	Grade
		Depth: 1.15 m **S04**			
0.00	MH	Start node type, manhole, reference number: S04	00:00:00	1, 2	
0.00	WL	Water level, 0% of the vertical dimension	00:00:05		
2.50	GP	General photograph taken at this point	00:00:20	3	
4.60	OCF	Finish node type, other special chamber, reference number: G15: .	00:00:31	4	
		G15 **Depth: m**			

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

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Section Pictures - 19/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
79	Upstream			



1, 00:00:00, 0.00 m
Start node type, manhole, reference number: S04



2, 00:00:00, 0.00 m
Start node type, manhole, reference number: S04



3, 00:00:20, 2.50 m
General photograph taken at this point



4, 00:00:31, 4.60 m
Finish node type, other special chamber, reference number: G15, .

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Section Inspection - 19/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
80	81	19/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Upstream	**Upstream Node:**	G12
Road:	Mcr Central	**Inspected Length:**	19.95 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	19.95 m	**Downstream Node:**	S04
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	1.150 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	150 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:174

Depth: 1.15 m
S04



Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node type, manhole, reference number: S04	00:00:00		
0.00	WL	Water level, 0% of the vertical dimension	00:00:04	1	
0.75	LR	Line deviates right	00:00:16		
2.40	JN	Junction at 09 o'clock, diameter: 100mm	00:00:23	2	
5.50	JN	Junction at 09 o'clock, diameter: 150mm	00:00:41	3	
9.80	GP	General photograph taken at this point	00:00:57	4	
16.80	CC	Crack, circumferential from 12 o'clock to 12 o'clock	00:01:25	5	2 / 2
19.95	OCF	Finish node type, other special chamber, reference number: G12: .	00:01:42		

G12

Depth: m

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
1	10.0	0.6	10.0	2.0	1	1.0	0.1	1.0	2.0

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Section Pictures - 19/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
80	Upstream			



1, 00:00:04, 0.00 m
Water level, 0% of the vertical dimension



2, 00:00:23, 2.40 m
Junction at 09 o'clock, diameter: 100mm



3, 00:00:41, 5.50 m
Junction at 09 o'clock, diameter: 150mm



4, 00:00:57, 9.80 m
General photograph taken at this point



5, 00:01:25, 16.80 m
Crack, circumferential from 12 o'clock to 12 o'clock

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Section Inspection - 19/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
81	82	19/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Downstream	**Upstream Node:**	G14
Road:	Mcr Central	**Inspected Length:**	10.20 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	10.20 m	**Downstream Node:**	D.S
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:89



Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	OC	Start node type, other special chamber, reference number: G14: .	00:00:00	1, 2	
0.00	WL	Water level, 0% of the vertical dimension	00:00:05	3	
3.50	GP	General photograph taken at this point	00:00:58	4	
9.30	GP	General photograph taken at this point	00:01:21	5	
10.20	OFF	Finish node type, outfall, reference number: D.S: AT LINE FROM G12	00:01:27	6	

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

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Section Pictures - 19/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
81	Downstream			



1, 00:00:00, 0.00 m
Start node type, other special chamber, reference number: G14, .



2, 00:00:00, 0.00 m
Start node type, other special chamber, reference number: G14, .



3, 00:00:05, 0.00 m
Water level, 0% of the vertical dimension



4, 00:00:58, 3.50 m
General photograph taken at this point



5, 00:01:21, 9.30 m
General photograph taken at this point



6, 00:01:27, 10.20 m
Finish node type, outfall, reference number: D.S, AT LINE FROM G12

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Section Inspection - 19/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
82	83	19/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Downstream	**Upstream Node:**	G13
Road:	Mcr Central	**Inspected Length:**	5.50 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	5.50 m	**Downstream Node:**	D.S
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m G13						
	0.00	OC	Start node type, other special chamber, reference number: G13: .	00:00:00	1, 2	
	0.00	WL	Water level, 25% of the vertical dimension	00:00:03		
	1.15	WL	Water level, 15% of the vertical dimension	00:01:04	3	
	4.60	WL	Water level, 5% of the vertical dimension	00:00:38	4	
	5.50	OFF	Finish node type, outfall, reference number: D.S: AT G12	00:00:42	5	
D.S Depth: m						



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

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Section Pictures - 19/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
82	Downstream			



1, 00:00:00, 0.00 m
Start node type, other special chamber, reference number: G13, .



2, 00:00:00, 0.00 m
Start node type, other special chamber, reference number: G13, .



3, 00:01:04, 1.15 m
Water level, 15% of the vertical dimension



4, 00:00:38, 4.60 m
Water level, 5% of the vertical dimension



5, 00:00:42, 5.50 m
Finish node type, outfall, reference number: D.S, AT G12

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Section Inspection - 19/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
83	84	19/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Downstream	**Upstream Node:**	S04
Road:	Mcr Central	**Inspected Length:**	50.70 m	**Upstream Pipe Depth:**	1.150 m
Location:		**Total Length:**	50.70 m	**Downstream Node:**	S03
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	225 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:441



Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node type, manhole, reference number: S04	00:00:00		
0.00	WL	Water level, 5% of the vertical dimension	00:00:02	1	
6.80	JN	Junction at 03 o'clock, diameter: 100mm	00:00:39	2, 3	
7.00	DEC	Settled deposits, hard or compacted, 10% cross-sectional area loss	00:01:06		3
18.60	GP	General photograph taken at this point	00:01:51	4	
20.50	JN	Junction at 03 o'clock, diameter: 100mm	00:02:01	5, 6	
32.50	JN	Junction at 03 o'clock, diameter: 100mm	00:03:27	7, 8	
42.90	JN	Junction at 03 o'clock, diameter: 100mm	00:05:17	9, 10	
49.70	REM	General remark: PATCH REPAIR	00:06:24	11	
50.70	MHF	Finish node type, manhole, reference number: S03	00:06:38	12	

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

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Section Pictures - 19/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
83	Downstream			



1, 00:00:02, 0.00 m
Water level, 5% of the vertical dimension



2, 00:00:39, 6.80 m
Junction at 03 o'clock, diameter: 100mm



3, 00:00:39, 6.80 m
Junction at 03 o'clock, diameter: 100mm



4, 00:01:51, 18.60 m
General photograph taken at this point



5, 00:02:01, 20.50 m
Junction at 03 o'clock, diameter: 100mm



6, 00:02:01, 20.50 m
Junction at 03 o'clock, diameter: 100mm

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Section Pictures - 19/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
83	Downstream			



7, 00:03:27, 32.50 m
Junction at 03 o'clock, diameter: 100mm



8, 00:03:27, 32.50 m
Junction at 03 o'clock, diameter: 100mm



9, 00:05:17, 42.90 m
Junction at 03 o'clock, diameter: 100mm



10, 00:05:17, 42.90 m
Junction at 03 o'clock, diameter: 100mm



11, 00:06:24, 49.70 m
General remark, PATCH REPAIR



12, 00:06:38, 50.70 m
Finish node type, manhole, reference number: S03

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Section Inspection - 19/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
84	85	19/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

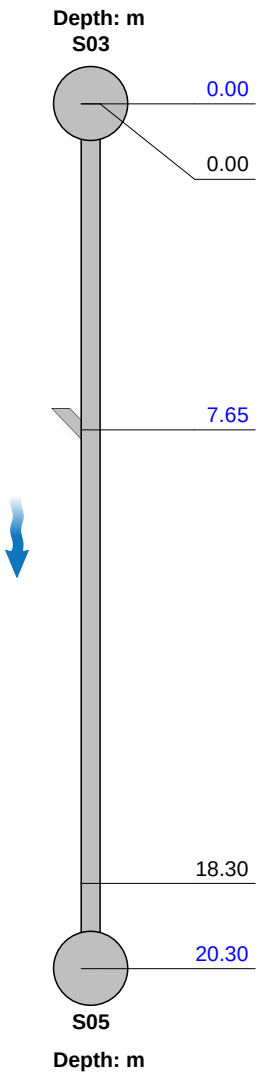
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Downstream	**Upstream Node:**	S03
Road:	Mcr Central	**Inspected Length:**	20.30 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	20.30 m	**Downstream Node:**	S05
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	225 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:177



Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node type, manhole, reference number: S03	00:00:00	1	
0.00	WL	Water level, 5% of the vertical dimension	00:01:29	2	
7.65	JN	Junction at 03 o'clock, diameter: 100mm	00:01:29	3, 4	
18.30	GP	General photograph taken at this point	00:03:31	5	
20.30	MHF	Finish node type, manhole, reference number: S05	00:03:43	6	

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

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Section Pictures - 19/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
84	Downstream			



1, 00:00:00, 0.00 m
Start node type, manhole, reference number: S03



2, 00:01:29, 0.00 m
Water level, 5% of the vertical dimension



3, 00:01:29, 7.65 m
Junction at 03 o'clock, diameter: 100mm



4, 00:01:29, 7.65 m
Junction at 03 o'clock, diameter: 100mm



5, 00:03:31, 18.30 m
General photograph taken at this point



6, 00:03:43, 20.30 m
Finish node type, manhole, reference number: S05

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Section Inspection - 20/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
85	86	20/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Downstream	**Upstream Node:**	G16
Road:	Mcr Central	**Inspected Length:**	15.60 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	15.60 m	**Downstream Node:**	S03
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	1.600 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:136



Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	OC	Start node type, other special chamber, reference number: G16: .	00:00:00	1, 2	
0.00	WL	Water level, 0% of the vertical dimension	00:00:04	3, 4	
1.00	SCC	Shape changes to circular, new size, 150mm high	00:00:30		
3.10	JN	Junction at 09 o'clock, diameter: 150mm	00:00:41	5	
8.80	GP	General photograph taken at this point	00:00:58	6	
14.30	JN	Junction at 11 o'clock, diameter: 100mm	00:01:17	7	
15.60	MHF	Finish node type, manhole, reference number: S03	00:01:23		

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

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Section Pictures - 20/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
85	Downstream			



1, 00:00:00, 0.00 m
Start node type, other special chamber, reference number: G16, .



2, 00:00:00, 0.00 m
Start node type, other special chamber, reference number: G16, .



3, 00:00:04, 0.00 m
Water level, 0% of the vertical dimension



4, 00:00:04, 0.00 m
Water level, 0% of the vertical dimension



5, 00:00:41, 3.10 m
Junction at 09 o'clock, diameter: 150mm



6, 00:00:58, 8.80 m
General photograph taken at this point

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Section Pictures - 20/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
85	Downstream			



7, 00:01:17, 14.30 m
Junction at 11 o'clock, diameter: 100mm

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Section Inspection - 20/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
86	87	20/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Downstream	**Upstream Node:**	G18
Road:	Mcr Central	**Inspected Length:**	8.45 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	8.45 m	**Downstream Node:**	D.S
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:74



Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	OC	Start node type, other special chamber, reference number: G18: .	00:00:00	1, 2	
0.00	WL	Water level, 0% of the vertical dimension	00:00:04		
0.80	SCC	Shape changes to circular, new size, 150mm high	00:00:31	3	
7.60	LL	Line deviates left	00:00:53	4	
8.45	OFF	Finish node type, outfall, reference number: D.S: AT LINE FROM G16	00:00:58	5	

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

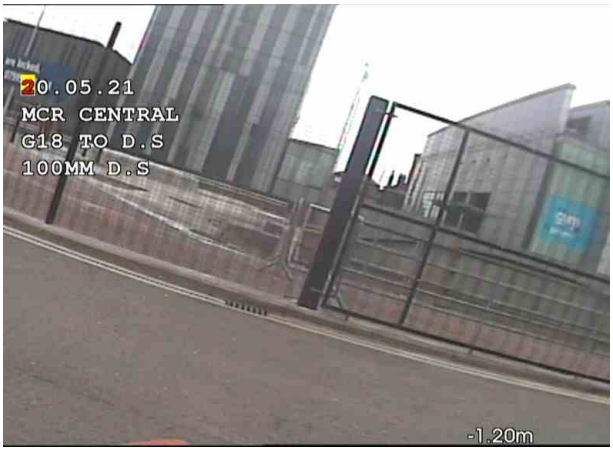
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Section Pictures - 20/05/2021

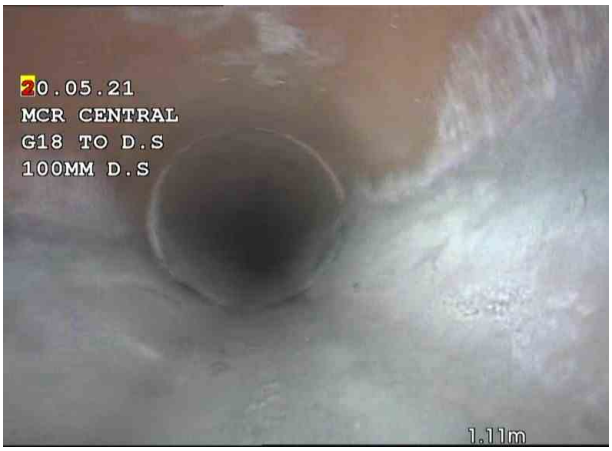
Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
86	Downstream			



1, 00:00:00, 0.00 m
Start node type, other special chamber, reference number: G18, .



2, 00:00:00, 0.00 m
Start node type, other special chamber, reference number: G18, .



3, 00:00:31, 0.80 m
Shape changes to circular, new size, 150mm high



4, 00:00:53, 7.60 m
Line deviates left



5, 00:00:58, 8.45 m
Finish node type, outfall, reference number: D.S, AT LINE FROM G16

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Section Inspection - 20/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
87	88	20/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Upstream	**Upstream Node:**	G16A
Road:	Mcr Central	**Inspected Length:**	2.30 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	2.30 m	**Downstream Node:**	S06
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	1.570 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: 1.57 m						
S06						
	0.00	MH	Start node type, manhole, reference number: S06	00:00:00	1, 2	
	0.00	WL	Water level, 5% of the vertical dimension	00:00:00	3	
	2.30	OCF	Finish node type, other special chamber, reference number: G16A: AT ACO DRAIN	00:00:31	4	
G16A						
Depth: m						

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

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Section Pictures - 20/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
87	Upstream			



1, 00:00:00, 0.00 m
Start node type, manhole, reference number: S06



2, 00:00:00, 0.00 m
Start node type, manhole, reference number: S06



3, 00:00:00, 0.00 m
Water level, 5% of the vertical dimension



4, 00:00:31, 2.30 m
Finish node type, other special chamber, reference number: G16A, AT ACO DRAIN

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Section Inspection - 20/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
88	89	20/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Upstream	**Upstream Node:**	S06
Road:	Mcr Central	**Inspected Length:**	14.80 m	**Upstream Pipe Depth:**	1.570 m
Location:		**Total Length:**	14.80 m	**Downstream Node:**	S03
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	1.600 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:129



Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node type, manhole, reference number: S03	00:00:00	1, 2	
0.00	WL	Water level, 0% of the vertical dimension	00:00:05	3	
5.80	GP	General photograph taken at this point	00:00:38	4	
12.00	GP	General photograph taken at this point	00:01:00	5	
14.80	MHF	Finish node type, manhole, reference number: S06: AT TRAP IN CHAMBER	00:01:12	6	

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

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Section Pictures - 20/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
88	Upstream			



1, 00:00:00, 0.00 m
Start node type, manhole, reference number: S03



2, 00:00:00, 0.00 m
Start node type, manhole, reference number: S03



3, 00:00:05, 0.00 m
Water level, 0% of the vertical dimension



4, 00:00:38, 5.80 m
General photograph taken at this point



5, 00:01:00, 12.00 m
General photograph taken at this point



6, 00:01:12, 14.80 m
Finish node type, manhole, reference number: S06, AT TRAP IN CHAMBER

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Section Inspection - 20/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
89	90	20/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Upstream	**Upstream Node:**	S09
Road:	Mcr Central	**Inspected Length:**	16.90 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	16.90 m	**Downstream Node:**	S03
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	1.600 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:147



Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node type, manhole, reference number: S03	00:00:00	1	
0.00	WL	Water level, 5% of the vertical dimension	00:00:08		
0.85	LR	Line deviates right	00:00:13		
6.60	GP	General photograph taken at this point	00:00:28	2	
15.50	GP	General photograph taken at this point	00:00:53	3	
16.90	MHF	Finish node type, manhole, reference number: S09: AT TRAP IN MH. UNDER CRANE.	00:01:00	4	

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

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Section Pictures - 20/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
89	Upstream			



1, 00:00:00, 0.00 m
Start node type, manhole, reference number: S03



2, 00:00:28, 6.60 m
General photograph taken at this point



3, 00:00:53, 15.50 m
General photograph taken at this point



4, 00:01:00, 16.90 m
Finish node type, manhole, reference number: S09, AT TRAP IN MH. UNDER CRANE.

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Section Inspection - 21/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
132	133	21/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Downstream	**Upstream Node:**	G23
Road:	Mcr Central	**Inspected Length:**	4.40 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	4.40 m	**Downstream Node:**	D.S
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:50



Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	OC	Start node type, other special chamber, reference number: G23: .	00:00:00	1, 2	
0.00	WL	Water level, 0% of the vertical dimension	00:00:05		
0.70	GP	General photograph taken at this point	00:00:29	3	
4.00	JDM	Joint displaced, medium	00:00:41	4	1 / 3
4.40	OFF	Finish node type, outfall, reference number: D.S: AT LINE FROM S03	00:00:43		

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
1	1.0	0.3	1.0	1.0	1	2.0	0.5	2.0	3.0

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Section Pictures - 21/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
132	Downstream			



1, 00:00:00, 0.00 m
Start node type, other special chamber, reference number: G23, .



2, 00:00:00, 0.00 m
Start node type, other special chamber, reference number: G23, .



3, 00:00:29, 0.70 m
General photograph taken at this point



4, 00:00:41, 4.00 m
Joint displaced, medium

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Section Inspection - 21/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
133	134	21/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Downstream	**Upstream Node:**	G26
Road:	Mcr Central	**Inspected Length:**	7.40 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	7.40 m	**Downstream Node:**	D.S
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	100 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:65	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: m G26						
	0.00	OC	Start node type, other special chamber, reference number: G26: .	00:00:00	1, 2	
	0.00	WL	Water level, 0% of the vertical dimension	00:00:05		
	0.30	LR	Line deviates right	00:00:23		
	5.40	GP	General photograph taken at this point	00:00:44	3	
	7.40	OFF	Finish node type, outfall, reference number: D.S: AT LINE FROM G27	00:00:55		
D.S Depth: m						

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

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Section Pictures - 21/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
133	Downstream			



1, 00:00:00, 0.00 m
Start node type, other special chamber, reference number: G26, .



2, 00:00:00, 0.00 m
Start node type, other special chamber, reference number: G26, .



3, 00:00:44, 5.40 m
General photograph taken at this point

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Section Inspection - 21/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
134	135	21/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Upstream	**Upstream Node:**	G31
Road:	Mcr Central	**Inspected Length:**	7.35 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	7.35 m	**Downstream Node:**	S05
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	1.600 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	150 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:



Scale: 1:64	Position [m]	Code	Observation	MPEG	Photo	Grade
	0.00	MH	Start node type, manhole, reference number: S05	00:00:00	1, 2	
	0.00	WL	Water level, 0% of the vertical dimension	00:00:07	3	
	0.25	JDM	Joint displaced, medium	00:00:15		1 / 3
	4.10	GP	General photograph taken at this point	00:00:30	4	
	6.70	JDM	Joint displaced, medium	00:00:38	5	1 / 3
	7.35	OCF	Finish node type, other special chamber, reference number: G31: .	00:00:42		

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
2	1.0	0.3	2.0	1.0	2	2.0	0.6	4.0	3.0

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Section Pictures - 21/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
134	Upstream			



1, 00:00:00, 0.00 m
Start node type, manhole, reference number: S05



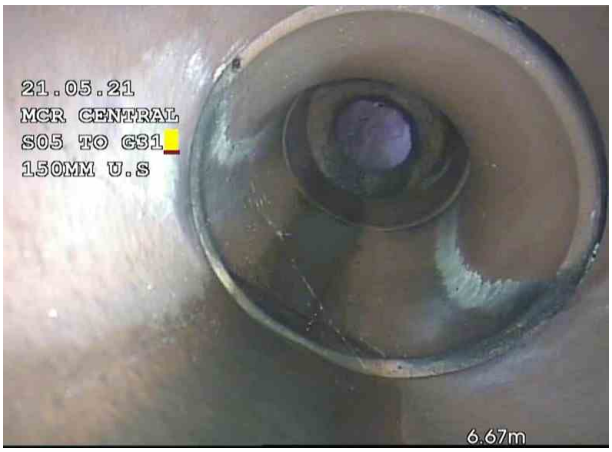
2, 00:00:00, 0.00 m
Start node type, manhole, reference number: S05



3, 00:00:07, 0.00 m
Water level, 0% of the vertical dimension



4, 00:00:30, 4.10 m
General photograph taken at this point



5, 00:00:38, 6.70 m
Joint displaced, medium

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Section Inspection - 21/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
135	136	21/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Upstream	**Upstream Node:**	G27
Road:	Mcr Central	**Inspected Length:**	20.70 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	20.70 m	**Downstream Node:**	S05
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	1.600 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	150 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:



Scale: 1:180	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: 1.60 m						
S05						
	0.00	OC	Start node type, other special chamber, reference number: S05: .	00:00:00	1	
	0.00	WL	Water level, 0% of the vertical dimension	00:00:03		
	7.50	GP	General photograph taken at this point	00:00:32	2	
	12.00	JN	Junction at 03 o'clock, diameter: 150mm	00:00:52	3	
	15.90	GP	General photograph taken at this point	00:01:03	4	
	19.30	LR	Line deviates right	00:01:14		
	20.70	OCF	Finish node type, other special chamber, reference number: G27: .	00:01:21		
G27						
Depth: m						

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

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Section Pictures - 21/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
135	Upstream			



1, 00:00:00, 0.00 m
Start node type, other special chamber, reference number: S05, .



2, 00:00:32, 7.50 m
General photograph taken at this point



3, 00:00:52, 12.00 m
Junction at 03 o'clock, diameter: 150mm



4, 00:01:03, 15.90 m
General photograph taken at this point

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Section Inspection - 21/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
136	137	21/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Upstream	**Upstream Node:**	G30
Road:	Mcr Central	**Inspected Length:**	6.15 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	6.15 m	**Downstream Node:**	S05
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	1.600 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	150 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:54



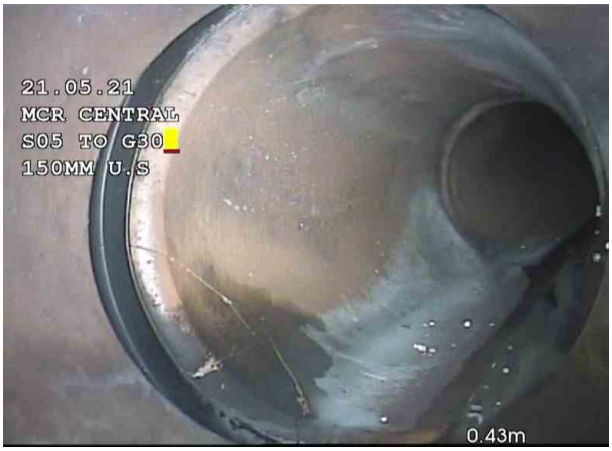
Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node type, manhole, reference number: S05	00:00:00		
0.00	WL	Water level, 0% of the vertical dimension	00:00:00		
0.30	JDM	Joint displaced, medium	00:00:12	1	1 / 3
0.30	CCJ	Crack, circumferential at joint from 06 o'clock to 10 o'clock	00:00:12		2 / 2
0.50	LR	Line deviates right	00:00:12		
4.70	GP	General photograph taken at this point	00:00:33	2	
6.15	OCF	Finish node type, other special chamber, reference number: G30: .	00:00:39		

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
2	11.0	2.3	11.0	2.0	2	3.0	0.6	3.0	3.0

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Section Pictures - 21/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
136	Upstream			



1, 00:00:12, 0.30 m
Joint displaced, medium



2, 00:00:33, 4.70 m
General photograph taken at this point

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Section Inspection - 21/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
137	138	21/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Upstream	**Upstream Node:**	G31A
Road:	Mcr Central	**Inspected Length:**	2.50 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	2.50 m	**Downstream Node:**	S05
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	-1.600 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	150 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:50	Position [m]	Code	Observation	MPEG	Photo	Grade
Depth: -1.60 m **S05**						
	0.00	MH	Start node type, manhole, reference number: S05	00:00:00		
	0.00	WL	Water level, 0% of the vertical dimension	00:00:01	1	
	1.30	JDM	Joint displaced, medium	00:00:18	2	1 / 3
	2.50	OCF	Finish node type, other special chamber, reference number: G31A: .	00:00:25		
G31A **Depth: m**						

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
1	1.0	0.8	1.0	1.0	1	2.0	1.5	2.0	3.0

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Section Pictures - 21/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
137	Upstream			



1, 00:00:01, 0.00 m
Water level, 0% of the vertical dimension



2, 00:00:18, 1.30 m
Joint displaced, medium

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Section Inspection - 21/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
138	139	21/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Downstream	**Upstream Node:**	S05
Road:	Mcr Central	**Inspected Length:**	4.00 m	**Upstream Pipe Depth:**	1.600 m
Location:		**Total Length:**	4.00 m	**Downstream Node:**	S11
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	1.620 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	225 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:50



Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node type, manhole, reference number: S05	00:00:00		
0.00	WL	Water level, 10% of the vertical dimension	00:00:03	1	
1.00	DEC	Settled deposits, hard or compacted, 10% cross-sectional area loss	00:00:10		3
2.20	GP	General photograph taken at this point	00:00:15	2	
4.00	MHF	Finish node type, manhole, reference number: S11	00:00:25	3	

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
0	0.0	0.0	0.0	1.0	1	2.0	0.9	2.0	3.0

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Section Pictures - 21/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
138	Downstream			



1, 00:00:03, 0.00 m
Water level, 10% of the vertical dimension



2, 00:00:15, 2.20 m
General photograph taken at this point



3, 00:00:25, 4.00 m
Finish node type, manhole, reference number: S11

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Section Inspection - 21/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
139	140	21/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

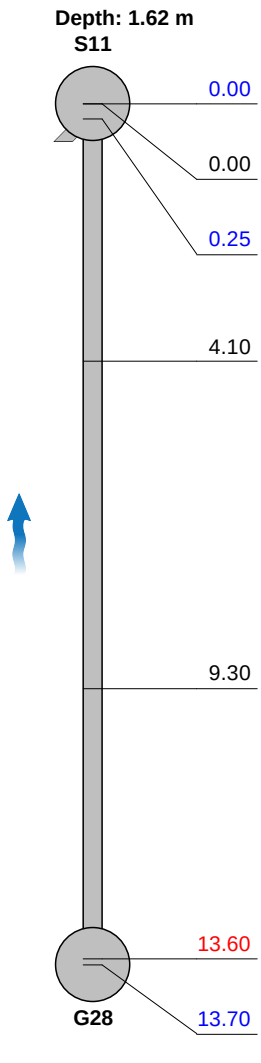
Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Upstream	**Upstream Node:**	G28
Road:	Mcr Central	**Inspected Length:**	13.70 m	**Upstream Pipe Depth:**	
Location:		**Total Length:**	13.70 m	**Downstream Node:**	S11
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	1.620 m

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	150 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:120



Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node type, manhole, reference number: S11	00:00:00	1	
0.00	WL	Water level, 0% of the vertical dimension	00:00:12		
0.25	JN	Junction at 02 o'clock, diameter: 100mm	00:00:14	2	
4.10	GP	General photograph taken at this point	00:00:32	3	
9.30	GP	General photograph taken at this point	00:00:49	4	
13.60	OJM	Open joint, medium	00:01:06	5	1
13.70	OCF	Finish node type, other special chamber, reference number: G28: .	00:01:07		

Construction Features					Miscellaneous Features				
Structural Defects					Service & Operational Observations				
STR No. Def	**STR Peak**	**STR Mean**	**STR Total**	**STR Grade**	**SER No. Def**	**SER Peak**	**SER Mean**	**SER Total**	**SER Grade**
1	1.0	0.1	1.0	1.0	0	0.0	0.0	0.0	1.0

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Section Pictures - 21/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
139	Upstream			



1, 00:00:00, 0.00 m
Start node type, manhole, reference number: S11



2, 00:00:14, 0.25 m
Junction at 02 o'clock, diameter: 100mm



3, 00:00:32, 4.10 m
General photograph taken at this point



4, 00:00:49, 9.30 m
General photograph taken at this point



5, 00:01:06, 13.60 m
Open joint, medium

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Section Inspection - 21/05/2021

Section	Inspection	Date	Time	Client`s Job Ref	Weather	Pre Cleaned	PLR
140	141	21/05/21	0:00	Not Specified	No Rain Or Snow	Not Specified	Not Specified

Operator	Vehicle	Camera	Preset Length	Legal Status	Alternative ID
DOC	FX17XLE	Proteus	Not Specified	Not Specified	Not Specified

Town or Village:	Manchester	**Inspection Direction:**	Downstream	**Upstream Node:**	S11
Road:	Mcr Central	**Inspected Length:**	36.75 m	**Upstream Pipe Depth:**	1.620 m
Location:		**Total Length:**	36.75 m	**Downstream Node:**	D.S
Surface Type:		**Joint Length:**	0.00 m	**Downstream Pipe Depth:**	

Use:	Surface water	**Pipe Shape:**	Circular
Type of Pipe:		**Dia/Height:**	225 mm
Year Constructed:		**Material:**	Vitrified clay
Flow Control:		**Lining Type:**	No Lining
Inspection Purpose:	Routine inspection	**Lining Material:**	No Lining

Comments:
Recommendations:

Scale: 1:320



Position [m]	Code	Observation	MPEG	Photo	Grade
0.00	MH	Start node type, manhole, reference number: S11	00:00:00	1, 2	
0.00	WL	Water level, 5% of the vertical dimension	00:00:06		
2.05	LD	Line deviates down	00:00:23	3	
5.00	GP	General photograph taken at this point	00:00:53	4	
5.60	MCPVC	Pipe material changes to polyvinyl chloride at this point	00:00:59		
5.60	SCC	Shape changes to circular, new size, 150mm high	00:00:59		
6.30	REM	General remark: REST BEND	00:01:08		
8.30	GP	General photograph taken at this point	00:01:26	5	
17.70	GP	General photograph taken at this point	00:02:35	6	
26.40	GP	General photograph taken at this point	00:03:27	7	
36.20	LD	Line deviates down	00:04:22	8	
36.75	OFF	Finish node type, outfall, reference number: D.S: UNABLE TO PUSH FURTHER	00:04:43		

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

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Section Pictures - 21/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
140	Downstream			



1, 00:00:00, 0.00 m
Start node type, manhole, reference number: S11



2, 00:00:00, 0.00 m
Start node type, manhole, reference number: S11



3, 00:00:23, 2.05 m
Line deviates down



4, 00:00:53, 5.00 m
General photograph taken at this point



5, 00:01:26, 8.30 m
General photograph taken at this point



6, 00:02:35, 17.70 m
General photograph taken at this point

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Section Pictures - 21/05/2021

Section	Inspection Direction	PLR	Client`s Job Ref	Contractor`s Job Ref
140	Downstream			



7, 00:03:27, 26.40 m
General photograph taken at this point



8, 00:04:22, 36.20 m
Line deviates down

APPENDIX D

PHASE 1 CONSTRUCTION DRAINAGE INFORMATION

TRAFFORD STREET

600DIA

REUSE EXISTING CONNECTION INTO UNITED UTILITIES PUBLIC SEWER SUBJECT TO S106 AGREEMENT REF EC5169. CONTRACTOR TO APPLY FOR S106 PART 2 APPLICATION BEFORE COMMENCING ANY WORK ON THE PUBLIC SEWER

UU MH
CL: 34.90
IL 31.01
d = 3.89m

525DIA UTT

300DIA

RAINWATER PIPE TO BE COORDINATED WITH ARCHITECT AND ABOVE GROUND DRAINAGE DESIGNER TO AVOID CLASH RODDING EYE.

EXISTING RUN ASSUMED TO SERVE VIADUCT PIERS AND IS TO BE MAINTAINED. DETAILS TBC ON SITE BACKDROP TO BE CONFIRMED ONCE EXISTING DRAIN HAS BEEN SURVEYED.

PROVIDE CLASS Z SURROUND FOR DRAINAGE BELOW PILECAP

CHANNEL DRAIN TO SUIT ARCHITECT AND BUILDING SERVICES ENGINEER

SW1- FLOW CONTROL
1.5m DIA PCC
CL: +34.965
IL: +32.552
HYDROBRAKE OPTIMUM (BY HYDROBRAKE INTERNATIONAL) SCL-0194-2330-1170-2330
DESIGN FLOW: 23.3 l/s DESIGN HEAD: 1.170m

FW8
1.2m DIA PCC
CL: +35.110
IL : +31.710

400DIA @ 1:421 (2.5l/s/Ha)

DP1
IL: +33.540

RE
CL: +34.965

225DIA (S1.000) @ 1:150

150 DIA

CHANNEL DRAIN TO SUIT ARCHITECT AND BUILDING SERVICES ENGINEER

CW1
1350mm DIA PCC
CL: +34.902
IL: +31.116

BD
IL: +33.523

150DIA @ 1:100

225DIA @ 1:150 (S1.001)

WASTOP SS225mm INLINE NON RETURN VALUE BY ALTHON TO PREVENT BACK UP OF CONTAMINATED FLOWS INTO THE SURFACE WATER NETWORK

BD
IL: +32.542

225DIA @ 1:100

FW6
1.2m DIA PCC
CL: +35.085
IL: +31.390

225DIA @ 1:150 (S2.000)

225DIA @ 1:150 (S2.003)

BD
IL: +33.290

SW2
600mm DIA PPIC
CL: +35.077
IL: +32.576

BD
IL: +33.519

BD
IL: +33.515

225DIA @ 1:100

SW5
600mm DIA PPIC
CL: +34.965
IL: +33.529

225DIA @ 1:150 (S3.000)

ALL FOUL DRAINAGE AND SVPs FROM LEVEL 01 AND ABOVE TO BE COLLECTED AT SERVICE YARD LEVEL AND DROPPED AT ONE LOCATION. FURTHER COORDINATION REQUIRED WITH BUILDING SERVICES ENGINEER.

SVP

DP2
IL: +33.540

IL: +33.540

FOUL SYSTEM TO BE VENTED A THIS LOCATION.

RE
CL: +35.000

EXG DP

IL: +33.461

150DIA @ 1:100

DIRECTION OF FLOW REVERSES WHEN THE OUTFALL IS RESTRICTED BY THE FLOW CONTROL TO UTILISE THE OFFLINE ATTENUATION TANK

PROVIDE CLASS Z SURROUND FOR DRAINAGE BELOW SUBSTATION

WASTOP SS150mm INLINE NON RETURN VALUE BY ALTHON TO PREVENT ODOURS FROM BACKING UP INTO SYSTEM

Substation

Landlord LV Switchroom

225DIA @ 1:150 (S2.002)

225DIA @ 1:100

RE
CL: +35.000

150DIA @ 1:100

IL: +33.546

EXG DP

FW4
600mm DIA PPIC
CL: +35.110
IL: +33.420

IL: +33.519

225DIA @ 1:100

G
CL: +35.110

FW3
600mm DIA PPIC
CL: +35.110
IL: +33.465

225DIA @ 1:150 (S2.001)

SW3
600mm DIA PPIC
CL: +35.110
IL: +32.700

BAY 'C' BELOW GROUND DRAINAGE TO HAVE MINIMUM 1m COVER TO AVOID CLASH WITH SWIMMING POOL BURIED INFRASTRUCTURE

FW10
600mm DIA PPIC
CL: +35.110
IL: +33.538

BAY 'D' DRAINAGE POINT OF CONNECTION. REFER TO VIA-REN-00-00-DR-C-1101 FOR CONTINUATION

300DIA

IL: +31.522

FW9
1.2m DIA PCC
CL: +35.085
IL: +31.507

150DIA @ 1:100

RE
CL: +35.110

IL: +34.610

G
CL: +35.110

EXG MH
CL: 35.09
IL 32.29
d = 2.8m

150DIA @ 1:100

150DIA @ 1:111.5

G
CL: +35.110

ALLOW FOR REPLACEMENT OF EXISTING DOWNPIPES AND GULLEY WITHIN ARCH BACKING TO SUIT HERITAGE ARCHITECT REQUIREMENTS. PROVIDE FLEXIBLE COUPLER CONNECTION BY POLYPIPE OR EQUAL APPROVED TO NEW BELOW GROUND DRAINS TO ALLOW FOR DIFFERENTIAL MOVEMENT BETWEEN VIADUCT AND NEW FOUNDATIONS.

FW5
600mm DIA PPIC
CL: +35.110
IL: +33.335

IL: +33.435

EXG DP

IL: +33.596

150DIA @ 1:26.2

IL: +33.769

IL: +33.804

EXG DP

IL: +33.961

EXG DP

IL: +34.194

150DIA @ 1:26.3

IL: +34.444

EXG DP

IL: +34.880

RE
CL: +35.620

WASTOP SS150mm INLINE NON RETURN VALUE BY ALTHON TO PREVENT ODOURS FROM BACKING UP INTO SYSTEM

G
CL: +35.110

225DIA

EXG MH
CL: 35.07
IL 33.30
d = 1.77m

150DIA

FW4
600mm DIA PPIC
CL: +35.110
IL: +33.420

IL: +33.671

EXG DP

IL: +34.013

150DIA @1:27.8

IL: +34.464

EXG DP

IL: +34.880

RE
CL: +35.620

EXG DP

IL: +33.910m

SS

DRAIN TO RUN BELOW M.U.T.

225mm DIA @1:71.8

G

SEE LEVEL 00-SERIES-00 GROUND FLOOR EXTENTS

FW 2
600mm DIA PPIC
CL: +35.620
IL: +33.847

SS

IL: +33.872

GEOCELLULAR ATTENUATION TANK
9.6 (W) x 10.0 (L) x 1.675m (D)
MIN 30.96m3 STORAGE
CL: +33.6 (TANK)
IL: +32.735

SS

CL: +35.09
IL 33.30
d = 1.59m

SW4 - CATCHPIT
600mm DIA PPIC
CL: +35.110
IL: +32.733
IL: +32.433 (SUMP)

1400mm THK RC PILE CAP

BALANCE TANK DRAIN IN ABEYANCE. TBC BY POOL DESIGNER

ss

SS

EXG DP

EXG DP UTT

EXG DP

EXG DP

1450mm THK RC PILE CAP

FOR CONTINUATION TO SHEET VIA-REN-00-00-DR-C-1101

FOR DRAINAGE REFER TO NEXT SHEET

PROPOSED BURIED INFRASTRUCTURE CORRIDOR WITHIN ARCH BAY - REFER TO M&E ENGINEER DRAWINGS. TO BE COORDIANTED WITH PROPOSED BELOW GROUND DRAINAGE

INFRASTRUCTURE CORRIDOR TO BE REALIGNED TO AVOID CLASH TOWER CRANE. INDICATIVE REALIGNMENT SHOWN.

Future connection to slot site

REFER TO SLOT SITE DRAWING PACKAGE FOR WORKS

REFER TO DRAWING: VIA-REN-00-00-DR-C-01105 FOR PROPOSED SURFACE WATER DRAINAGE TO SLOT SITE

EXTERNAL LEVELS TO FALL AWAY FROM BUILDING THRESHOLD MIN 1:60

Staff Welfare

Residential Entrance Lobby

Parcel Store

Gate switch location - TBC

Library

Games

Cardboard Store

Plant

Ramp 1:25

FOR DETAILED CORE WALL GENERAL ARRANGEMENT REFER TO DRAWING VIA-REN-B-XX-DR-S-01201

GREAT BRIDGEWATER STREET

NOTES:

1. FOR CURRENT PLANS, LEVELS AND STACK LOCATIONS REFER TO LATEST ARCHITECT LANDSCAPE ARCHITECT AND BUILDING SERVICES DRAWINGS.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE BELOW GROUND DRAINAGE SPECIFICATION SP-C-00050, MANHOLE SCHEDULE ON DRAWING C-01300 AND DETAILS SHOWN ON DRAWING SERIES C-03301 & C-03311 TO C-03312.
3. THE FINAL CONNECTION TO THE SEWER IS SUBJECT TO UNITED UTILITIES APPROVAL AND IS TO BE IN ACCORDANCE WITH THEIR AGREED DETAILS.
4. FOR ALL ABOVE GROUND DRAINAGE AND ASSOCIATED PUMPS REFER TO BUILDING SERVICES AND ARCHITECT'S DRAWINGS.
5. ALL BELOW GROUND DRAINAGE WORKS TO BE IN ACCORDANCE WITH RELEVANT BUILDING REGULATIONS AND SEWER SECTOR GUIDANCE APPENDIX C- DESIGN AND CONSTRUCTION GUIDANCE. IF DISCREPANCIES ARE NOTED BETWEEN SSG AND DRAWINGS THESE SHOULD BE BROUGHT TO THE ATTENTION OF RENAISSANCE FOR REVIEW.
6. ALL FOUL AND SURFACE WATER DRAINAGE TO BE 150DIA PLASTIC TWIN WALL UNLESS NOTED OTHERWISE.
7. THE ATTENUATION TANK, FLOW CONTROL AND NON-RETURN VALUES ARE TO BE TO SUPPLIERS DESIGN AND DETAILS. INSTALLATION IS TO BE IN ACCORDANCE WITH THE SUPPLIER REQUIREMENTS.
8. ROCKER PIPE DETAIL TO BE PROVIDED AT ALL ENTRY AND EXIT POINTS FOR DRAINS CAST INTO CONCRETE FOUNDATIONS UNLESS NOTED OTHERWISE.
9. UNLESS NOTIFIED OTHERWISE CHANNEL DRAINS TO BE ACO M150D 0.0 OR SIMILAR APPROVED
10. FLOOR GULLEYS AND RWPS TO BE TRAPPED.
11. THE CONTRACTOR IS TO UNDERTAKE A FULL CCTV SURVEY AT COMPLETION OF THE PROJECT TO DEMONSTRATE THAT THE DRAINAGE IS CLEAN. ANY DEFECTS ARE TO BE CORRECTED BY THE CONTRACTOR PRIOR TO HANDOVER OF THE SYSTEM TO THE CLIENT.
12. THE CONTRACTOR IS TO KEEP A RECORD SET OF THE AS INSTALLED DRAINAGE ON SITE AND PROVIDE THIS TO RENAISSANCE UPON COMPLETION OF THE WORKS TO ALLOW FOR PRODUCTION OF A 'FINAL CONSTRUCTION' ISSUE DRAWING.
13. DURING THE WORKS ALTERATIONS TO THE DRAINAGE LAYOUT ARE TO BE MARKED UP BY THE CONTRACTOR AND AGREED WITH RENAISSANCE IN WRITING.
14. MANHOLE COVERS ARE TO BE ACCORDANCE WITH BS EN 124 FOR THE RATING INDICATED IN THE MANHOLE SCHEDULE. THE CONTRACTOR IS TO SUBMIT DETAILS FOR THE PROPOSED MANHOLE COVERS TO THE ENGINEER AND LANDSCAPE ARCHITECT FOR REVIEW PRIOR TO INSTALLATION.
15. ALL CONCRETE PIPES TO BE TO ES EN 1916 CLASS 120 (54kN/m).
16. BEDDING AND BACKFILL MATERIAL TO CONFORM TO THE REQUIREMENTS OF THE WATER INDUSTRY SPECIFICATION 4-08092 (TABLE A2).
17. IF PLASTIC PIPES ARE TO BE USED THEN THE FOLLOWING MUST APPLY:
    A. BSI KITEMARK (CERTIFIED TO BS EN 13476-1 AND WIS 4-35-01)
    B. PIPES LESS THAN OR EQUAL TO 500mm DIA
    C. BEDDING AND BACKFILL MATERIAL TO CONFORM TO THE REQUIREMENTS OF THE WATER INDUSTRY SPECIFICATION 4-08092 (TABLE A2)
18. SULPHATE RESISTANT CEMENT (C20-DC2) AND PRECAST CONCRETE PRODUCTS MUST BE USED OR A LABORATORY REPORT PROVIDED PROVIDING THAT SUCH PRECAUTIONS ARE NOT NECESSARY.
19. SEWER PIPES TO BE LAID IN MAXIMUM 3 METER LENGTHS UNLESS THERE IS A SPECIFIC OPERATIONAL NEED TO LAY LONGER PIPES, AND THIS IS AGREED BY THE CONTRACTOR WITH THE PIPE MANUFACTURER.

DRAWING LEGEND

- SITE BOUNDARY
- SURFACE WATER DRAINAGE
- FOUL WATER DRAINAGE
- COMBINED WATER DRAINAGE
- EXISTING PRIVATE DRAINAGE TO BE RETAINED IN PHASE 1 WORKS
- EXISTING PRIVATE DRAINAGE TO BE REMOVED IN PHASE 1 WORKS
- EXISTING UNITED UTILITIES COMBINED SEWER
- G GULLY
- CHANNEL DRAIN
- RAINWATER PIPE/ SOIL VENT PIPE
- RE RODDING EYE
- IN-LINE NON-RETURN VALUE

Rev:	Description:	Date:	By:	Chkd:
C03	AMENITY CHANGE UPDATE	16.03.22	SS	PC
C02	UPDATED FOR DESIGN TEAM COMMENTS	03.11.20	SS	PC
C01	STAGE 5	02.10.20	SS	PC

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Renaissance Associates Ltd
Carvers Warehouse
77 Dale Street
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Project:
VIADUX, MANCHESTER

Drawing Title:
BELOW GROUND DRAINAGE GROUND LEVEL PLAN

Status:
STAGE 5

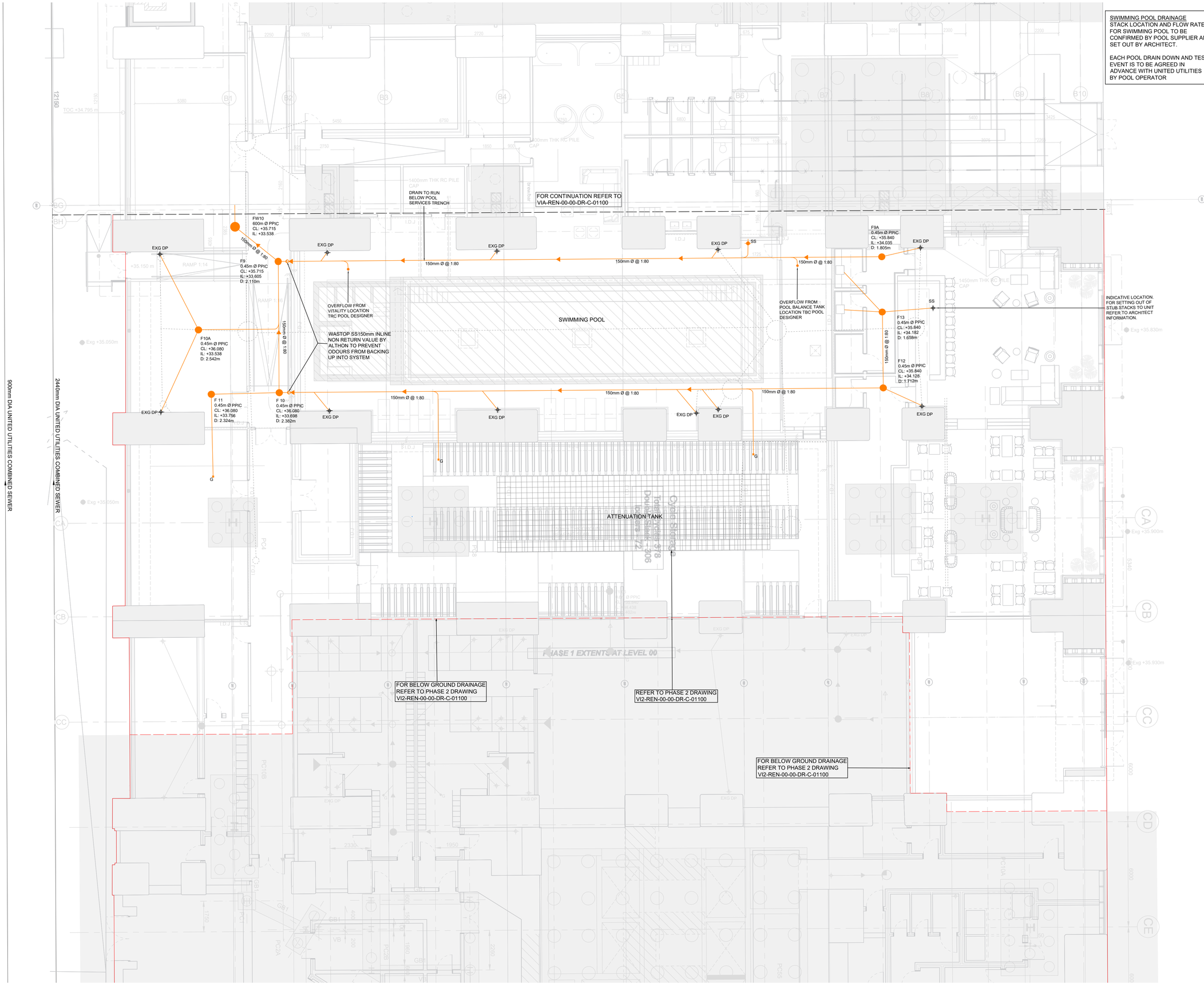
Size:	Date:	Drawn by:	Designed by:	Checked by:
A1	OCT 20	MR	JB	PC

Scale: 1:100 | Project No: 1910-12

Project: | Originator: | Volume: | Level: | Type: | Role: | Category/Number: | Rev:

VIA - REN - 00 - 00 - DR - C - 01100 - C03

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NOTES:

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3. THE FINAL CONNECTION TO THE SEWER IS SUBJECT TO UNITED UTILITIES APPROVAL AND IS TO BE IN ACCORDANCE WITH THEIR AGREED DETAILS.
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6. ALL FOUL AND SURFACE WATER DRAINAGE TO BE 150DIA PLASTIC TWIN WALL UNLESS NOTED OTHERWISE.
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10. FLOOR GULLEYS AND RWPS TO BE TRAPPED.
11. THE CONTRACTOR IS TO UNDERTAKE A FULL CCTV SURVEY AT COMPLETION OF THE PROJECT TO DEMONSTRATE THAT THE DRAINAGE IS CLEAN. ANY DEFECTS ARE TO BE CORRECTED BY THE CONTRACTOR PRIOR TO HANDOVER OF THE SYSTEM TO THE CLIENT.
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13. DURING THE WORKS ALTERATIONS TO THE DRAINAGE LAYOUT ARE TO BE MARKED UP BY THE CONTRACTOR AND AGREED WITH RENAISSANCE IN WRITING.
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    A. BSI KITEMARK (CERTIFIED TO BS EN 13476-1 AND WIS 4-35-01)
    B. PIPES LESS THAN OR EQUAL TO 500mm DIA
    C. BEDDING AND BACKFILL MATERIAL TO CONFORM TO THE REQUIREMENTS OF THE WATER INDUSTRY SPECIFICATION 4-08092 (TABLE A2)
18. SULPHATE RESISTANT CEMENT (C20-DC2) AND PRECAST CONCRETE PRODUCTS MUST BE USED OR A LABORATORY REPORT PROVIDED PROVIDING THAT SUCH PRECAUTIONS ARE NOT NECESSARY.
19. SEWER PIPES TO BE LAID IN MAXIMUM 3 METER LENGTHS UNLESS THERE IS A SPECIFIC OPERATIONAL NEED TO LAY LONGER PIPES, AND THIS IS AGREED BY THE CONTRACTOR WITH THE PIPE MANUFACTURER.
20. ALL MAMHOLES COVER RATINGS TO BE CLASS B125 UNLESS NOTED OTHERWISE.

DRAWING LEGEND

- SITE BOUNDARY
- SURFACE WATER DRAINAGE
- FOUL WATER DRAINAGE
- COMBINED WATER DRAINAGE
- EXISTING PRIVATE DRAINAGE TO BE RETAINED IN PHASE 1 WORKS
- EXISTING PRIVATE DRAINAGE TO BE REMOVED IN PHASE 1 WORKS
- EXISTING UNITED UTILITIES COMBINED SEWER
- G — GULLY
- CHANNEL DRAIN
- RAINWATER PIPE/ SOIL VENT PIPE
- RE — RODDING EYE
- IN-LINE NON-RETURN VALUE

Rev:	Description:	Date:	By:	Chkd:
C01	STAGE 5	20.05.22	SS	PC

renaissance
Renaissance Associates Ltd
Carvers Warehouse
77 Dale Street
Manchester
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Project:
VIADUX, MANCHESTER

Drawing Title:
GROUND FLOOR DRAINAGE PLAN SHEET 2

Status:
STAGE 5

Size:	Date:	Drawn by:	Designed by:	Checked by:
A1	MAY'22	PH	JB	PC

Scale: 1:100 | Project No: 1910-12

Project:	Originator:	Volume:	Level:	Type:	Role:	Category/Number:	Rev:
VIA	REN	00	00	DR	C	01101	C01

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STREET

NOTE IF EXISTING DRAINAGE LEVELS PERMIT GRAVITY CONNECTION TO NEW SW NETWORK, RETAIN EXISTING, ALLOW FOR REPLACEMENT AS SHOWN.

INDICATES PHASE 2 DRAINAGE, REFER TO VI2-REN-00-01-DR-C-01110 FOR DETAILS

ACCESSIBLE

B125 ACO MULTIDRAIN M100PPD NO 0.0J 1%

S1,02
600mm Ø PPIC
CL: +43.285
IL: +42.593

S1,00
450mm Ø PPIC
CL: +43.300
IL: +42.737

S1,03
600mm Ø PPIC
CL: +43.285
IL: +42.538

150Ø @ 1:100 (S1.000)

RWP FROM ABOVE CANOPY

225Ø @ 1:100 (S1.002)

225Ø @ 1:100 (S1.001)

S1,01
600mm Ø PPIC
CL: +43.285
IL: +42.650

225Ø @ 1:100 (S1.003)

S1.04
600mm Ø PPIC
CL: +43.190
IL: +42.472

225Ø @ 1:100 (S1.004)

F1,00
1.2m Ø PCC
CL: +43.300
IL: +42.431

F1,01
1.2m Ø PCC
CL: +43.300
IL: +42.389

225Ø @ 1:100 (F1.001)

225Ø @ 1:100 (F1.000)

G

G

225Ø

RWP FOR TOWER ATTENUATION BY BLUE ROOF. DISCHARGE RATE 1,15 l/s

SVP B

F1,02
1.2m Ø PCC
CL: +43.190
IL: +41.990

S5,00
1,05m Ø PCC
CL: +43.210
IL: +42.565

S1.05
600mm Ø PPIC
CL: +43.260
IL: +42.407

225Ø @ 1:100 (S1.005)

S1.06
600mm Ø PPIC
CL: +43.430
IL: +42.331

225Ø @ 1:100 (S1.006)

E600 ACO S200 1% CHANNEL DRAIN

225Ø @ 1:100 (F1.002)

150Ø @ 1:100 (S5.000)

RWP FOR TOWER ATTENUATION BY BLUE ROOF. DISCHARGE RATE 1,15 l/s

S5,01
1.05m Ø PCC
CL: +43.194
IL: +42.470

RWP (BLUE ROOF)

G07

G06

G07

225Ø @ 1:80 (P0.000)

F1,03
1.2m Ø PCC
CL: +43.280
IL: +41.655

F3.00
1.2m ØPCC
CL:+43.280
IL: TBC ON SITE

F1,04
1.2m Ø PCC
CL: +43.244
IL: +41.580

150Ø @ 1:100 (S5.001)

E600 ACO S200 1% CHANNEL DRAIN

225Ø @ 1:100 (F1.003)

S5,02
1.05m Ø PCC
CL: +43.253
IL: +42.407

F2,00
1.2m Ø PCC
CL: +43.300
IL: +42.176

225Ø @ 1:16 (F2.000)

G

225Ø

F1,05
1.2m Ø PCC
CL: +43.220
IL: +41.525

225Ø @ 1:100 (F1.004)

RWP (BLUE ROOF)

150Ø @ 1:100 (S5.002)

SVP A

G

F-SVP 1
IL 41.884

225Ø @ 1:80 (F3.000)

S1,11
1.2m Ø PCC w/ SILT TRAP
CL: +43.275
IL: +41.385

150Ø @ 1:100 (S3.001)

S4,00
450mm Ø PPIC
w/ SILT TRAP
CL: +43.270
IL: +41.410

225Ø @ 1:100 (F1.007)

225Ø @ 1:100 (F1.006)

225Ø @ 1:100 (F1.005)

F4.00
1.2m ØPCC
CL:+43.200
IL: TBC ON SITE

150Ø @ 1:100 (S5.003)

S5,03
1.05m Ø PCC
CL: +43.273
IL: +42.355

S1,07
600mm Ø PPIC
CL: +43.200
IL: +42.215

INDICATIVE POSITION OF RETAINING WALL

225Ø @ 1:100 (S1.007)

CONNECTION TO PLANTERS TO LANDSCAPE ARCHITECTS DETAIL

S1,08
600mm Ø PPIC
CL: +42.970
IL: +42.126

S1.09
600mm Ø PPIC
CL: +42.770
IL: +42.066

225Ø @ 1:100 (S1.008)

225Ø @ 1:100 (S1.009)

WASTOP SS150mm INLINE NON RETURN VALVE BY ALTHON

150Ø @ 1:100 (S2.000)

S3,00
450mm Ø PPIC
CL: +43.290
IL: +42.076

S3,01
450mm Ø PPIC
CL: +43.290
IL: +41.982

150Ø @ 1:100 (S3.000)

EXISTING CHANNEL DRAIN MODIFIED / REPLACED TO SUIT ROAD REALIGNMENT WORKS

E600 ACO S200 1% CHANNEL DRAIN

225Ø @ 1:169 (S1.010)

225Ø @ 1:170 (S1.011& S1.012)

225Ø @ 1:35(S4.000)

S1.10
1.2m Ø PCC
CL: +42.772
IL: +42.045

S2.00
450mm Ø PPIC
CL: +42.750
IL: +42.139

S-RWP 1
IL 41.871
MAX DISCHARGE RATE 54,3 l/s
TOTAL IMPERMEABLE AREA 0,133 HA

S-RWP 2
IL 42.258
MAX DISCHARGE RATE 6,9 l/s

F1,07
1.2m Ø PCC
CL: +43.286
IL: +41.400

F1,06
1.2m Ø PCC
CL: +43.286
IL: +41.495

S5.00A
1.05m Ø PCC
CL: +43.210
IL: +42.675

150Ø @ 1:100 (S5.001A)

S5.00B
1.05m Ø PCC
CL: +43.200
IL: +42.620

150Ø @ 1:100 (S5.001C)

S5.00C
1.05m Ø PCC
CL: +43.200
IL: +42.680

RWP (BLUE ROOF)

150Ø @ 1:100 (S5.000C)

INDICATIVE TOWER CRANE LOCATION. EXISTING DRAINAGE TO BE DIVERTED OR ABANDONED SUBJECT TO SURVEY FINDINGS.

G20?

G21?

G21?

HEAD OF EXISTING DRAINAGE RUN AT EASTERN END OF SERVICE YARD

FOR HILTON SLOT SITE DRAINAGE DETAILS REFER TO HSS-REN-00-00-DR-C-01100

NOTE BLUE ROOF TO PODIUM LEVEL 02 DECK TO HAVE MAX 4.6 l/s PEAK DISCHARGE RATE

PROVIDE NEW GULLIES WITHIN SERVICE YARD. CONNECT TO LOCATIONS OF EXISTING REMOVED GULLIES

NOTE LEVEL OF BRICKWORK ARCH BELOW ASSUMED AT +41.295m IN THIS LOCATION. TBC ON SITE TO CHECK FOR CLASH WITH DRAINAGE

OFFSITE RESURFACING WORKS TO BE DETAILED TO REUSE EXISTING DRAINAGE

2 NEW RWP DROP POINTS PENETRATING THROUGH THE VIADUCT. VERTICAL DRAINAGE TO BE DESIGNED AND DETAILED BY ABOVE GROUND DRAINAGE DESIGNER

NEW SVP DROP POINT PENETRATING THROUGH THE VIADUCT. VERTICAL DRAINAGE TO BE DESIGNED AND DETAILED BY ABOVE GROUND DRAINAGE DESIGNER

PHASE I EXTENTS OF PODIUM

SVP & RWP SETTING OUT

SVP AND RWP LOCATIONS ARE INDICATIVE FOR DETAILED SETTING OUT REFER TO ARCHITECTS/ BUILDING SERVICES ENGINEERS DRAWINGS. ALL CAPILLARY DRAINAGE IS IN ABEYANCE UNTIL SETTING OUT OF ALL SVPs, STACKS AND RWPs IS CONFIRMED BY THE ARCHITECT AND BUILDING SERVICES ENGINEER

ALL CONNECTIONS BETWEEN ABOVE GROUND DRAINAGE AND BELOW GROUND DRAINAGE TO BE SIZED TO SUIT ABOVE GROUND DRAINAGE.

EXTERNAL WORKS SETTING OUT

FOR PROPOSED SITE LEVELS REFER TO LANDSCAPE DRAWINGS. CHANNELS/ GULLY LOCATIONS TO LANDSCAPE ARCHITECT SPECIFICATION UNLESS NOTES OTHER WISE.

BEDDING/ SURROUND REQUIREMENTS

ALL DRAINAGE TO BE CONCRETE ENCASED (CLASS Z BEDDING), EXCAVATIONS FORMED USING MINIMUM DIG TECHNIQUES SUCH AS TRENCH BOXING TO MINIMISE EXCAVATIONS TO ARCH STRUCTURE BALLAST.

COVER LEVELS

LANDSCAPE ARCHITECT TO VALIDATE COVER LEVESL IN ALL EXTERNAL AREAS, ARCHITECT TO VALIDATE COVER LEVELS IN ALL INTERNAL AREAS.

NOTES:

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RENAISSANCE, ARCHITECTS, LANDSCAPE ARCHITECTS AND BUILDING SERVICES ENGINEERS DRAWINGS.
2. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE BELOW GROUND DRAINAGE SPECIFICATION SP-C-00050, MANHOLE SCHEDULE ON DRAWING C-01301 AND DETAILS SHOWN ON DRAWING SERIES C-03301 & C-03311 TO C-03312.
3. REFER TO DRAWING VIA-REN-00-00-DR-C-01100 FOR BELOW GROUND FLOOR DRAINAGE GROUND LEVEL PLAN.
4. FOR ALL ABOVE GROUND DRAINAGE AND ASSOCIATED PUMPS REFER TO BUILDING SERVICES AND ARCHITECT'S DRAWINGS.
5. ALL BELOW GROUND DRAINAGE WORKS TO BE IN ACCORDANCE WITH RELEVANT BUILDING REGULATIONS AND SEWER SECTOR GUIDANCE APPENDIX C- DESIGN AND CONSTRUCTION GUIDANCE. IF DISCREPANCIES ARE NOTED BETWEEN SSG AND DRAWINGS THESE SHOULD BE BROUGHT TO THE ATTENTION OF RENAISSANCE FOR REVIEW.
6. RWPs, SVPs, SSs AND FLOOR GULLEYS TO BE TRAPPED.
7. THE CONTRACTOR IS TO UNDERTAKE A FULL CCTV SURVEY AT COMPLETION OF THE PROJECT TO DEMONSTRATE THAT THE DRAINAGE IS CLEAN. ANY DEFECTS ARE TO BE CORRECTED BY THE CONTRACTOR PRIOR TO HANDOVER OF THE SYSTEM TO THE CLIENT.
8. THE CONTRACTOR IS TO KEEP A RECORD SET OF THE AS INSTALLED DRAINAGE ON SITE AND PROVIDE THIS TO RENAISSANCE UPON COMPLETION OF THE WORKS TO ALLOW FOR PRODUCTION OF A 'FINAL CONSTRUCTION' ISSUE DRAWING.
9. DURING THE WORKS ALTERATIONS TO THE DRAINAGE LAYOUT ARE TO BE MARKED UP BY THE CONTRACTOR AND AGREED WITH RENAISSANCE IN WRITING.
10. THE CHAMBER SIZE OF MANHOLES WITH MORE THAN ONE CONNECTION IN THEM MAY NEED TO BE INCREASED AN INCREMENT TO ACCOMMODATE THE CONNECTIONS AND BENDS.
11. MANHOLE COVERS ARE TO BE ACCORDANCE WITH BS EN 124 FOR THE RATING INDICATED IN THE MANHOLE SCHEDULE. THE CONTRACTOR IS TO SUBMIT DETAILS FOR THE PROPOSED MANHOLE COVERS TO THE ENGINEER AND LANDSCAPE ARCHITECT FOR REVIEW PRIOR TO INSTALLATION.
12. COVER SLABS MUST CARRY THE BSI KITEMARK. WHERE THE CLEAR OPENING OF THE KITEMARKED PRODUCT IS DIFFERENT TO THAT OF THE COVER AND FRAME, A LOAD BEARING REDUCING SLAB SHOULD BE FITTED ABOVE THE COVER SLAB TO BRING THE SIZE DOWN TO REQUIRED SIZE.
13. ALL SEWERS TO BE BSI KITEMARK (CERTIFIED TO WIS 4-35-01)
14. ALL CONCRETE PIPES TO BE TO ES EN 1916 CLASS 120 (54kN/m),
15. BEDDING AND BACKFILL MATERIAL TO CONFORM TO THE REQUIREMENTS OF THE WATER INDUSTRY SPECIFICATION 4-08092 (TABLE A2).
16. IF PLASTIC PIPES ARE TO BE USED THEN THE FOLLOWING MUST APPLY:
    A. BSI KITEMARK (CERTIFIED TO BS EN 13476-1 AND WIS 4-35-01)
    B. PIPES LESS THAN OR EQUAL TO 500mm DIA
    C. BEDDING AND BACKFILL MATERIAL TO CONFORM TO THE REQUIREMENTS OF THE WATER INDUSTRY SPECIFICATION 4-08092 (TABLE A2)
17. THE MINIMUM CRUSHING STRENGTH FOR CLAY PIPES SHOULD BE AS FOLLOWS: 100mm DIA. 40kN/m, 150mm DIA. 40kN/m, 225mm DIA. 45kN/m AND 300mm DIA. 72kN/m.
18. THE MINIMUM CRUSHING STRENGTH FOR CONCRETE PIPES SHOULD BE - (CLASS 120 TO EN 1916/BS5911-1 2002). PLASTIC PIPES SHOULD CONFORM TO WIS 4-35-01 AND BS EN13476.
19. SULPHATE RESISTANT CEMENT (C20-DC2) AND PRECAST CONCRETE PRODUCTS MUST BE USED OR A LABORATORY REPORT PROVIDED PROVIDING THAT SUCH PRECAUTIONS ARE NOT NECESSARY,
20. SEWER PIPES TO BE LAID IN MAXIMUM 3 METER LENGTHS UNLESS THERE IS A SPECIFIC OPERATIONAL NEED TO LAY LONGER PIPES, AND THIS IS AGREED BY THE CONTRACTOR WITH THE PIPE MANUFACTURER.

DRAWING LEGEND

- PLANNING BOUNDARY
- OWNERSHIP BOUNDARY
- PHASE 1 BOUNDARY
- SURFACE WATER DRAINAGE
- FOUL WATER DRAINAGE
- EXISTING DRAINAGE TO BE RETAINED
- EXISTING DRAINAGE TO BE REMOVED
- PHASE 2 DRAINAGE
- G — GULLY
- CHANNEL DRAIN TO LANDSCAPE ARCHITECTS SPECIFICATION UNO
- RAINWATER PIPE/ SOIL VENT PIPE

Rev:	Description:	Date:	By:	Chkd:
C03	CHANNEL DRAINS CO-ORDINATED	04.11.22	AM	PC
C02	RECEIPT OF SITE SURVEY INFORMATION	26.11.21	HW	PC
C01	CONSTRUCTION	29.09.21	HW	PC

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77 Dale Street
Manchester
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Project:

VIADUX, MANCHESTER

Drawing Title:

BELOW GROUND DRAINAGE LEVEL 01 PLAN (SHEET 01)

Status:

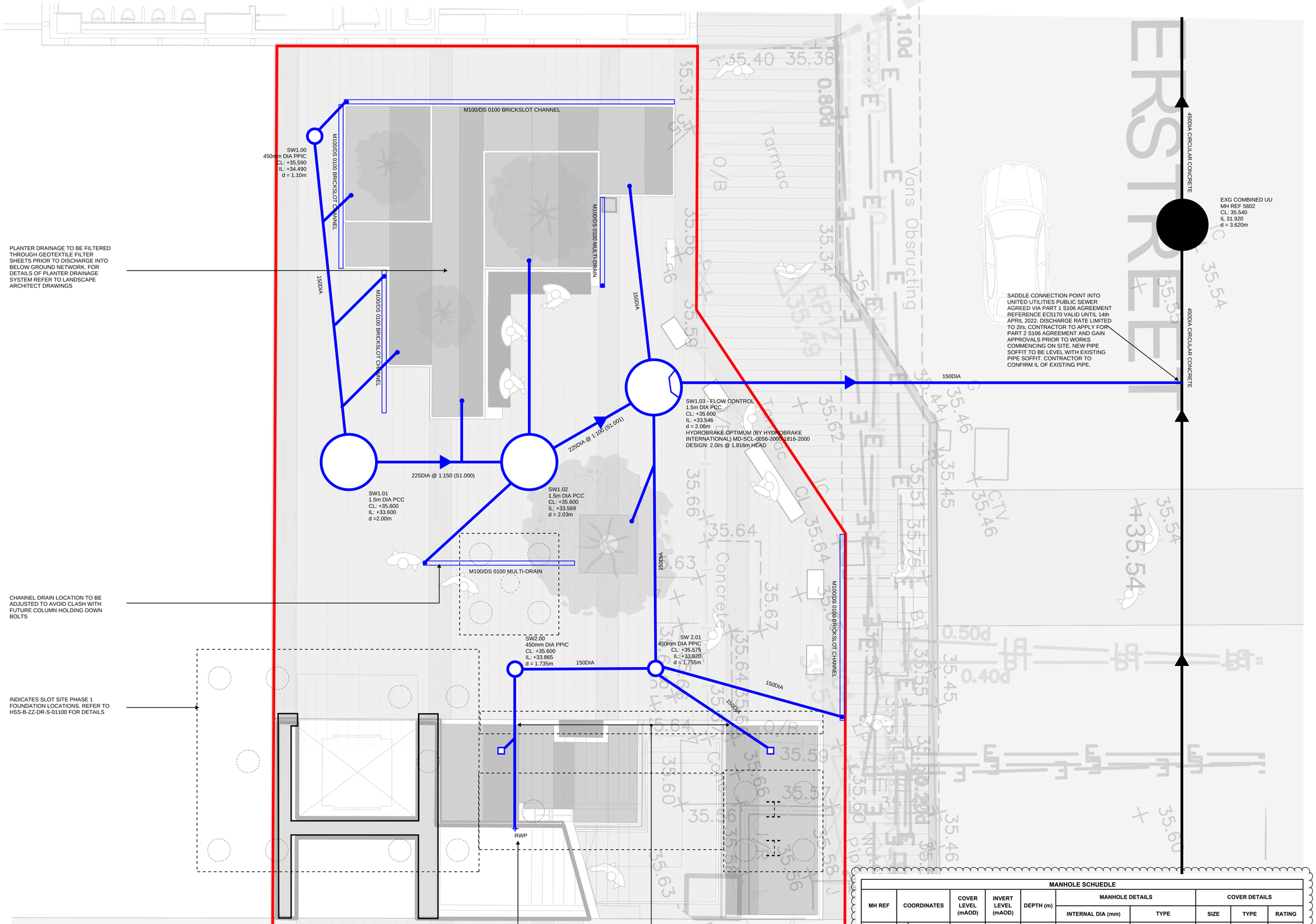
CONSTRUCTION

Size:	Date:	Drawn by:	Designed by:	Checked by:
A1	NOV'21	HW	HW	PC

Scale:	Project No:
1:150	1910-12

Project:	Originator:	Volume:	Level:	Type:	Role:	Category/Number:	Rev:
VIA	REN	0	01	DR	C	01101	C03

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NOTES:

1. FOR ALL ABOVE GROUND DRAINAGE AND ASSOCIATED PUMPS REFER TO BUILDING SERVICES AND ARCHITECT'S DRAWINGS
2. ALL BELOW GROUND DRAINAGE WORKS TO BE IN ACCORDANCE WITH RELEVANT BUILDING REGULATIONS AND SEWERS FOR ADOPTION 7TH EDITION
3. ALL FOUL AND SURFACE WATER DRAINAGE TO BE 150mm DIA UNLESS NOTED OTHERWISE
4. SEWERS TO BE LAID IN CLASS S BEDDING (150mm GRANULAR BED AND SURROUND). WHERE DEPTH OF COVER TO TOP OF THE SEWER IS LESS THAN; 1.2m IN HIGHWAYS OR VERGES, OR LESS THAN 0.9m IN PEDESTRIAN AREAS, THEN A 150mm CONCRETE SLAB SHOULD BE PROVIDED ABOVE THE GRANULAR BED AND SURROUND
5. ROCKER PIPE DETAIL TO BE PROVIDED AT ALL ENTRY AND EXIT POINTS FOR DRAINS CAST INTO CONCRETE FOUNDATIONS
6. ALL SEWERS TO BE BSI KITEMARK (CERTIFIED TO WIS 4-35-01)
7. SEWER PIPES TO BE LAID IN MAXIMUM 3m LENGTHS UNLESS THERE IS A SPECIFIC OPERATIONAL NEED TO LAY LONGER
8. BEDDING AND BACKFILL MATERIAL TO CONFORM TO THE REQUIREMENTS OF THE WATER INDUSTRY SPECIFICATION 4-08092 (TABLE A2)
9. IF PLASTIC PIPES ARE TO BE USED THEN THE FOLLOWING MUST APPLY:
   A) BSI KITEMARK (CERTIFIED TO BS EN 13476-1 AND WIS 4-35-01)
   B) PIPES LESS THAN OR EQUAL TO 500mm DIA
   C) BEDDING AND BACKFILL MATERIAL TO CONFORM TO THE REQUIREMENTS OF THE WATER INDUSTRY SPECIFICATION 4-08092 (TABLE A2)
10. SULPHATE RESISTANT CEMENT (C20-DC2) AND PRECAST CONCRETE PRODUCTS MUST BE USED OR A LABORATORY REPORT PROVIDED, DEMONSTRATING THAT SUCH PRECAUTIONS ARE NOT NECESSARY
11. UNLESS NOTIFIED OTHERWISE CHANNEL DRAINS TO BE ACO M150D 0.0 OR SIMILAR APPROVED
12. THE CONTRACTOR IS TO UNDERTAKE A FULL CCTV SURVEY AT COMPLETION OF THE PROJECT TO DEMONSTRATE THAT THE DRAINAGE IS CLEAN. ANY DEFECTS ARE TO BE CORRECTED BY THE CONTRACTOR PRIOR TO HANDOVER OF THE SYSTEM TO THE CLIENT

PROVIDE C250 RECESSED COVERS TO ALL MANHOLES. COVER FRAME SETTING OUT TO TIE IN WITH PAVING JOINTING. REFER TO LANDSCAPE ARCHITECT REQUIRMENTS.

FOR ALL SETTING OUT AND DETAILS OF CHANNEL DRAINS AND EXTERNAL FINISHED LEVELS REFER TO LANDSCAPE ARCHITECT DRAWING PACK

DRAWING LEGEND

- SITE BOUNDARY
- SURFACE WATER DRAINAGE
- FOUL WATER DRAINAGE
- COMBINED WATER DRAINAGE
- EXISTING PRIVATE DRAINAGE TO BE RETAINED IN PHASE 1 WORKS
- EXISTING PRIVATE DRAINAGE TO BE REMOVED IN PHASE 1 WORKS
- EXISTING UNITED UTILITIES COMBINED SEWER
- G GULLEY
- LINEAR DRAINAGE CHANNEL

MANHOLE SCHUEDLE

MH REF	COORDINATES	COVER LEVEL (mAOD)	INVERT LEVEL (mAOD)	DEPTH (m)	MANHOLE DETAILS		COVER DETAILS		
					INTERNAL DIA (mm)	TYPE	SIZE	TYPE	RATING
SW1.00	E: 383502641 N: 397661568	35.590	34.490	1.100	450	PPIC	450 x 450	RECESSED	C250
SW1.01	E: 383510917 N: 397659752	35.600	33.600	2.000	1500	PC B	600 x 600	RECESSED	C250
SW1.02	E: 383512399 N: 397664168	35.600	33.569	2.031	1500	PC B	600 x 600	RECESSED	C250
SW1.03	E: 383511571 N: 397667848	35.600	33.546	2.054	1500	PC WITH FLOW CONTROL B	600 x 600	RECESSED	C250
SW2.00	E: 383517360 N: 397662108	35.600	33.865	1.735	450	PPIC	350 x 350	RECESSED	C250
SW2.01	E: 383518500 N: 397665571	35.575	33.820	1.755	450	PPIC	350 x 350	RECESSED	C250

Rev:	Description:	Date:	By:	Chkd:
C03	MANHOLE SCHEDULE ADDED	18.06.21	JB	PC
C02	UPDATED FOR COMMENTS	27.04.21	AS	PC
C01	STAGE 5 CONSTRUCTION ISSUE	30.03.21	JB	PC

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Project:
VIADUX
MANCHESTER

Drawing Title:
SLOT SITE BELOW GROUND DRAINAGE PLAN

Status:
STAGE 5

Size:	Date:	Drawn by:	Designed by:	Checked by:
A1	MAR '21	JB	JB	PC

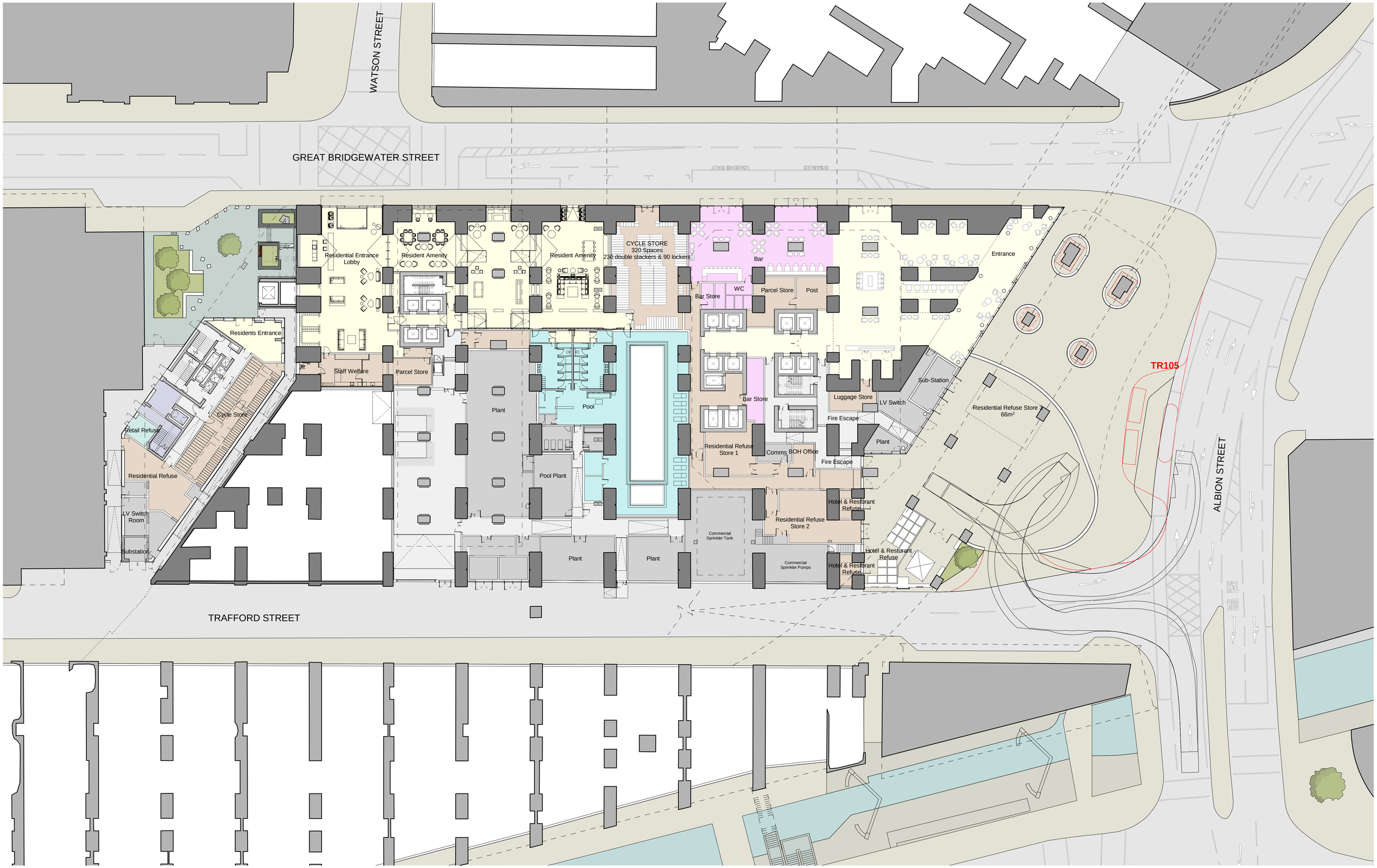
Scale: 1:50 | Project No: 2002-05

Project: | Originator: | Volume: | Level: | Type: | Role: | Category/Number: | Rev:
HSS-REN-00-00-DR-C-01100-C03

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APPENDIX E

PROPOSED DEVELOPMENT PLANS



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SCALE 1:250

0 5m 10m 15m 25m

NORTH

Rev	Date	Description
P01	26-03-2024	Planning Issue
P02	XX-10-2024	Planning Issue - Hotel & Residential

Project Title
Viadux Phase 2 - Plot 2a & 2b
Manchester

Status
PLANNING

Drawing Title
Viadux Phase 2 - Plot 2a & 2b
Masterplan
Ground Floor Plan

Job No
10448

Scale
1:500 @ A3
1 : 250@ A1

SHP Drawing Code
Project-Architect-Zone-Role-Planning-Unit(ass)-& Type-Level/Location-Series
10448-SHP-ZZ- A-B5D9-G100-PL-00-001

Revision
P02

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SCALE 1:125

0 1m 5m 10m

NORTH

Rev	Date	Description
P01	26-03-2024	Planning Issue
P02	31-10-2024	Planning Issue - Hotel & Residential

DRAFT

Project Title
Viadux Phase 2 - Plot 2a & 2b
Manchester

Status
PLANNING

Drawing Title
Viadux Phase 2 - Plot 2a
General Arrangement
Ground Floor Plan

Job No
10448

Scale
1:250 @ A3
1 : 125@ A1

SHP Drawing Code
10448-SHP-ZC- A-B5D9-G200-PL-00-001

Revision
P02

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